Eureka Transit Service Line Feasibility Study

October 2018

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FEHR PEERS

Redwood Community Action Agency
"Empowering People, Changing Lives Since 1980"

Prepared for:

CITY of EUREKA

RIDE THE BUS
HTA
HUMBOLDT TRANSIT AUTHORITY

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1. INTRODUCTION

1.1 Background

Eureka Transit Service (ETS), operated and maintained by the Humboldt Transit Authority (HTA), has provided bus service in the City of Eureka and surrounding communities since 1976. Approximately three quarters of funding for ETS is provided by Transportation Development Act (TDA) funds from the City of Eureka and Humboldt County.

HTA is a joint powers authority established in 1975 to provide transportation services in the Highway 101 corridor throughout the county. The HTA joint powers agreement is between the cities of Arcata, Eureka, Fortuna, Rio Dell and Trinidad and the Humboldt County. HTA operates and maintains the Redwood Transit System (RTS), the Willow Creek Transit Service, and the Southern Humboldt Transit Systems (SHTS). In addition, under contract, HTA operates and maintains the ETS and provides administrative services for the region. Funding for HTA is provided by Transportation Development Act (TDA) funds and passenger fares.

1.2 Current Services

ETS

ETS operates four hourly fixed one-way routes on weekdays and three routes on Saturdays. All routes provide timed connections either in downtown, at Harris and F Streets or at the Bayshore Mall. The Red and Gold routes mostly serve the western part of the city, including Humboldt County Social Services along Koster Street, the Bayshore Mall along Broadway Street and the Eureka Mall along Harris Street. The Purple and Green routes serve the east end of the city. Major destinations along these routes include St. Joseph Hospital, the Humboldt Senior Resource Center, and the Silvercrest Senior Residence. The Red route also serves Cutten and Redwood Acres in the south and southeastern edges of the city. The Rainbow route operates on Saturdays only, replacing portions of the weekday-only Red and Green routes.

ETS offers single ride, day pass, and monthly pass fares, as shown in Table 1. Discounted fares are available for passengers using multi-ride regional transit passes (available via magnetic media cards), and for youth, elderly, and disabled passengers. Free transfers are provided between ETS routes for a single trip. Riders may use a multi-ride regional transit pass to transfer to RTS; free interagency transfers are unavailable. ETS fares may be purchased onboard or at the HTA office. Humboldt State University's *Jack Pass* allows students to ride ETS and RTS for free and provides discounted passes to faculty and staff ($45 to $60 per semester).

Table 1. ETS Bus Fares

Fare Type	Single Ride	Multi-Ride	Day Pass	Monthly Pass
Adult (18-62)	$1.70	$1.40	$3.95	$48
Youth (3-17)	$1.30	$0.95	$3.00	$41
Senior (62+)	$1.30	$0.95	$3.00	$41
Disabled (with ID)	$1.30	$0.95	$3.00	$41

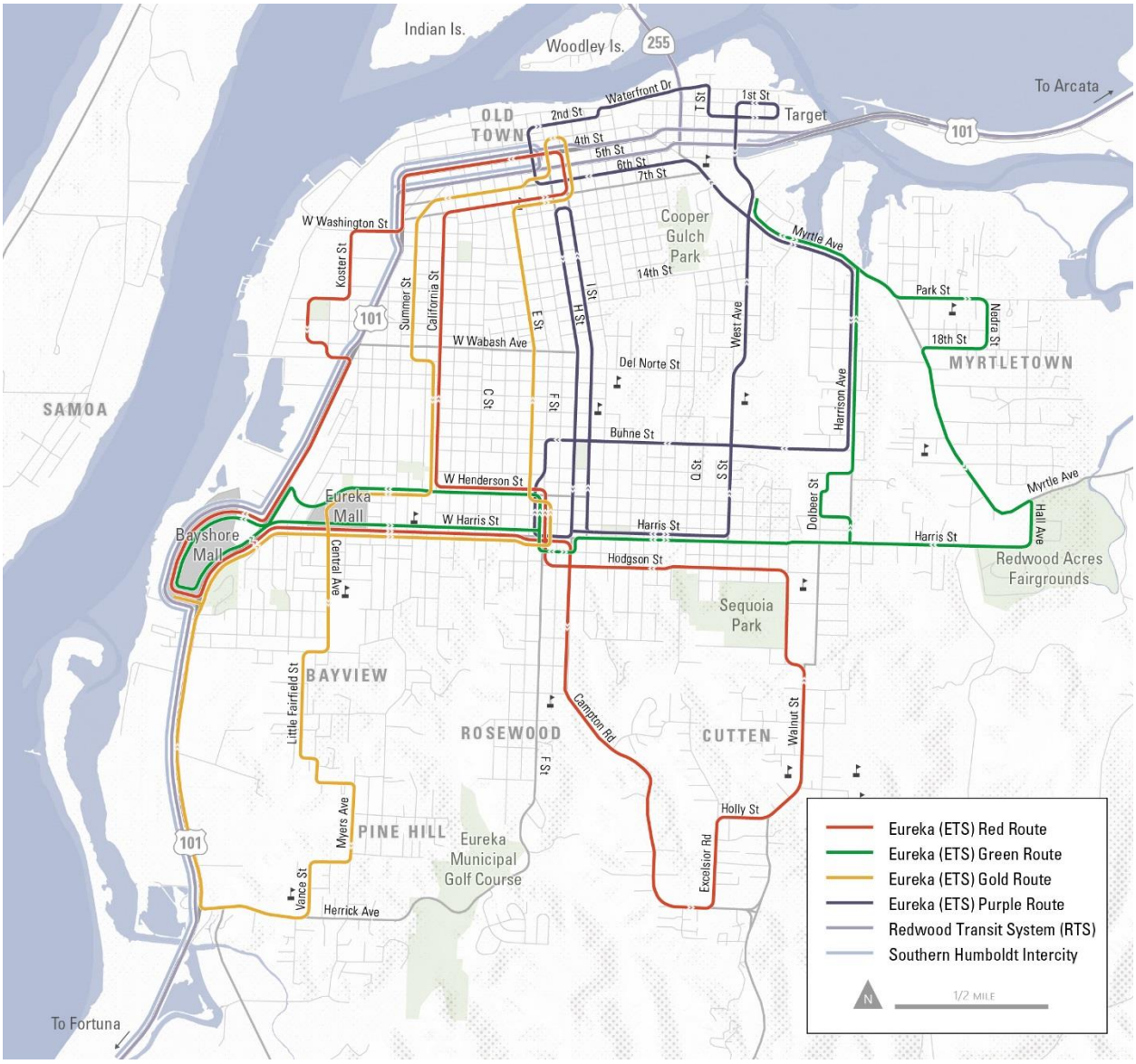


Figure 1: ETS Bus System – Weekday Service

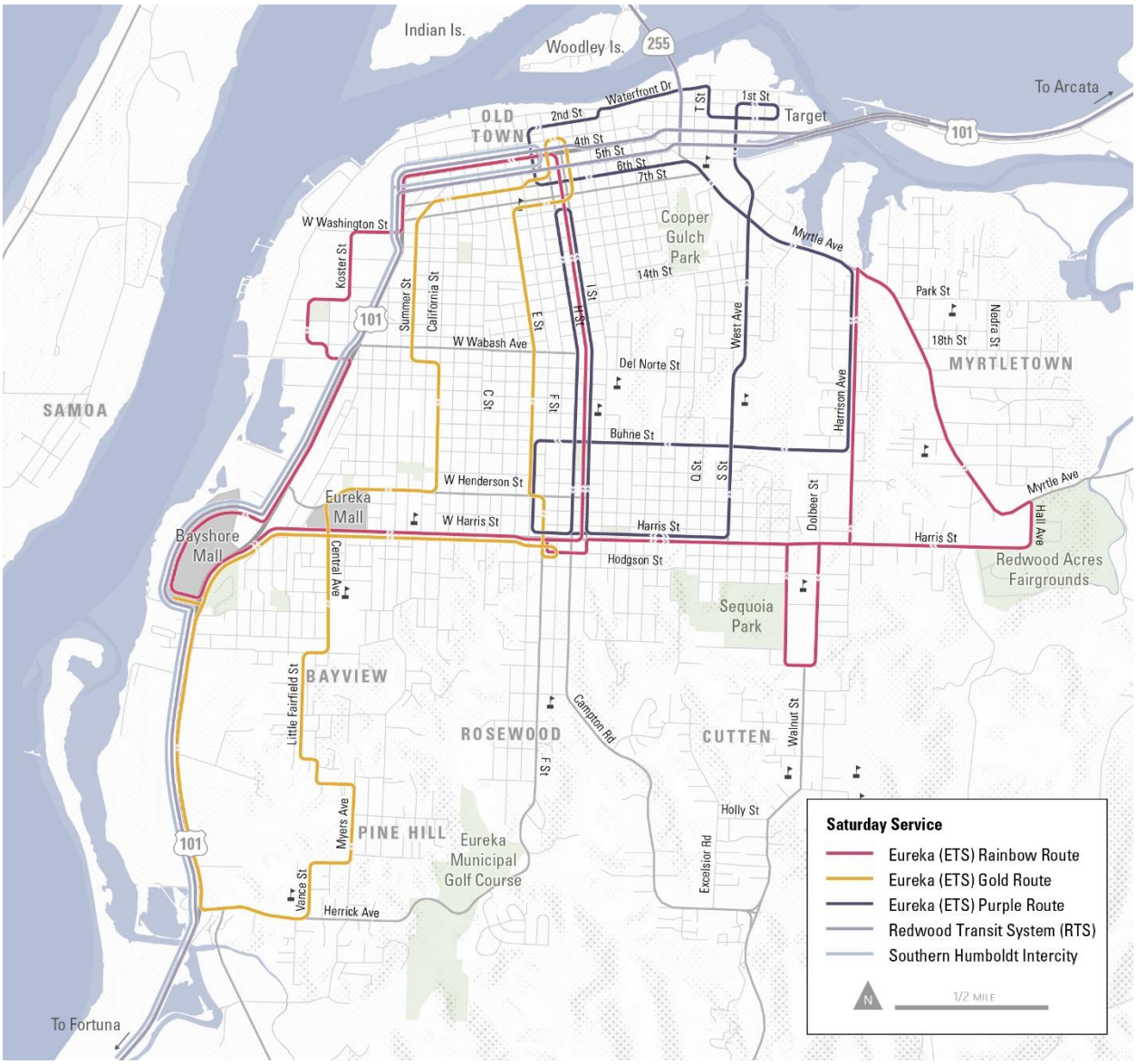


Figure 2: ETS Bus System – Saturday Service

Redwood Transit System

Redwood Transit System (RTS) provides fixed route intercity public transit system across Humboldt County. RTS service spans the US-101 corridor from Garberville to Trinidad, including key origins and destinations such as the College of the Redwoods, Bayshore Mall, Downtown Eureka, Humboldt State University, the Arcata Transit Center, and Arcata/Eureka Airport. In Eureka, RTS serves Broadway Street, 4th Street, and 5th Street. RTS operates seven days a week. On weekdays, service runs through Eureka approximately every 30 minutes between 6:30 AM and 6:30 PM, with hourly service extending to approximately 9:30 PM. On weekends, RTS operates ten round trips on Saturdays and four round trips on Sundays.

Dial-A-Ride

Dial-a-Ride service operated by City Ambulance of Eureka (CAE) Inc. is offered within the ETS service area to seniors and disabled citizens who are unable to use public transportation. The system is zone-based.

Intercity Buses

Amtrak and Greyhound operate intercity bus service in Eureka. Amtrak Thruway Bus 6318 (McKinleyville-Martinez) stops at the intersection of 6th Street and C Street in Downtown Eureka. Amtrak provides two daily roundtrips to the Bay Area. Greyhound Route 607 (Arcata-San Francisco) stops at the intersection of 4th Street and Q Street in Downtown Eureka. Greyhound provides two daily roundtrips to the Bay Area.

1.3 Study Goals

ETS seeks to identify transit service and facility improvements that better serve the unique mobility needs of Eureka residents, employees, and visitors. A successful study will achieve the following goals:

- **Evaluate the suitability of a line-based transit system.** Since its inception in the 1970s, ETS has primarily operated as a loop-based transit system comprised of one-way circulators connecting Eureka residential neighborhoods and shopping centers with Downtown Eureka. As discussed in the Key Choices section below, this system structure carries distinct trade-offs related to service performance and quality. This study provides an opportunity to reimagine the ETS system as a line-based system in response to land use and demographic changes, and in preparation for planned development activity and future transportation trends and technologies.
- **Increase ETS ridership.** Today, only a small percentage of local trips are completed via ETS bus routes, while most Eureka residents rely on driving, walking, or biking for daily mobility needs. Improvements identified in this study will help to retain existing riders and attract new riders, reducing the adverse environmental and public health effects of an auto-dominant transportation system by expanding mobility options for Eureka residents, employees, and visitors.
- **Position ETS for long-term financial sustainability.** Rising operating costs and funding uncertainty are affecting the long-term financial outlook for transit operators nationwide. An implementation program will identify funding sources and service delivery strategies that can be leveraged to ensure the on-going fiscal resiliency of the ETS system.

1.4 Guiding Principles

Successful transit systems share the same basic elements related to network design and service delivery to ensure a positive customer experience. This study incorporates the following guiding principles to create a simple yet effective ETS system plan.

Regularity

Regularity refers to the time interval between trips at a given transit stop. Repeating trip intervals are easier for customers to remember, while inconsistent schedule patterns can confuse customers as they plan their trip. For example, regular trip intervals based on basic clockface elements (i.e., 15-, 30-, and 60-minute intervals) are immediately recognizable. On-time performance also effects the regularity of a transit service, since routes that routinely arrive early or late introduce irregularity and uncertainty to a scheduled timetable. Recommendations identified in this study will maintain a high degree of service reliability while providing service at regular intervals in line with customer mobility needs.

Directness

Directness refers to the path between a transit trip origin and destination. Route directness correlates with travel time, which is a key factor in a customer's decision to utilize transit service. Routes that minimize the distance between origins and destinations are more attractive than circuitous routes that add unnecessary travel time. Circuitous routes can disorient customers by deviating from familiar travel corridors.

Symmetry

Symmetry measures how closely a departing transit trip resembles a return transit trip. Symmetrical routes follow similar inbound and outbound paths and allow customers to board and deboard at bus stops in close proximity to each other, improving the legibility of a transit route.

Synchronization

Synchronization refers to the operation of individual routes to form a unified, cohesive transit system. Synchronized transit systems facilitate coordinated, seamless transfers from one route to another while minimizing redundant routings and service coverage.

Simplicity

Simple transit systems are highly legible and easy to understand for customers of all ages and abilities. Hallmarks of simple transit systems include a straightforward route structure with distinct routes serving key markets, routes with repetitive trip and schedule patterns, and major origin-destination connections fulfilled by a single route or two routes with a brief, well-coordinated transfer window.

1.5 Key Choices

The design of the ETS system involves several key choices that guide how the agency allocates its fixed operating resources. These choices involve what type of bus service is provided, when and where buses operate, and how bus routes are designed. A summary of key choices is provided below.

What Type of Transit Service Fits Eureka?

Currently, Eureka is served by a fixed-route bus service delivery model, where customers plan trips via published schedules and regular routes to access destinations throughout the Study Area. Under this model, customer travel choice is defined by the availability of transit service as determined by the timing of scheduled trips and the location of transit routes and their associated bus stops. This study explores the potential for refinements to the current fixed-route model, as well as alternative transit service delivery models, that more closely match customer expectations for transit in and around Eureka.

When Should Transit Service Operate?

While people in the Study Area may drive, bike, or walk at any time of day, they may only ride the bus during ETS operating hours of 7:00 AM to 7:00 PM on weekdays and from 10:00 AM to 5:00 PM on Saturdays. This study considers if these hours of operation meets the needs of the Study Area.

How Should Eureka Balance Ridership and Coverage Goals?

ETS allocates fixed operating resources toward balancing goals of maximizing ridership (the number of people using its buses) and coverage (the amount of area served by its buses). Balancing these goals requires tradeoffs: a system that only maximizes ridership would focus on areas where transit demand is highest, while a system that only maximize coverage would spread bus routes evenly across the service area. ETS currently prioritizes maximizing coverage by providing bus service to as many areas as possible. This study considers whether this focus on coverage-only services meets the needs of the Study Area.

How Important is Walking Distance to a Bus Stop Relative to Waiting Time and Travel Time?

ETS currently serves 68 percent of residents within one quarter mile (a five minute walk) of a bus stop, many residents live even closer. However, in order to minimize walking distances, ETS operates hourly one-way loops with average travel times and wait times up to ten times longer than driving. This study considers the tradeoffs between walking distance, waiting times, and travel times in the Study Area.

One-Seat Ride or Transfer

Transit systems designed around one-seat rides allow for customers to utilize a single route to travel between trip origins and destinations but can be inefficient due to the increased demand on operating resources. Systems designed around transferring require customers to utilize multiple routes to travel between trip origins and destinations but rely on seamless network connections and can decrease convenience for customers. Currently, ETS relies on both one-seat rides and transfers. This study will explore measures that rebalance the use of one-seat rides and transfers to enhance customer connections, including those to RTS routes serving the Study Area.

2. MARKET AND NEED ASSESSMENT

2.1 Service Area at a Glance

ETS serves approximately 42,000 people and 19,000 jobs across about 11 square miles. The service area includes the City of Eureka and unincorporated communities of Bayview, Cutten, Myrtletown, and Rosewood. Major destinations within the service area include Old Town Eureka, the Bayshore Mall, St. Joseph Hospital, and Eureka High School. Beyond the ETS service area, RTS connects Eureka residents to key destinations such as Humboldt State University, College of the Redwoods, and Arcata-Eureka Airport.

