

SANTA CRUZ METROPOLITAN TRANSIT DISTRICT

WATSONVILLE TRANSIT PLANNING STUDY
FINAL REPORT

FEBRUARY 2012



Santa Cruz Metropolitan Transit District Watsonville Transit Study

FINAL REPORT

February 2012

Prepared for

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EXECUTIVE SUMMARY

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CHAPTER 1 – EXECUTIVE SUMMARY

Moore & Associates was retained by the Santa Cruz Metropolitan Transit District (Santa Cruz METRO) to prepare a Transit Study for the Watsonville community. The cornerstone goal of the project was to assess the efficiency of transit services provided within the city of Watsonville. As with many other California transit operators, Santa Cruz METRO faces the challenge of providing adequate and efficient service provision despite budget shortfalls and future funding uncertainties. Santa Cruz METRO and the consultant team conducted a comprehensive assessment of existing transit services within Watsonville, and from said assessment crafted a set of recommendations for service enhancement. The primary recommendations focus on enhancing efficiency while maintaining fair and balanced geographic coverage within Watsonville.

Eight Santa Cruz METRO routes operate within the city of Watsonville, including four intra-city routes, three inter-city routes, and a commuter express route. Local service routes include Route 72 (Corralitos), Route 74 (Ohlone Parkway/Rolling Hills), Route 75 (Green Valley), and Route 79 (Eastlake). The inter-city service is positioned within the South County area and includes Route 69A (Capitola Rd/Watsonville via Airport B), Route 69W (Capitola Rd/Cabrillo/Watsonville), and Route 71 (Santa Cruz/Watsonville). The commuter service (i.e., Route 91X) functions as a link between Santa Cruz and Watsonville. Monterey-Salinas Transit (MST) operates three routes to/in Watsonville (Line 27 Watsonville-Marina, Line 28 Salinas-Watsonville via Castroville, and Line 29 Salinas-Watsonville via Prunedale). All routes terminate at the Watsonville Transit Center where connections can be made to Santa Cruz METRO services.

Transit Study Process

A project initiation meeting was held on March 29, 2011 at the Santa Cruz METRO administrative offices. Topics discussed included the project timeline, data needs, proposed project completion strategy, inclusion of other entities (i.e., local non-profits), and data collection methodologies.

Report Structure

The Watsonville Transit Study report is divided into eight chapters including an Executive Summary. Each chapter provides analysis of findings generated from the specific or individual project component. Chapters include: Executive Summary, Service Evaluation, Demand Analysis, Public Involvement, Ride Check, Public Involvement, Recommendations, Capital and Financial Plans, and Marketing. Presented herein is a summary of each and the associated findings.

A key goal of the Study was to identify strategies for optimizing service within the framework of immediate and near-term budget realities. The [Service Evaluation](#) chapter (Chapter 2) details the performance of those transit services operated by Santa Cruz METRO within Watsonville for the period Fiscal Year (FY) 2009 through FY 2011. The Service Evaluation chapter is divided into three sections. The first is an overview of combined service (i.e., fixed-route and paratransit) metrics, including operating hours and fare structure. The second discusses performance specific to fixed-

route services within Watsonville. The third details the performance of paratransit (ParaCruz) services within the entire Santa Cruz METRO service area (given Watsonville-specific ParaCruz data was unavailable at the time of this study).

Summary Points:

- Exhibit 1.1 presents the combined (fixed-route and paratransit) performance indicators for transit services in Watsonville for FY 2009 through FY 2011.
- Fixed-route ridership increased across the evaluation period by nearly 15,000 unlinked-rides translating to approximately one-percent growth.
- The combined Watsonville services posted an average farebox ratio of 19.9 percent, just shy of the TDA standard of 20 percent for urbanized operators.
- Those fixed-routes with the lowest annual ridership (i.e., below 100,000 unlinked trips) were Routes 79 and 74.
- ParaCruz productivity (Passengers/Vehicle Service Hour) improved from 2.09 to 2.15, although farebox recovery declined from 8.9 percent to 5.5 percent.

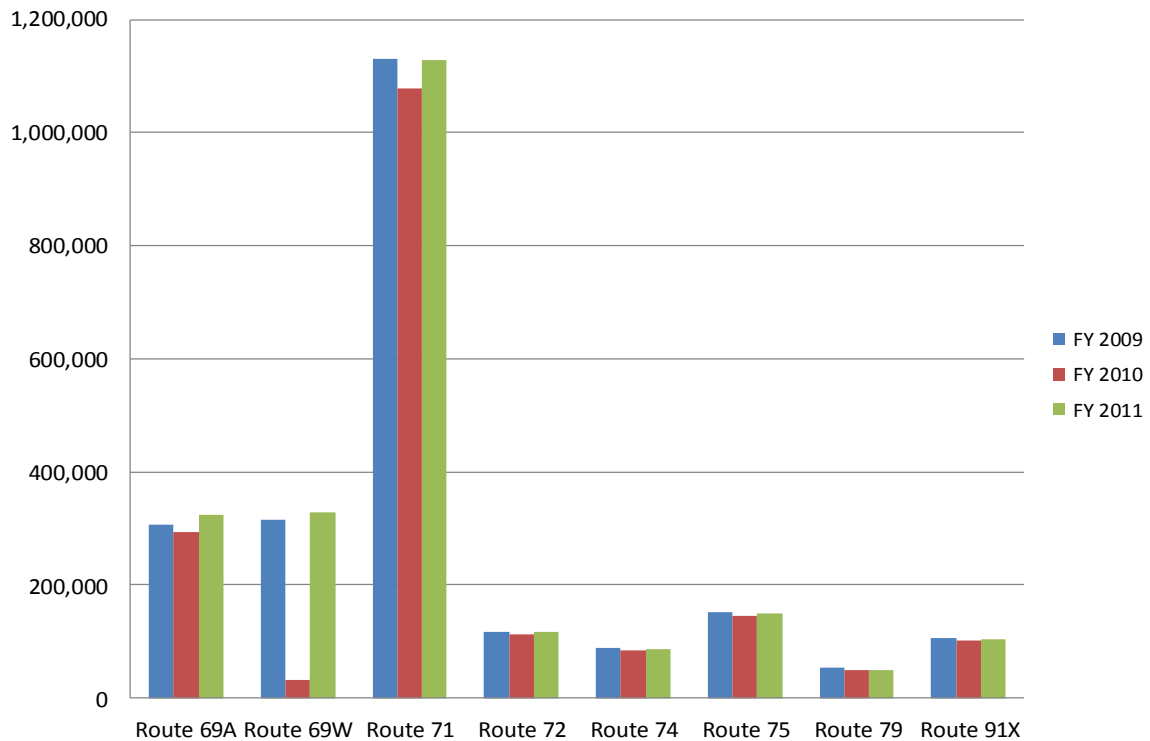
Exhibit 1.1 Combined Performance Indicators

**Performance Measure	**FY 2009	**FY 2010	**FY 2011
Operating Cost	\$14,569,697	\$14,995,663	\$16,251,261
percent change	0.0%	2.9%	8.4%
Fare Revenue	\$3,094,128	\$2,920,178	\$3,102,160
percent change	0.0%	-5.6%	6.2%
Vehicle Service Hours	125,004	124,393	125,318
percent change	0.0%	-0.5%	0.7%
Vehicle Service Miles	1,845,533	1,822,879	1,842,089
percent change	0.0%	-1.2%	1.1%
Ridership	2,365,414	2,274,216	2,381,391
percent change	0.0%	-3.9%	4.7%
Performance Indicator			
Operating Cost/VSH	\$116.55	\$120.55	\$129.68
percent change	0.0%	3.4%	7.6%
Operating Cost/VSM	\$7.89	\$8.23	\$8.82
percent change	0.0%	4.2%	7.2%
Operating Cost/Passenger	\$6.16	\$6.59	\$6.82
percent change	0.0%	7.1%	3.5%
Passengers/VSH	18.92	18.28	19.00
percent change	0.0%	-3.4%	3.9%
Passengers/VSM	1.28	1.25	1.29
percent change	0.0%	-2.7%	3.6%
Farebox Recovery	21.2%	19.5%	19.1%
percent change	0.0%	-8.3%	-2.0%
Fare/Passenger	\$1.31	\$1.28	\$1.30
percent change	0.0%	-1.8%	1.5%

***Data reflects Routes 69A, 69W, 71, 72, 74, 75, 79, 91X, and ParaCruz.*

- Route 71 functions as the “backbone” of transit service to and from Watsonville, accounting for the majority of riders and fare revenue.

Exhibit 1.2 Fixed-Route Ridership by Route



The primary goal of the [Demand Analysis](#) (Chapter 3) was to identify and analyze an array of actual and potential contributors influencing transit demand for residents, workers, and visitors within Watsonville. The analysis considers factors such as transportation options, trip generators, key demographics, economic indicators, recent and proposed land-use changes, and home-to-work travel behavior. The analysis seeks to provide a basis for future service recommendations intended to enhance fixed-route and ParaCruz services throughout the Watsonville community by assessing reported demand and observed mobility trends while also seeking to identify temporal and spatial gaps.

Summary Points:

- The primary transportation corridor through Watsonville is Highway 1.
- The primary transfer point between local, inter-city, and regional transit services operating in Watsonville is the Watsonville Transit Center located at West Lake Boulevard and Rodriguez Street.
- The Atkinson Lane Specific Plan and Manabe-Ow Business Park Specific Plan are projected to result in a substantial increase in residents and jobs within Watsonville.
- Exhibit 1.3 presents transit-dependent population growth projections for Watsonville through 2020.

Exhibit 1.3 Transit-Dependent Population Growth

Population Group	2000		2010		2020 Forecast		Percent Change	
	Number	Share of Population	Number	Share of Population	Number	Share of Population	2000-2010	2010-2020
Youth (ages 6 to 17)	10,937	24.70%	10,298	20.10%	12,025	20.10%	-5.80%	16.80%
Seniors (60 and over)	3,802	8.60%	4,239	8.30%	4,726	7.90%	11.50%	11.50%
Persons with a disabilities*	8,350	18.90%	5,629	12.90%	7,718	17.70%	-32.60%	37.10%
Low-Income Individuals*	8,361	18.90%	9,488	19.20%	11,052	22.40%	13.50%	16.50%
Persons with no vehicle access*	1,184	2.70%	1,124	2.30%	1,376	2.80%	-5.10%	22.40%

*Census 2010 data not available. Data reflects 2007 ACS data (disabilities, total population = 43,725) and 2009 ACS data (low-income, no-vehicle, total population = 49,418). 2020 population based on 1.57 percent increase/year.

Exhibit 1.4 Summary of Watsonville Economic Characteristics

	Percentage Unemployed	Commute			Income				
		Drive Alone	Public Transit	Walked	Median Household Income	Social Security Income	Public Assistance Income	Median Family Income	Per Capita Income
City of Watsonville	10.5%	70.3%	1.2%	4.2%	\$47,526.00	\$12,563.00	\$5,911.00	\$49,458.00	\$16,227.00
Santa Cruz County	7.5%	71.3%	2.9%	4.0%	\$64,349.00	\$14,631.00	\$5,694.00	\$81,709.00	\$33,532.00
California	7.9%	73.0%	5.1%	2.8%	\$60,392.00	\$14,722.00	\$5,455.00	\$68,909.00	\$29,020.00
Nationally	7.2%	75.9%	5.0%	2.9%	\$51,425.00	\$14,966.00	\$3,363.00	\$62,363.00	\$27,041.00

Source: 2009 American Community Survey

The [Ride Check Analysis](#) (Chapter 4) presents a thorough assessment of those transit services operating in Watsonville under actual operating conditions. In doing so, a snapshot results illustrating system activity as well as service quality. Moore & Associates conducted a ride check of trips operated by Santa Cruz METRO along Routes 69A, 69W, 71, 72, 74, 75, 79, and 91X. Ride checks were conducted during the summer season from June 8 to June 13, 2011. Supplemental ride checks were conducted by Santa Cruz METRO staff during fall and winter (October 24 through December 9, 2011) on the same routes as the June 2011 ride check. The fall/winter ride check data and detailed route-by-route assessment are presented in the Appendix.

The [Ride Check Analysis](#) includes two elements: system on-time performance and productivity (i.e., boarding and alighting activity) by stop, route, and day-part. Following a summary of ride check data are key findings as well as recommendations for improvement.

The following criteria were used to evaluate on-time performance:

- **On-time:** defined as trip departure occurring up to five minutes after the published schedule time.
- **Early:** defined as any departure from an established time-point occurring in advance of the published schedule time.

- **Late:** defined as any departure from an established time-point occurring five or more minutes after the published schedule time.
- **Missed:** defined as any departure from an established time-point occurring more than 10 minutes after the published schedule time.

Ride checks were also segregated into specific day-parts and by trip segments. The day-parts are:

- **AM Other** (3:01 a.m. to 6:00 a.m.)
- **AM Peak** (6:01 a.m. to 9:00 a.m.)
- **Midday** (9:01 a.m. to 3:30 p.m.)
- **PM Peak** (3:31 p.m. to 7:00 p.m.)
- **PM Other** (7:01 p.m. to 3:00 a.m.)

Detailed route-by-route performance and graphic representations of boarding and alighting activity for the June 2011 ride checks is presented in Chapter 4.

Summary Points (summer ride checks):

- The most significant issue in terms of on-time performance was the incidence of late departures during the PM day-parts. This suggests inadequate “run time” in the current operating schedule.
- While the incidence of early departures were an issue throughout the operating day for all observed routes it was particularly acute during the *AM Peak* day-part (20.3 percent).
- 17.8 percent of surveyed trips during the *PM Peak* departed early from published time points.

Exhibit 1.5 Overall On-Time Performance by Day-Part

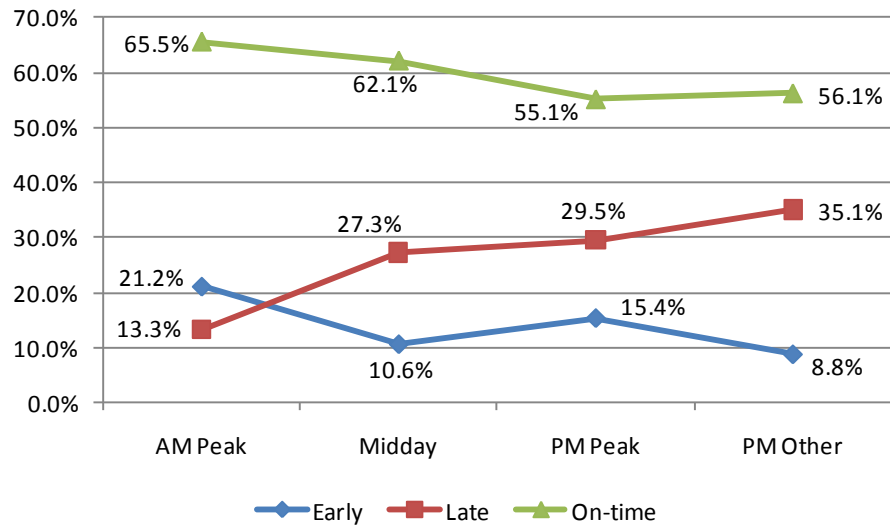


Exhibit 1.6 Overall Boardings by Route and Day-Part

Boarding Averages						
Route	AM Other	AM Peak	Midday	PM Peak	PM Other	Route Average
Route 69A Inbound	-	32.7	37.8	29.8	-	32.9
Route 69A Outbound	-	22.0	30.0	39.3	-	32.2
Route 69W Inbound	-	24.0	39.6	24.0	-	31.8
Route 69W Outbound	-	-	43.7	29.3	20.0	36.9
Route 71 Inbound	-	32.5	46.3	20.3	22.0	36.7
Route 71 Outbound	-	19.3	33.5	31.8	26.3	30.0
Route 72	-	10.0	11.0	15.0	-	11.2
Route 74	-	5.0	15.0	10.7	-	10.3
Route 75	-	14.6	23.3	17.8	8.5	18.0
Route 79	-	2.0	-	9.0	-	5.5
Route 91X Inbound	-	6.0	7.0	-	-	6.5
Route 91X Outbound	-	7.0	-	-	-	7.0
Total	-	19.4	34.8	25.3	19.7	28.0

Exhibit 1.7 Overall Alightings by Route and Day-Part

Alighting Averages						
Route	AM Other	AM Peak	Midday	PM Peak	PM Other	Route Average
Route 69A Inbound	-	29.7	35.3	29.7	-	31.4
Route 69A Outbound	-	22.0	30.6	40.3	-	32.9
Route 69W Inbound	-	24.0	39.6	23.8	-	31.7
Route 69W Outbound	-	-	43.1	32.8	20.0	37.8
Route 71 Inbound	-	32.3	45.9	18.8	17.0	36.0
Route 71 Outbound	-	19.3	33.4	31.0	25.3	29.6
Route 72	-	9.3	11.0	15.0	-	10.8
Route 74	-	5.0	14.0	10.7	-	10.0
Route 75	-	14.6	23.1	17.8	8.0	17.9
Route 79	-	2.0	-	9.0	-	5.5
Route 91X Inbound	-	6.0	7.0	-	-	6.5
Route 91X Outbound	-	9.0	-	-	-	9.0
Total	-	19.1	34.5	25.5	18.4	27.7

Summary Points (fall/winter ride checks):

- The most significant issue in terms of on-time performance was the incidence of late departures during the PM Other day-part (30 percent). This suggests inadequate “run time” in the operating schedule.
- The observance of missed trips resulted in a decrease in overall on-time performance. Missed trips imply severely inadequate “run time” in the operating schedules.
- The incidents of early departures decreased from the summer ride checks. Early departures remain a concern during the AM Other day-part (12.5-percent).
- Exhibit 1.9 presents overall boarding by route and day-part for Fall/Winter 2011 ride checks.