As the largest city in Humboldt County and the Northern California Coast, Eureka serves as a regional employment hub for public administration, healthcare, retail, food service, and education. There is a substantial amount of commute activity in and out of the service area each day. Fifty-five percent of employees working in the ETS service area live in surrounding areas such as McKinleyville, Arcata, and Fortuna. However, 55 percent of residents in the service area also work outside of Eureka. Nonetheless, average commute durations for residents in the study area are short, averaging only 14 minutes.

Table 2. ETS Service Area at a Glance

42,000	Residents
19,000	Jobs
45%	Residents work in study area
2%	Residents commute by bus
14 minutes	Average commute time to work
12%	Households without vehicles
$43,000	Median household income
21%	People living under the Federal poverty line
26%	People younger than 25 years old
15	People older than 65 years old

Source: American Community Survey, 2015, and US Census Longitudinal Employer-Household Dynamics, 2015.

2.2 Land Use Characteristics

Land Use

Most Eureka neighborhoods are comprised of single family homes and small multifamily dwellings. Old Town has a high concentration of office and retail uses, while the Bayshore Mall, Eureka Mall, and Henderson Center are also large retail hubs. Some industrial and warehouse uses are located along the western waterfront near Redwood Highway. Eureka's street grid is interrupted by several creeks and sloughs, particularly around the eastern and southern neighborhoods and adjacent unincorporated areas of Myrtletown, Bayview, Rosewood, and Pine Hill. The Draft Eureka General Plan (April 2017) prioritizes infill development on vacant or underutilized land within the City's core. (see Figure 3)

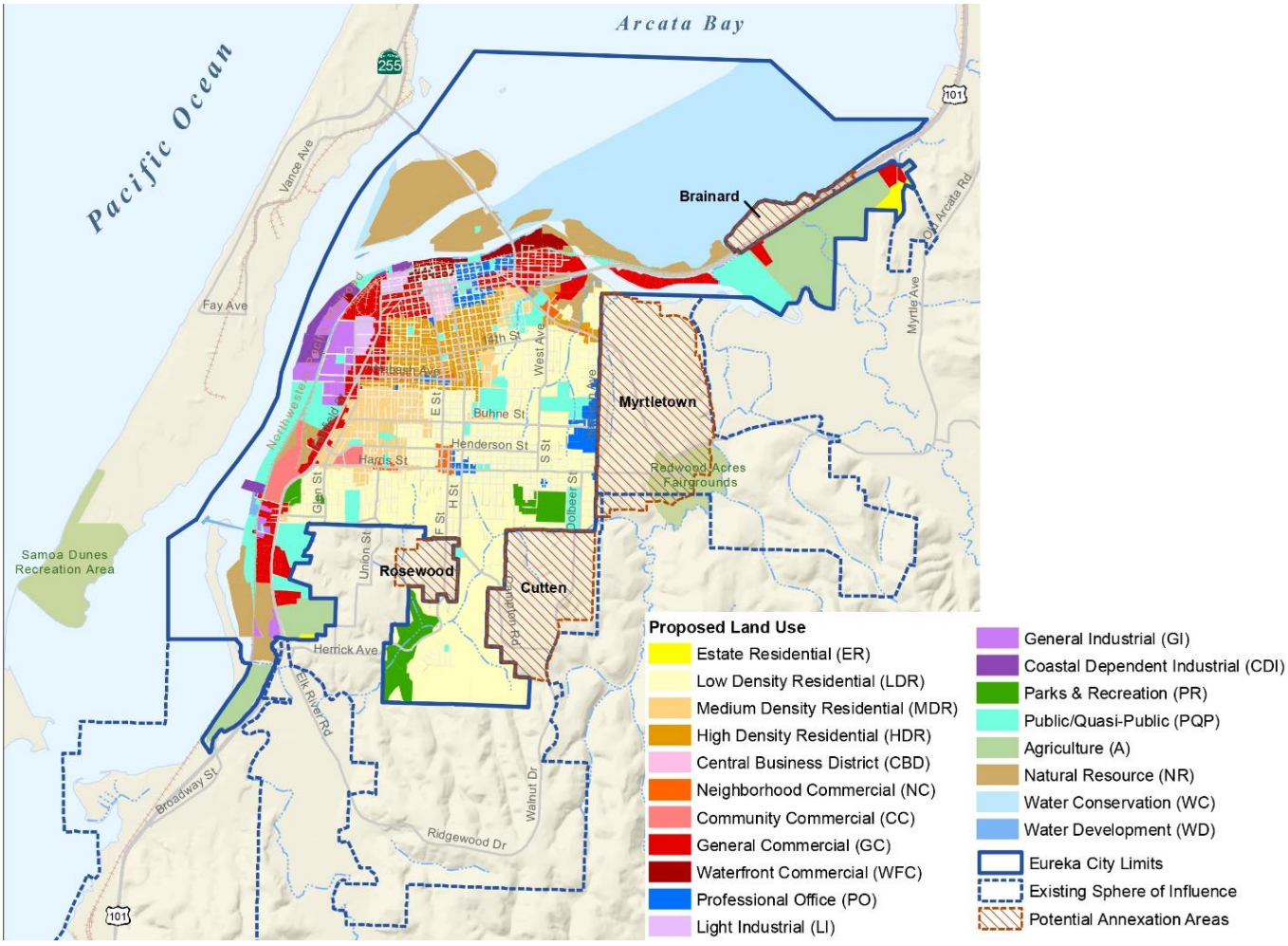


Figure 3: Study Area Land Use. *Eureka General Plan, 2017*

Population Density

Transit service is most efficient when it connects people and destinations within easy walking distance of bus stops. Fixed route transit typically requires population densities of at least 4,000 people per square mile to warrant service, and works best at densities greater than 10,000 people per square mile (communities with lower densities are sometimes served by dial-a-ride services). Population density in the study area is concentrated within the City of Eureka, particularly residential neighborhoods north of Wabash Avenue and along Harris Street near the Eureka Mall. Parts of Myrtletown (along Myrtle Avenue), Cutten (along Walnut Street), and Rosewood (along F Street) exhibit transit-supportive residential densities.

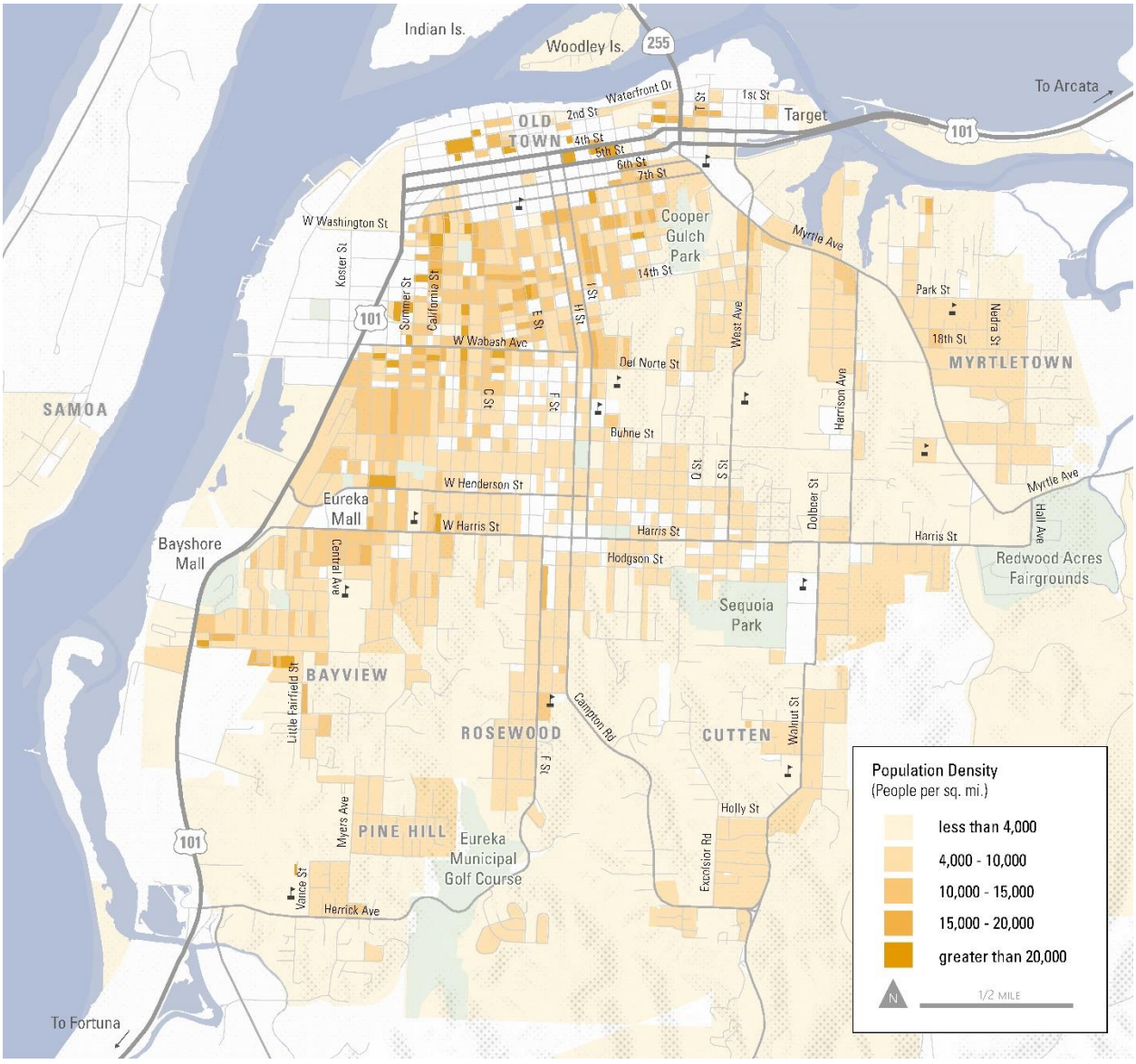


Figure 4: Population Density. ***American Community Survey, 2015***

Employment Density

The location and concentration of jobs presents a strong indicator of potential transit demand, since commuting to and from work is a routine travel pattern. Employment concentrations greater than 3,000 jobs per square mile typically represent minimum densities to support transit service. Employment densities are highest around Old Town Eureka, roughly bounded by 7th Street, R Street, 2nd Street, and Broadway Street, along with the Redwood Highway corridor and the area around St. Joseph Hospital on the border of Eureka and Myrtletown. Beyond the Study Area, other nearby employment centers include McKinleyville, Arcata, Humboldt State University, College of the Redwoods, and Fortuna, which are accessible via RTS.

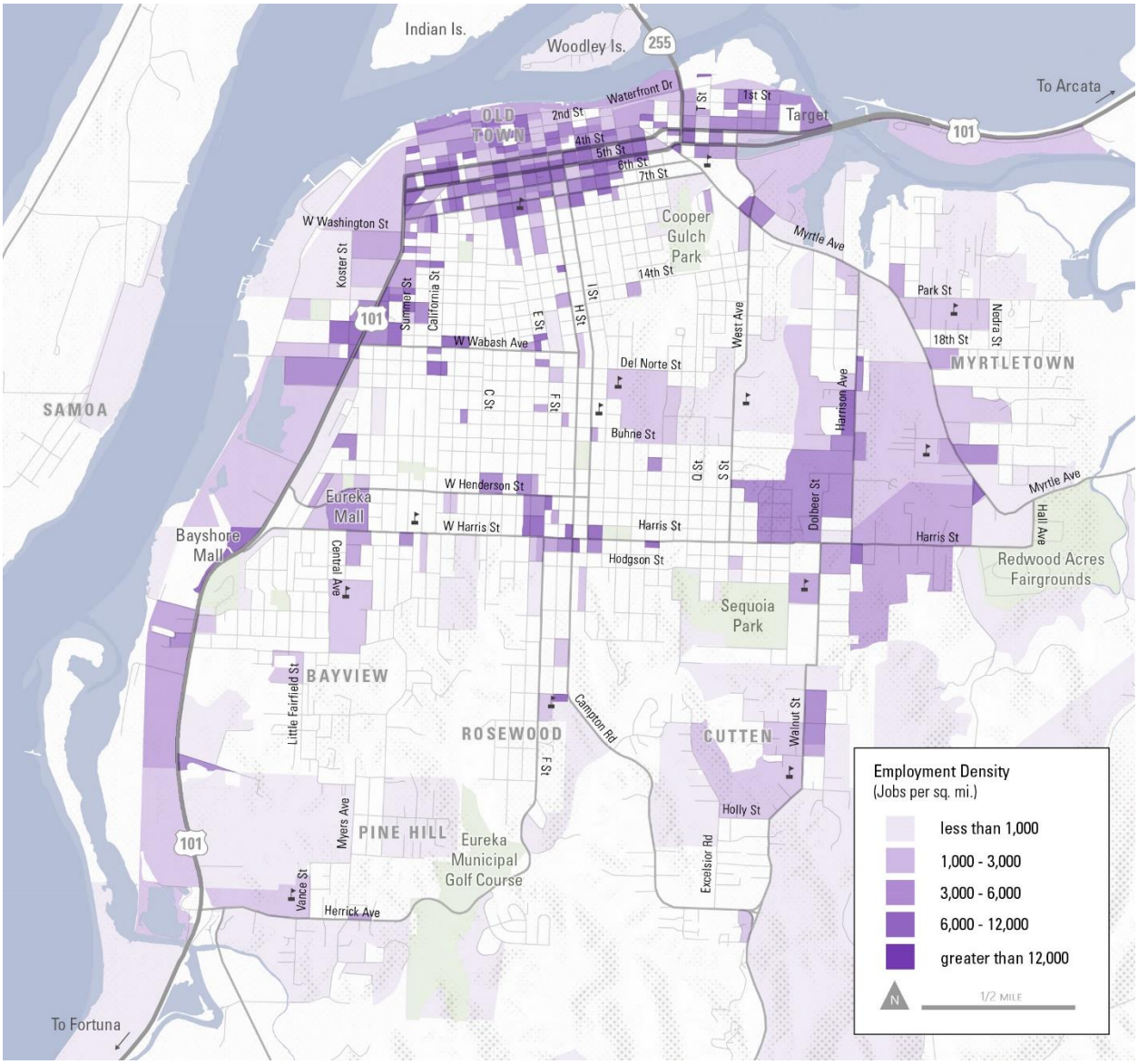


Figure 5: Employment Density. ***American Community Survey, 2015***

Population + Employment Density

The combined density of population and employment presents a measure of geographic concentration and distribution of activity within the Study Area. Activity is most heavily concentrated around Redwood Highway, Harris Street, H Street/I Street, Wabash Avenue, Harrison Avenue, Myrtle Avenue.

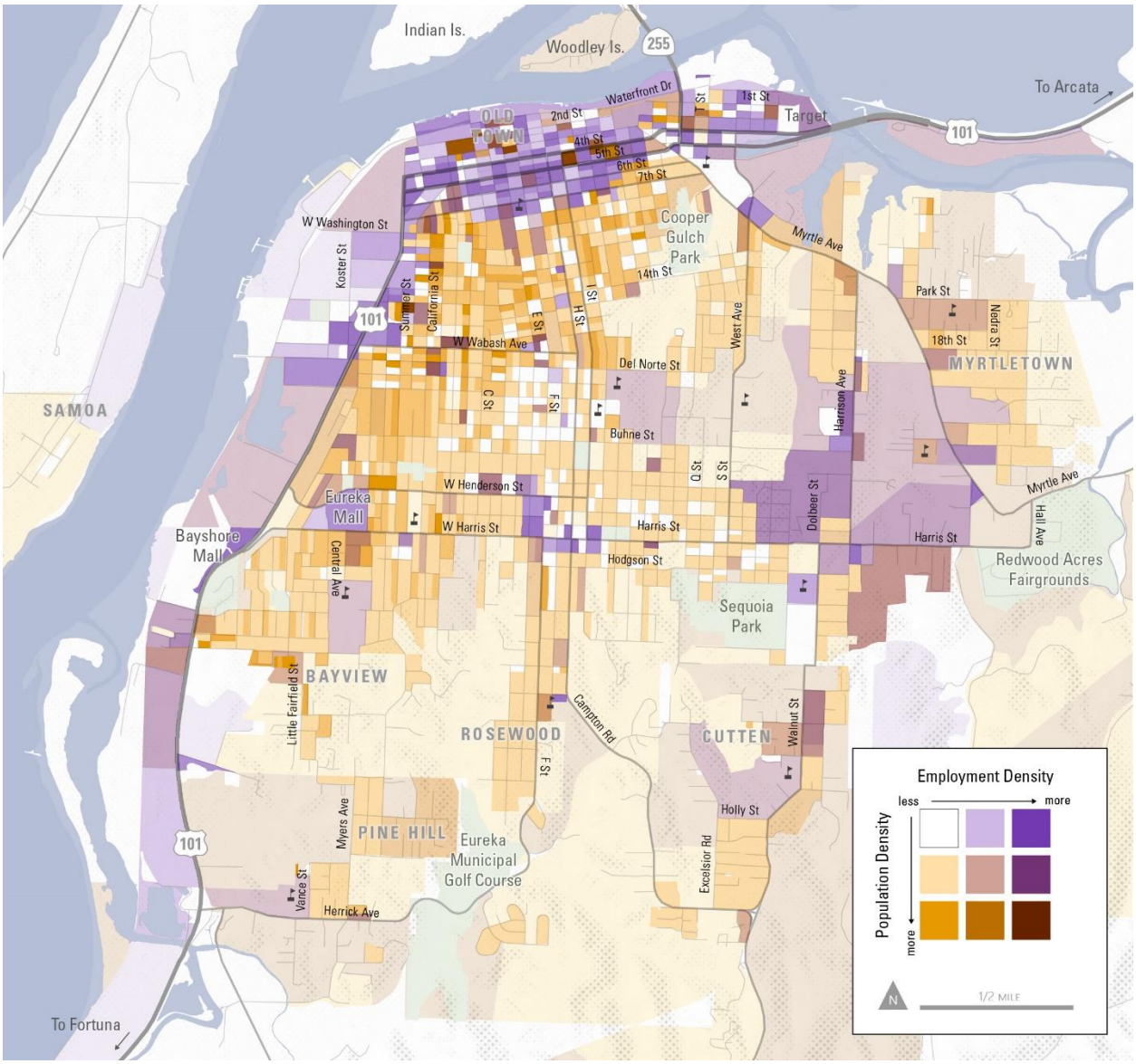


Figure 6: Population + Employment Density. ***American Community Survey, 2015***

2.3 Socioeconomic Characteristics

Median Household Income

Transit often appeals to a broad cross-section of the general population, yet is particularly useful for households with fewer financial resources and those in poverty. Transit enables access to jobs and services while providing the ability to own fewer cars and spend less on gas, parking, and vehicle maintenance. The median household income in Eureka is $43,000 per year.