Exhibit 1.8 Overall On-Time Performance by Day-Part

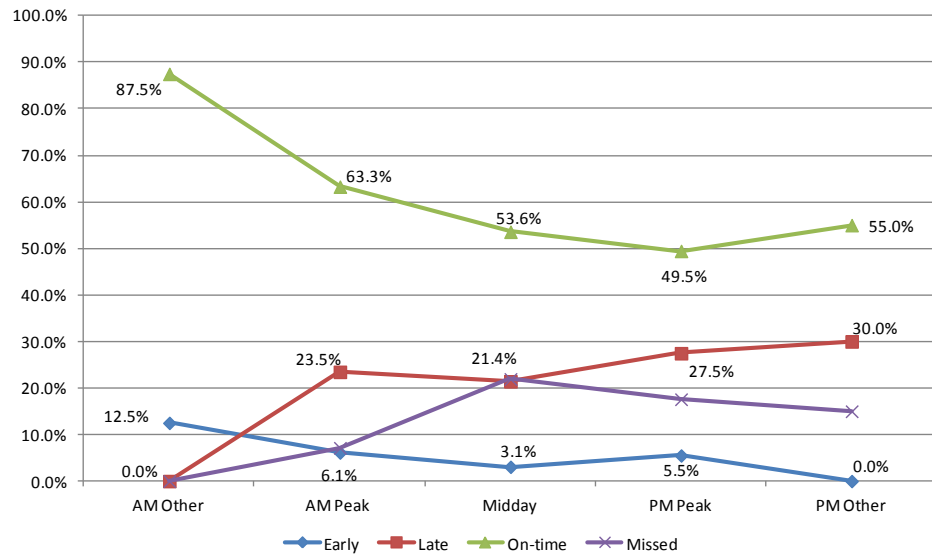


Exhibit 1.9 Overall Boardings by Route and Day-Part

Weekday Boarding Averages						
Route	AM Other	AM Peak	Midday	PM Peak	PM Other	Route Average
Route 69A Inbound	-	32.0	58.0	31.0	-	44.8
Route 69A Outbound	-	-	27.5	-	-	27.5
Route 69W Inbound	-	-	44.0	-	-	44.0
Route 69W Outbound	-	20.0	58.5	-	-	50.8
Route 71 Inbound	-	39.0	55.3	30.5	23.5	37.5
Route 71 Outbound	-	24.0	41.0	21.0	-	32.5
Route 72	5.0	22.0	20.5	14.5	-	16.2
Route 74	-	18.0	8.3	11.0	-	12.0
Route 75	-	15.0	20.3	34.5	-	21.5
Route 79	-	10.5	9.8	8.0	-	9.8
Route 91X Inbound	-	10.0	12.0	1.0	-	6.0
Route 91X Outbound	-	20.0	12.0	-	-	17.3
Total	5.0	20.7	30.9	20.9	23.5	25.9

The most successful transit plans include active community involvement. To encourage public involvement the project plan included a bilingual community survey and six community workshops within Watsonville.

Public Involvement (Chapter 5): Outreach efforts focused on soliciting feedback from riders and non-riders alike regarding perception of current transit offerings throughout the study area. The community survey had three objectives: identify and quantify mobility needs, gauge perception of existing services, and identify opportunities for attracting “choice riders”. The approach quantified travel patterns, identified barriers to use of transit, and identified mobility preferences of persons residing within the study area who had not patronized public transit within 90 days of the survey contact.

Summary Points:

- A community survey was employed using two distinct methodologies: intercept survey throughout Watsonville, and onboard survey for those Santa Cruz METRO fixed-routes serving Watsonville.
- 354 surveys were collected, reflecting a statistically-valid sample size (95-percent confidence level).
- 38.7 percent of respondents stated they live in a household with an annual income of less than \$35,000, which suggests potential sensitivity to fare increases.
- 37.9 percent indicated speaking a language other than English (primarily Spanish) at home.
- 24 percent indicated they were employed. Of these, more than 80 percent stated they work in Watsonville or adjoining areas.
- 35 percent of respondents indicated they had a difficult time accessing healthcare and employment due to the absence of affordable transportation.
- Generally, riders were satisfied with all six service attributes. Riders were particularly satisfied with the safety of transit service in Watsonville.
- “Having access to a personal vehicle” is the greatest barrier to transit usage (cited by 58 percent of total respondents).
- There is little consensus amongst rider groups regarding preferred service enhancement.
- More than 52 percent cited they would not support any fare increase, even if it would result in the desired service enhancement. More than 70 percent of non-riders indicated they would not support any fare increase.

To achieve effective outreach with the community at-large, Moore & Associates facilitated six focus groups between July 20 and August 24, 2011. Exhibit 1.10 presents the location and attendance at each session.

Exhibit 1.10 Focus Groups

Location	Attendance
La Manzana Community Resource Center (Focus Group 1)	25
La Manzana Community Resource Center (Focus Group 2)	13
Watsonville Senior Center (Focus Group 1)	25
Watsonville Senior Center (Focus Group 2)	21
Volunteer Center - Friends Outside (Focus Group 1)	15
Volunteer Center - Community Connection (Focus Group 2)	18

Focus group comments were segregated into the following four categories: new/additional service area(s), enhancements to existing service, capital/technology, and policy.

- New areas where service was requested included the county jail off Buena Vista, county employment offices, and Santa Cruz public beaches.
- Requested enhancements to existing services included more frequency to local businesses (groceries, hardware), extended evening service hours on local routes, and additional service to healthcare centers.
- Capital and technology requests included additional bicycle capacity, internet service on vehicles, and additional infrastructure (bus shelters and benches) along current alignments.
- Policy enhancements requested included easing the bus transfer process for customers, increased availability of bus passes, enhanced distribution of service information to local schools, reduction in fares, and additional multi-use pass options.

The [Recommendations](#) chapter (Chapter 6) presents a "roadmap" for the continuing enhancement of Santa Cruz METRO services within Watsonville across the study horizon. The recommendations reflect the findings presented within the Service Evaluation, Demand Analysis, Ride Check, and Public Involvement chapters specific to current service offerings.

The consultant's recommendations are segregated into distinct program segments:

- Administrative,
- Capital, and
- Operational.

Administrative recommendations include:

- Santa Cruz METRO staff should actively participate in driver training and safety meetings.
- Marketing within Watsonville should focus on direct outreach to the community versus traditional/historic marketing methods.

- Focus on increasing ridership versus modifying fare structures.
- Consider “uncoupling” the interlined routes to enhance system flexibility resulting in improved on-time performance.

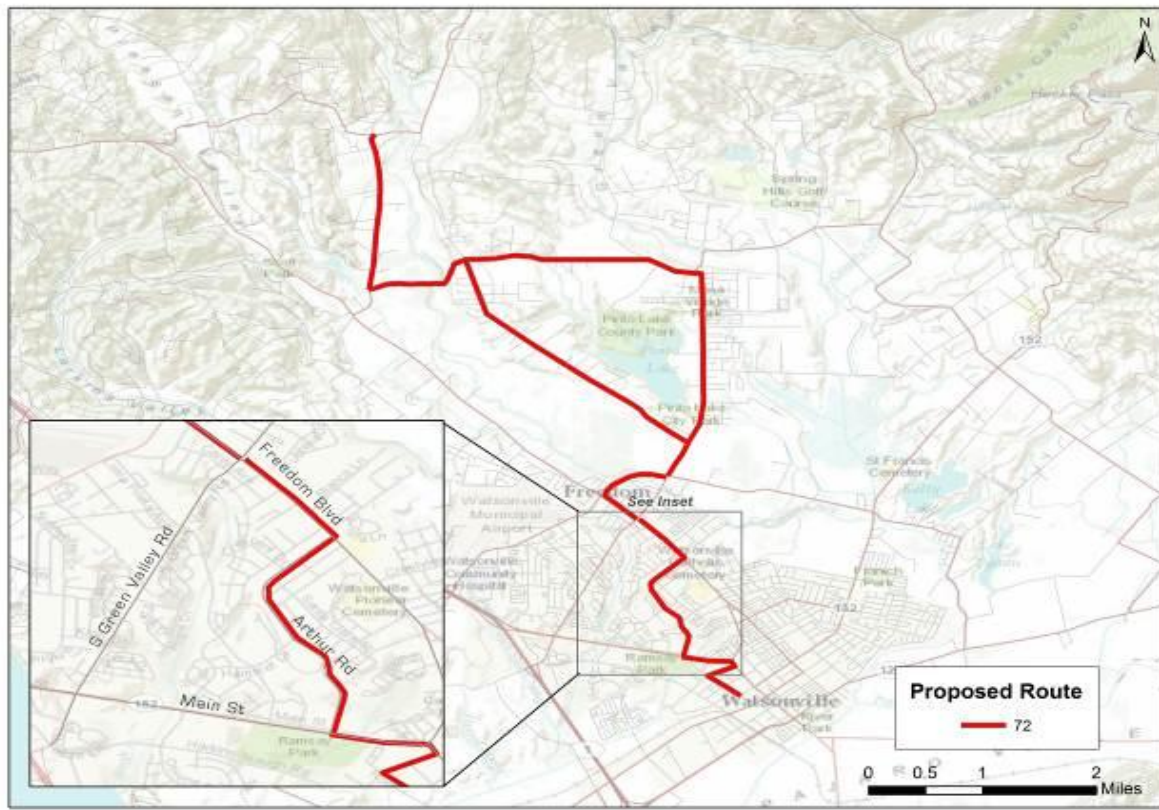
Capital recommendations include:

- Identify funding for internet access onboard vehicles.
- Bicycle capacity should be a consideration when procuring new service vehicles.
- Involve the community directly with regard to the enhancement and development of new infrastructure projects. Can be accomplished as part of recurring public hearings such as the annual TDA Article 8 “Unmet Needs” public hearings.

Operational recommendations include:

- System shakeups (schedule modifications) should be limited to twice annually to reduce customer confusion and increase confidence in the schedules.
- Route nomenclature should be revised to reduce confusion and redundancy. For example, renaming Routes 69A and 69W to unique identifiers such as Route 68 and Route 69.
- Maintain regular communication and coordination with regional operators, in particular Monterey-Salinas Transit, to streamline regional travel for transit riders.
- Increase run time for Routes 69A and 69W to improve on-time performance.
- Eliminate or revise unproductive trips on Route 71.
- Increase run time on Route 71 to improve on-time performance.
- Introduce a new limited-stop express route (Route 71X) to address vehicle crowding.
- Extend Route 91X service span into the early evening by adding another outbound trip to Watsonville.
- Increase run time on Route 74 to improve on-time performance.
- Increase run time (trip mid-segment) on Route 79 to improve on-time performance.
- Reduce alignment duplication on Routes 72 and 75 by modifying the current Route 72 alignment so as to travel along a different path (Exhibit 1.11).

Exhibit 1.11 Revised Route 72 Alignment



In addition to presenting service and policy recommendations, the Study includes [Capital and Financial Plans](#) (Chapter 7) forecasting fiscal impact across a twenty-year horizon. The Capital Plan presents a framework for the ongoing development of the infrastructure needed to support the efficient provision of public transit service throughout the Study area focusing on transit fleet and facilities. The Financial Plan identifies those expenditures needed to implement the recommendations included within the operational recommendations within [Recommendations](#) (Chapter 6).

The [Marketing](#) chapter (Chapter 8) presents marketing tactics intended to support implementation of the service/operational recommendations presented in the Recommendations chapter. The marketing strategies focus on short and mid-range recommendations (a 12- to 18-month horizon). Three primary strategies are identified:

- Service information,
- Online resources, and
- Service marketing.

Each of the strategies presents specific and detailed suggestions for achieving the Study goals of improving mobility for persons residing and working in Watsonville, while also ensuring reasonable access to public transit.

2

SERVICE EVALUATION

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CHAPTER 2 – SERVICE EVALUATION

Watsonville is served by two transportation providers: Santa Cruz Metropolitan Transit (Santa Cruz METRO) and Monterey-Salinas Transit (MST). Over the last three years, Santa Cruz METRO services operating to and within Watsonville averaged more than two million unlinked trips annually. However, year-to-year tallies reveal a fluctuation in ridership, with a decline in FY 2010 attributable to service adjustments to the overall system, population change, and shifts in transit demand due chiefly to the economic downturn. In contrast, MST continues to enjoy steady ridership on its three Watsonville routes (Lines 27, 28, and 29), which offer connections with Santa Cruz METRO at the Watsonville Transit Center.

Eight Santa Cruz METRO routes operate within the city of Watsonville, including four intra-city routes, three inter-city routes, and a commuter express route. Local routes include Route 72 (Corralitos), Route 74 (Ohlone Parkway/Rolling Hills), Route 75 (Green Valley), and Route 79 (Eastlake). The inter-city service is positioned within the South County area and includes Route 69A (Capitola Rd/Watsonville via Airport B), Route 69W (Capitola Rd/Cabrillo/Watsonville), and Route 71 (Santa Cruz/Watsonville). The commuter service (i.e., Route 91X) functions as a link between Santa Cruz and Watsonville.

Monterey-Salinas Transit (MST) operates three routes to/in Watsonville (Line 27 Watsonville-Marina, Line 28 Salinas-Watsonville via Castroville, and Line 29 Salinas-Watsonville via Prunedale). All routes terminate at the Watsonville Transit Center where connections can be made with Santa Cruz METRO services. At the time of this report, Line 26 Watsonville-Aromas had been discontinued. Therefore, discussion of this route is not included in our report. The consultant team contacted MST staff and discussed near-term plans for MST services to Watsonville. MST plans to reduce service to Watsonville by nearly 50 percent as early as April 2012. Planned reductions include modifying MST Routes 28 and 29 to 120-minute headways (versus current 60-minute headways). These planned reductions will also impact the nearby community of Pajaro as MST provided the only direct link from Pajaro to the Watsonville Transit Center. Connections between Santa Cruz METRO and MST services are now even more important to regional travel due to planned decrease in service.

Objectives of Evaluation

The cornerstone objectives of this chapter are: (1) evaluate aspects of Santa Cruz METRO's operations (both internal and external) impacting the day-to-day delivery of public transit services operating within the city of Watsonville, and (2) present cost-effective strategies and recommendations for achieving a higher quality of service. Our analysis includes operational, maintenance, and administrative elements.

Evaluation Approach

Throughout the course of this project, Moore & Associates met with Santa Cruz METRO staff to establish project priorities, deliverables, and data collection methodologies. Additionally, our project team coordinated with Santa Cruz METRO staff with respect to report writing responsibilities and individual project tasks. With the assistance of Santa Cruz METRO staff, we employed strategies for soliciting community input (i.e., community intercept survey), compiled performance and service activity data for Santa Cruz METRO Watsonville services (i.e., ride checks), and solicited community participation through focus groups and stakeholder meetings.

Santa Cruz Metropolitan Transit District Overview

The Santa Cruz Metropolitan Transit District (Santa Cruz METRO) was formed in 1968 as a special district within Santa Cruz County. Its initial services operated within the cities of Santa Cruz and Capitola, and the community of Live Oak. In 1974, Santa Cruz METRO expanded its service area to include Watsonville, Scotts Valley, and the San Lorenzo Valley. Currently, eight of its 34 fixed-route alignments (including the 91X Commuter Express) operate within the city of Watsonville and provide connections with Monterey-Salinas Transit (MST) at the Watsonville Transit Center. In addition to fixed-route service, Santa Cruz METRO ParaCruz provides a county-wide paratransit program which includes ADA complementary service for eligible Watsonville residents.

Fixed-route operating schedules may vary slightly in transit times depending on the season. Santa Cruz METRO updates its transit services quarterly and some schedules or hours of operation detailed below may change subsequent to the adoption of this report.

Santa Cruz METRO's Mission Statement

To provide a public transportation service that enhances personal mobility and creates a sustainable transportation option in Santa Cruz County through a cost-effective, reliable, accessible, safe, clean and courteous transit service.

Inter-City Fixed-Route Alignments

The following narrative describes Santa Cruz METRO fixed-route, commuter, and impacted ParaCruz services operating within the city of Watsonville. Historically Santa Cruz METRO has made quarterly updates to its published schedule resulting in potential variances in hours of operation presented within this report. For purposes of this report, the transit schedule presented herein is reflective of the published schedule in effect September 15, 2011 to January 4, 2012. Several routes were discontinued in 2011 due chiefly to funding shortfall.

Route 69A (Capitola Rd./Watsonville via Airport B) provides inbound/outbound service between Santa Cruz and Watsonville. It operates along Capitola Road in Santa Cruz, traveling to Watsonville on Highway 1 and Freedom Blvd. in Watsonville. Inbound service runs hourly from 6:45 a.m. to 7:48

p.m. weekdays, and every two hours from 8:20 a.m. to 6:20 p.m. on weekends. Outbound weekday service operates hourly between 7:07 a.m. and 7:10 p.m., and on weekends every other hour from 9:00 a.m. to 8:03 p.m. Origin and terminus points are the Watsonville Transit Center and Santa Cruz METRO Center.

Similar to the Route 69A alignment, [Route 69W \(Capitola Rd./Cabrillo/Watsonville\)](#) provides inbound/outbound service linkage Santa Cruz and Watsonville. However, this alignment differs slightly as it runs along Soquel Drive in Santa Cruz and onto Main Street rather than Freedom Blvd. in Watsonville. Outbound service is offered hourly from 6:37 a.m. to 7:37 p.m. on weekdays, and every two hours from 8:20 a.m. to 7:18 p.m. on weekends. Inbound service runs hourly from 6:20 a.m. to 7:18 p.m. on weekdays and every two hours between 7:20 a.m. and 6:25 p.m. on weekends. The route functions as a limited express between Watsonville Transit Center and Cabrillo College serving all published time-points as well as the following stops: Rodriguez & Main, Main & Pennsylvania, Main & Clifford, and Soquel & State Park. All posted stops are served between the Santa Cruz METRO Center and Cabrillo College.

[Route 71 \(Santa Cruz/Watsonville\)](#) runs on 30-minute headways between the Santa Cruz METRO Station and Watsonville Transit Center. Service is provided daily, with reduced service on weekends (Saturday and Sunday). Outbound service operates every half hour from 6:10 a.m. to 9:45 p.m. on weekdays, with hour frequency between 9:45 p.m. and 12:45 a.m. Outbound weekend service operates on a similar schedule, every half hour from 7:15 a.m. to 9:45 p.m., and hourly from 9:45 p.m. to 12:45 a.m. The first trip on the inbound weekday service begins at 5:35 a.m., with the last trip ending at 11:50 p.m. Frequencies vary from 20-minute to 30-minute headways. Inbound weekend service operates between 6:05 a.m. and 10:30 p.m. At the time of this report, four weekday trips had been eliminated from the schedule (6:55 a.m., 3:55 p.m., 4:25 p.m., and 9:00 p.m.), trip start-time changed from 10:30 p.m. to 10:50 p.m., and weekend service offered one less trip (9:00 p.m.).

Local Fixed-Route Alignments

The [Route 72 \(Corralitos\)](#) alignment runs from the Watsonville Transit Center traveling north to Browns Valley and Corralitos. The alignment starts along Main Street where it heads up Green Valley Rd. before turning onto on Airport Blvd. and then back to Green Valley Rd. The alignment then travels northbound along Arnesti Rd. and then out to Corralitos and on a clockwise loop back onto Green Valley Rd. before returning back to the Watsonville Transit Center. Hours of operation are 5:50 a.m. to 7:48 p.m. The Fall 2011 schedule shake-up modified schedule times so as to depart 50 minutes after the hour, and then hourly from 5:50 a.m. to 5:50 p.m. (with an additional 6:50 p.m. trip).

[Route 74 \(Ohlone Parkway/Rolling Hills\)](#) offers service to/from the Watsonville Transit Center between Ohlone Parkway and Rolling Hills. The alignment travels in a “figure 8” fashion heading northbound to the Watsonville Municipal Airport. Running on a clockwise loop along Anna Street it

then travels counterclockwise along Buena Vista before heading toward Airport Blvd. The route stops at Pajaro Valley High School before continuing back to its origin point at the Watsonville Transit Center. Service operates weekdays from 6:50 a.m. to 5:40 p.m. At the time of this report, Santa Cruz METRO adapted to a 120-minute frequency between 6:50 a.m. and 4:50 p.m., with an added stop at the Social Security office (12:50 p.m. and 4:50 p.m. trips). A schedule adjustment was also made on the 2:50 p.m. trip, serving Pajaro Valley High School at the end of the trip to address the school afternoon bell schedule.

Route 75 (Green Valley) provides service between the Watsonville Transit Center and as far north as Wheelock and Monte Vista School. This route travels northbound from the Transit Center proceeding onto Green Valley Road, detouring slightly onto Airport Blvd, where it continues onto Green Valley Road. The route path then continues onto Wheelock Road where it travels counterclockwise before returning to its point of origin. Service is provided seven days a week, between 6:09 a.m. and 7:57 p.m. At the time of this report, the 8:09 p.m. trip had been eliminated as part of Santa Cruz METRO's quarterly service shake-up.

Route 79's (East Lake) alignment extends up College Drive, proceeding to Bridge Street as it heads south to its origin/terminus point, at the Watsonville Transit Center. The service operates Monday through Friday from 7:10 a.m. to 5:35 p.m. on a 60-minute headway.

Route 91X (Santa Cruz to Watsonville) runs on a southeast/northwest axis with inbound/outbound express service between the Santa Cruz METRO Center and Watsonville Transit Center. Originating at the Santa Cruz METRO Center, the alignment travels along Water Street for a short stretch before proceeding for the lion's share part of the route along Cabrillo Highway. Transitioning onto Soquel Drive the route continues back onto Cabrillo Highway until Main Street, where it terminates at the Watsonville Transit Center. The outbound express bus operates morning and evening peak-hour periods (6:35 a.m. to 9:12 a.m., and 3:30 p.m. to 5:25 p.m.) on weekdays. Inbound service runs between 5:55 a.m. and 10:19 a.m., and again between 4:30 p.m. to 6:19 p.m. during evening peak-hours.

Exhibit 2.1 Santa Cruz METRO Service Span

Fall 2011 Schedule			Headways	
Fixed-Routes	Weekday (Monday - Friday)	Weekend (Saturday & Sunday)	Weekday	Weekend
Route 69A Inbound	6:45 a.m. to 7:48 p.m.	8:20 a.m. to 6:20 p.m.	60-minute	120-minute
Route 69A Outbound	7:07 a.m. to 7:10 p.m.	9:00 a.m. to 8:03 p.m.	60-minute	120-minute
Route 69W Inbound	6:20 a.m. to 7:18 p.m.	7:20 a.m. to 6:25 p.m.	60-minute	120-minute
Route 69W Outbound	6:37 a.m. to 7:37 p.m.	8:20 a.m. to 7:18 p.m.	60-minute	120-minute
Route 71 Inbound	5:35 a.m. to 11:50 p.m.	6:05 a.m. to 10:30 p.m.	30-minute	30-minute
Route 71 Outbound	6:10 a.m. to 12:45 a.m.	7:15 a.m. to 12:45 a.m.	30-minute	30-minute
Route 72	5:50 a.m. to 7:48 p.m.	-	120-minute; 60-minute ¹	120-minute
Route 74	6:50 a.m. to 5:40 p.m.	-	120-minute	120-minute
Route 75	6:09 a.m. to 7:57 p.m.	6:09 a.m. to 7:57 p.m.	60-minute	60-minute
Route 79	7:10 a.m. 5:35 p.m.	-	60-minute	-
Route 91X Inbound	5:55 a.m. to 10:19 p.m., 4:30 p.m. to 6:19 p.m.		55-minute; 65-minute; 60-minute ²	-
Route 91X Outbound	6:35 a.m. to 9:12 a.m., 3:30 p.m. to 5:35 p.m.		60-minute	-

60-minute headway reflects last trip of the day. ¹ Frequency varies by time of day. ²

Santa Cruz METRO Fixed-Route Fare Structure

Patrons may travel on Santa Cruz METRO's fixed-route service using one of six possible fare options (i.e., cash, day pass, 3-day pass, 7-day pass, 31-day pass, and 15-ride pass). Patrons riding the Amtrak Highway 17 Express route are required to pay an additional fare for travel between Santa Cruz and San Jose. Children measuring 46 inches or less in height are eligible to ride free on any Santa Cruz METRO fixed-route bus. A limit of three children may ride free with each fare-paying adult. Discounted fares are available for adults (age 62 or older) and persons with disabilities subject to presentation of one of the following METRO-approved identity cards.

Elderly Patrons

- METRO Discount photo identity card,
- METRO ParaCruz identity card,
- Discount photo identity card/Paratransit identity card issued by a recognized transit agency,
- Senior citizen identity card,
- Identification displaying date of birth (i.e., passports and/or birth certificates), and
- Valid State driver license or valid State identity card.

Persons with disabilities:

- METRO Discount photo identity card,
- METRO ParaCruz identity card,
- Discount photo identity card/Paratransit identity card issued by a recognized transit agency,
- Medicare identity card,
- Valid identity card for a California Disabled Person parking placard,
- Disabled Veteran identity card, and
- Children accompanying a parent with a disability may also ride at the discounted fare.

The METRO CASH Card (stored value) does not expire and is available in \$10, \$20, \$30, and \$50 denominations. METRO day passes provide unlimited rides in Santa Cruz County (except on Amtrak Highway 17). Patrons may receive additional discounts at the time of purchase of an Amtrak Highway 17 Express day pass when exchanging their METRO discount day pass, METRO day pass, Regular Santa Clara VTA day pass, or displaying their Clipper card and receipt for CalTrain monthly 2-zone pass or VTA Express pass. Amtrak Highway 17 Express Passes are valid for unlimited rides on all METRO and VTA local routes. Patrons may obtain transfer passes valid for travel on Monterey Salinas Transit services onboard Watsonville Routes 71-79.

At the time of this report, Santa Cruz METRO had implemented a fare increase across all fixed-routes. New fares took effect September 2011 and are reflected in the fare table below.

Exhibit 2.2 Santa Cruz METRO Fixed-Route Fare Structure

METRO Fixed-Route	Child (less than 46 inches tall)		Youth (up to 17)		Adult (18 and older)		Discount Fare	
	Current	New	Current	New	Current	New	Current	New
Regular Service in Santa Cruz County								
Cash	Free	Free	\$1.50	\$2.00	\$1.50	\$2.00	\$0.75	\$1.00
Percent Change				33.3%		33.3%		33.3%
Day Pass	N/A	N/A	\$4.50	\$6.00	\$4.50	\$6.00	\$2.25	\$3.00
Percent Change				33.3%		33.3%		33.3%
3-Day Pass	N/A	N/A	\$15.00	\$15.00	\$15.00	\$15.00	\$7.50	\$7.50
Percent Change				0.0%		0.0%		0.0%
7-Day Pass	N/A	N/A	\$32.00	\$32.00	\$32.00	\$32.00	\$16.00	\$16.00
Percent Change				0.0%		0.0%		0.0%
31-Day Pass	N/A	N/A	\$35.00	\$48.00	\$50.00	\$65.00	\$25.00	\$32.00
Percent Change				37.1%		30.0%		28.0%
15-Ride Pass	N/A	N/A	\$27.00	\$27.00	\$27.00	\$27.00	\$13.50	\$13.50
Percent Change				0.0%		0.0%		0.0%
Amtrak Highway 17 Express								
Cash	Free	Free	\$5.00	\$5.00	\$5.00	\$5.00	\$2.50	\$2.50
Percent Change				0.0%		0.0%		0.0%
Day Pass	N/A	N/A	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Percent Change				0.0%		0.0%		0.0%
5-Day Pass	N/A	N/A	\$42.00	\$42.00	\$42.00	\$42.00	\$42.00	\$42.00
Percent Change				0.0%		0.0%		0.0%
31-Day Pass	N/A	N/A	\$113.00	\$113.00	\$113.00	\$113.00	\$113.00	\$113.00
Percent Change				0.0%		0.0%		0.0%
ParaCruz Fare (One Way)								
	One Way Fare							
Cash	\$3.00	\$4.00						
Percent Change								

* Commuter Express fares are the same as fixed-route fares.

Paratransit Program

Santa Cruz METRO operates METRO ParaCruz, an eligibility-based, door-to-door, ADA complementary paratransit service for persons with temporary or permanent physical, cognitive, or psychiatric disabilities limiting their use of regular fixed-route transit service. Hours of operation supplement Santa Cruz METRO's fixed-route hours with additional evening service corresponding with later evening fixed-route service. Service is provided throughout Santa Cruz County to locations within three-quarters of a mile of a fixed-route alignment. The service operates on a limited basis during summer months reflective of Route 33 and 34 operating times. Eligible patrons must make reservations at least one day in advance of the scheduled pick-up or drop-off, between 8:00 a.m. and 5:00 p.m. Persons interested in participating in the program must submit an application and complete an in-person interview to determine eligibility. Patrons can ride ParaCruz for \$4.00 (one-way). Payment options include cash or a pre-paid coupon valid for a single direction one-way trip. The coupon can be purchased from the driver, online, or at the Santa Cruz METRO Center information booth.

Monterey Salinas Transit Fixed-Route Services (Watsonville Routes)

[Line 27 \(Watsonville-Marina\)](#) offers weekday service between the Marina Transit Exchange and Watsonville Transit Center. Service operates every 120-minutes between 6:10 a.m. and 8:09 p.m. Trips originate at Watsonville Transit Center traveling along Riverside onto Merritt Street. It then travels along Castroville Blvd to Moro Cojo Esperanza and Vista De Tierra, proceeding onto Del Monte Avenue before reaching the Marina Transit Exchange. Returning north it operates on the same alignment terminating at the Watsonville Transit Center.

[Line 28 \(Salinas-Watsonville via Castroville\)](#) provides round trip service between the Watsonville Transit Center and Salinas Transit Center. Hourly service is offered Monday through Saturday from 6:00 a.m. to 10:40 p.m., and Sunday from 6:45 a.m. to 6:40 p.m. Trips originate at the Watsonville Transit Center running along State Highway 1 en route to/from the Salinas Transit Center. Line 28 also runs through Castroville, stopping at Merritt and Union for connections with MST Line 27.

[Line 29 \(Salinas-Watsonville via Prunedale\)](#) provides daily round trips between the Watsonville Transit Center and Salinas Transit Center. Unlike Line 28, Line 29 travels along Salinas Rd. from Watsonville, heading south onto San Miguel Canyon Rd as it passes through Prunedale. The alignment then travels along Highway 101, then onto North Main Street where it loops at the Salinas Transit Center as it travels north to its origin point, the Watsonville Transit Center. Line 29 operates on a 60-minute headway from 6:30 a.m. to 7:35 p.m., Monday through Saturday; and from 6:45 a.m. to 7:55 p.m. on Sunday.

Combined Performance Indicators (Watsonville-Specific Services)

This section analyzes the combined performance of these services operating within Watsonville using a series of quantitative criteria to assess service and efficiency. The performance indicators were evaluated across a three-year period. The analysis reflects performance of eight Santa Cruz METRO fixed-route local and inter-city services as well as ParaCruz, Santa Cruz METRO's county-wide ADA-complementary paratransit program. ParaCruz performance data reflects county-wide performance and is not limited to Watsonville services only.

Fare revenue, ridership, and operating cost for fixed-route services were calculated using Santa Cruz METRO system fixed-route performance indicators (i.e., Operating Cost/VSH, Passengers/VSH, and Fare/Passengers) as route-specific data for the abovementioned measures were not available at the time of this report. Following Exhibit 2.4 are illustrations of each performance indicator as well as a discussion of perceived trends.

Exhibit 2.3 Combined Performance Indicators

**Performance Measure	**FY 2009	**FY 2010	**FY 2011
Operating Cost	\$14,569,697	\$14,995,663	\$16,251,261
percent change	0.0%	2.9%	8.4%
Fare Revenue	\$3,094,128	\$2,920,178	\$3,102,160
percent change	0.0%	-5.6%	6.2%
Vehicle Service Hours	125,004	124,393	125,318
percent change	0.0%	-0.5%	0.7%
Vehicle Service Miles	1,845,533	1,822,879	1,842,089
percent change	0.0%	-1.2%	1.1%
Ridership	2,365,414	2,274,216	2,381,391
percent change	0.0%	-3.9%	4.7%
Performance Indicator			
Operating Cost/VSH	\$116.55	\$120.55	\$129.68
percent change	0.0%	3.4%	7.6%
Operating Cost/VSM	\$7.89	\$8.23	\$8.82
percent change	0.0%	4.2%	7.2%
Operating Cost/Passenger	\$6.16	\$6.59	\$6.82
percent change	0.0%	7.1%	3.5%
Passengers/VSH	18.92	18.28	19.00
percent change	0.0%	-3.4%	3.9%
Passengers/VSM	1.28	1.25	1.29
percent change	0.0%	-2.7%	3.6%
Farebox Recovery	21.2%	19.5%	19.1%
percent change	0.0%	-8.3%	-2.0%
Fare/Passenger	\$1.31	\$1.28	\$1.30
percent change	0.0%	-1.8%	1.5%

**Data reflects Watsonville-bound Routes 69A, 69W, 71, 72, 74, 75, 79, 91X and ParaCruz.

Combined Ridership (Exhibit 2.4)

Exhibit 2.4 illustrates the combined ridership for Santa Cruz METRO Routes 69A, 71, 72, 74, 75, 79, 91X, and ParaCruz. As shown, ridership declined nearly four percent in FY 2010. We believe this can likely be attributed to the economic recession. Though officially ended in June 2009, economic recovery has been slow. The Department of Labor reports a county unemployment rate of 10.6 percent as of December 2011, down from 13.7 percent in 2009. This downturn resulted in an erosion in transit use due to fewer commuters and limited household income translating into declines in fare revenue and ridership during FY 2010. Ridership rebounded in FY 2011 despite continued economic difficulties.

Combined Passengers/Vehicle Service Hour (Exhibit 2.5)

Passenger/Vehicle Service Hour illustrates the productivity level and efficiency of a transit program during revenue generating hours of operation. This metric quantifies the number of rides provided during each revenue or service hour.

Relative to overall ridership trends, Passengers/Vehicle Service Hour dropped four percent in FY 2010 resulting from increases in Vehicle Service Hours when fewer passengers were transported per single revenue hour. Passengers/VSH increased a modest 0.4 percent across the three-year period from FY 2009. Again, we believe this can be attributed to declines in ridership occurring in FY 2010 associated with the economic recession.

Combined Passengers/Vehicle Service Mile (Exhibit 2.6)

Similar to the above metric, the Operating Cost/VSH measures the cost of providing a single mile of revenue service. This metric is also used to help evaluate a transit service's cost-effectiveness.

Passengers/Vehicle Service Mile mirrored Passengers/Vehicle Service Hour trends, revealing a slight dip in FY 2010. When examining the service modes separately, in FY 2010 the ParaCruz program increased in passengers transported and Vehicle Service Miles, while the fixed-route posted a Vehicle Service Mile increased and ridership loss. Given ParaCruz is an eligibility-based service (i.e., persons with disabilities) it is likely the customer base and associated demand would remain stable.

Combined Operating Cost/Vehicle Service Hour (Exhibit 2.7)

Operating Cost/VSH illustrates the cost incurred by a transit operator for the provision of a single hour of revenue service.

Operating Cost/VSH steadily rose throughout the evaluation period, with an eight-percent jump in FY 2011. This dramatic increase is likely attributable to operating cost escalating at a rate higher than the number of Vehicle Service Hours traveled. During our evaluation period, Santa Cruz METRO discontinued underperforming fixed-route services and modified schedules (as it does seasonally). These service changes resulted in a reduction in total VSH. For Watsonville routes this translated to a 0.7 percent increase in VSH between FY 2010 and FY 2011. Additionally, overtime claims by drivers rose during this time period, adding to the Combined Operating Cost.

[Combined Operating Cost/Vehicle Service Mile \(Exhibit 2.8\)](#)

This metric assesses cost-effectiveness of operating a transit service by calculating the total cost expended to operate a single mile of revenue service.

Similar to the Operating Cost/Vehicle Service Hour trend, combined Operating Cost/Vehicle Service Miles increased due to growth in this metric for ParaCruz services. Santa Cruz METRO experienced a greater than 14-percent increase in Operating Costs, although VSM and Ridership increased modestly across the last fiscal year.

[Combined Operating Cost/Passenger \(Exhibit 2.9\)](#)

Another yardstick of cost-effectiveness, Cost/Passenger illustrates the amount Santa Cruz METRO spends on system-wide for a single unlinked trip.

As Operating Costs increased so did this performance metric. Santa Cruz METRO spent nearly \$7.00/Passenger for services to/from Watsonville. The ParaCruz service cost alone increased 14 percent in FY 2011 to \$47.00/Passenger, while fixed-route service inched up one percent. This high cost per passenger is reflective of high operating costs for both services, especially the paratransit program.

[Combined Farebox Recovery Ratio \(Exhibit 2.10\)](#)

Farebox Recovery Ratio calculates the percentage of operating cost recovered through passenger fares. It is the most common measure of public subsidy of a transit service.

Across the evaluation period, Farebox Recovery declined from 21.2 percent (in FY 2009) to 19.1 percent (in FY 2011). Based on California Transportation Development Act standards, Santa Cruz METRO should maintain a 20-percent standard for combined fixed-route and paratransit services. Although Santa Cruz METRO has achieved this standard, attention is fixed on the decline witnessed throughout the evaluation period. Continued monitoring is warranted regarding Watsonville service to ensure operating cost does not outpace fare revenue. A continued lower farebox recovery (beyond the evaluation period) may warrant a fare increase or further service modifications.