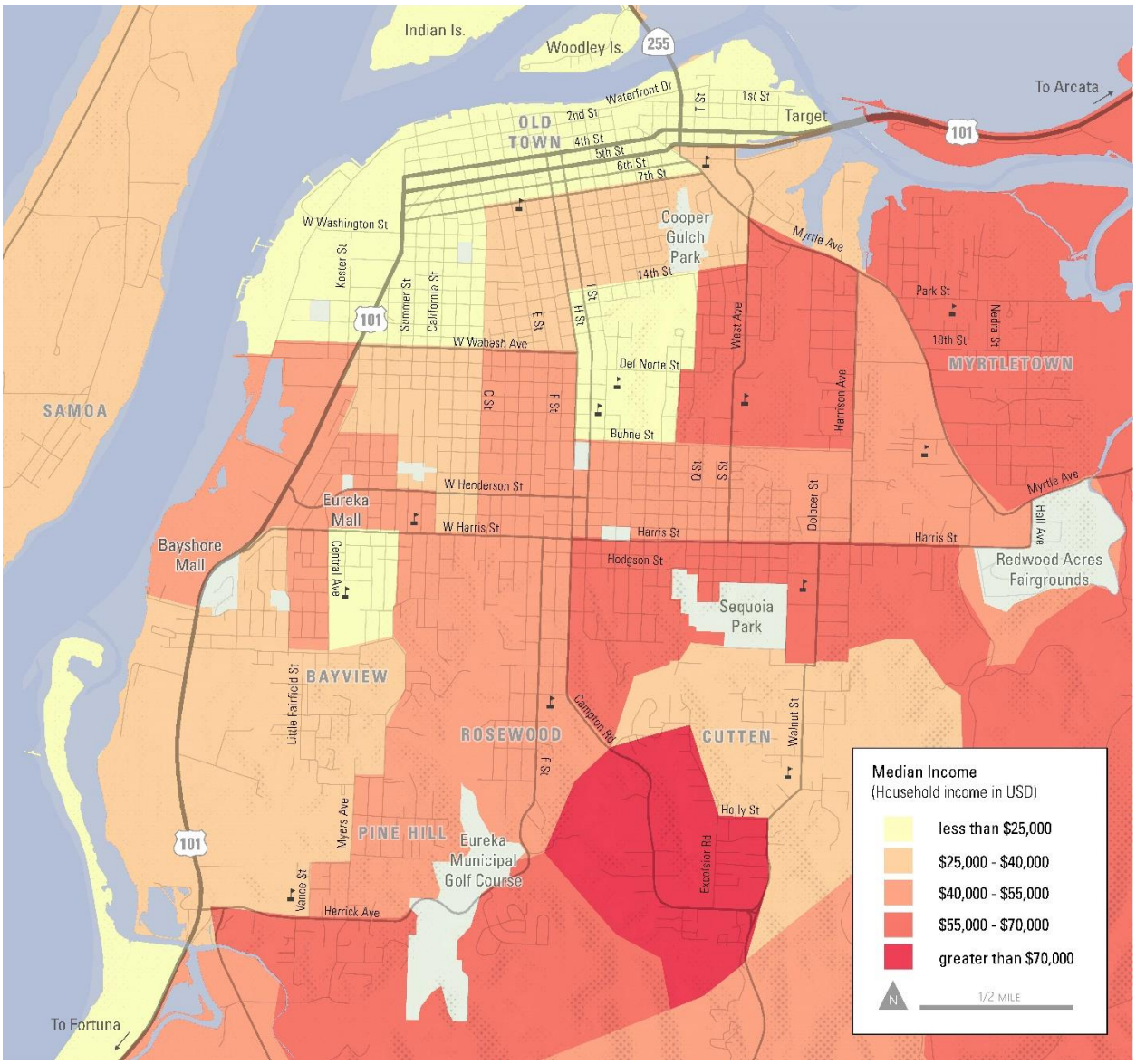


Figure 7: Median Household Income. ***American Community Survey, 2015***

Poverty Density

About one in five residents of the Study Area are living under the federal poverty line. Households in poverty are primarily concentrated in Bayview south of the Eureka Mall, west of Cooper Gulch Park, along the C Street corridor, and in Rosewood.

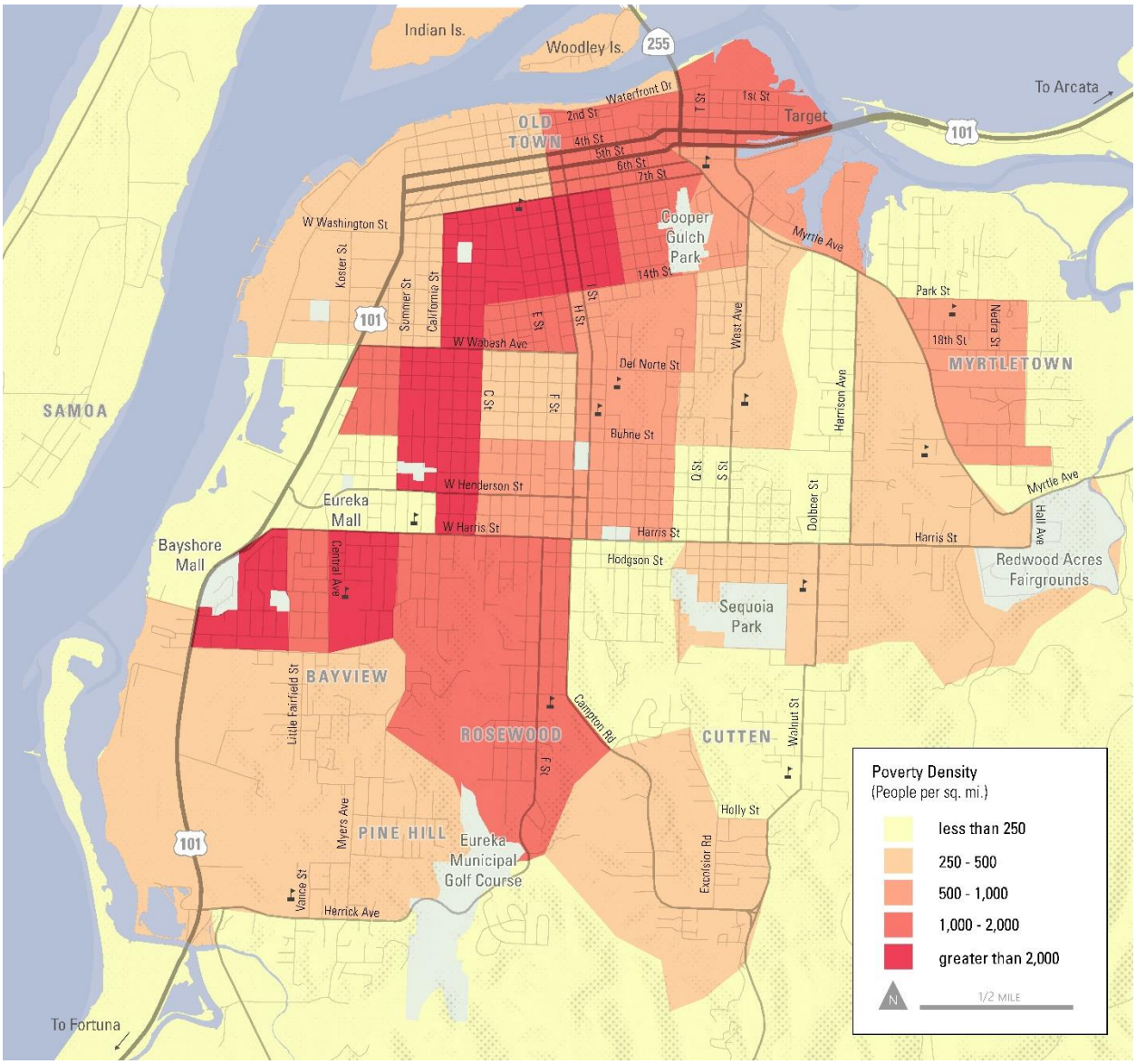


Figure 8: Poverty Density. ***American Community Survey, 2015***

Youth, Young Adult, and Senior Density

Youth (under 18 years old), young adults (18 to 25 years old), and seniors (over 65 years old) typically exhibit a higher likelihood of riding transit. Many are unable to drive or lack access to a car. ETS provides discounted fares for youth and seniors, while Humboldt State students receive discounted Jack Passes. In the Study Area, 26 percent of residents are under age 25, and 15 percent of residents are over age 65. These residents are most heavily concentrated in central and western Eureka, Rosewood, and Myrtletown.

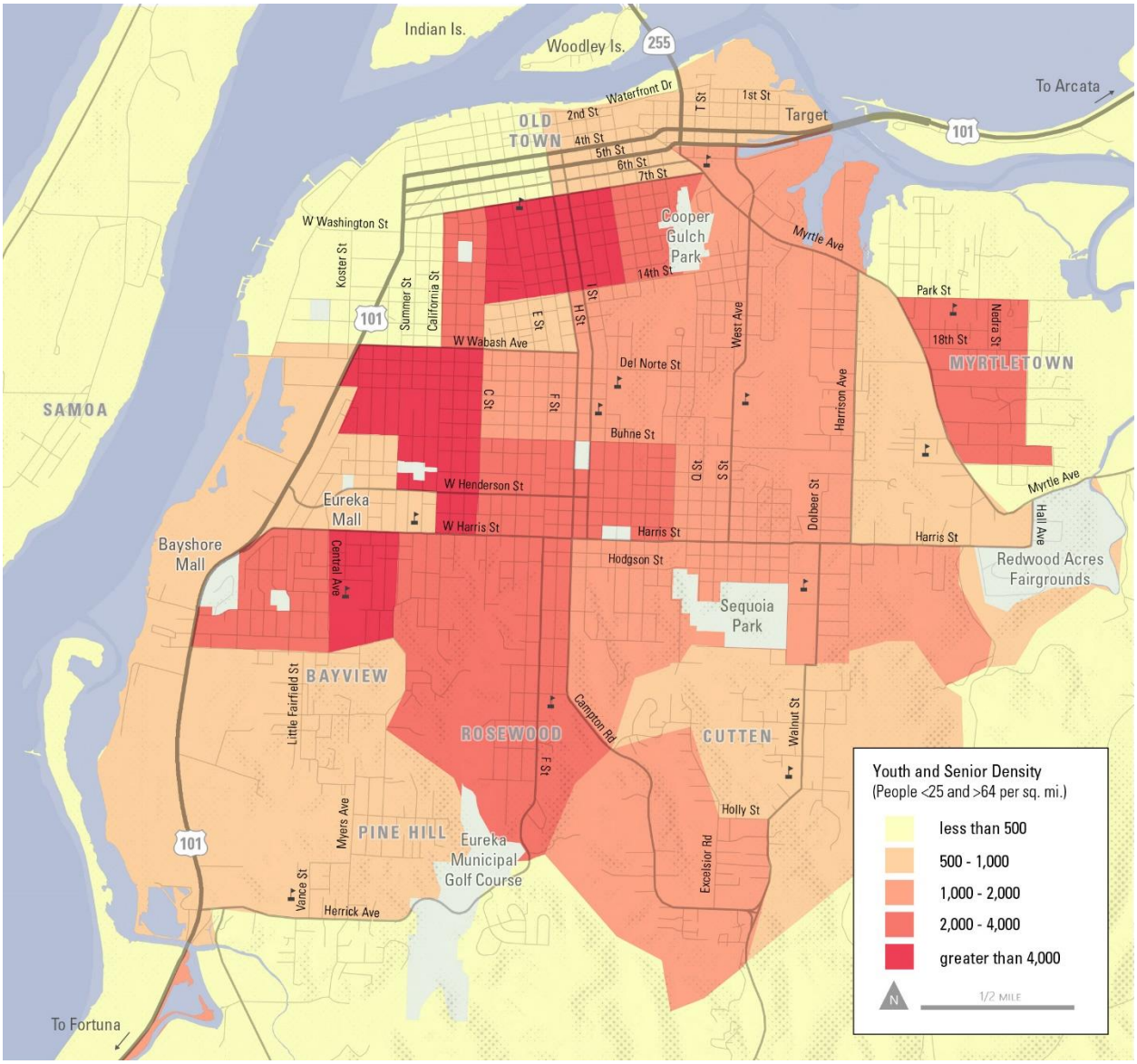


Figure 9: Youth, Young Adult, and Senior Density. ***American Community Survey, 2015***

Zero Vehicle Households

Households without automobiles depend on transit, active transportation, and carpooling for their travel needs. Twelve percent of Eureka households do not own a car. These households are most heavily concentrated near the 14th Street and C Street corridors in central Eureka, near Eureka High School, and southeast of the Eureka Mall. Cutten, Myrtletown, and Rosewood also have significant densities of zero vehicle households.

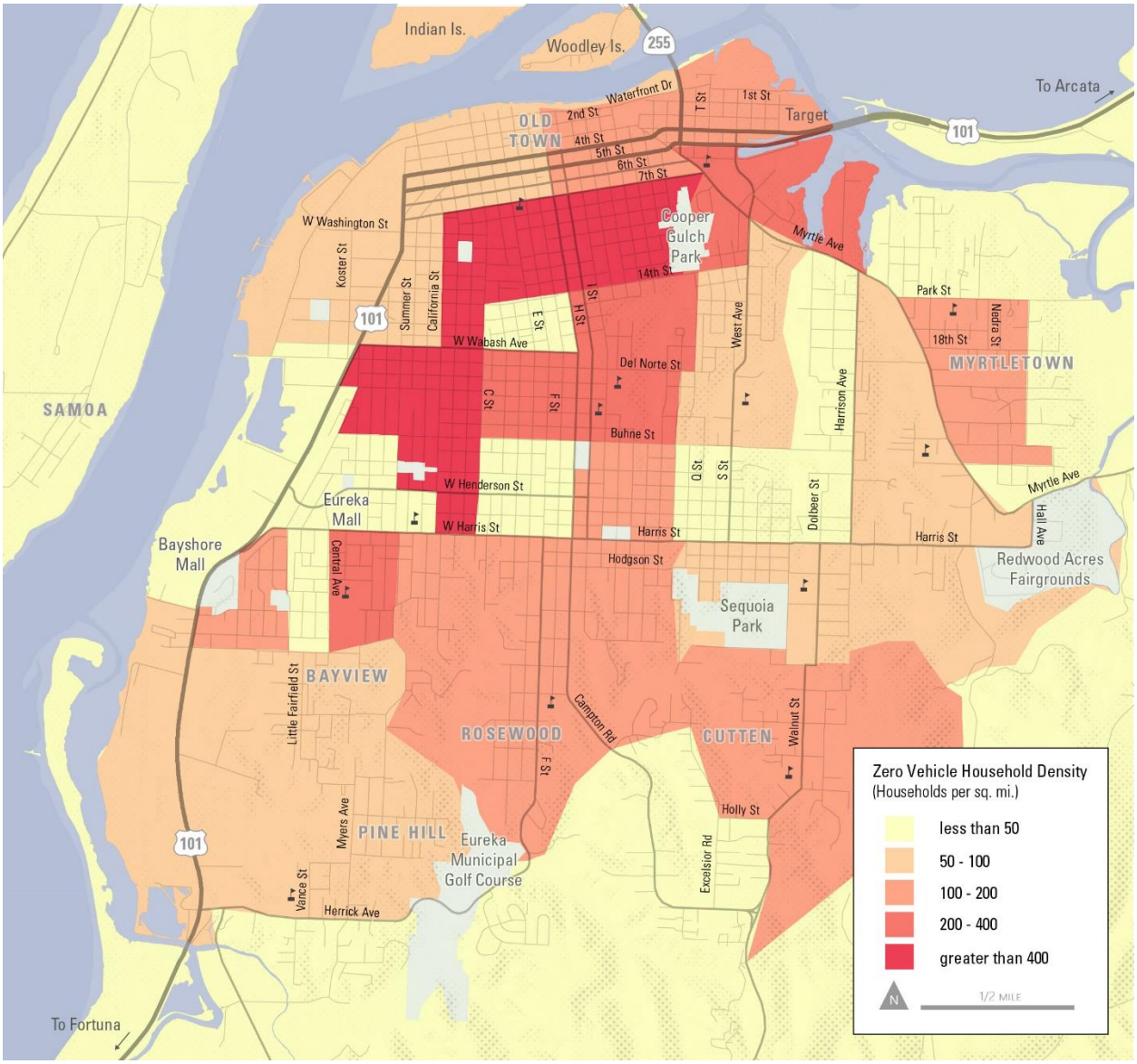


Figure 10: Zero Vehicle Household Density. ***American Community Survey, 2015***

2.4 Transit Ridership Potential

Transit ridership is broadly influenced by five key factors: service attributes, ease of access, land use density, socioeconomics, and value relative to other transportation options. Of these factors, ETS exercises control over the service that it operates (including attributes such as frequency, travel time, reliability, and fares) and partially influences its perception of value (through its fares relative to the cost of driving and parking). However, ETS has little influence over the ease of access (such as the quality of sidewalks and crosswalks and perception of safety), land use (the density, linearity, and proximity of residences, jobs, and activities), and socioeconomics (age, income, and vehicle ownership) within its service area.

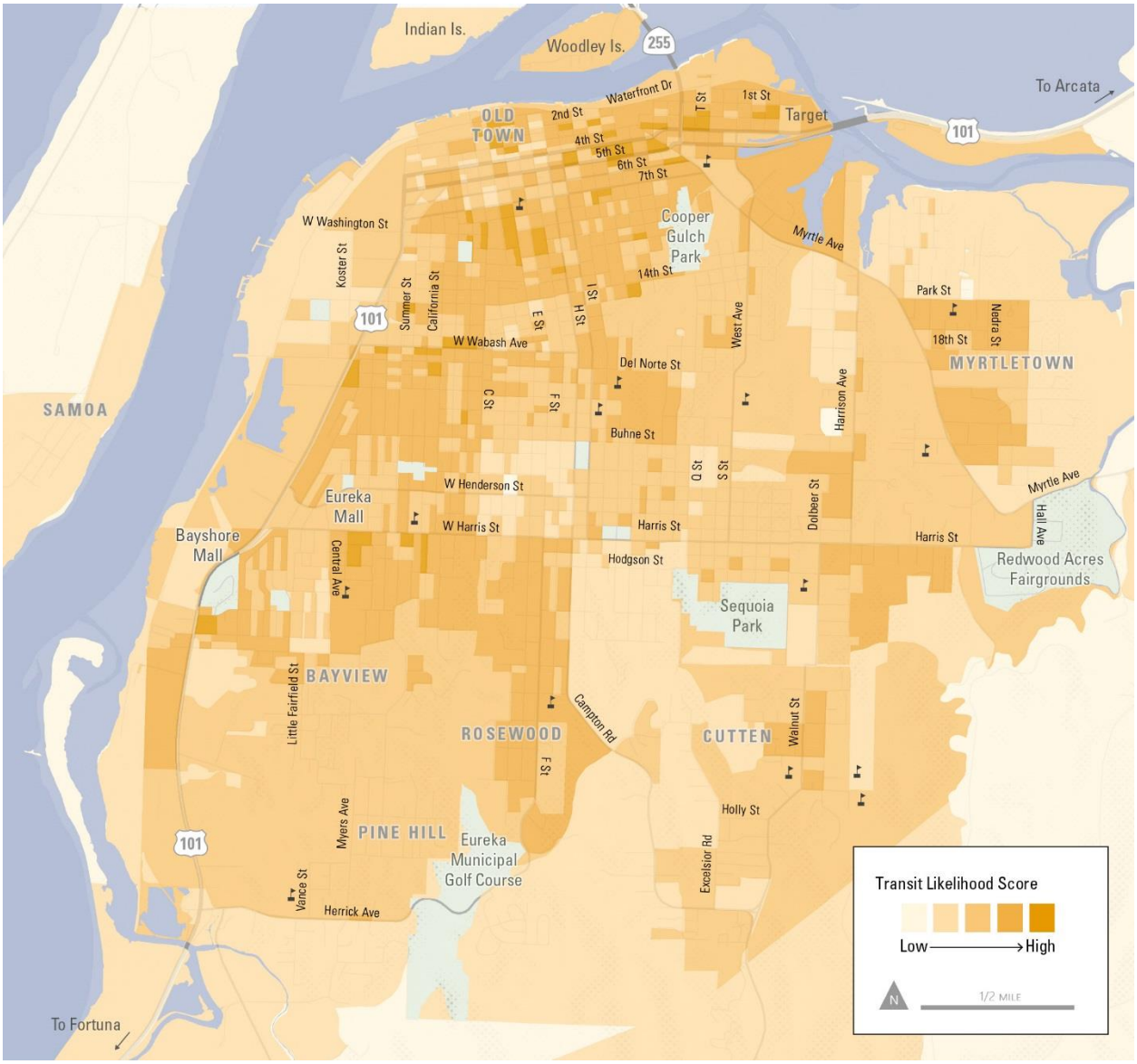


Figure 11: Transit Ridership Potential. *American Community Survey*, 2015

3. SERVICE ASSESSMENT

3.1 Service Characteristics

Service Frequency & Span

Table 3 summarizes the existing service frequency and span for weekday and weekend services by route. Service is available from 6:30 AM to 7:00 PM on weekdays and from 10:00 AM to 5:00 PM on Saturdays. ETS does not operate on Sundays.

All routes operate at 60 minute headways for both weekday and Saturday service. Since each route is served by a single bus, round trip travel times and layovers also total 60 minutes. The 60 minute frequency requires riders to plan their bus trips in advanced to use the system effectively and depends on reliable timed transfers between routes, including transfers with RTS service for regional connections.

Table 3. ETS Service Frequency and Span

Route	Weekday		Saturday		Sunday	
	Frequency (Minutes)	Service Span	Frequency (Minutes)	Service Span	Frequency (Minutes)	Service Span
Red	60	7:00 AM – 7:00 PM	-	-	-	-
Green	60	7:00 AM – 6:30 PM	-	-	-	-
Gold	60	6:30 AM – 7:00 PM	60	10:00 AM – 5:00 PM	-	-
Purple	60	6:30 AM – 7:00 PM	60	10:00 AM – 5:00 PM	-	-
Rainbow	-	-	60	10:00 AM – 5:00 PM	-	-

Source: Eureka Transit Service Website, October 2017.

3.2 Ridership

An on-board ridecheck was conducted on each route for Weekday and Saturday service during October 2017 to observe rider origin and destination patterns. The ridecheck is comprised of a single day sample of data, one day of data for weekday service and one day of data for Saturday service.

Ridership by Stop

Current stop-level ridership patterns is heavily influenced by the loop-based route and transfer system. Weekday ridership activity (see Figure 12) is most concentrated at three key destinations that also serve as transfer points; Harris & F Street at Henderson Center (201 weekday boardings) and H & 3rd Street in downtown Eureka (148 weekday boardings), and the Bayshore Mall (99 weekday boardings). Secondary

concentrations of ridership activity occur near the Silvercrest Retirement home (38 weekday boardings), at the Alpha & Myers Street stop (31 weekday boardings), at the Humboldt Community Access and Resource Center (HCAR), near the Eureka Mall, and along the Myrtle Avenue and H Street/I Street corridors.

Saturday ridership activity (see Figure 13) mirrors weekday stop-level ridership patterns, however, boardings and alightings levels are substantially diminished compared to weekday conditions.

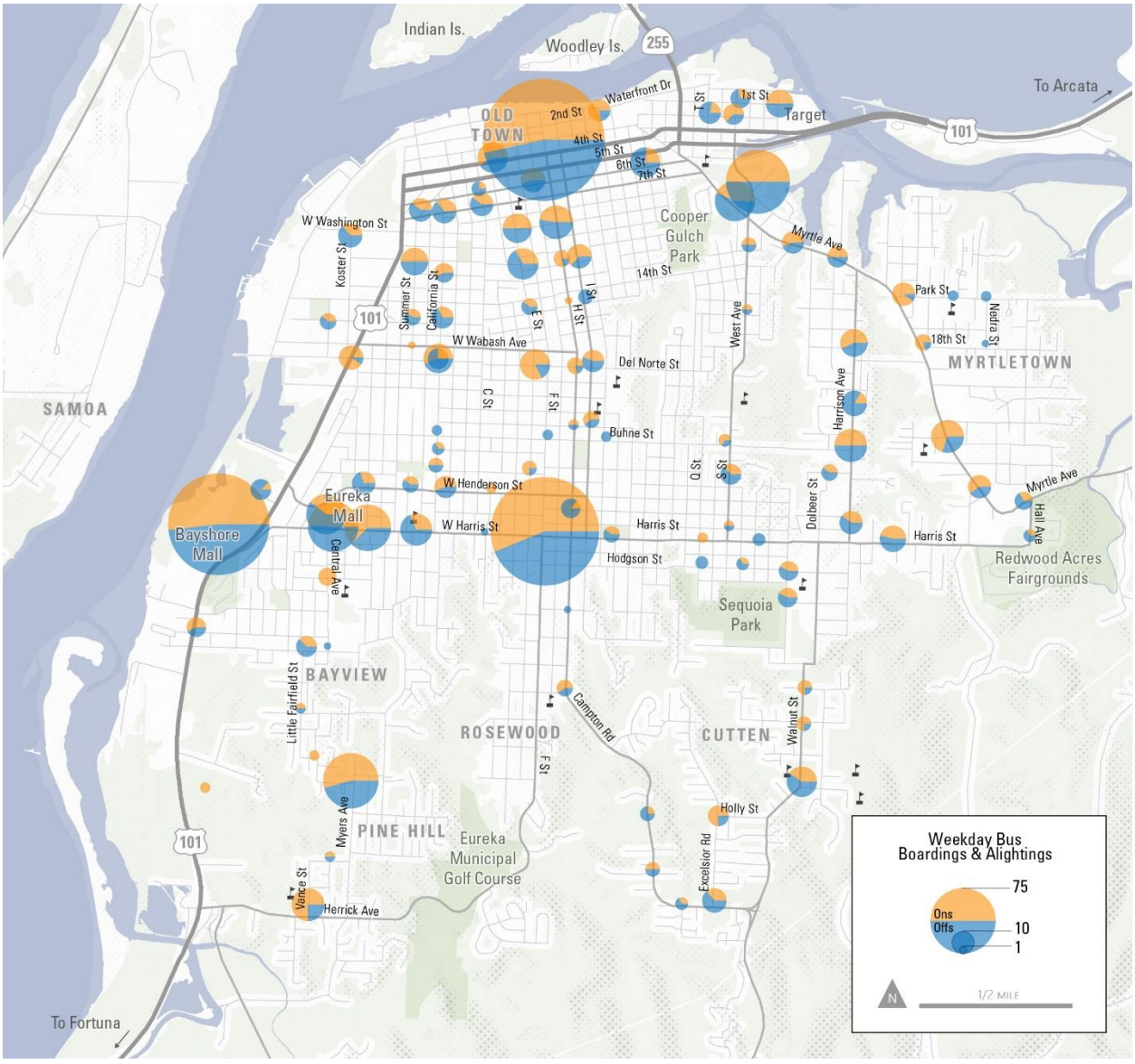


Figure 12: Boardings and Alightings by Stop – Weekday Service, October 2017

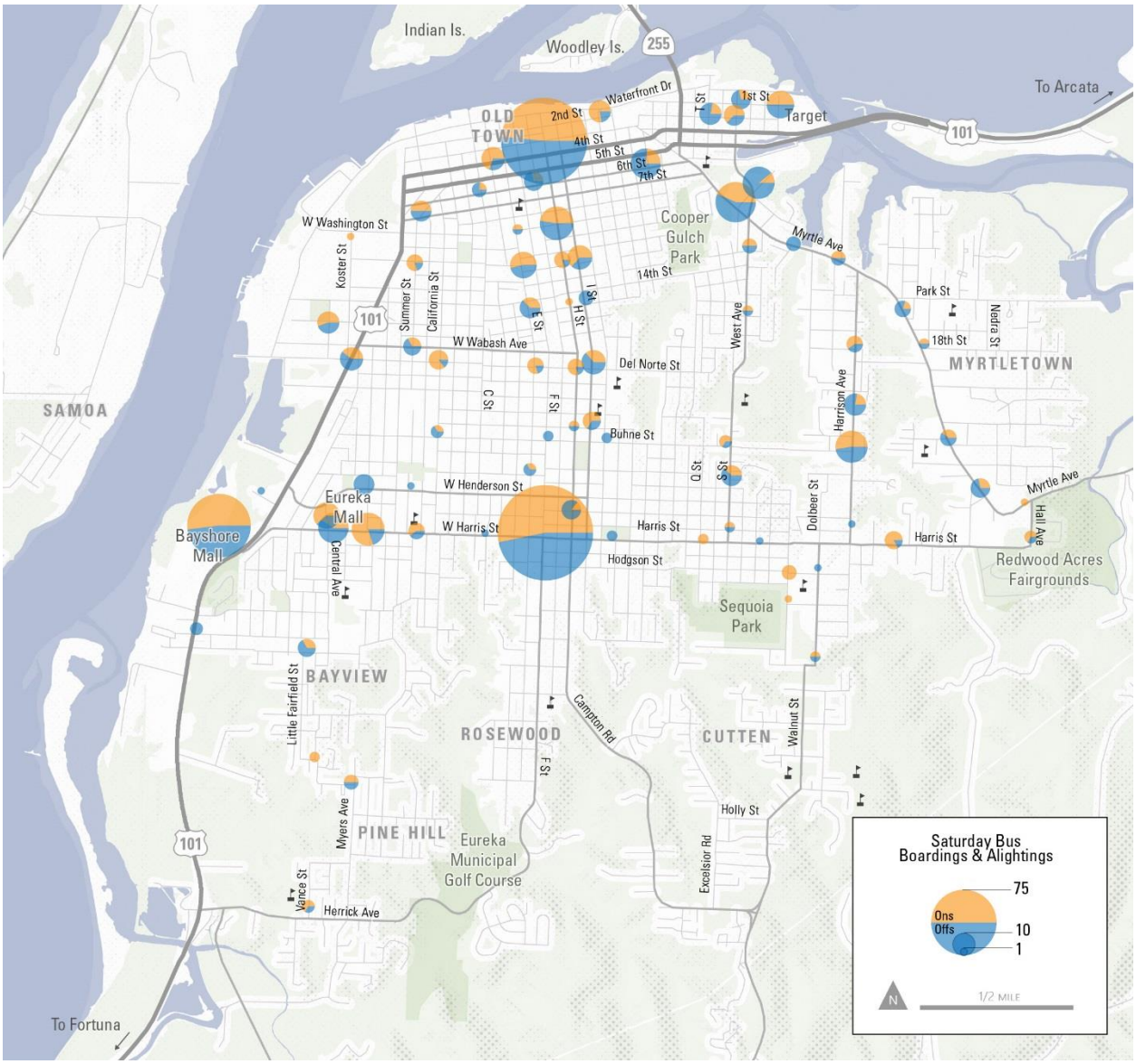


Figure 13: Boardings and Alightings by Stop – Saturday Service, October 2017

Ridership by Route

Table 4 displays weekday and Saturday ridership for each individual ETS route. In total, ETS serves 941 riders on weekdays and 325 riders on Saturdays. The Gold route generates the highest total passenger boardings on both weekdays and Saturdays.

System usage in terms of passenger load varies by route, most carrying a maximum passenger load in the afternoon while the Green route carries a maximum passenger load around 8:00 AM during the typical commuter peak period. Table 4 displays the maximum passenger load of each route by time of day.

Table 4. Ridership and Load by Route

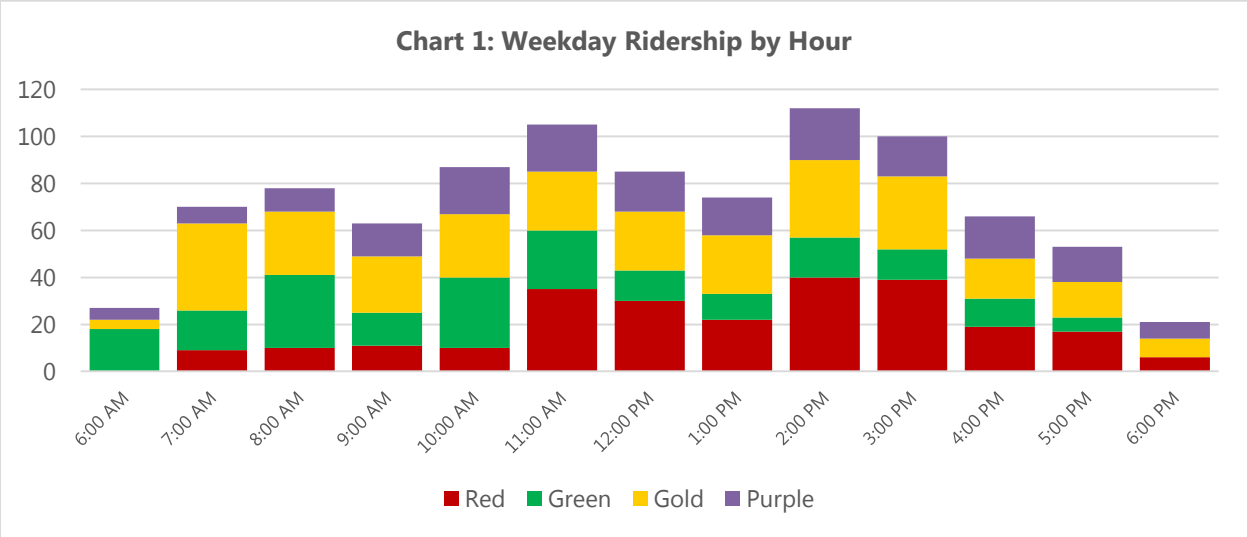
Route	Weekday			Saturday		
	Passenger Boardings	Max. Passenger Load	Max. Passenger Load Trip Time	Passenger Boardings	Max. Passenger Load	Max. Passenger Load Trip Time
Red	248	16	2:00 PM	-	-	-
Green	207	20	8:00 AM	-	-	-
Gold	298	19	1:00 PM	145	12	12:00 PM
Purple	188	15	2:00 PM	76	12	2:00 PM
Rainbow	-	-	-	104	14	2:00 PM
ETS Total	**941**	**-**	**-**	**325**	**-**	**-**

Source: Fehr & Peers, October 2017.