[Combined Fare/Passenger \(Exhibit 2.11\)](#)

This metric calculates the average fare paid by each passenger (unlinked trip) on Santa Cruz METRO. Fare/Passenger averaged \$1.30 across the evaluation period, with a modest decrease in FY 2010 attributable to declines in Ridership and Fare Revenue.

Exhibit 2.4 Combined Ridership

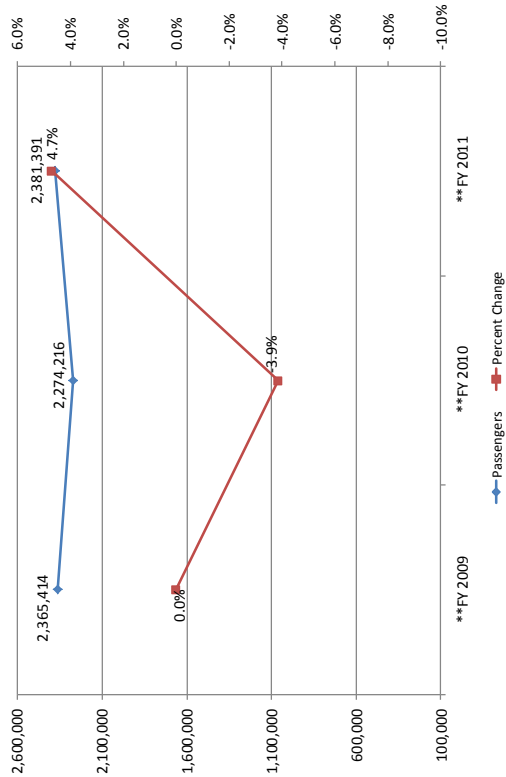


Exhibit 2.5 Combined Passenger/VSH

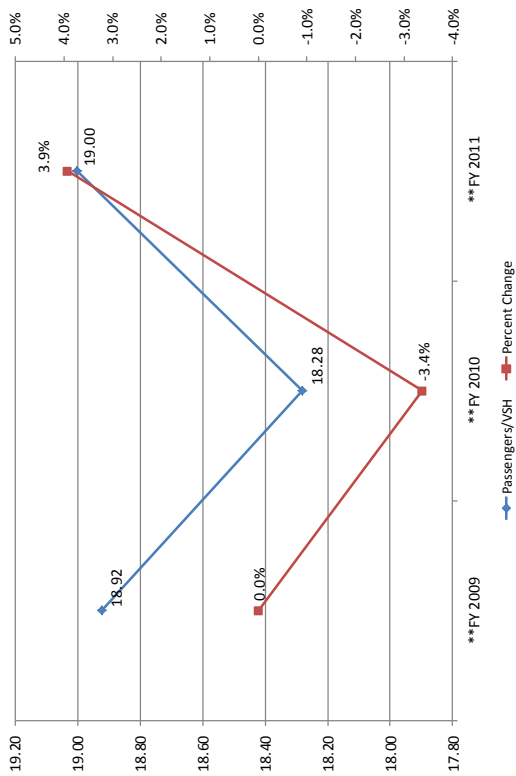


Exhibit 2.6 Combined Passengers/VSM

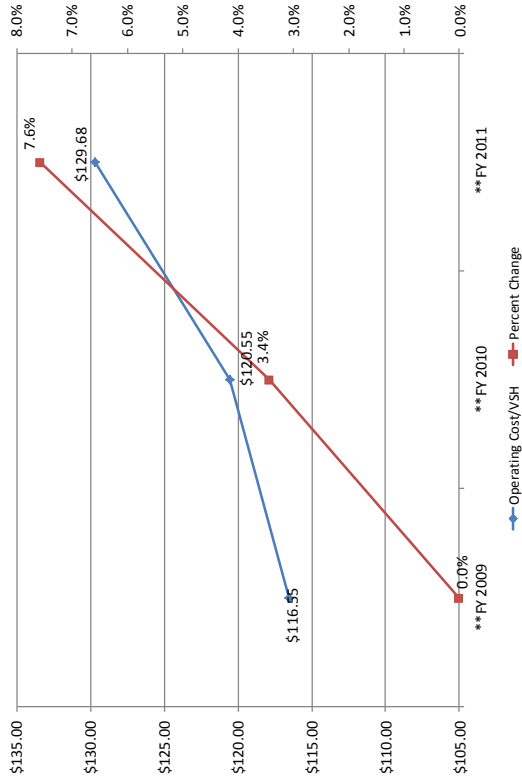


Exhibit 2.7 Combined Operating Cost/VSH

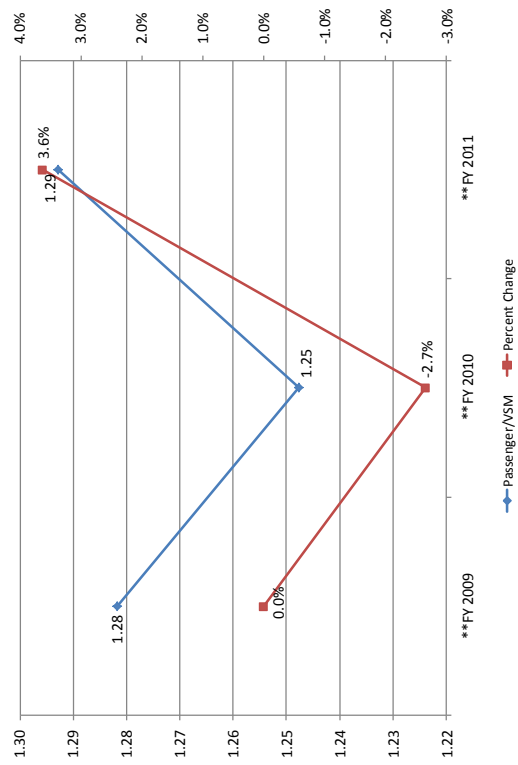


Exhibit 2.8 Combined Operating Cost/VSM

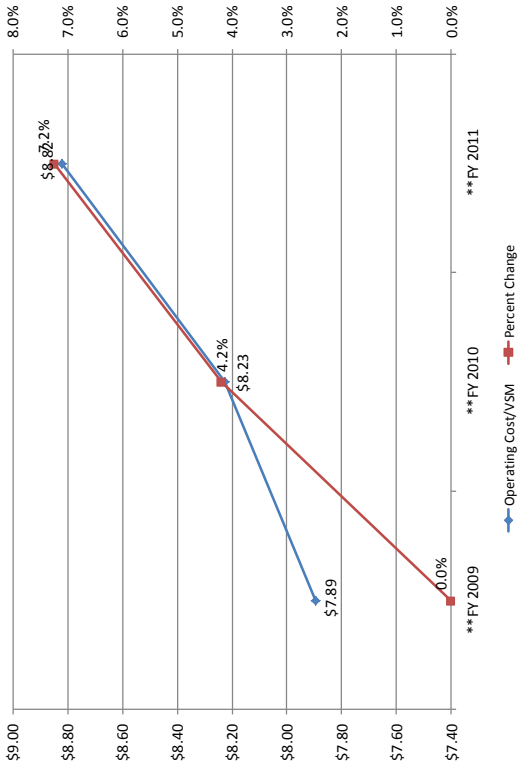


Exhibit 2.9 Combined Operating Cost/Passenger

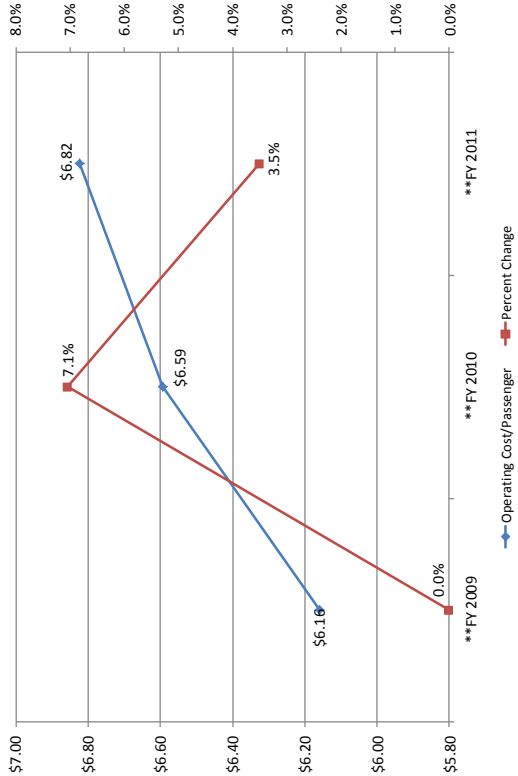


Exhibit 2.10 Combined Farebox Recovery Ratio

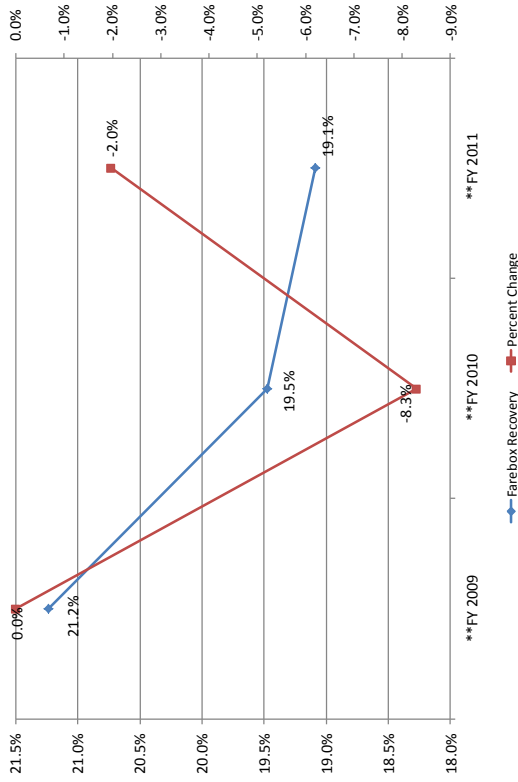
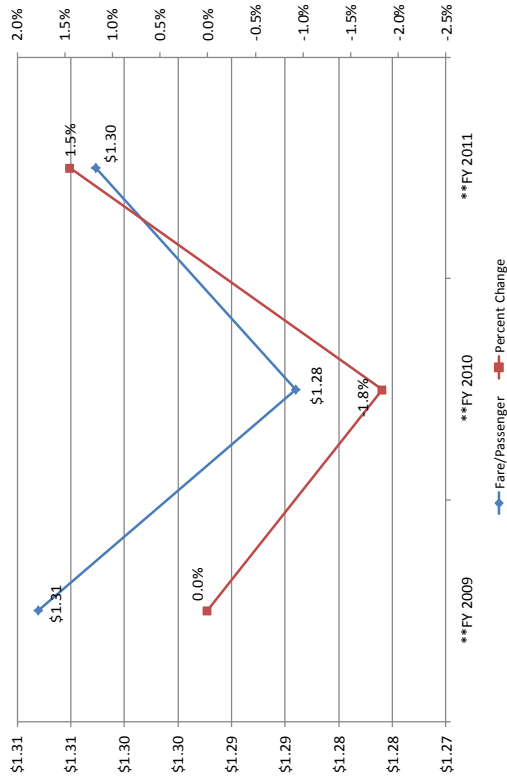


Exhibit 2.11 Combined Fare/Passenger



Fixed-Route Performance Indicators

Exhibit 2.13 shows the performance measures and indicators for Santa Cruz METRO's Watsonville services for FY 2009, 2010, and 2011. This section evaluates Santa Cruz METRO Routes 69A, 69W, 71, 72, 74, 75, 79, and 91X operating within Watsonville using a variety of quantitative criteria to assess effectiveness and efficiency. The indicators were evaluated across a three-year period. Fare Revenue, Ridership, and Operating Cost were calculated using fixed-route performance indicators (i.e., Operating Cost/VSH, Passengers/VSH, and Fare/Passengers). Route-specific data for the aforementioned metrics were not available at the time of this report.

Based on the agency's 2008 Short Range Transit Plan (SRTP), Santa Cruz METRO allocated 38 percent of total Vehicle Service Hours to those services operating within Watsonville. Of note, Routes 69 and 69N, both of which formerly served Watsonville, were discontinued subsequent to the adoption of the 2008 SRTP. Therefore, data regarding these routes is not included within this Study.

Current allocation of Santa Cruz METRO fixed-route Vehicle Service Hours to Watsonville is 38-percent. Although service changes or reductions have occurred (i.e., elimination of Routes 69 and 69N), the performance metrics for FY 2011 suggest transit demand within Watsonville remains strong.

Exhibit 2.12 Fixed-Route Performance Indicators

Performance Measure	FY 2009	FY 2010	FY 2011
Operating Cost	\$10,943,540	\$11,127,083	\$11,816,772
percent change	0.0%	1.7%	6.2%
Fare Revenue	\$2,772,004	\$2,681,575	\$2,858,601
percent change	0.0%	-3.3%	6.6%
Vehicle Service Hours	80,373	81,137	81,355
percent change	0.0%	1.0%	0.3%
Vehicle Service Miles	1,208,632	1,210,997	1,202,665
percent change	0.0%	0.2%	-0.7%
Ridership	2,272,135	2,180,142	2,286,881
percent change	0.0%	-4.0%	4.9%
Performance Indicator			
Operating Cost/VSH	\$136.16	\$137.14	\$145.25
percent change	0.0%	0.7%	5.9%
Operating Cost/VSM	\$9.05	\$9.19	\$9.83
percent change	0.0%	1.5%	6.9%
Operating Cost/Passenger	\$4.82	\$5.10	\$5.17
percent change	0.0%	6.0%	1.2%
Passengers/VSH	28.27	26.87	28.11
percent change	0.0%	-5.0%	4.6%
Passengers/VSM	1.88	1.80	1.90
percent change	0.0%	-4.2%	5.6%
Farebox Recovery	25.3%	24.1%	24.2%
percent change	0.0%	-4.9%	0.4%
Fare/Passenger	\$1.22	\$1.23	\$1.25
percent change	0.0%	0.8%	1.6%

****Data reflects Watsonville Routes 69A, 69W, 71, 72, 74, 75, 79, 91X only.**

Ridership (Exhibit 2.13)

Exhibit 2.13 shows ridership for those Santa Cruz METRO fixed-route service operating to/within Watsonville. Santa Cruz METRO seasonally adjusts its published schedules to reflect changes in travel demand patterns and funding availability.

Given the faltering economy, high unemployment rates, and shifts in commuter patterns in FY 2010, ridership declined significantly on all Watsonville routes. This trend was also noted across the majority of Santa Cruz METRO intercity and local fixed-route services.

Ridership by Route (Exhibit 2.14)

Moore & Associates analyzed ridership data at the individual route level for the period FY 2009 through FY 2011. Exhibit 2.14 illustrates how each route evolved across the three-year period. Route 71 garnered the highest ridership of the eight fixed-routes during the evaluation period. Without exception, FY 2010 experienced a decline in ridership for Watsonville services. This is likely

attributable to the economic downturn which reduced transit demand during this period. As discussed in Chapter 2 (Demand Analysis), Watsonville's unemployment rate reached 10.5 percent in 2009, three percent higher than the county's figure. This high unemployment in 2009 contributed to the decline in ridership, as home-to-work travel demand decreased.

Passengers/Vehicle Service Hour (Exhibit 2.15)

One of the most commonly employed yardsticks for assessing public transit service productivity is Passengers/VSH. This indicator quantifies the number of rides provided within a single revenue hour.

The Passenger/VSH metric fluctuated widely across the evaluation period. The trend mirrored ridership performance data. This is not surprising given Vehicle Service Hours remained relatively stable while ridership varied across the evaluation period.

Passengers/Vehicle Service Mile (Exhibit 2.16)

Passengers/VSM is another metric commonly employed when evaluating public transit service effectiveness. It calculates the number of rides provided for each service mile traveled.

As shown in by Exhibit 2.13, fixed-route services operating within Watsonville posted a four-percent decline in ridership along with a 2.4-percent decrease in fare revenue. This essentially translates to a decrease in this metric with fewer than two persons using the service per revenue mile.

Operating Cost/Vehicle Service Hour (Exhibit 2.17)

This indicator serves as a measure of a transit program's cost-effectiveness, illustrating the cost of providing a single hour of revenue service.

Exhibit 2.17 reveals increasing Cost/VSH. Ideally, a transit operator hopes for Operating Cost to remain flat or in line with inflation. Throughout the evaluation period, Santa Cruz METRO (Watsonville intercity and local routes) experienced increased Operating Cost. As a result, the cost of providing a single hour of revenue service continues to increase. This increase in Cost/VSH can be attributed to both higher labor and fuel costs.

Operating Cost/Vehicle Service Mile (Exhibit 2.18)

This metric serves as an indicator of a transit program's cost-effectiveness by illustrating the cost of providing a single mile of revenue service.

Operating Cost/Vehicle Service Mile increased in FY 2011 due in large part to a seven percent decrease in Vehicle Service Miles. The increase in this metric posits a decrease in cost-effectiveness of the services as Santa Cruz METRO experiences a higher operating cost per single revenue mile.

[Operating Cost/Passenger \(Exhibit 2.19\)](#)

Another gauge of cost-effectiveness, Cost/Passenger indicates how much Santa Cruz METRO is spending to provide a single unlinked trip.

As presented in Exhibit 2.19, Operating Costs increased per unlinked trip across the evaluation period. Higher operating costs coupled with fewer passengers transported caused Santa Cruz METRO to experience a six-percent spike between FY 2009 and FY 2010, a trend noted across the majority of Santa Cruz METRO fixed-routes. Since FY 2010, this metric has improved, rising more than one percent in FY 2011 with increases in ridership.

Although operating costs declined in FY 2010 employee salaries and benefits increased dramatically since 2009. This increase in labor-related expenditures impacts the overall operating cost metric, yielding a net increase in Cost/Passenger. Santa Cruz METRO should continue to monitor labor costs across the next fiscal year and attempt to postpone further wage or benefit increases until the Cost/Passenger metric improves.

[Farebox Recovery Ratio \(Exhibit 2.20\)](#)

Farebox Recovery Ratio calculates the percentage of operating cost realized through passenger fares. It is the most common measure of public subsidy of a transit service.

With the exception of FY 2010, which noted a drop in Farebox Recovery of five percent, Farebox Recovery Ratio continued to surpass the TDA standard of 20 percent for a claimant within an urbanized area. Farebox Recovery Ratio remained above 24 percent modestly decreasing across the evaluation period.

[Fare/Passenger \(Exhibit 2.21\)](#)

This metric calculates the average fare paid for every unlinked trip provided by Santa Cruz METRO on its fixed-route service. This metric fluctuated considerably across the evaluation period, dipping in FY 2010 due likely to ridership loss. Given the average Fare/Passenger was \$1.25 in FY 2011, we conclude passengers were likely utilizing increased non-cash discounted fare media given this metric averages 25 cents less than the adult base fare of \$1.50.

Exhibit 2.13 Fixed-Route Ridership

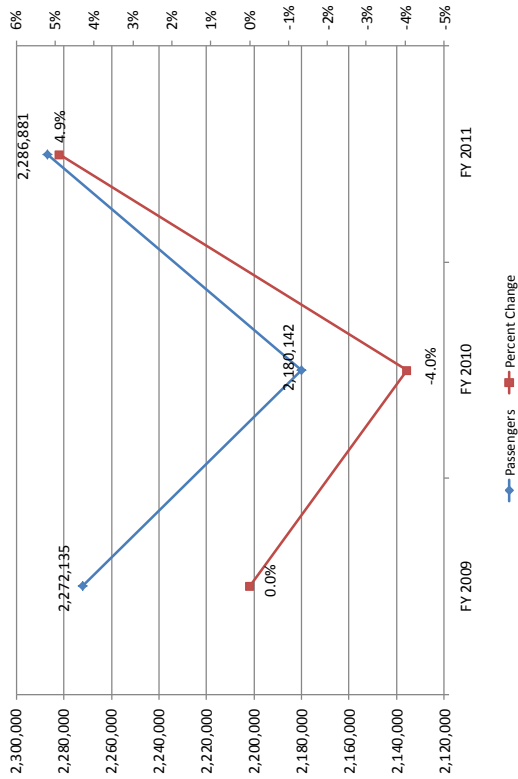


Exhibit 2.14 Fixed-Route Ridership by Route

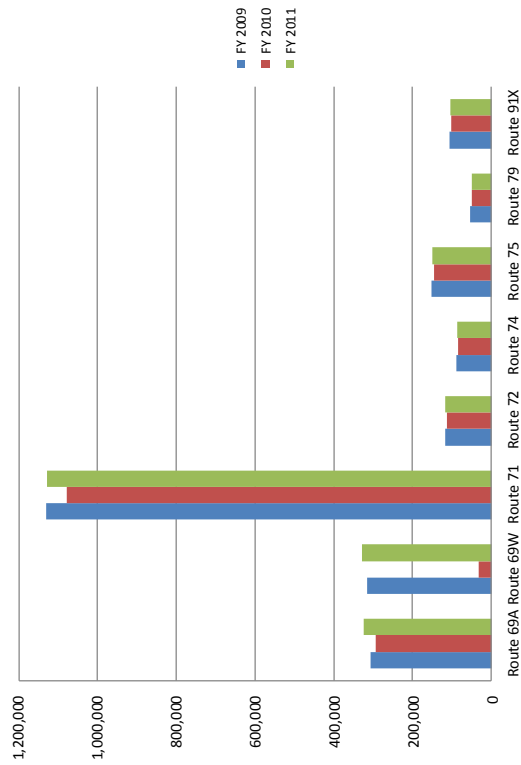


Exhibit 2.15 Fixed-Route Passengers/VSH

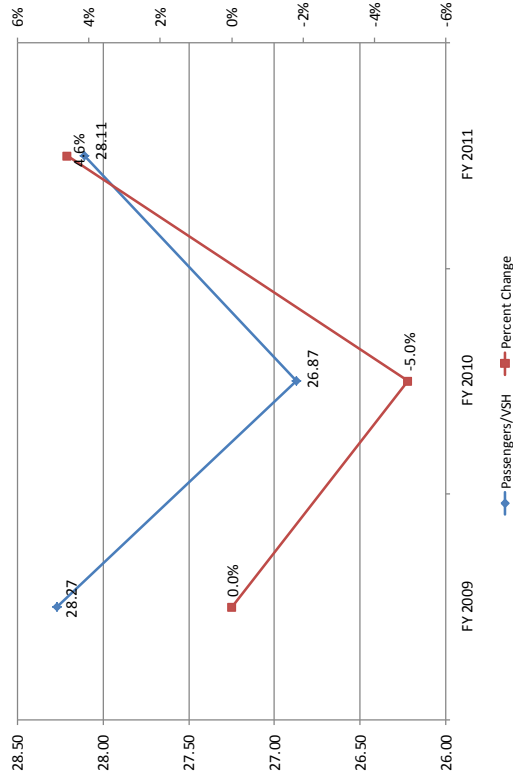


Exhibit 2.16 Fixed-Route Passengers/VSM

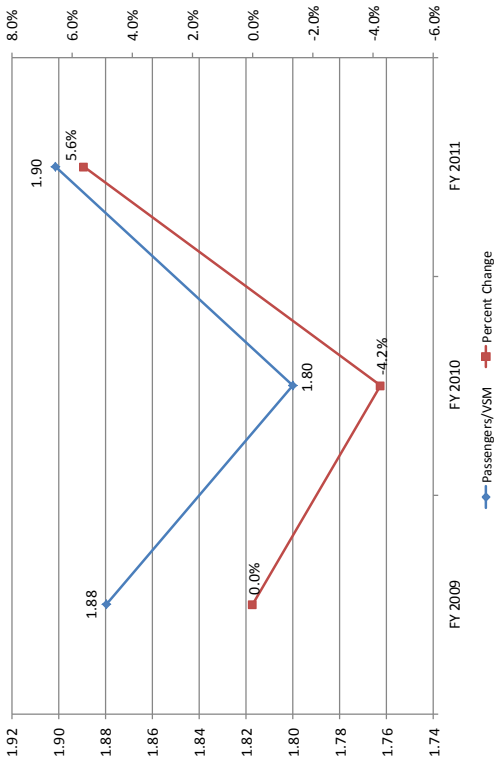


Exhibit 2.17 Fixed-Route Operating Cost/VSH

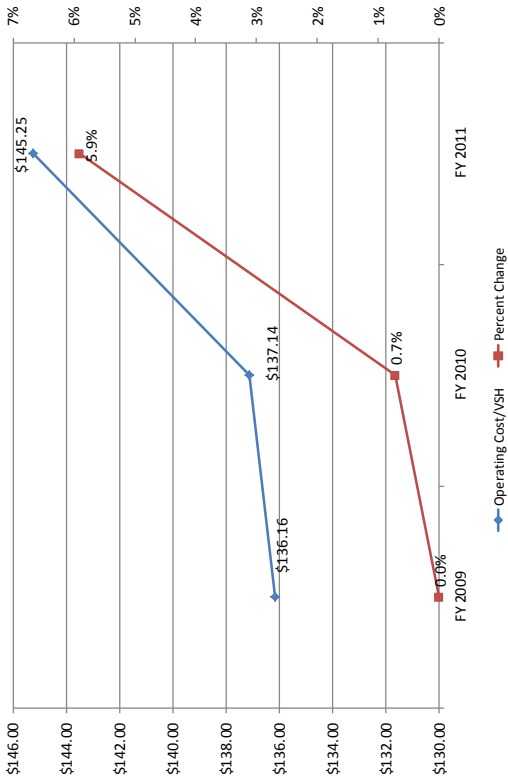


Exhibit 2.18 Fixed-Route Operating Cost/VSM

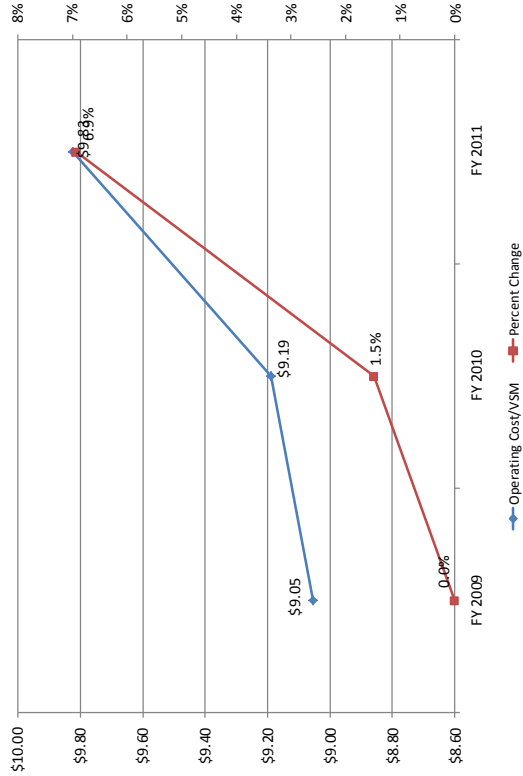


Exhibit 2.19 Fixed-Route Operating Cost/Passenger

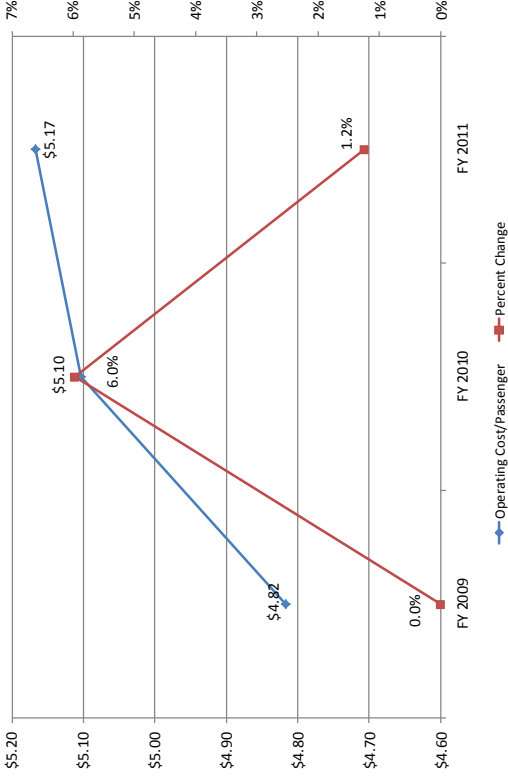


Exhibit 2.20 Fixed-Route Farebox Recovery Ratio

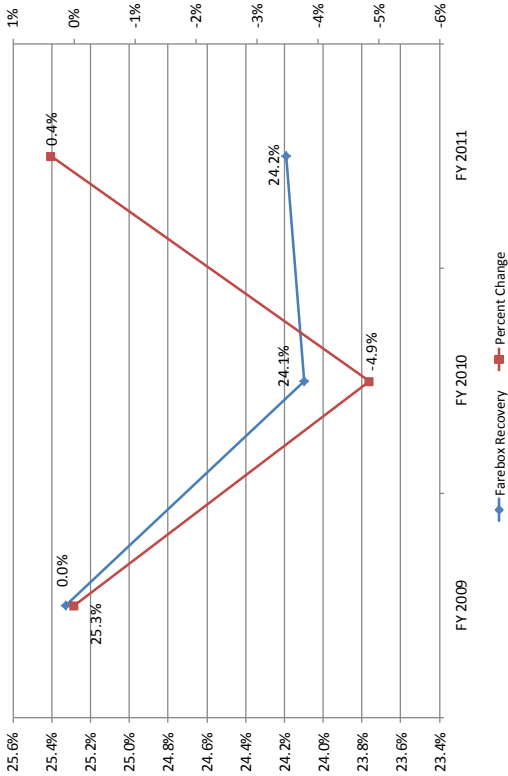
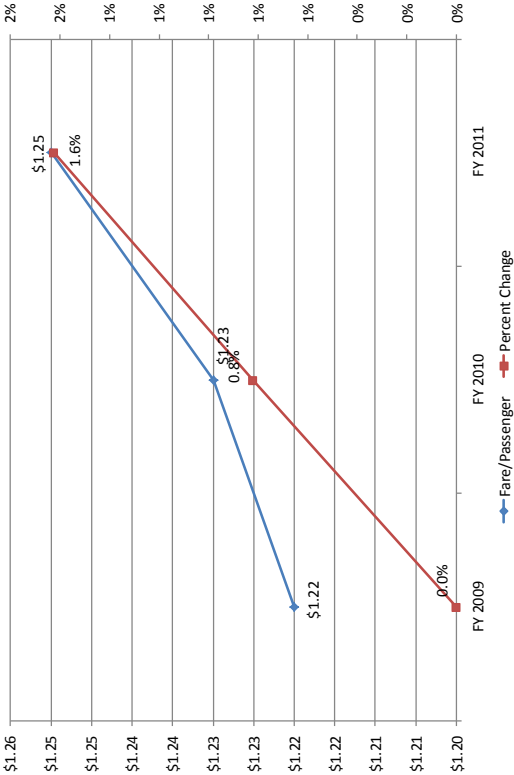


Exhibit 2.21 Fixed-Route Fare/Passenger



Paratransit Performance Indicators (County-wide)

Exhibit 2.22 presents the performance measures and indicators for Santa Cruz METRO's ADA complementary paratransit program (ParaCruz) for the period FY 2009, 2010, and 2011. The evaluation presented herein utilizes a series of quantitative criteria to determine the effectiveness and efficiency. The indicators were evaluated over a three-year period which supports trend analysis. Following the exhibit are illustrations of each performance indicator and include trend analysis where warranted. Paratransit performance data reflects county-wide trips served as Watsonville-specific data was not available at the time of this analysis.

Exhibit 2.22 Paratransit Performance

Performance Measure	FY 2009	FY 2010	FY 2011
Operating Cost	\$3,626,157	\$3,868,580	\$4,434,489
<i>percent change</i>	0.0%	6.7%	14.6%
Fare Revenue	\$322,124	\$238,603	\$243,559
<i>percent change</i>	0.0%	-25.9%	2.1%
Vehicle Service Hours	44,631	43,256	43,963
<i>percent change</i>	0.0%	-3.1%	1.6%
Vehicle Service Miles	636,901	611,882	639,424
<i>percent change</i>	0.0%	-3.9%	4.5%
Passengers	93,279	94,074	94,510
<i>percent change</i>	0.0%	0.9%	0.5%
Performance Indicator			
Operating Cost/VSH	\$81.25	\$89.43	\$100.87
<i>percent change</i>	0.0%	10.1%	12.8%
Operating Cost/VSM	\$5.69	\$6.32	\$6.94
<i>percent change</i>	0.0%	11.0%	9.7%
Operating Cost/Passenger	\$38.87	\$41.12	\$46.92
<i>percent change</i>	0.0%	5.8%	14.1%
Passengers/VSH	2.09	2.17	2.15
<i>percent change</i>	0.0%	4.1%	-1.2%
Passengers/VSM	0.146	0.154	0.148
<i>percent change</i>	0.0%	5.0%	-3.9%
Farebox Recovery	8.9%	6.2%	5.5%
<i>percent change</i>	0.0%	-30.6%	-10.9%
Fare/Passenger	\$3.45	\$2.54	\$2.58
<i>percent change</i>	0.0%	-26.6%	1.6%

Source: Santa Cruz METRO

[Paratransit Ridership \(Exhibit 2.23\)](#)

Unlike fixed-route trends which show a decline in ridership in FY 2010, paratransit ridership steadily increased across the evaluation period, averaging more than 93,000 unlinked trips annually across all three years. As discussed in the Demand Analysis chapter, seniors and persons with disabilities have increased more than eight-percent across the last decade with a similar trend projected in this decade. Assuming demand for affordable mobility options among this population continues to grow, we anticipate demand will not abate.

[Passengers/Vehicle Service Hour \(Exhibit 2.24\)](#)

One of the most commonly employed yardsticks for assessing service effectiveness, Passengers/VSH, quantifies the number of rides provided within a single service hour.

Given the on-demand nature of the paratransit service, one should expect passenger and operations metrics (VSH, VSM) to closely mirror changes in ridership. However, this metric experienced a different trend than the steady increase experienced in ridership. Rather, the metric experienced a modest decline in FY 2011. In spite of overall increases in both performance measures, productivity remained at two passengers/revenue hour.

[Passengers/Vehicle Service Mile \(Exhibit 2.25\)](#)

Passengers/VSM is another commonly employed metric for evaluating public transit service performance. It calculates the number of passengers transported for each service mile traveled.

As with the prior metric, VSM typically varies proportionate to the number of passengers. However, unlike reported VSH and ridership trends which incrementally increased across the evaluation period, VSM declined nearly four percent in FY 2010. This suggests a reduction in average trip length despite an increase in passengers/VSM.

[Operating Cost/Vehicle Service Hour \(Exhibit 2.26\)](#)

This indicator serves as a measure of a transit service's cost-effectiveness by calculating the cost to provide a single hour of revenue service.

Increasing Operating Cost drove this metric higher, especially in FY 2011. Vehicle Service Hours increased slightly across the last fiscal year, suggesting growth in this metric was tied largely to increases in Operating Cost. Given the modest increase in VSH, increases to Operating Cost are likely the result of increases in direct and indirect Operating Cost (i.e., administrative burden, fuel, salaries/overtime, etc.) This increase in cost when all other performance indicators remained relatively stable concludes a reduction in overall Operating Cost of the service is warranted to improve the cost-effectiveness of the service.

[Operating Cost/Vehicle Service Mile \(Exhibit 2.27\)](#)

This indicator serves as a measure of a program's cost-effectiveness by calculating the cost to provide a single mile of revenue service.

As with Operating Cost/VSH metric above, the Operating Cost/Vehicle Service Mile metric increased across the evaluation period. The escalation in the metric indicates a less cost-effective service. Again, increases in Operating Cost did not translate into more service, indicating increased Operating Cost (Salaries/Overtime) is likely the contributor to erosion of the paratransit program operating efficiently.

Operating Cost/Passenger (Exhibit 2.28)

Another measure of cost-effectiveness, Operating Cost/Passenger calculates total funding spent on each unlinked trip provided by ParaCruz.

The Operating Cost/Passenger metric increased more than 14 percent across the last fiscal year, attributable to high operating costs and modest ridership growth. As a result, it became increasingly expensive to operate the service in FY 2011, with Santa Cruz METRO expending more per passenger with each subsequent fiscal year primarily due to increases in salary/wage/benefits costs.

Farebox Recovery Ratio (Exhibit 2.29)

Farebox Recovery Ratio calculates the percentage of Operating Cost recovered through passenger fares. It is the most common measure of public subsidy of a transit service.