Ridership by Time of Day

Chart 1 displays weekday ridership by hour for each individual ETS route. The busiest hours for ETS occur during the midday time period between 10:00 AM and 4:00 PM, outside of the typical morning and evening peak periods for transit demand. The single busiest hour for ETS is the 2:00 PM hour, when the system generates approximately 110 passenger boardings. In addition to the 2:00 PM hour, the 11:00 AM hour and the 3:00 PM hour each generate over 100 passenger boardings. The first and last hours of the service day, 6:00 AM and 6:00 PM, each generate fewer than 25 passenger boardings.

Individual ETS routes exhibit varying ridership patterns throughout the day. The Gold route, the highest performing ETS route, maintains relatively stable ridership levels throughout a typical weekday. Ridership on the Green route is more strongly oriented towards the morning and midday hours, with ridership beginning to trail off after 3:00 PM. Conversely, ridership on the Purple and Red routes is low during the morning but steadily grows as the day progresses, peaking during the afternoon hours.



Source: Fehr & Peers, October 2017.

3.3 Productivity

Assessing a transit system's productivity consists of analyzing several factors such as operating hours and cost, vehicle capacity, ridership, and fares to produce system and route statistics by revenue hour and mile. Table 5 displays the route level productivity in terms of revenue hours and miles by passenger. ETS currently serves about 20 passengers per revenue hour on weekdays and 15 passengers per revenue hour on Saturdays, translating to about one to two passengers per revenue mile. Productivity levels are generally above average considering the hourly frequency of ETS service and longer travel times associated with a loop-based system.

Table 5. ETS Productivity by Route

Route	Weekday				Saturday			
	Revenue Hours	Passengers per Rev. Hour	Revenue Miles	Passengers per Rev. Mile	Revenue Hours	Passengers per Rev. Hour	Revenue Miles	Passengers per Rev. Mile
Red	12	20.7	148	1.7	-	-	-	-
Green	12	17.3	144	1.4	-	-	-	-
Gold	12	24.8	122	2.4	7	20.7	71	2.0
Purple	12	15.7	132	1.4	7	10.9	77	1.0
Rainbow	-	-	-	-	7	14.9	95	1.1
ETS Total	**48**	**19.6**	**546**	**1.7**	**21**	**15.5**	**243**	**1.3**

Source: Fehr & Peers, October 2017.

3.4 Financial Effectiveness

Table 6 summarizes the financial effectiveness of ETS routes. Farebox recovery ratio combines the operating characteristics with the bus fare to measure the fraction of operating cost paid by passenger bus fares. Subsidy per passenger equates to the total operating cost minus fare box recovery over passenger boardings. Most ETS routes have a low subsidy per passenger of approximately $2 to $3, and recover approximately 1/4 to 1/3 of their operating cost with fares. On an annual basis, the ETS farebox recovery ratio is 32 percent relative to an annual budget of approximately $1 million.

Table 6. ETS Financial Effectiveness by Route

Route	Weekday		Saturday	
	Farebox Recovery Ratio	Subsidy per Passenger Boarding	Farebox Recovery Ratio	Subsidy per Passenger Boarding
Red	35%	$2.33	-	-
Green	29%	$3.04	-	-
Gold	42%	$1.73	35%	$2.32
Purple	26%	$3.21	18%	$5.56
Rainbow	-	-	25%	$3.73
ETS Total	**33%**	**$2.52**	**26%**	**$3.53**

Source: Fehr & Peers, October 2017.

3.5 Service Quality

Average Travel Time & Wait Time

Table 7 compares average travel times plus wait times between local destinations on different modes of travel. ETS travel times are presented for both trips to and from these sample locations, and include an average wait time of 30 minutes. All ETS trips can be currently completed in a single-ride along a single route. For the sample trips, transit is substantially slower than driving or biking, and approximately on par with walking.

Table 7. Travel Time Comparison

Sample Trip	Travel Time by Mode (Minutes)			
	ETS	Driving	Walking	Biking
Humboldt County Superior Court - Bayshore Mall	47 / 77	9	48	17
St. Joseph Hospital - Myrtletown (Park Street/Nedra Street)	48 / 44	6	29	9
Eureka Municipal Auditorium - Pine Hill (Alpha Street/Myers Avenue)	55 / 63	9	57	16

Note: ETS travel time includes average wait time of 30 minutes due to 60 minute service frequency. ETS travel times are presented for both directions of travel (to/from).

Reliability

Time points along each route were identified and analyzed for on-time performance during the ridecheck, where checkers were directed to record the actual departure time of buses leaving each scheduled time point. As shown in Table 8, on weekdays, ETS routes are on-time 89 percent of the time, while on Saturdays, ETS routes are on-time 96 percent of the time. Under the current route structure, on-time performance is particularly important to accommodate transfers between ETS routes and with RTS routes given the hourly service frequency.

On weekdays, the Green route is late at approximately eight percent of the scheduled time points, indicating that the schedule may not provide sufficient running time based on factors such as travel distance and congestion. The Gold route is early at approximately thirteen percent of the scheduled time points, indicating that it may have excess running time built into the weekday schedule. Higher percentages of early departures may result in passengers missing their desired ETS trip.

Table 8. ETS Reliability by Route

Route	Weekday			Saturday		
	On-Time	Early	Late	On-Time	Early	Late
Red	93%	3%	4%	-	-	-
Green	87%	5%	8%	-	-	-
Gold	87%	13%	0%	97%	3%	0%
Purple	90%	6%	4%	94%	2%	4%
Rainbow	-	-	-	98%	2%	0%
ETS Total	**89%**	**7%**	**4%**	**96%**	**2%**	**2%**

Note: Early is defined as a bus departing a stop at least two minutes earlier than the scheduled departure time. Late is defined as the bus departing a stop at least five minutes after the scheduled departure time.

Source: Fehr & Peers, October 2017.

Geographic Coverage

ETS routes cover most of the service area, with 68 percent of residents living within one quarter mile (a five minute walk) of a bus stop. The loop-based system is designed to maximize geographic accessibility, with transfer centers facilitating connectivity for the system in a scheduled manner. However, while the loop-based system spreads service equally such that most residents are within a few blocks of a bus stop, the distribution of service does not differentiate between high-ridership and low-ridership areas and reduces mobility for riders by offering longer travel times and wait times in exchange for shorter walking distances.

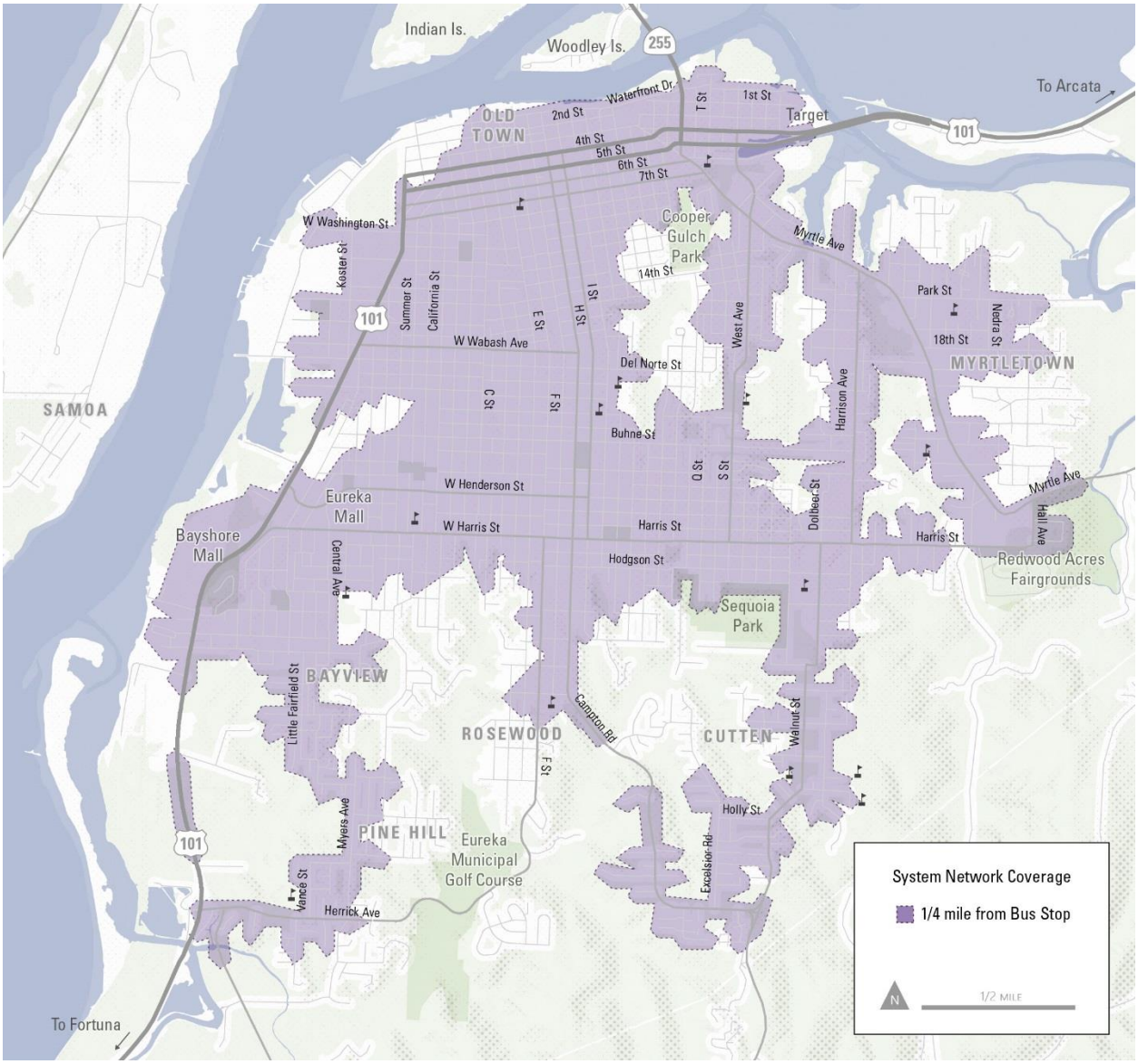


Figure 13: Geographic System Coverage

3.6 Peer Review

Compared to peer agencies in Petaluma, Redding, Grants Pass, and Medford, ETS operates a lower cost system with lower productivity. Each agency operates a combination of line-based and loop-based services at 15 to 60 minute frequencies within small to mid-sized urban areas. As shown in Table 9 ETS ranks first or second out of these five agencies in cost efficiency metrics of cost per passenger, cost per revenue hour, and farebox recovery, but fourth out of five in productivity metrics of passengers per revenue hour and annual passenger trips per population. ETS ranks in the middle with respect to service levels, as measured by annual vehicle revenue hours per population.

Table 9. ETS Peer Comparison

City	Productivity		Service Levels	Cost Effectiveness		
	Passengers per Revenue Hour	Annual Passenger Boardings per Population	Annual Vehicle Revenue Hours per Population	Cost per Passenger	Cost per Revenue Hour	Farebox Recovery Ratio
Petaluma	21	5.61	0.27	$3.78	$79.36	16%
Redding	19	7.03	0.36	$4.58	$88.66	19%
Grants Pass	14	3.25	0.24	$3.99	$54.68	12%
Medford	25	9.08	0.36	$4.94	$125.14	16%
Eureka	19	5.78	0.30	$3.84	$73.82	32%

Sources: Petaluma Transit, Redding Area Bus Authority, Josephine Community Transit, and Rogue Valley Transit District, via National Transit Database, 2014; ETS, 2016.

4. COMMUNITY ENGAGEMENT

4.1 Community Engagement Process

An extensive community engagement process requested input from both current and potential riders of ETS. This engagement effort sought to understand community concerns, experiences, and ideas in order to inform potential route and service alternatives. The outreach process was initiated in December 2017 with two surveys – one for current ETS riders and one for non-riders. Surveys and project information sheets were developed in both English and Spanish. A variety of methods were used to inform the community of the project, including the distribution of surveys, printed flyers, press releases, and radio coverage.

The intended outcomes of this first phase of community outreach included:

- Reach to a diversity of potential and current transit users
- Understand existing transit users' travel choices, unmet needs and priority improvements
- Understand how to improve the ETS system to help more community members efficiently get to work, school, appointments and other destinations

Key components and methods of community outreach included:

- Online and print surveys
- Advertisement and outreach via social media and local radio programs
- In-person outreach and surveys at key locations
- Spanish language surveys and flyers
- Direct outreach to transit users on ETS buses

In-person outreach included tabling and conducting conversations at key locations to reach a diversity of study area residents during the month of December 2017, including: the Bayshore Mall, Silvercrest Senior Residences, Humboldt County Public Library, Humboldt Senior Resource Center, Humboldt County Access & Resource Center, Tri-County Independent Living, North Coast Co-op, and bus transfer stops at 3rd and H Streets, and F and Harris Streets. In-person outreach also included interviews with key groups such as the HCAOG Social Services Technical Advisory Committee, Paso a Paso, LatinoNet, and English Express classes. Outreach the efforts utilized printed materials including a two-page passenger survey, a half-sheet transit survey for non-users, and a quarter-sheet information sheet (see Appendix).

Surveys were distributed online as well as in print to reach a broad spectrum of respondents. The survey helped better illuminate both current uses of the ETS service and the unmet needs of the community. RCAA worked with HTA to distribute surveys in both English and Spanish on all ETS buses and encourage

participation using flyers/posters and survey return boxes. Bus drivers were encouraged to offer the survey to all passengers. The survey was also available online through SurveyMonkey and was advertised through media outlets and on social media through community partners such as the Community Bike Kitchen. The online link was also shared with Humboldt County Association of Governments (HCAOG) and City of Eureka staff.

4.2 Community Engagement Results

This first phase of community engagement received 381 survey responses; 193 surveys were from current ETS riders and 188 from non-ETS riders. Of respondents who currently ride the bus, 70 percent have been riding ETS for more than three years and a majority of riders (55 percent) use the service due to a lack of other travel options. Current riders are content with ETS services, with 79 percent of survey respondents rating ETS as either Very Good or Good. Typically riders use ETS for shopping and errands (51 percent), medical appointments (31 percent), and work (30 percent). Most transit users walk to an ETS stop (83 percent), and indicated they would use a Sunday service if offered (85 percent).

A majority of current ETS user survey respondents indicated an approximate household income of less than $15,000 (57 percent). Transit user respondents were mostly white (84 percent) and come from households that mostly are English speaking (97 percent). Spanish-speaking survey respondents were much less likely to have used ETS: 91 percent of the 33 Spanish language survey respondents had never ridden ETS. The age of transit users ranged from 18 years to over 64, with the largest group of users being over 64 years old (34 percent) and the 26 – 49 year range (31 percent). Very few youth and young adult riders were surveyed during the outreach, though this does not necessarily mean that few youth ride the system. Most respondents indicated they are not currently in school (88 percent) and do not have access to a vehicle (76 percent).

Among those who did not ride ETS, respondents noted that transit doesn't go where needed (43 percent), service is not frequent enough (39 percent), transit takes too long (38 percent), travel patterns are not flexible enough (35 percent), and respondents preferred to drive (30 percent). More convenient routes and more frequent service were the primary improvements that would make transit more appealing to non-ETS users.

Many survey respondents provided detailed comments on potential improvements for ETS including:

- The loop system being inconvenient particularly that return trips can take up to four times as long
- More frequent buses could help make ETS more appealing to non-riders
- More destinations would be helpful, particularly along Old Arcata Road/Myrtle Avenue

Additional survey comments can be reviewed in the Appendix.

4.3 Transportation Development Plan Feedback

In addition to the community engagement process undertaken as a part of this study, HCOAG recently completed a separate outreach efforts through the Transportation Development Plan (TDP) update. Respondents to the TDP update survey noted that while the Redwood Highway corridor was served satisfactorily by RTS, service in other areas of Eureka was insufficient for respondent's needs – especially in Cutten, Ridgewood, and Pine Hill. The frequency and loop-based routing of ETS services represented the biggest barriers to ridership. Respondents also noted that the lack of integration of fare structures between RTS and ETS provided a barrier to use.

5. NETWORK ALTERNATIVES

5.1 Why Consider a New Transit Network

ETS is characterized as a financially efficient, reasonably productive, and valued system by current riders, as illustrated in Sections 3 and 4. Nonetheless, the existing ETS system design presents challenges for current riders and barriers to attracting new riders:

- A lack of service frequency limits the freedom with which riders can travel without planning their day around bus schedules.
- Circuitous, complicated routes lengthen travel times and discourage use by members of the community less familiar with the system's intricacies.
- Inconsistent on-time performance could result in missed connections between routes and with RTS.

While Section 2 demonstrates that Eureka and surrounding communities present strong markets for transit service, the current network design limits the potential for ETS to expand ridership.