Across the evaluation period, the Farebox Recovery Ratio for ParaCruz remained below nine percent, subsequently declining to 5.5 percent in FY 2011. This dramatic decline in Farebox Recovery directly impacts the amount of service which Santa Cruz METRO can provide and threatens future TDA allocations.

Fare/Passenger (Exhibit 2.30)

This indicator calculates the average fare collected for each unlinked trip provided by Santa Cruz METRO's paratransit program.

The metric declined across the evaluation period with a greater than 26-percent decrease in Fare/Passenger in FY 2010. Typically the Fare Revenue trend correlates with ridership trends. However, this was not the case in FY 2010 during which fare revenue decreased while ridership increased. Possible causes may include riders not paying the full fare when using the service, an increase in the number of attendants riding fare-free, or faulty/inoperative farebox equipment.

Exhibit 2.23 Paratransit Annual Ridership

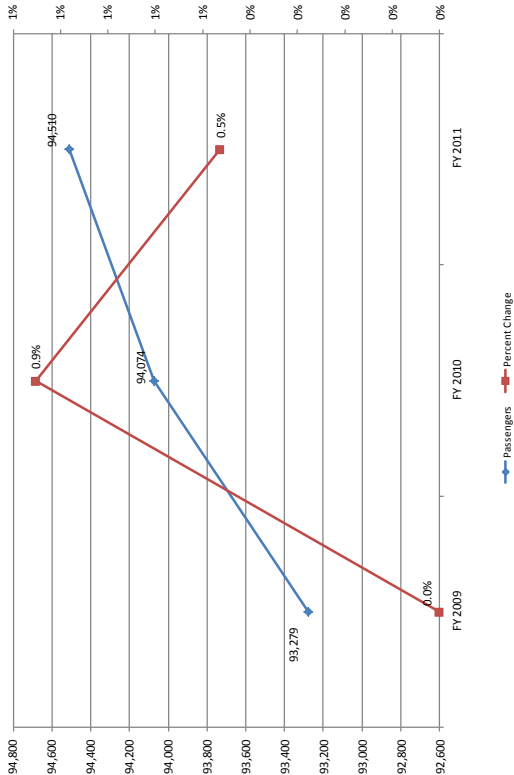


Exhibit 2.24 Paratransit Passengers/VSH

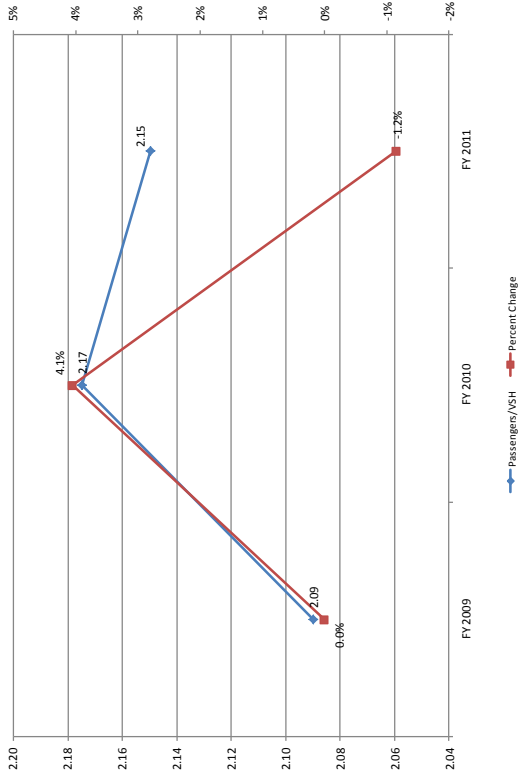


Exhibit 2.25 Paratransit Passengers/VSM

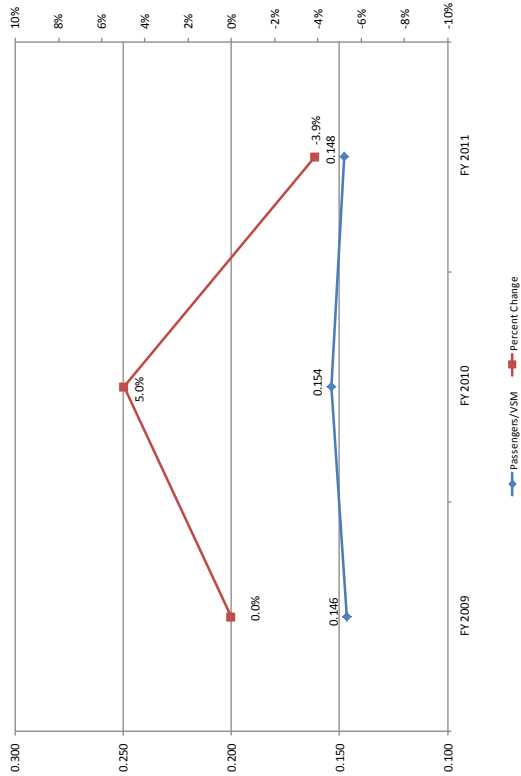


Exhibit 2.26 Paratransit Operating Cost/VSH

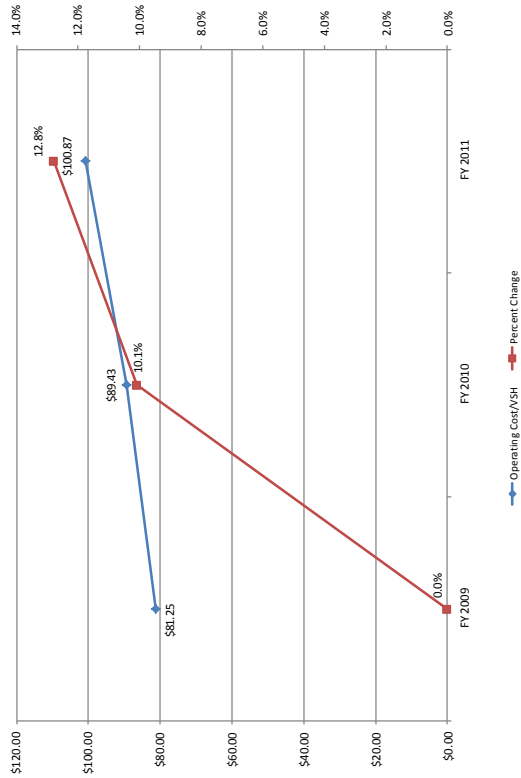


Exhibit 2.27 Paratransit Operating Cost/VSM

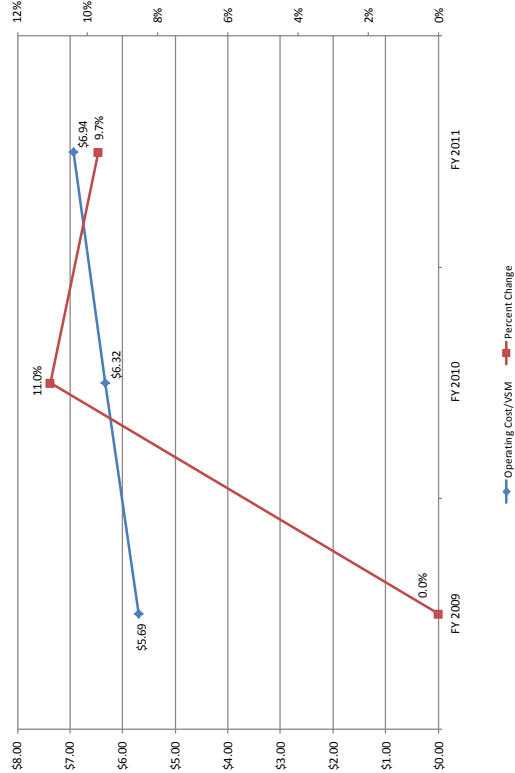


Exhibit 2.28 Paratransit Operating Cost/Passenger

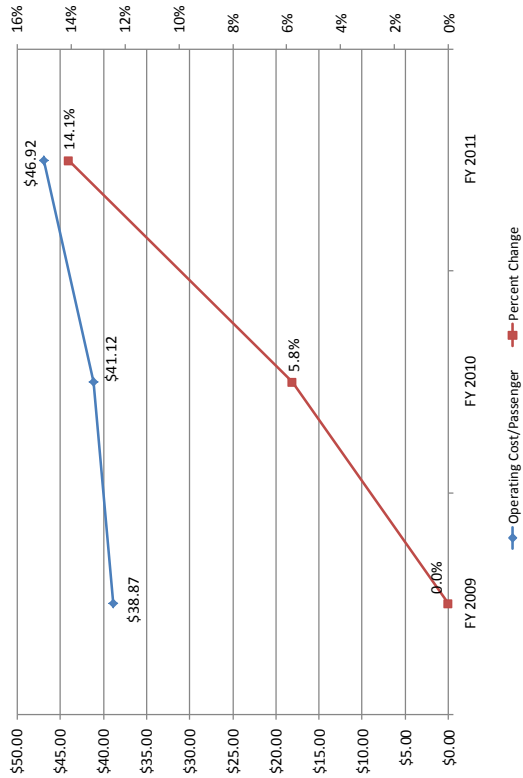


Exhibit 2.29 Paratransit Farebox Recovery Ratio

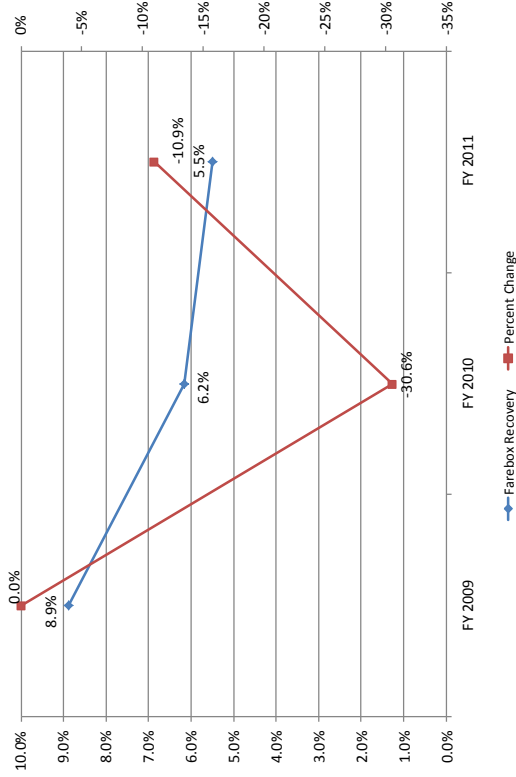
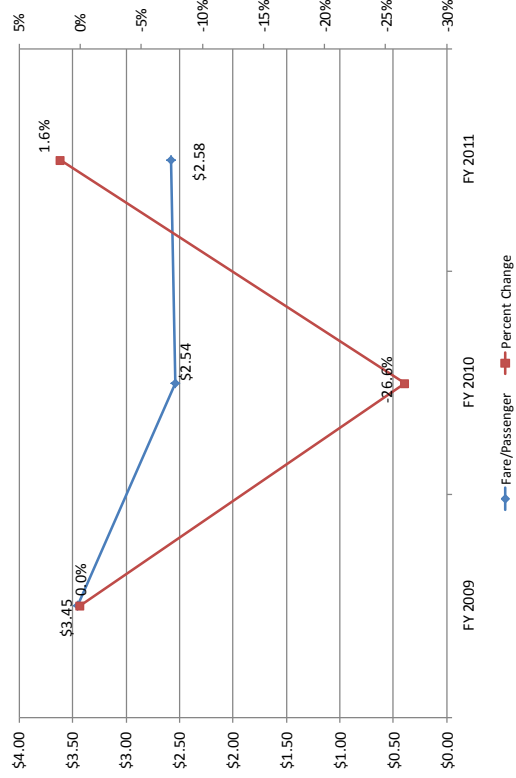


Exhibit 2.30 Paratransit Fare/Passenger



3

DEMAND ANALYSIS

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CHAPTER 3– DEMAND ANALYSIS

Incorporated in 1868, Watsonville lies in the southern portion of Santa Cruz County in the Pajaro Valley. Watsonville is located approximately 18 miles southeast of the city of Santa Cruz, approximately 95 miles south of San Francisco. Watsonville’s 2010 population was 51,199.

Watsonville is the center of the agricultural industry in the Pajaro Valley. The city is home to a large number of agricultural workers as well as food processing companies. In addition to the importance of agriculture, Watsonville has a fairly diverse economic base comprised of manufacturing, retail, warehousing, healthcare, and public sector. The top five employers include the Pajaro Valley Unified School District, Watsonville Community Hospital, Fox Racing Shox, local government, and West Marine.

Major Transportation Corridors

The primary transportation corridor through Watsonville and Santa Cruz County is Highway 1 which connects the Pajaro Valley to Monterey County to the south and the city of Santa Cruz, San Mateo County, and San Francisco to the north. In addition, Highways 129 and 152 provide direct connections with Highway 101.

There are several key arterials in Watsonville. Airport Boulevard offers north-south connections between Highway 1 and Freedom Boulevard. The Watsonville Community Hospital, Watsonville Municipal Airport, and several industrial and commercial centers are located along Airport Boulevard.

Freedom Boulevard also provides north-south connectivity along the eastern portions of the city. Several major shopping and employment centers are located along Freedom Boulevard including the Freedom Center and Crestview Shopping Centers.

Main Street and East Lake Boulevard (Highway 152) provide east-west connections through the central portions of Watsonville. Several large shopping centers are located along the Highway 152 corridor as well as the downtown Watsonville, Ramsay Park, and several schools. Beach Street is also part of the Highway 152 corridor in downtown Watsonville.

Riverside Drive (Highway 129) provides north-south connections along the southern portions of Watsonville. Several large food processing companies and warehouses are located along this corridor in the southwest quadrant of the city. Additionally, Riverside Drive passes through the southern portion of downtown Watsonville.

South Green Valley Road is located to the south of Airport Boulevard and provides north-south connections for the northern portion of Watsonville. South Green Valley Road has several large

residential developments along the roadway as well as several large shopping centers at the northern and southern termini.

Public transit routes largely utilize the above-mentioned corridors. The primary transfer point is the Watsonville Transit Center located at West Lake Boulevard and Rodriguez Street (just west of Main Street in downtown Watsonville).

Mobility Inventory

Presented below are public and private transportation services operating throughout Santa Cruz County. Santa Cruz METRO is the primary public transit service provider within the county. It also operates ParaCruz, an ADA complementary paratransit service for persons with disabilities. Intercity-regional transit services are available throughout the county via Santa Cruz METRO and other service providers (i.e., Santa Clara Valley Transportation Authority (VTA) and Monterey-Salinas Transit (MST)). Specialized transportation services operate within Santa Cruz County specific to persons with disabilities, students with disabilities, and elderly individuals through numerous private transportation operators such as Community Bridges – Lift Line and The University of California-Santa Cruz’s Transportation and Parking Services (TAPS) campus transit services. The TAPS campus transit service is supported by a student fee and requires a valid campus ID to use, but does not charge a fare.

Exhibit 3.1 Mobility Inventory

Public Transit			Private Transportation Services			
Fixed-Route	Demand-Response	Intercity-Regional	Bus Lines	Taxis	Specialized Services	Rail
Santa Cruz Metropolitan Transit District	Santa Cruz Metropolitan Transit District - ParaCruz	Valley Transportation Authority (VTA)	Greyhound Bus Lines	Courtesy Cab Company (Watsonville Transportation)	Cabrillo College Disabled Student Services	Amtrak Rail
		Monterey Salinas Transit (MST)		Delux Cab, Inc	Central Coast Ambulance Service	Roaring Camp Big Trees Railroad
		San Benito County Express		Yellow Cab Company	City of Capitola- Seasonal Shuttle	
					Community Bridges - Lift Line	
					Davenport Resource Service Center	
					First Transit	
					Medi-Cal/Alliance Non-Emergency Transportation	
					Mental Health Client Action Network	
					Pajaro Valley Unified School District	
					San Lorenzo Valley Unified School District	
					Santa Cruz City Schools	
					Santa Cruz County Veterans Service Office	
					Scotts Valley Senior Center	
					UCSC - Disability Van Service Transportation and Parking Services (TAPS)	
					Van Rentals	

Sources: County of Santa Cruz, Santa Cruz County Regional Transportation Commission

Population Profile

Exhibit 3.2 shows the population trend for Santa Cruz County and Watsonville. Between 2000 and 2010, Watsonville grew at a much faster rate than the county as a whole. This may be largely due to the relative affordability of Watsonville in contrast to Santa Cruz. Therefore it is believed that Watsonville will grow more rapidly over the next decade versus the county at-large. With this in mind, Watsonville should account for the vast majority of the growth in the county moving forward, much as it did during the prior decade.

Given the demographic characteristics described below, this will have important forecast growth implications for provision of transit service to/from and within Watsonville. First, the lower cost of housing in Watsonville may attract additional residents which could increase demand for intercity and inter-county travel. Second, the population growth within Watsonville could potentially increase demand for intracity travel. Since growth will be primarily concentrated in Watsonville, making strategic additions to service will be important to increasing transit ridership.

Exhibit 3.2 Population Growth

Geographic Area	Population			Percent Change	
	2000 Census	2010 Census	2020 Forecast	2000-2010	2010-2020
City of Watsonville	44,265	51,199	59,828	15.7%	16.9%
Santa Cruz County	255,602	262,387	269,557	2.7%	2.7%

Source: US Census

Exhibit 3.3 shows selected demographic characteristics for Watsonville. Compared to the county and state as a whole, Watsonville has a much younger population. This is likely due to the population growth observed in Exhibit 3.2, as families have been attracted to Watsonville for the affordable housing.

In terms of education, Watsonville had a lower educational attainment than Santa Cruz County and California. Given the manufacturing and agricultural basis for the Watsonville economy, this is not surprising. As will be shown in Exhibit 3.13, the lower educational attainment correlates strongly with lower household income. As a result, there are likely more transit-dependent households in Watsonville versus the county at-large.

Exhibit 3.3 Summary of Watsonville Demographic Characteristics

	Median Age	Education		
		Percentage Over 25 without High School Diploma	Percentage High School Diploma or Higher	Percentage Bachelor's Degree or Higher
City of Watsonville	27.4	45.0%	55.0%	11.1%
Santa Cruz County	36.7	14.9%	85.2%	38.7%
California	34.6	19.5%	80.5%	29.7%
Nationally	36.5	15.5%	84.6%	27.5%

Source: 2009 American Community Survey

Exhibit 3.4 shows the population growth of Watsonville residents who are under 18 years old (youth). In 2010, about 20 percent of Watsonville residents are under 18. According to the American Community Survey, the 2020 youth population in Watsonville is projected to grow by almost 17 percent, or slightly more than 1,700 individuals, but make up about the same proportion of residents as in 2010. This could translate to an increased demand for transit schedule coordination with local school bell times.