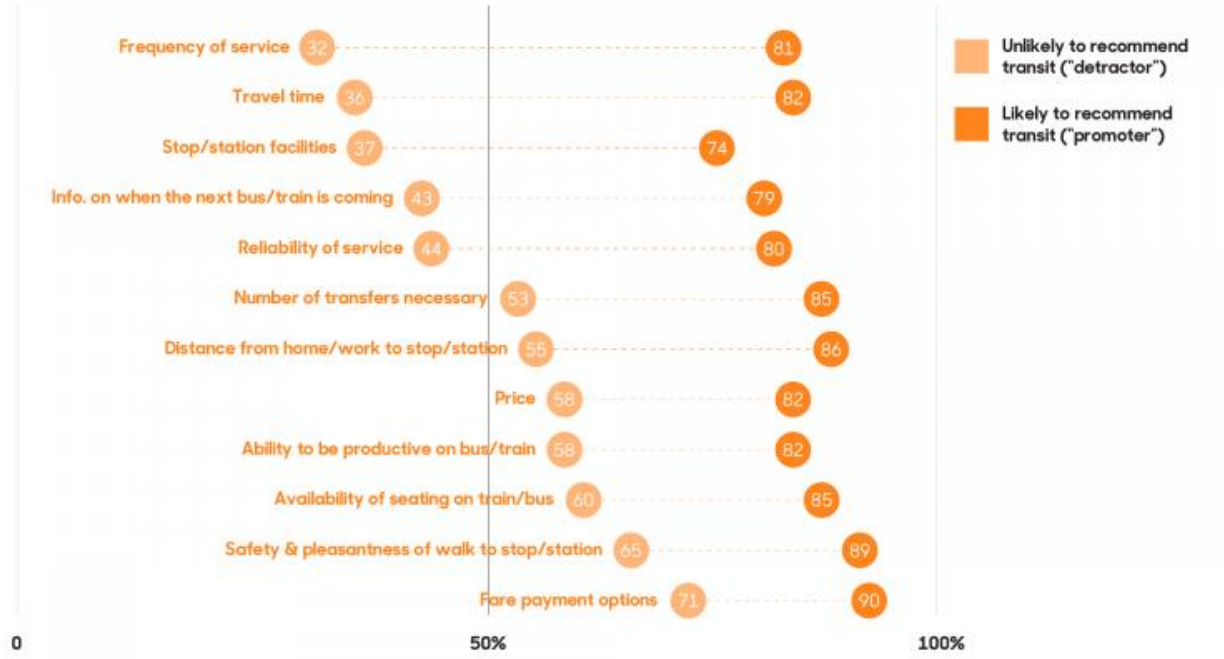


Figure 14: Satisfaction with Transit Service Attributes
Source: Who's On Board Survey, TransitCenter, 2016

Changing the current network structure to a line-based system would require tradeoffs. A line-based system cannot serve every stop which currently receives service, and would sometimes require riders to walk a few blocks to access ETS routes. Due to ETS' constrained financial resources and Eureka's unique geography,

not all areas would receive service coverage. Nonetheless, a line-based system would also offer substantial benefits, including faster, more frequent, and more reliable service. Research by the TransitCenter demonstrates that such attributes substantially influence rider satisfaction (and ultimately support ridership growth) amongst transit agencies across the country.[1]

5.2 Network Concepts

This study presents three network concepts for ETS, a balanced ridership/coverage approach (Concept A) and two coverage-focused approaches (Concepts B and C), to serve the core service needs under present financial and fleet constraints. Like all transit system planning efforts, all concepts should be considered works in progress and may be further optimized prior to or after implementation. Alignments, travel times, schedules, and stop locations have been estimated, but are by no means finalized. The precise frequency, span, and timing of ETS bus route schedules should be calibrated to optimize transfers between services, including ETS-to-ETS transfers and ETS-to-RTS transfers at the Bayshore Mall and Downtown Transit Center.

All network concepts share several common features:

- Twelve hours of weekday service on most routes (6:30 AM to 6:30 PM) and eight hours of Saturday and Sunday service on some routes (9:00 AM to 5:00 PM)
- Peak requirement of four vehicles (equal to existing operating conditions)
- Annual operating budget of approximately $1 million (equal to existing operating conditions)
- Continued use of the Bayshore Mall Transit Center and Henderson Center Transit Center at the intersection of E Street and Harris Street
- Relocation of the Downtown Transit Center to H Street between 4th and 5th Streets
- System integration with RTS to serve the US-101/Redwood Highway corridor, with coordinated transfers at the Bayshore Mall and Downtown Transit Center.
- Addition of a RTS stop at the intersection of Broadway/Washington to serve the Department of Health and Human Services on Washington Street.
- Addition, elimination, or relocation of ETS bus stops based on general principals described in Section 6.1.

A summary of each network concept is provided on the following pages.

[1] *Who's On Board 2016 Survey, TransitCenter, 2016*

Network Concept A: Balanced Ridership/Coverage

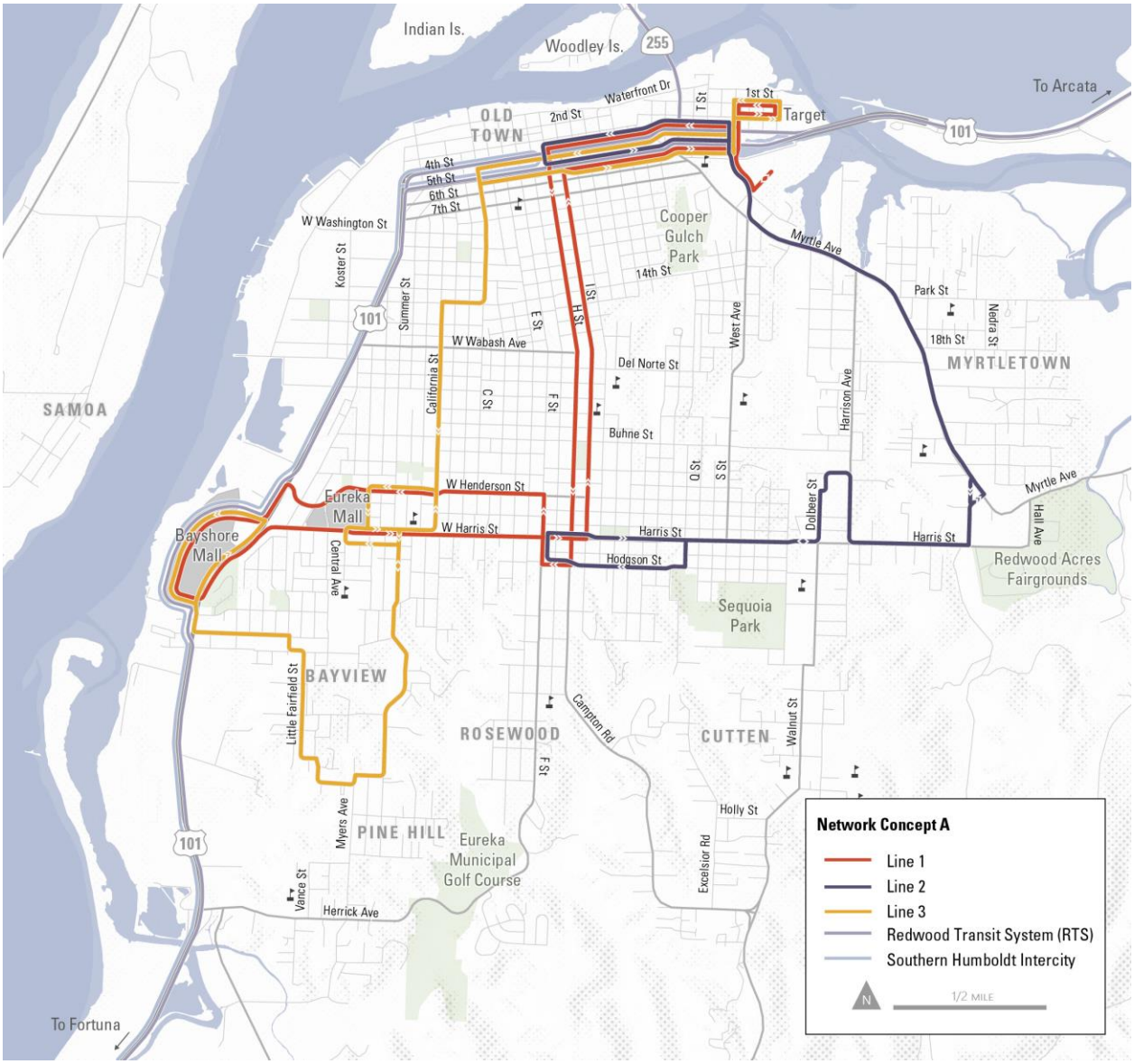


Figure 15: Network Concept A

Concept A balances ETS resources between serving ridership and coverage goals and restructures ETS routes to more closely align with the principles of a line-based system. It serves 93 percent of existing weekday ETS riders and 93 percent of existing Saturday ETS riders within a five-minute (1/4 mile) walk of their current bus stop.

- Route 1 would provide service between the Bayshore Mall and Silvercrest Residence, via Henderson Center, Eureka High School, Old Town, and Target.
- Route 2 would provide service between Old Town and Henderson Center, via Target, Silvercrest Residence, Myrtletown, and St. Joseph Hospital.

- Route 3 provides service between the Bayshore Mall and Target, via Bayview, Pine Hill, HCAR, the Eureka Mall, and Old Town.

Table 10 provides a summary of the conceptual service plan for Network Concept A. On weekdays, Concept A would include one route operating at 30 minute frequencies (Route 1) and two routes at 60 minute frequencies (Routes 2 and 3). The provision of 30 minute weekday service on Route 1 would increase the frequency of service connecting key transit destinations including Bayshore Mall, Eureka Mall, Henderson Center, Eureka High School, Old Town, Target, and the Silvercrest Residence.

Concept A would expand weekend service to include service on Sundays. On weekends, Routes 1 and 2 would operate at 60 minute frequencies from 9:00 AM to 5:00 PM.

Table 10. Network Concept A Service Plan

Route	Weekday (Monday - Friday)		Weekend (Saturday and Sunday)	
	Frequency (Minutes)	Service Span	Frequency (Minutes)	Service Span
1	30	6:30 AM to 6:30 PM	60	9:00 AM to 5:00 PM
2	60	6:30 AM to 6:30 PM	60	9:00 AM to 5:00 PM
3	60	6:30 AM to 6:30 PM	-	-

In order to achieve higher levels of service frequency and the addition of Sunday service, this concept would include the removal of service from existing low-ridership portions of the ETS service area, including Cutten, Rosewood, and West Avenue.

Network Concept B: Coverage-Focused Network

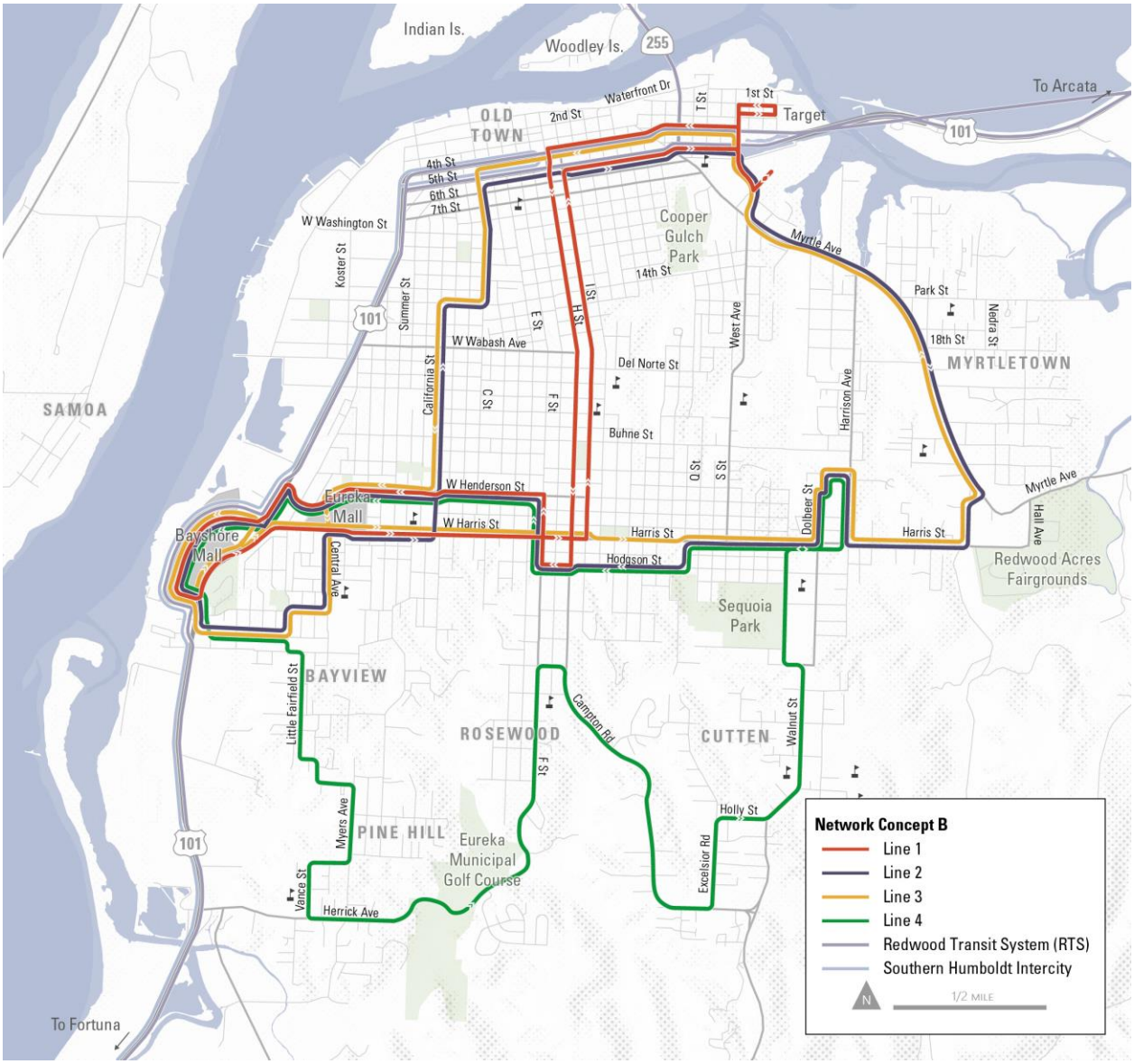


Figure 16: Network Concept B

Concept B exhibits similarities to Concept A, but provides greater coverage to outlying communities of Pine Hill, Rosewood, and Cutten in lieu of greater frequency in the core. It serves 98 percent of existing weekday ETS riders and 87 percent of existing Saturday ETS riders within a five-minute (1/4 mile) walk of their current bus stop.

- Route 1 would provide service between the Bayshore Mall and Silvercrest Residence, via Henderson Center, Eureka High School, Old Town, and Target.

- Route 2 would provide a clockwise one-way loop service between the Bayshore Mall, Bayview, the Eureka Mall, Old Town, Silvercrest Residence, Myrtletown, St. Joseph Hospital, and Henderson Center.
- Route 3 would provide a counterclockwise one-way loop service between the Bayshore Mall, Bayview, Eureka Mall, Henderson Center, St. Joseph Hospital, Myrtletown, Silvercrest Residence, and Old Town.
- Route 4 would provide a counterclockwise one-way loop service to Bayview, Pine Hill, Rosewood, Cutten, St. Joseph Hospital, and Henderson Center.

Routes 2 and 3 would form a bi-directional loop serving key transit destinations throughout Eureka. This configuration would facilitate two-way travel between destinations located along the loop, providing a greater degree of connectivity and directness to passengers compared to the one-way loops typical of the current ETS system.

Table 11 provides a summary of the conceptual service plan for Network Concept B. On weekdays, Concept B would include four routes operating at 60 minute frequencies.

Concept B would expand weekend service to include service on Sundays. On weekends, Routes 2 and 3 would operate at 60 minute frequencies from 9:00 AM to 5:30 PM

Table 11. Network Concept B Service Plan

Route	Weekday (Monday - Friday)		Weekend (Saturday and Sunday)	
	Frequency (Minutes)	Service Span	Frequency (Minutes)	Service Span
1	60	6:30 AM – 6:30 PM	-	-
2	60	6:30 AM – 6:30 PM	60	9:00 AM – 5:00 PM
3	60	7:00 AM – 7:00 PM	60	9:30 AM – 5:30 PM
4	60	7:30 AM – 5:30 PM	-	-

Network Concept C: Revised Coverage-Focused Network

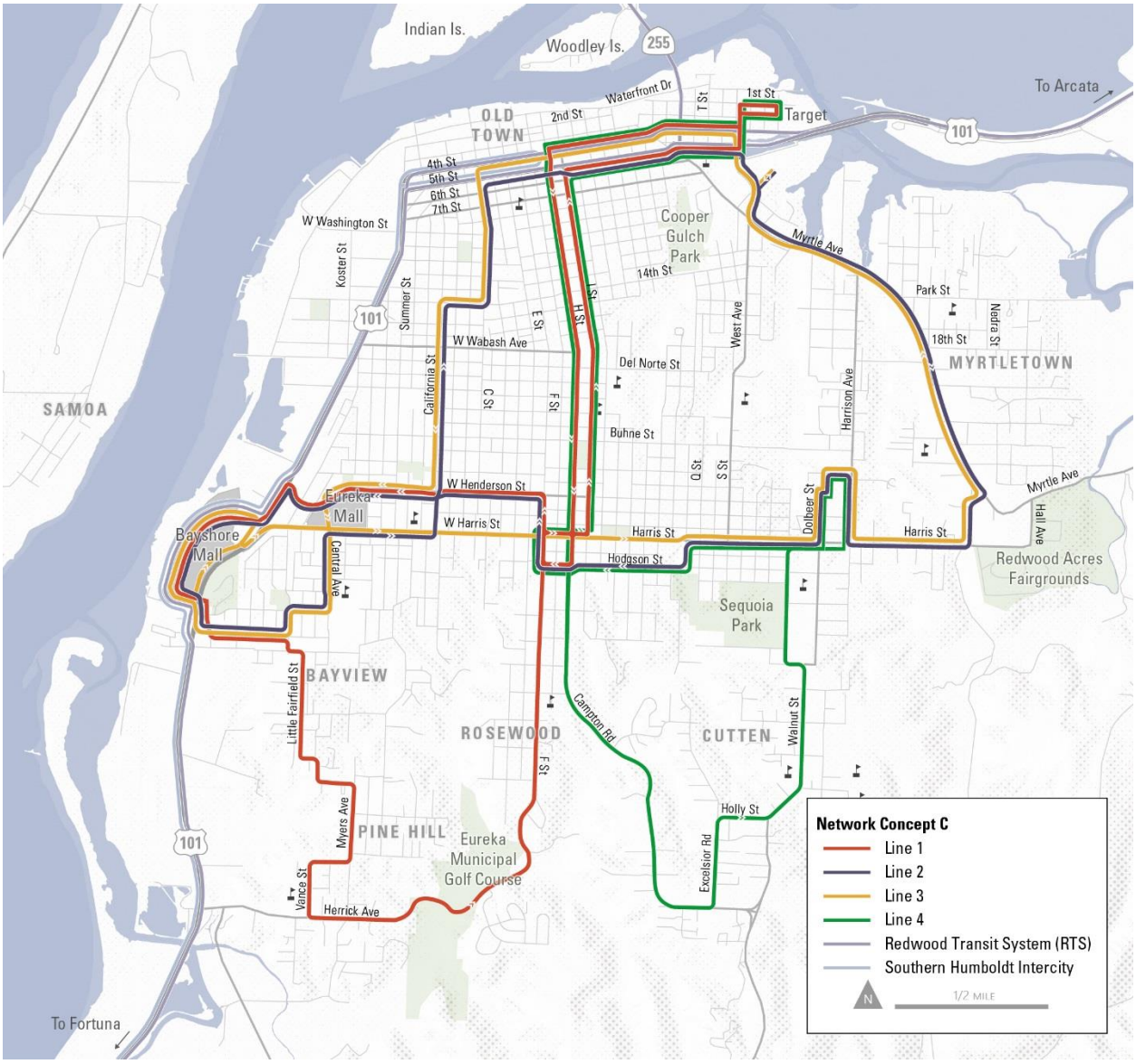


Figure 17: Network Concept C

Concept C exhibits similarities to the coverage-focused Concept B, but reconfigures service to Pine Hill, Rosewood, and Cutten. Rather than serving these neighborhoods with a standalone one-way loop, this concept would directly connect these neighborhoods into the core ETS network via routes operating along H Street and I Street. It serves 98 percent of existing weekday ETS riders and 87 percent of existing Saturday ETS riders within a five-minute (1/4 mile) walk of their current bus stop.

- Route 1 would provide service between the Bayview, Pine Hill, and Rosewood neighborhoods and Target, via Henderson Center, Eureka High School, and Old Town.

- Route 2 would provide a clockwise one-way loop service between the Bayshore Mall, Bayview, the Eureka Mall, Old Town, Silvercrest Residence, Myrtletown, St. Joseph Hospital, and Henderson Center.
- Route 3 would provide a counterclockwise one-way loop service between the Bayshore Mall, Bayview, Eureka Mall, Henderson Center, St. Joseph Hospital, Myrtletown, Silvercrest Residence, and Old Town.
- Route 4 would provide service between Cutten. St. Joseph Hospital, and Target, via Henderson Center, Eureka High School, and Old Town.

Routes 2 and 3 would form a bi-directional loop serving key transit destinations throughout Eureka. This configuration would facilitate two-way travel between destinations located along the loop, providing a greater degree of connectivity and directness to passengers compared to the one-way loops typical of the current ETS system.

Table 12 provides a summary of the conceptual service plan for Network Concept C. On weekdays, Concept C would include four routes operating at 60 minute frequencies. This network design and service plan achieves a combined 30 minute frequency on bus routes serving the H Street and I Street corridor.

Concept C would expand weekend service to include service on Sundays. On weekends, Routes 2 and 3 would operate at 60 minute frequencies from 9:00 AM to 5:30 PM

Table 12. Network Concept C Service Plan

Route	Weekday (Monday - Friday)		Weekend (Saturday and Sunday)	
	Frequency (Minutes)	Service Span	Frequency (Minutes)	Service Span
1	60	6:30 AM – 6:30 PM	-	-
2	60	6:30 AM – 6:30 PM	60	9:00 AM – 5:00 PM
3	60	7:00 AM – 7:00 PM	60	9:30 AM – 5:30 PM
4	60	7:30 AM – 5:30 PM	-	-

Other Concepts Considered

In addition to the concepts described above, a range of other network concepts were considered, but were eliminated from further consideration:

- A ridership-focused concept was considered that would concentrate higher frequency service on two routes that serve the highest demand. This concept was found to provide insufficient connectivity to neighborhoods across the service area.
- An on-demand service concept was considered that would shift the system to a dial-a-ride service. This concept would not provide sufficient capacity to handle current ridership levels and future growth.
- A modified one-way loop system was considered that would streamline some duplication, complexity, and unreliability of the current system. This concept was found to provide a marginal improvement over the current network and did not warrant a major service restructuring.
- A "grid" concept was considered that would concentrate service on primary east-west and north-south corridors, providing route-to-route connections at designated transfer points. This concept was found to provide insufficient connectivity to neighborhoods across the service area. Also, the ETS financial and fleet constraints would necessitate low frequencies with long wait times for transferring passengers, substantially diminishing the ease-of-use for the system.

5.3 Evaluation of Network Alternatives

Each of the network concepts strives to adhere to the guiding principles for transit network design established in Section 1.4 – regularity, directness, symmetry, synchronization, and simplicity – while balancing with the ETS coverage goals. The resulting network concepts provide options for improving the ETS passenger experience and quality of service while yielding a range of potential performance outcomes. Table 13 summarizes the ridership potential and service coverage associated with each network concept.

Table 13. ETS Network Concept Projections

Network Concept	Projected Ridership (Daily)		Percentage of Existing Weekday Passengers Covered
	Weekday	Weekend	
Network Concept A	1,200 to 1,400 passengers	400 to 600 passengers	93%
Network Concept B	1,000 to 1,200 passengers	400 to 600 passengers	98%
Network Concept C	1,000 to 1,200 passengers	400 to 600 passengers	98%

Source: Fehr & Peers.

Each of the network concepts would improve service frequencies compared to the existing ETS system. Concept A would concentrate 30 minute service on Route 1 operating along the H Street and I Street corridor. Although individual routes under Concepts B and C would operate with 60 minute frequencies during weekdays, the resulting network design would achieve combined 30 minute frequencies on key corridors by overlapping individual routes. For example, Concept B would provide combined 30 minute service between Bayshore Mall, Eureka Mall, and Henderson Center via Harris Street and Henderson Street, while Concept C would provide combined 30 minute service between Henderson Center, Eureka High School, Old Town Eureka, and Target via H Street and I Street. These modifications would increase the level of service and reduce transit passenger wait times along key ETS corridors, providing for a greater degree of travel flexibility for existing and future ETS passengers.

Moreover, each of the network concepts would enhance the directness, symmetry, and simplicity of the ETS system compared to existing conditions. These principles are achieved by removing excess out-of-direction route deviations and co-locating inbound/outbound service on the same roadway or proximate one-way couplets. Ultimately, these network design features enhance the legibility and ease of use of the ETS system, making it more accessible to first-time passengers and improving the long-term likelihood of retaining regular passengers. Table 14 summarizes the extent to which each network concept, as well as the existing ETS system, adheres to the guiding principles for transit network design.

Table 14. ETS Network Concept Evaluation

Network Concept	Transit Network Design Principles				
	Regularity	Directness	Symmetry	Synchronization	Simplicity
Existing ETS System	○	○	○	◑	○
Network Concept A	◑	◑	●	●	◑
Network Concept B	◑	◑	◑	●	◑
Network Concept C	◑	◑	◑	●	◑

Note: Symbols indicate consistency with transit network design principles as follows: ● - Mostly consistent, ◑ - Partially consistent, ○ – Mostly inconsistent.

Source: Fehr & Peers.

5.4 Future Service Enhancements

A long-term vision for ETS service would provide 30 minute weekday service on every route, accompanied by expanding evening, Saturday, and Sunday service and adding another route that may serve network gaps along 14th Street and West Avenue. The future service improvements and associated annual operating costs identified in Table 15 could be implemented regardless of the network alternative chosen.

Given the existing fleet and financial constraints facing ETS, potential improvements that entail an expansion of service hours or additional peak vehicles would require additional operating funds from local, regional, or state sources.

Table 15. Future Service Enhancements

Service Improvement	Network Concept	Estimated Operating Cost (Annual)	Estimated Ridership Potential (Daily)
Extend weekday service span from 6:00 AM to 10:00 PM on all routes	All	$330,000	100 to 200 passengers
Increase weekday service frequency to 30 minutes	Network Concept A (all routes)	$430,000	600 to 800 passengers
	Network Concept B (Routes 1, 2, and 3)	$650,000	700 to 900 passengers
	Network Concept C (all routes)	$830,000	800 to 1,000 passengers
Add weekend service and extend service hours from 7:30 AM to 7:30 PM	Network Concept A (all routes)	$180,000	200 to 300 passengers
	Network Concept B (Routes 1, 2, and 3)	$160,000	200 to 300 passengers
	Network Concept C (all routes)	$230,000	200 to 300 passengers
Add additional coverage route with 60 minute cycle and 12 weekday service hours	All	$220,000	100 to 200 passengers

Source: Fehr & Peers.

6. IMPLEMENTATION

6.1 Transit Street Design

All network concepts would require siting of new bus stops. Of the approximately 130 to 140 potential stop locations in each network concept, about half would use new bus stops and half would use existing stops. Approximate stop locations for each route are shown in the Appendix; however, further work is needed to site bus stops. This section provides street design guidance to ensure bus stops and other infrastructure support effective transit service. The guidance described below is primarily derived from best practices identified in the National Association of City Transportation Officials (NACTO) *Transit Street Design Guide*.

Bus Stop Placement

Placement of bus stops on the far-side of intersections is preferred to support safe and efficient operations. Far-side stops allow buses to clear the intersection before stopping, to avoid conflicts with right-turning vehicles, and to avoid instances of "multiple threat" crashes in which buses obscure the visibility of pedestrians crossing the street. Near-side or mid-block stops may be appropriate in certain circumstances where bus routing, street geometries, or land uses may prevent siting of far-side stops.

In-lane and pull-out stops may be provided depending on the site-specific context. In-lane stops are generally preferable for faster and more reliable bus operations by reducing delays, eliminating pull-out time and traffic re-entry time. This can be particularly helpful on streets with high traffic volumes or at intersections with long signal cycles. In-lane stops may be paired with sidewalk bulbouts to enhance pedestrian safety. In-lane stops use significantly less curb space than pull-out stops, as shown in Table 16.

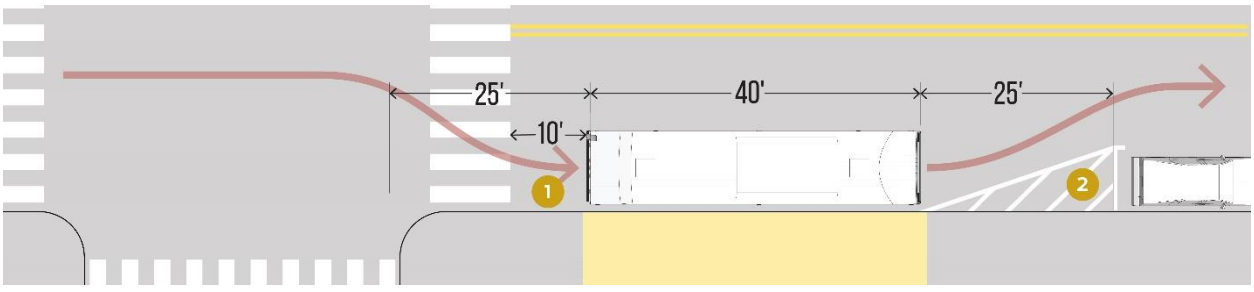
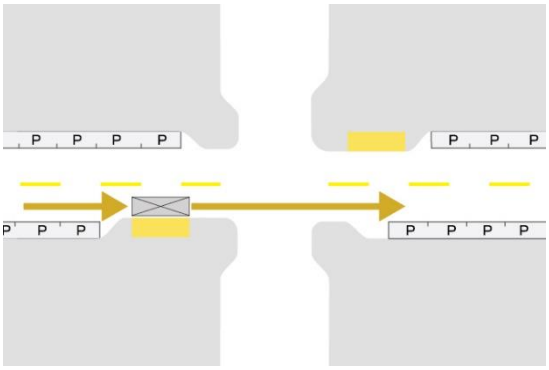
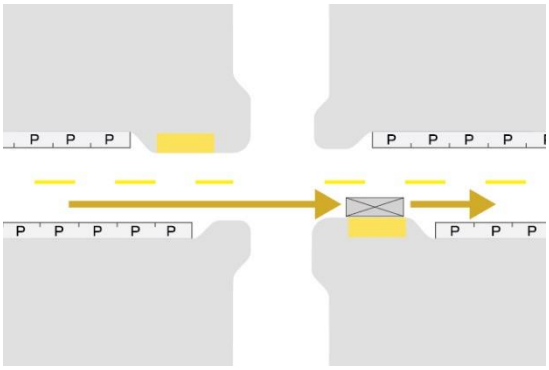
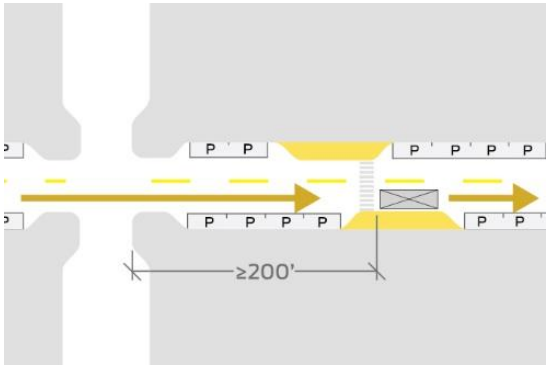
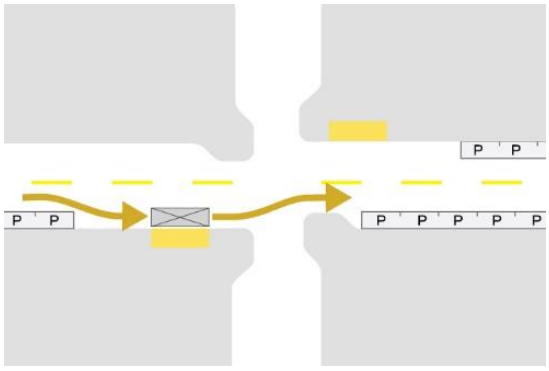
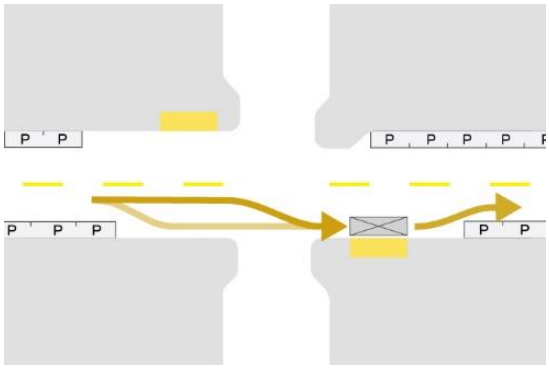
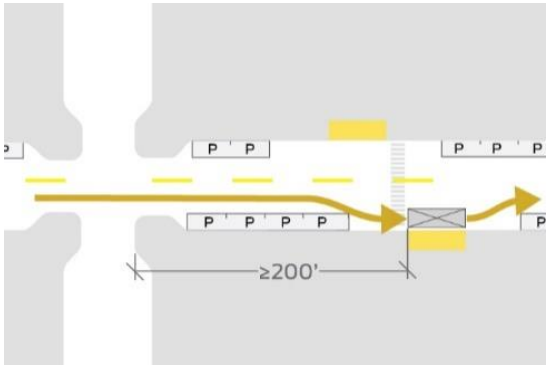


Figure 18: Far-Side Pull-Out Stop Dimensions
Source: NACTO Transit Street Design Guide

Table 16. Desired Minimum Platform Length by Vehicle Type (Feet)

Stop Position	40′ Bus	Two 40′ Buses
In-Lane Stops		
Near-Side 	35′	80′
Far-Side 	45′	90′
Mid-Block 	35′	80′

Stop Position	40′ Bus	Two 40′ Buses
Pull-Out Stops		
Near-Side 	100′	145′
Far-Side 	90′	125′
Mid-Block 	120′	185′

Note: Dimensions are for standard 40′ bus.
Source: NACTO Transit Street Design Guide.

Bus stop spacing affects the accessibility, travel time, and reliability of transit service. Stop spacing of 800 to 1,000 feet is generally appropriate for ETS service, though stop spacing may vary depending on land use density and topography.

A walkable pedestrian network is critical to supporting transit use. Continuous sidewalks with accessible curb ramps should be provided on all roadways connecting to bus stops, while marked crosswalks should be provided at or near (within 100 feet of) all bus stops.

Bicycle networks can complement bus service, extending their reach beyond the pedestrian walkshed. The placement of bicycle lanes, signage, and parking should be coordinated with transit service to create a multimodal transportation network.

Bus Stop Elements

The overall design of bus stops – the stop itself and the urban space around it – should allow all riders to wait, board, and alight without obstruction (see Figure 19). A width of eight to twelve feet is preferred for pedestrian travel paths; widths of less than six feet create issues for capacity and comfort, though widths of four feet can be acceptable around shelters and seating.