In terms of youth and student demand, Watsonville has 12 public elementary schools and seven secondary schools within the Santa Cruz METRO service area.¹ Santa Cruz METRO should continue to work with the Pajaro Valley Unified School District to ensure transit service and school schedules are compatible.

Exhibit 3.4 Youth Population Growth

Youth Population Growth			
Year	2000	2010	2020
Population	10,937	10,298	12,025
% change		-5.8%	16.8%
net change		-639	1,727
Percent Share	24.7%	20.1%	20.1%

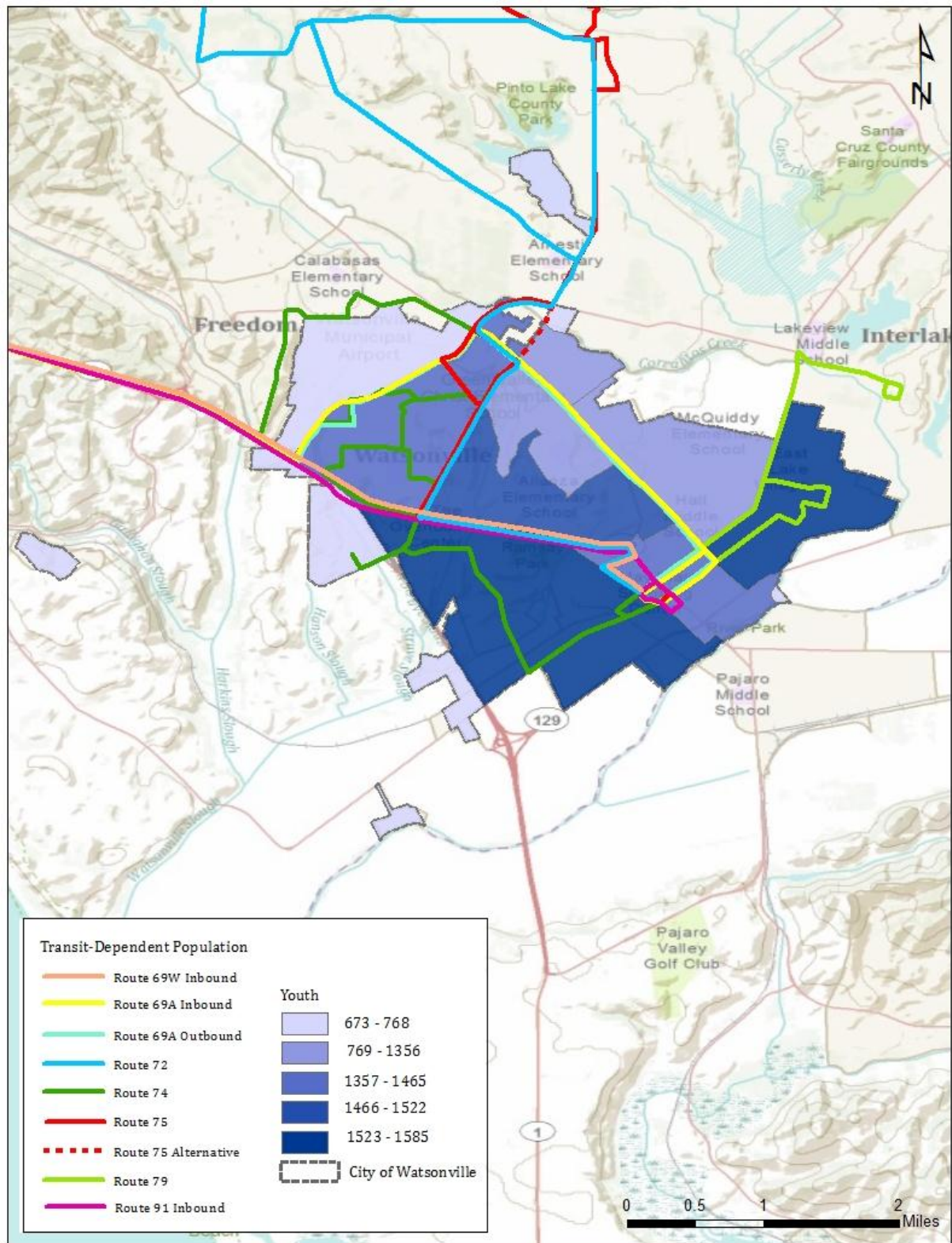
Source: 2009 American Community Survey

Exhibit 3.5 shows the geographic distribution of youth. Existing Santa Cruz METRO route alignments serve many areas with high concentrations of youth. However, there are areas such as East Lake – only served by hourly service on Route 79 – which would benefit from increased service. This is especially true given this route serves E.X. Hall Middle School, Watsonville High School, Ann Soldo Elementary School, and Lakeview Middle School.

In addition, a concentration of youth reside in the Ohlone Parkway area which is served only every other hour by Route 75. This is an area which could warrant expanded service.

¹ <http://www.pvusd.k12.ca.us/shortcuts/quick-info.html>

Exhibit 3.5 Concentration of Youth by Census Tract



Source: 2009 American Community Survey

Exhibit 3.6 shows the population growth of Watsonville residents who are over 65 years old (seniors). In 2010, about eight percent of Watsonville residents were over 65. It is projected that the 2020 senior population in Watsonville will increase by approximately 500, which should comprise a slightly smaller proportion of residents than in 2010. Based on these projections, demand for transit service within this demographic group should remain unchanged between 2010 and 2020.

In terms of senior demand, METRO and ParaCruz should continue to provide the existing service, while routinely conducting outreach to seniors to ensure their transportation needs are being met.

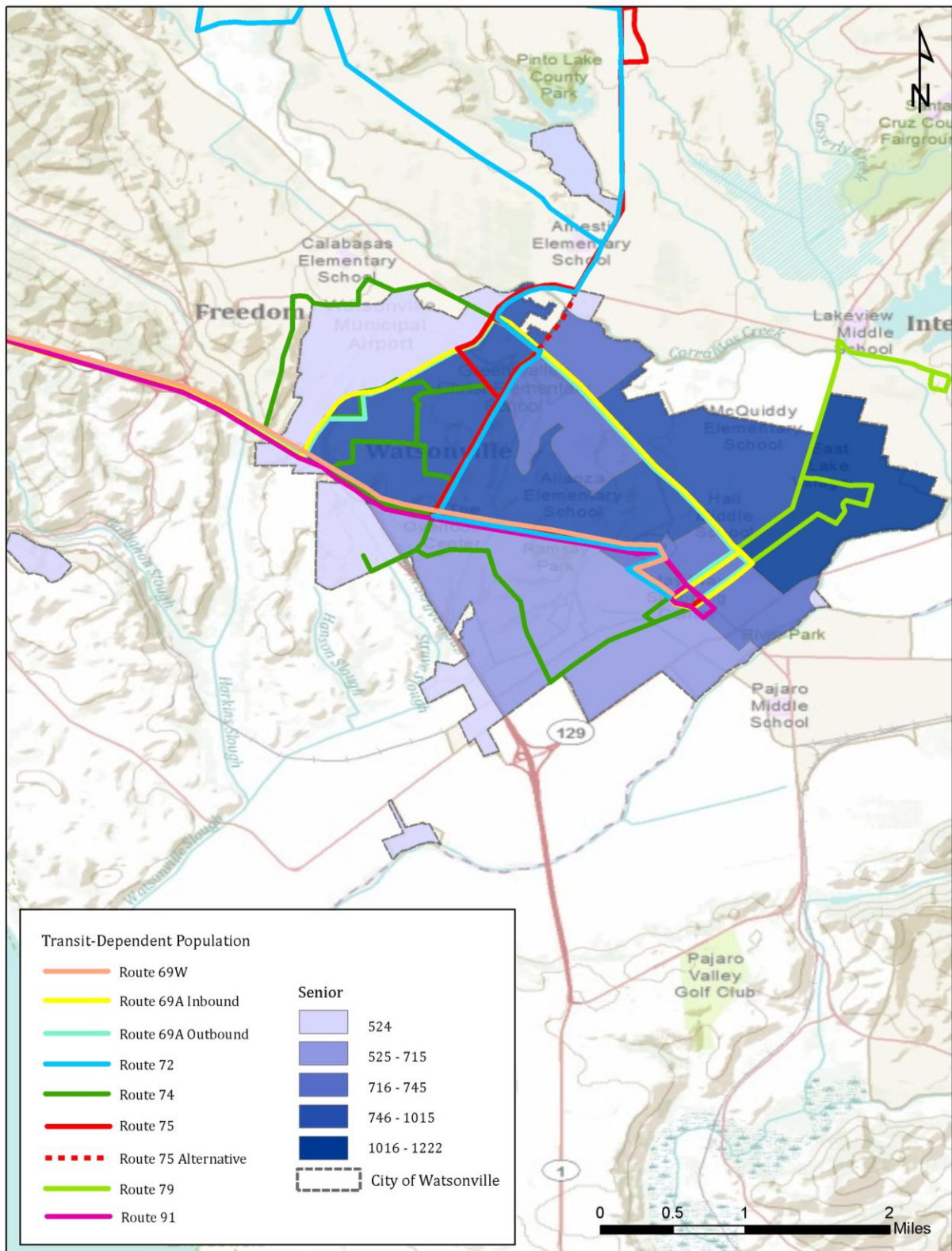
Exhibit 3.6 Senior Population Growth

Senior Population Growth			
Year	2000	2010	2020
Population	3,802	4,239	4,726
% change		11.5%	11.5%
net change		437	487
Percent Share	8.6%	8.3%	7.9%

Source: 2009 American Community Survey

Exhibit 3.7 shows the geographic distribution of seniors. The current Santa Cruz METRO route alignments serve many of the areas with high concentrations of seniors. However, there are portions of Watsonville where service could be enhanced to improve access and mobility for seniors. For example, the Watsonville Senior Center currently has no direct transit service. Residents can access this destination by taking either Route 69A or 79 and then walking at least a quarter-mile to the senior center. Although this is an acceptable walking distance, it may become a barrier for seniors with limited mobility. This could be a consideration in future expanded service in Watsonville. In addition, there is a concentration of seniors living in the East Lake neighborhood, which is only served hourly by Route 79, which would benefit from improved access to transit service.

Exhibit 3.7 Concentration of Senior by Census Tract



Source: 2009 American Community Survey

Exhibit 3.8 shows the population trends related to persons with disabilities in Watsonville. In 2007, approximately 13 percent of Watsonville residents were disabled, which was a sharp decline from the number of disabled persons in Watsonville in 2000. According to the American Community Survey, the 2020 disabled population in Watsonville is projected to grow by around 2,000, yet make up approximately the same proportion of residents as in 2007. While significant, this is still less than the number of disabled residents in the community in 2000. From these numbers, it is likely that the demand for transit service by disabled individuals will be higher than the existing travel demand, which may necessitate adjustments in service.

In terms of demand from persons with disabilities, Santa Cruz METRO and ParaCruz coordinate monitoring ridership patterns on its buses and vans to be able to respond to this change and align its services accordingly. In addition, Santa Cruz METRO should evaluate if this increase can be met using traditional fixed-route or dial-a-ride services, or if more coordination with social service providers (Lift Line) should be considered.

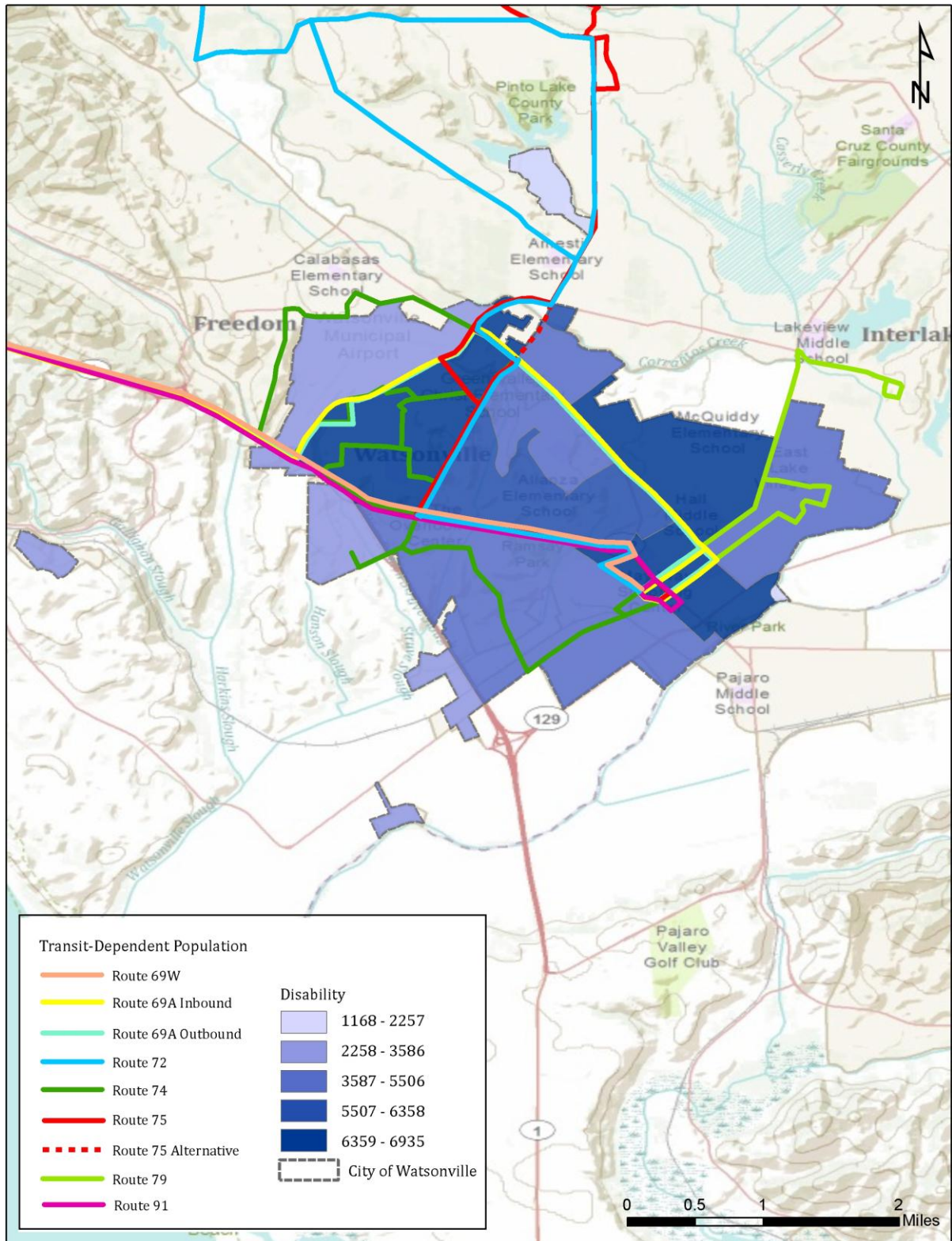
Exhibit 3.8 Persons with Disabilities Population Growth

Persons with Disabilities Population Growth			
Year	2000	2007	2020
Population	8,350	5,629	7,718
% change		-32.6%	37.1%
net change		-2,721	2,089
Percent Share	18.9%	12.9%	12.9%

Source: 2009 American Community Survey

Exhibit 3.9 shows the geographic distribution of persons with disabilities by census tract. The current Santa Cruz METRO route alignments serve many of the areas with high concentrations of persons with disabilities. Areas of high concentrations of persons with disabilities are well served by both local Watsonville routes and routes that connect Watsonville to areas to the north.

Exhibit 3.9 Concentration of Persons with Disabilities by Census Tract



Source: Census 2000 and 2010

Exhibit 3.10 shows the population growth of Watsonville residents who live in zero-vehicle households. In 2009, slightly over two percent of Watsonville households were zero-vehicle. Based on projections, it is estimated the 2020 zero-vehicles households will grow modestly, by around 250 households. Given the projected changes in the number of zero-vehicle households, this population will continue to have a high demand for Santa Cruz METRO service.

Given that the number of zero-vehicle households is predicted to grow slowly from the current number, the demand from this population is expected to be relatively similar to the demand today.

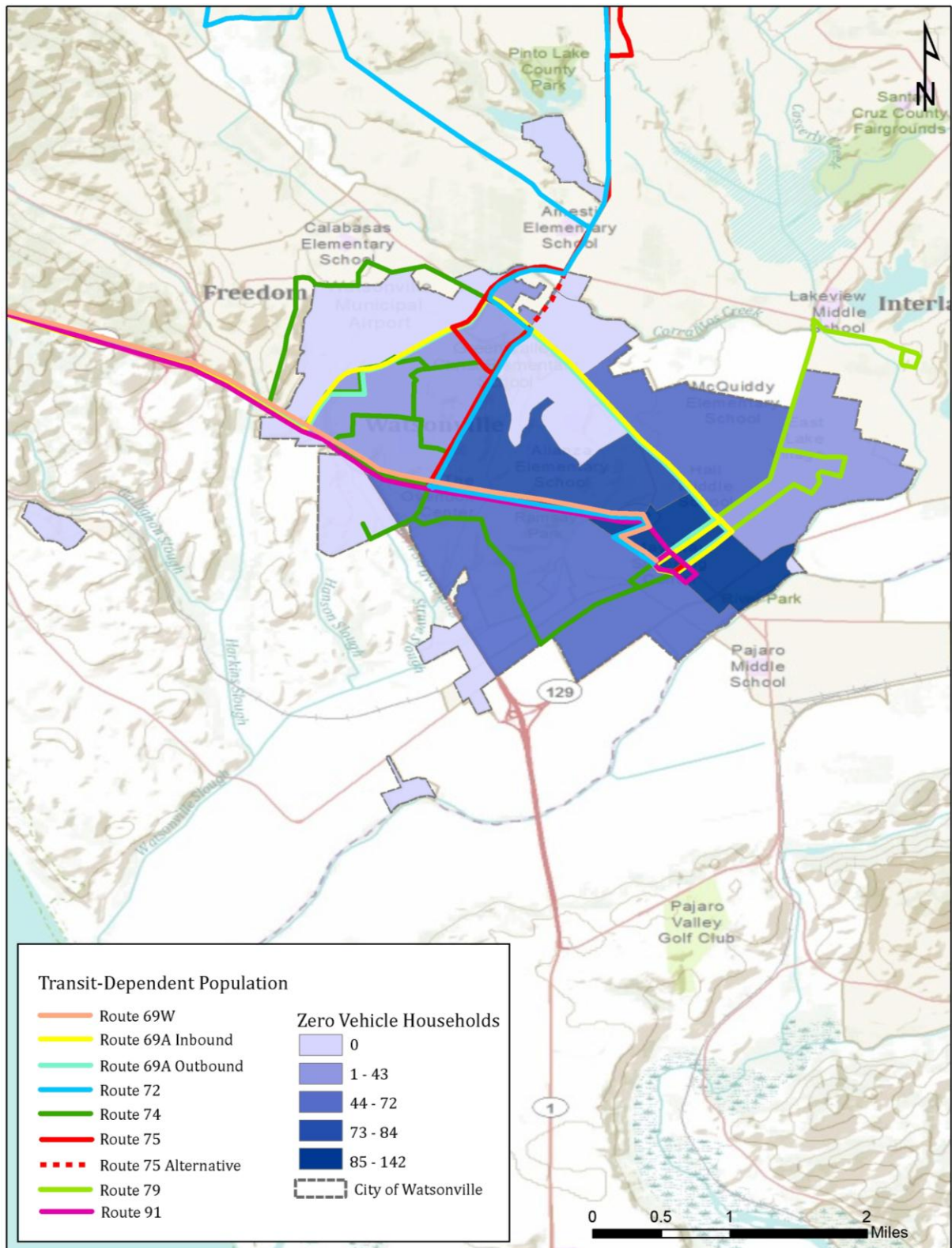
Exhibit 3.10 Zero-Vehicle Households Population Growth

Zero Vehicle Households Population Growth			
Year	2000	2009	2020
Population	1,184	1,124	1,376
% change		-5.1%	22.4%
Net change		-60	252
Percent Share	2.7%	2.3%	2.3%

Source: 2009 American Community Survey

Exhibit 3.11 shows the geographic distribution of zero-vehicle households by Census tract. Many of the zero-vehicle households live in the historical core of the city, which is well served by both local and regional transit service. The current Santa Cruz METRO route alignments serve many of the areas with the highest concentrations of zero-vehicle households. Although Santa Cruz METRO already serves many of the areas with higher rates of zero-vehicle households, there are areas and locations which would benefit these households if there were enhanced access to transit service. For example, there is a moderately high percentage of zero-vehicle households living in the Ohlone Parkway neighborhood, which is currently served by Route 74 on a 120-minute headway. Service enhancements (i.e., increased frequency) to this area would especially benefit zero-vehicle households.

Exhibit 3.11 Concentration of Zero-Vehicle Households by Census Tract



Source: 2009 American Community Survey

Exhibit 3.10 shows the population growth of low-income households in Watsonville. In 2009, 2,259 households in Watsonville were considered low-income, according to the American Community Survey. By 2020, the number of low-income households in Watsonville is projected to grow by almost 80 percent, around 1,754 households, and make up a larger proportion of residents than in 2009. With the increasing number of low-income households, and as a population that is traditionally ride-dependent, this should translate into a continued high demand for Santa Cruz METRO's service. In reviewing demographic statistics for Watsonville, the community has a significantly larger average household size than the nation as a whole (3.6 persons per household versus 2.6 nationwide), higher poverty rate (16.6 percent versus 9.9 percent nationwide, and higher unemployment rate (10.5 percent versus 9.9 percent nationwide). Together, these factors all contribute toward the significant number of low-income households in the community.

The demand for transit service from low-income households will be large. As a growing population with limited purchasing power, having access to a quality and affordable public transit system is incredibly important. METRO should aim to maintain low fares and coverage area in order to facilitate discretionary and non-discretionary trips for this group.

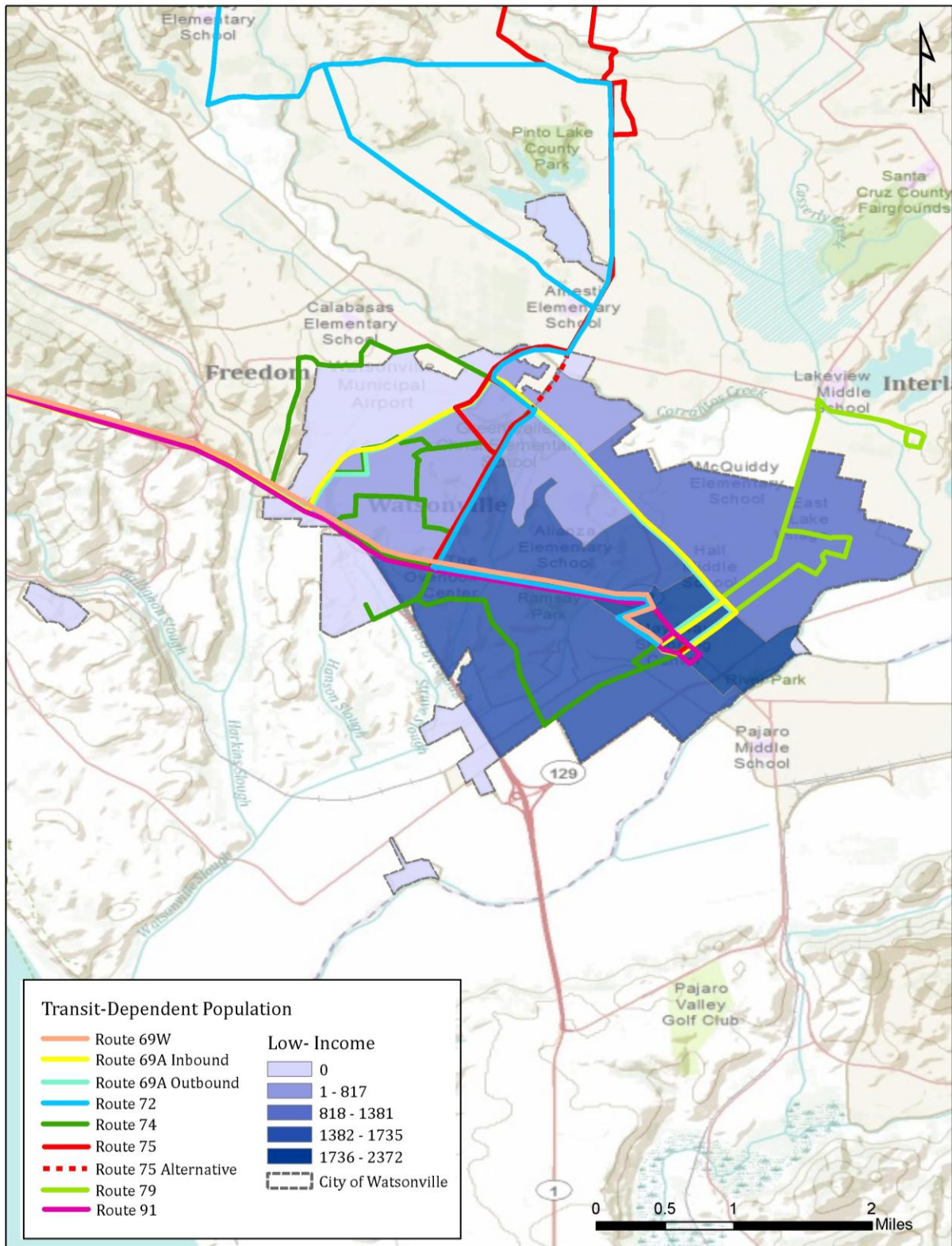
Exhibit 3.12 Low-Income Households Population Growth

Low-Income Population Growth			
Year	2000	2009	2020
Population	1,381	2,259	4,013
% change		63.5%	77.7%
net change		878	1,754
Percent Share	11.7%	16.6%	25.3%

Source: 2009 American Community Survey

Exhibit 3.13 shows the concentration of low-income households by census tract. As illustrated in the map, low-income households are concentrated in downtown Watsonville. The downtown area is well served by both local and regional service. Since low-income residents are particularly vulnerable to high transportation costs, Santa Cruz METRO may wish to increase frequency on local routes to assist connect low-income households with regional service to improve job access.

Exhibit 3.13 Concentration of Low-Income Households by Census Tract



Source: 2009 American Community Survey

Economic Characteristics

The lower educational attainment of Watsonville residents combined with relatively young age suggests a lower average household income than either Santa Cruz County or California. Additionally, the unemployment rate in Watsonville is substantially higher, which suggests driving alone could present a financial burden to many households.

In terms of commuter habits, Watsonville had fewer commuters who drive alone as well as fewer who use public transit compared to Santa Cruz County and California. By contrast, more Watsonville residents indicated walking to work.

Exhibit 3.14 Summary of Watsonville Economic Characteristics

	Percentage Unemployed	Commute			Income				
		Drive Alone	Public Transit	Walked	Median Household Income	Social Security Income	Public Assistance Income	Median Family Income	Per Capita Income
City of Watsonville	10.5%	70.3%	1.2%	4.2%	\$47,526.00	\$12,563.00	\$5,911.00	\$49,458.00	\$16,227.00
Santa Cruz County	7.5%	71.3%	2.9%	4.0%	\$64,349.00	\$14,631.00	\$5,694.00	\$81,709.00	\$33,532.00
California	7.9%	73.0%	5.1%	2.8%	\$60,392.00	\$14,722.00	\$5,455.00	\$68,909.00	\$29,020.00
Nationally	7.2%	75.9%	5.0%	2.9%	\$51,425.00	\$14,966.00	\$3,363.00	\$62,363.00	\$27,041.00

Source: 2009 American Community Survey

Exhibit 3.15 Summary of Watsonville Housing Characteristics

	Median Rooms per Structure	Owner-Occupied		Renter-Occupied	
		Median Value	Percentage of owners spending more than 30% on income on mortgage	Median Rent	Percentage of renters spending more than 30% on income on rent
City of Watsonville	4.8	\$497,600.00	66.2%	\$1,024.00	65.5%
Santa Cruz County	4.9	\$675,300.00	55.7%	\$1,251.00	59.2%
California	5.1	\$479,200.00	51.6%	\$1,116.00	54.5%
Nationally	5.4	\$185,400.00	36.9%	\$817.00	50.1%

Source: 2009 American Community Survey

Exhibit 3.16 shows the ten largest employers in Watsonville. By far the largest employer is the Pajaro Valley Unified School District, which has 20 schools located throughout the city. The second-largest employer is Watsonville Community Hospital. The hospital is located in the northwest portion of the city and has a bus stop for Routes 69A and 74. As shown in Exhibit 3.17, many of the top trip generators are located along existing routes. Only two employers, West Marine and Couch Distributing, are not currently served by Santa Cruz METRO.

Exhibit 3.16 Top 10 Employers in Watsonville

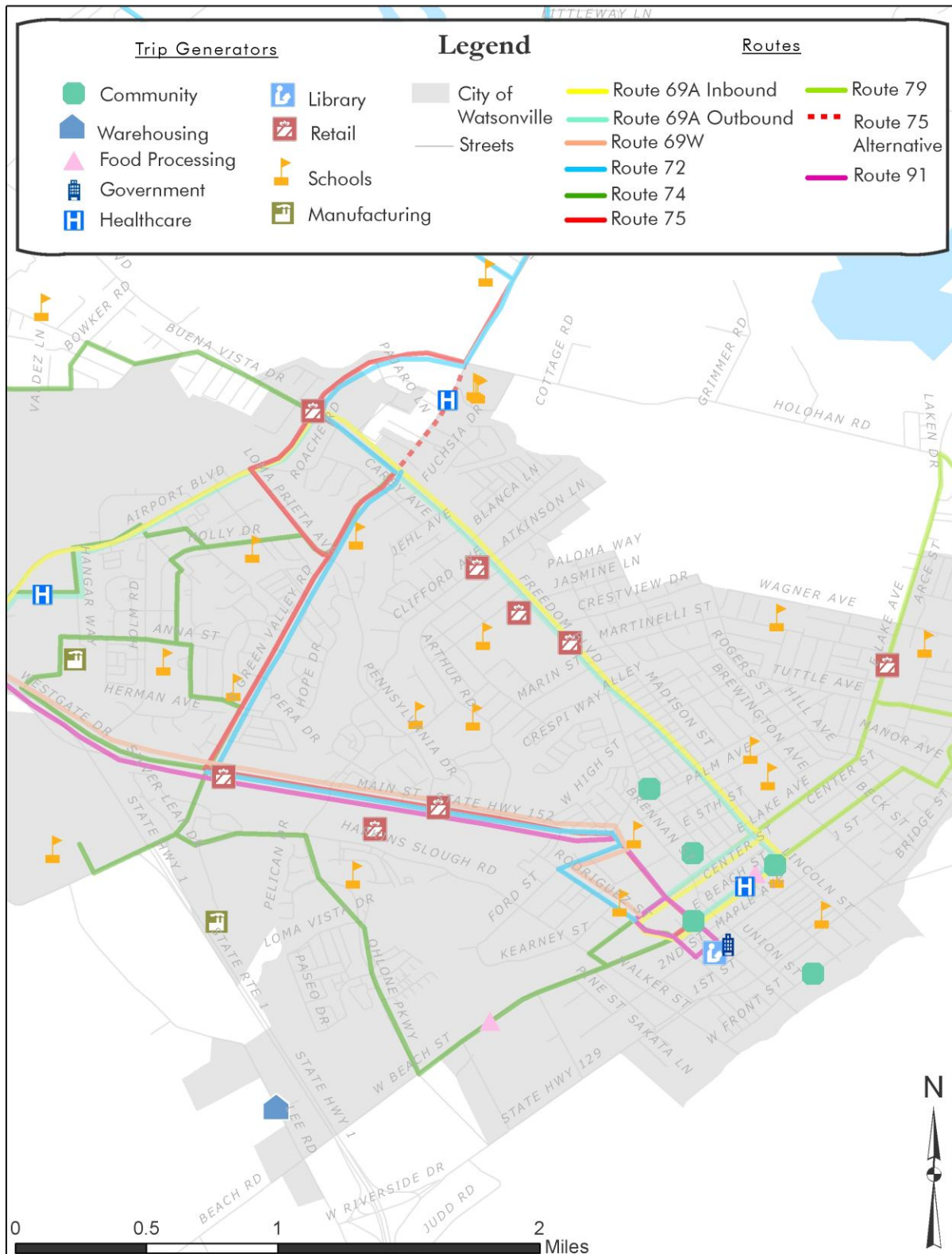
Employer	Industry	Number of Employees
Pajaro Valley Unified School District	Government/Education	2061
Watsonville Community Hospital	Health & Human Services	693
Fox Racing Shox	Sporting Goods	400
City of Watsonville	Government	374
West Marine	Marine Equipment	279
Target	Retail	211
S. Martinelli & Co.	Food Processing & Distribution	180
Couch Distributing	Alcoholic Beverage Distribution	170
Salud Para La Gente	Health & Human Services	160
Mi Pueblo Food Center	Retail	144

Source: City of Watsonville, "Comprehensive Annual Financial Report", June 2010.

Exhibit 3.17 illustrates the top trip generators in Watsonville and their location relative to existing Santa Cruz METRO routes. Many of the routes serve the identified trip generators, particularly the large employers. What this suggests is the lack of ridership might stem from travel time rather than actual physical connections between home and work. In other words, accessing job on transit does not seem to be a problem insofar as routes are currently connecting population centers and employment centers. Rather the barrier might be travel time caused by circuitous routes or less than optimal on-time performance.

As will be discussed below, there are two significant proposed developments in Watsonville which could have a large impact on demand for travel. Both projects, the Atkinson Lane Specific Plan and Manabe-Ow Business Park Specific Plan, are projected to add a substantial number of residents and jobs respectively. Both projects are adjacent to existing bus routes. However, Santa Cruz METRO may wish to consider adding additional service to these areas following project occupancy.

Exhibit 3.17 Major Trip Generators in Watsonville



Source: City of Watsonville

Future Land Use and Economic Development Changes

There are two large-scale developments which could have the potential to substantially impact travel demand throughout Watsonville. The two projects are the Atkinson Lane Specific Plan and the Manabe-Ow Business Park Specific Plan.

The Atkinson Lane Specific Plan is located east of the Freedom Boulevard and Atkinson Lane intersection. The project is bounded by Atkinson Lane on the north, the Corralitos Creek and Wagner Drive on the east, Brookhaven Lane on the south. The project is planned to consist of 450 residential units on 37.5 acres. This translates to a gross density of approximately 6.8 units per acre or 13 units per net developable space.

Of the 450 units, the Specific Plan proposes a blending of density between high-density (20 units per acre), medium-density (10-12 units per acre), and low-density (eight to 10 units per acre) residential units. The Specific Plan shows the high-density buildings being placed in the western portion of the planning area, which is also closest to Freedom Boulevard. This is promising given Santa Cruz METRO Routes 69A and 71 serve the Freedom Avenue/Atkinson Lane intersection. In addition, the bus stop is approximately one-quarter-mile from the western boundary of the planning area.

In addition to placing the densest portion of the project closest to transit, the Specific Plan also provides the required 20-percent set-aside for affordable housing units. This reflects both 20 percent of for-sale units as well as rental units. As a result, Santa Cruz METRO anticipates a likely increase in demand for public transit from this area reflective of the anticipated increase in transit-dependent population. Another major proposed development is the Manabe-Ow Business Park Specific Plan. The proposed project would be located between West Beach Street and Santa Catalina Avenue with a portion adjacent to Highway 1. As envisioned, the project would include approximately 61 acres of flex-use space for office or industrial uses. In addition, the site also features approximately 25,000 square feet of neighborhood retail.

In terms of the project's potential impact on transit demand, new commercial and industrial space would likely boost demand for travel to and from this area. The primary access point to the project is located on Ohlone Parkway, which is served by Route 74. Currently there is no bus stop at this location, however the Manabe-Ow Business Park Specific Plan recommends Santa Cruz METRO add bus stops on the northeast and southwest corners of the intersection. Doing so would improve access to a significant number of the proposed buildings within the planning area.

A significant portion of the project is greater than one-quarter-mile from the bus stop, which is the traditional distance a person is likely to walk. However, the project does appear to incorporate bicycle lanes and trails which may improve access to the more remote portions of the project area. In order for this project to be completed, an extensive infrastructure investment is needed. As a result, the necessary infrastructure construction as well as market conditions might push the phasing for this project beyond the horizon of this study.