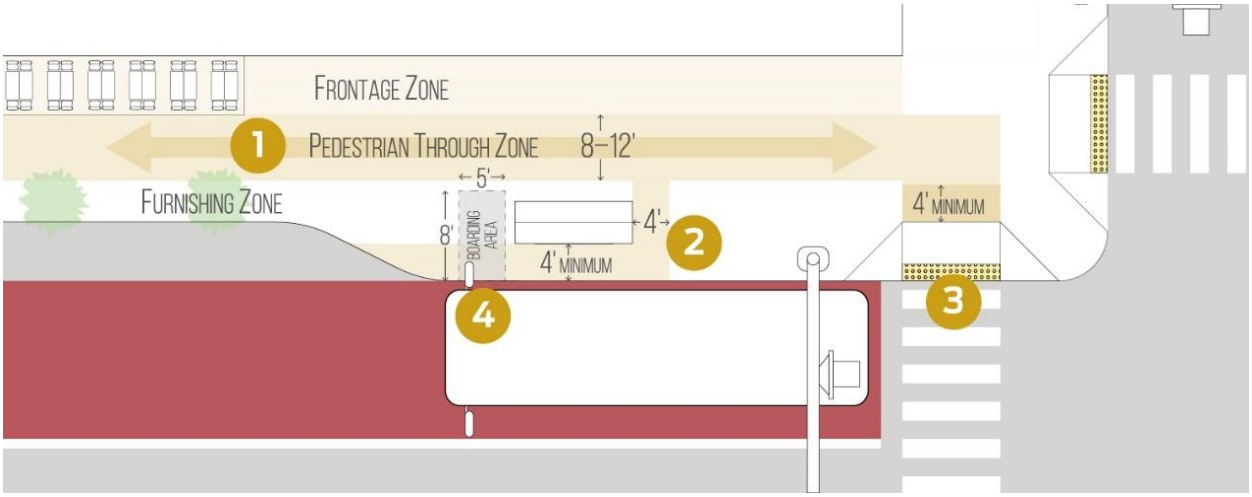


Figure 19: Accessible Bus Stop Design
Source: NACTO Transit Street Design Guide

Transit shelters provide a safe, comfortable place for passengers to wait for the bus. Shelters should not only provide physical protection from the elements but also promote a sense of social safety. Shelters should be constructed of transparent materials and have good lighting so that passengers waiting are visible. Amenities such as places to rest (seating or areas to lean on), trash receptacles, and wayfinding elements can all be incorporated into transit shelter design.

Wayfinding information should be clear and legible. At a minimum, pole and bus stop signs should include the stop name, route number(s), direction and/or destination, and a system logo. At transfer points and where space is available, maps, schedules, and expected travel times can be helpful to passengers and potential passengers (Figure 20). Real-time displays that communicate up-to-date information about service help to increase rider satisfaction and may be worth the investment at high-ridership stops.

Figure 20: Transit Shelter with Wayfinding Elements
Source: NACTO Transit Street Design Guide

Other Transit-Supportive Infrastructure

In addition to designing safe and accessible bus stops, ETS could partner with the City of Eureka to resolve sources of transit passenger delay and conflict in the transit network. In particular, buses crossing side-street stop controlled intersections with high volumes of cross-traffic (such as the intersection of Wabash Avenue and California Street) results in potential conflicts between buses and vehicles while deprioritizing and delaying buses. Traffic control modifications at such intersections, whether via signalization or installation of all-way stop controls, would help resolve these conflicts and support faster, more reliable bus operations.

Moreover, the presence of on-street parking can affect bus operations. Parked vehicles located in on-street parking spaces immediately adjacent to an intersection can limit sight distance for bus operators, while parked vehicles adjacent to designated bus stops can inhibit bus maneuvers to and from the curb. ETS and the City should coordinate planning efforts to ensure that on-street parking is provided in a manner that fulfills local parking supply needs without impeding bus operations.

6.2 Fare & Systems Integration

Connectivity between transit routes, including ETS-to-ETS and ETS-to-RTS connections, is an important element of the overall Eureka transit system. Such connections enable use of the transit system as a network, where passengers are able to access a greater variety of destinations via multiple connecting routes. This approach to transit system development is reflected in each of the ETS network concepts described previously, where ETS routes would provide access to local neighborhoods and destinations within Eureka while maintaining multiple connections with the mainline RTS service to access communities along the US-101 corridor. The following strategies would optimize these ETS-to-RTS connections:

- Maintain timed transfers between ETS and RTS routes. Given the low frequency of ETS routes, well-timed transfers minimize the wait time, and overall travel time, for transferring passengers.
- Enhance amenities at transfer centers, including the Downtown Transit Center, Bayshore Mall, and Henderson Center, to create comfortable wait environments and easy access between buses.
- Pursue joint communitcation and marketing initiatives (see Section 6.3) between ETS, RTS, and other HTA entities, to reinforce the interconnectivy of the regional transit system.

In addition to providing physical connections between transit agencies, an integrated fare structure and shared fare media can improve the connectivity between transit agencies. Currently, offerings such as the regional transit pass, the Token Transit app, and the Jack Pass provide some degree of fare integration across ETS and the other HTA transit agencies. However, the current transfer policy, which allows for free transfers within but not between the various HTA transit systems, deters use of the regional transit system as a cohesive network. ETS, along with its HTA partners, could explore implementing a free transfer policy across systems in order to reduce the inter-agency transfer burden and improve the seamlessness of the regional transit system.

6.3 Communication & Marketing

Effective communication and promotion of ETS services is critical to the long-term success of ETS in serving existing riders and attracting new riders, especially if a network redesign is implemented. Key communication strategies include:

- Social media: use Facebook, Twitter, and NextDoor to communicate services and changes
- Website: continually update ETS website with key information
- Real-time arrival information: make ETS arrivals available via a bus tracking app
- Pamphlets: provide network pamphlets at major destinations such as schools, grocery stores, HCAR, Humboldt State University, and College of the Redwoods
- Branding: periodically refresh ETS brand to maintain a distinct and recognizable service
- Promotions: Promotional fare programs (student summer pass, senior pass, etc.)
- Partnerships: Partnerships with regional tourist destinations (e.g. Redwood National and State Parks) and major community event organizers (e.g. Eureka Arts Alive)

7. APPENDIX

Eureka Transit Service Study

How can local public transit work better for you?

Eureka Transit Service (ETS) and the City of Eureka want to hear from you how ETS transit routes, schedules and overall experience could be improved so more Eureka residents, workers, and visitors are able to regularly use public transit for their everyday needs.

ETS provides weekday and Saturday transit service within the greater Eureka area and connects to the regional north-south Redwood Transit Service. Weekday ETS service is comprised of four routes operating every 60 minutes.

ETS is conducting a survey to better understand existing transit users' travel choices and needs and how the ETS transit service could be improved to help more community members efficiently get to work, school, appointments and other destinations.

Please help by completing a short survey! To complete the survey online go to: https://www.surveymonkey.com/r/NYNRVFT

For questions about ETS routes or schedule contact 707-443-0826. To sign up for updates on the Eureka Transit Service Study contact 269-2055 or amy@nrsrcaa.org

Eureka Transit Study

PSA for Public Survey

Distribution: Times-Standard, Lost Coast Outpost, Senior News, Northern CA Association of Non-Profits, City of Eureka newsletter, HCAOG, Next Door, Facebook through local partners like Humboldt Trails Council. (Not sure if advertising a survey on the radio is going to work well…but could also do KHSU, KMUD, KHUM)

Brief PSA draft:

How can local transit work better for you? Eureka Transit Service and the City of Eureka are seeking input on how transit routes in the greater Eureka area, schedules and overall experience could be improved so more Eureka residents, workers, and visitors are able to regularly use public transit for their everyday needs.

Please help by completing a short survey! To complete the survey go online to: https://www.surveymonkey.com/r/NYNRVFT

Passenger Survey

This survey is part of the
Eureka Transit Service Study.
Participation is voluntary and anonymous.

Date _____

Service: M-F Sa Route _____

1. What is the main language you speak at home?
   a. English b. Español c. Other

2. Do you speak English?
   a. Fluent b. Some English c. No English

3. What is your approximate household income?
   a. Less than $10,000
   b. $10,000 to $14,999
   c. $15,000 to $24,999
   d. $25,000 to $34,999
   e. $35,000 to $49,999
   f. $50,000 to $74,999
   g. $75,000 to $99,999
   h. $100,000 or more

4. Are any children riding with you? No -------- Yes --------
   If yes, how many? 1 2 3 4

5. What is your race/ethnicity?
   a. White/Caucasian
   b. Black/African American
   c. Hispanic/Latino
   d. Asian/Pacific Islander
   e. Alaskan/Native American
   f. Mixed
   g. Other _____

6. What is your age? _____

7. Do you qualify for any of the following discounted fares?
   a. Youth (3-17)
   b. Senior (62+)
   c. Disabled (with valid ID card)

8. How long have you been riding ETS?
   a. First-time rider
   b. Less than 1 year
   c. 1 to 3 years
   d. More than 3 years

9. How many days per week do you ride ETS? 1 2 3 4 5 6 7
   ☐ Less than once per week

10. Do you ever use Dial-A-Ride services? Yes No

11. Do you have access to any of the following?
   a. smart phone
   b. cell phone (non-smart phone)
   c. computer with Internet access
   d. e-mail address

12. Do you have a job? Full-Time Part-Time No

13. Are you a student? Full-Time Part-Time No

14. Do you have access to a vehicle? Yes No

15. Overall, how would you rate your satisfaction with the *bus route* you're on *right now*? Poor 1 2 3 4 5 Good

16. Please rank the following in order of importance from 1 to 3 where 1 is most important to you and 3 is least important to you:

Short walking distance to bus stop from origin/destination location ___

Short wait times for bus service (every 15 minutes or less) ___

Shorter travel time from start to end of bus route (arrive at your destination faster) ___

(continue on back)

Passenger Survey

This survey is part of the
Eureka Transit Service Study.
Participation is voluntary and anonymous.

Date _____

Service: M-F Sa Route _____

1. What is the main language you speak at home?
   a. English b. Español c. Other

2. Do you speak English?
   a. Fluent b. Some English c. No English

3. What is your approximate household income?
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   b. $10,000 to $14,999
   c. $15,000 to $24,999
   d. $25,000 to $34,999
   e. $35,000 to $49,999
   f. $50,000 to $74,999
   g. $75,000 to $99,999
   h. $100,000 or more

4. Are any children riding with you? No -------- Yes --------
   If yes, how many? 1 2 3 4

5. What is your race/ethnicity?
   a. White/Caucasian
   b. Black/African American
   c. Hispanic/Latino
   d. Asian/Pacific Islander
   e. Alaskan/Native American
   f. Mixed
   g. Other _____

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   d. More than 3 years

9. How many days per week do you ride ETS? 1 2 3 4 5 6 7
   ☐ Less than once per week

10. Do you ever use Dial-A-Ride services? Yes No

11. Do you have access to any of the following?
   a. smart phone
   b. cell phone (non-smart phone)
   c. computer with Internet access
   d. e-mail address

12. Do you have a job? Full-Time Part-Time No

13. Are you a student? Full-Time Part-Time No

14. Do you have access to a vehicle? Yes No

15. Overall, how would you rate your satisfaction with the *bus route* you're on *right now*? Poor 1 2 3 4 5 Good

16. Please rank the following in order of importance from 1 to 3 where 1 is most important to you and 3 is least important to you:

Short walking distance to bus stop from origin/destination location ___

Short wait times for bus service (every 15 minutes or less) ___

Shorter travel time from start to end of bus route (arrive at your destination faster) ___

(continue on back)

17. Why did you choose ETS for this trip? (choose one)
- a. Cost of service
- b. Lack of other travel options
- c. Environmental reasons
- d. Convenience
- e. Avoid traffic/parking
- f. Other _____

18. Trip Purpose - Where are you going to (or coming from)?
- a. Work
- b. College
- c. High School
- d. Junior High School
- e. Elementary School
- f. Medical Appt
- g. Court/Legal Appt
- h. Other Personal Appt
- i. Shopping/Errands
- j. Social/Recreational

19. What is your home street and closest cross street? _____

20. How did you get to the bus ***you are on right now***?
- a. Walked entire way
- b. Bicycle
- c. Drove car
- d. Dropped off
- e. Carpooled
- f. Transferred from ETS, Redwood Transit or Southern Humboldt Intercity bus

21. If you transferred, from what route? _____

22. Where is the ***bus stop*** that you boarded ***this bus***?

_____
Address, Cross streets or Landmark

23. Where were you ***coming from*** before boarding ***this bus***?

☐ Home -or- _____
Name of place (Ex: Bayshore Mall)

_____ _____
Address (or Cross Streets) Zip Code

24. Where is the ***bus stop*** that you will be exiting ***this bus***?

_____
Address, Cross streets or Landmark

25. Where is your **actual destination**?

☐ Home -or- _____
Name of place (Ex: St. Joseph Hospital)

_____ _____
Address (or Cross Streets) Zip Code

26. When you get off ***this bus*** what will you do next?
- a. Walk to destination
- b. Bike to destination
- c. Drive to destination
- d. Get picked up
- e. Carpool
- f. Transfer to ETS, Redwood Transit or Southern Humboldt Intercity bus

27. If you will be transferring, to what route? _____

THANK YOU!

This survey is being conducted by Humboldt Transit Authority as part of the ongoing Eureka Transit Service Study.
Your responses will be used to help understand customer preferences and travel patterns for the study and future planning.

17. Why did you choose ETS for this trip? (choose one)
- a. Cost of service
- b. Lack of other travel options
- c. Environmental reasons
- d. Convenience
- e. Avoid traffic/parking
- f. Other _____

18. Trip Purpose - Where are you going to (or coming from)?
- a. Work
- b. College
- c. High School
- d. Junior High School
- e. Elementary School
- f. Medical Appt
- g. Court/Legal Appt
- h. Other Personal Appt
- i. Shopping/Errands
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- c. Drove car
- d. Dropped off
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- f. Transferred from ETS, Redwood Transit or Southern Humboldt Intercity bus

21. If you transferred, from what route? _____

22. Where is the ***bus stop*** that you boarded ***this bus***?

_____
Address, Cross streets or Landmark

23. Where were you ***coming from*** before boarding ***this bus***?

☐ Home -or- _____
Name of place (Ex: Bayshore Mall)

_____ _____
Address (or Cross Streets) Zip Code

24. Where is the ***bus stop*** that you will be exiting ***this bus***?

_____
Address, Cross streets or Landmark

25. Where is your **actual destination**?

☐ Home -or- _____
Name of place (Ex: St. Joseph Hospital)

_____ _____
Address (or Cross Streets) Zip Code

26. When you get off ***this bus*** what will you do next?
- a. Walk to destination
- b. Bike to destination
- c. Drive to destination
- d. Get picked up
- e. Carpool
- f. Transfer to ETS, Redwood Transit or Southern Humboldt Intercity bus

27. If you will be transferring, to what route? _____

THANK YOU!

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Your responses will be used to help understand customer preferences and travel patterns for the study and future planning.

Appendix Item #4. ETS Study In-Person Survey Instrument

Transit Survey

This survey is part of the Eureka Transit Service Study.

Date:

1. What is your preferred method of traveling locally?
   a. vehicle b. carpool c. biking
   d. walking e. transit f. other: ______________________

2. If you are not a regular user of ETS, what are the primary reasons you choose not to use public transportation in Eureka.
   a. Using transit takes too long
   b. Service isn't frequent enough
   c. Transit doesn't go where I need to go
   d. Need to be flexible/control when I come and go
   e. Need a car for work
   f. Public transit is dirty
   g. I don't know how
   h. Public transit feels unsafe
   i. Can get rides
   j. I prefer to drive my car
   k. other: ____________________

3. From the following features and amenities that ETS could add to its current transit service, choose one that would make it more appealing for you to use public transportation more frequently or at all.
   a. Lower fares
   b. More frequent service
   c. More routes to serve places I need to go
   d. Easier methods of buying fares
   e. Easier to use
   f. Shade at transit stops
   g. Vehicles and/or stops in better condition
   h. Would not ride public transportation under any circumstances

4. What are common trip purposes; places you could be going and making with ETS if you are not already?
   a. Work
   b. College
   c. High School
   d. Junior High School
   e. Elementary School
   f. Medical Appt
   g. Court/Legal Appt
   h. Other Personal Appt
   i. Shopping/Errands
   j. Social/Recreational

Transit Survey

This survey is part of the Eureka Transit Service Study.

Date:

1. What is your preferred method of traveling locally?
   a. vehicle b. carpool c. biking
   d. walking e. transit f. other: ______________________

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   a. Using transit takes too long
   b. Service isn't frequent enough
   c. Transit doesn't go where I need to go
   d. Need to be flexible/control when I come and go
   e. Need a car for work
   f. Public transit is dirty
   g. I don't know how
   h. Public transit feels unsafe
   i. Can get rides
   j. I prefer to drive my car
   k. other: ____________________

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   f. Shade at transit stops
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   f. Medical Appt
   g. Court/Legal Appt
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   c. Transit doesn't go where I need to go
   d. Need to be flexible/control when I come and go
   e. Need a car for work
   f. Public transit is dirty
   g. I don't know how
   h. Public transit feels unsafe
   i. Can get rides
   j. I prefer to drive my car
   k. other: ____________________

3. From the following features and amenities that ETS could add to its current transit service, choose one that would make it more appealing for you to use public transportation more frequently or at all.
   a. Lower fares
   b. More frequent service
   c. More routes to serve places I need to go
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   e. Easier to use
   f. Shade at transit stops
   g. Vehicles and/or stops in better condition
   h. Would not ride public transportation under any circumstances

4. What are common trip purposes; places you could be going and making with ETS if you are not already?
   a. Work
   b. College
   c. High School
   d. Junior High School
   e. Elementary School
   f. Medical Appt
   g. Court/Legal Appt
   h. Other Personal Appt
   i. Shopping/Errands
   j. Social/Recreational

Transit Survey

This survey is part of the Eureka Transit Service Study.

Date:

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   a. vehicle b. carpool c. biking
   d. walking e. transit f. other: ______________________

2. If you are not a regular user of ETS, what are the primary reasons you choose not to use public transportation in Eureka.
   a. Using transit takes too long
   b. Service isn't frequent enough
   c. Transit doesn't go where I need to go
   d. Need to be flexible/control when I come and go
   e. Need a car for work
   f. Public transit is dirty
   g. I don't know how
   h. Public transit feels unsafe
   i. Can get rides
   j. I prefer to drive my car
   k. other: ____________________

3. From the following features and amenities that ETS could add to its current transit service, choose one that would make it more appealing for you to use public transportation more frequently or at all.
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   f. Shade at transit stops
   g. Vehicles and/or stops in better condition
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   a. Work
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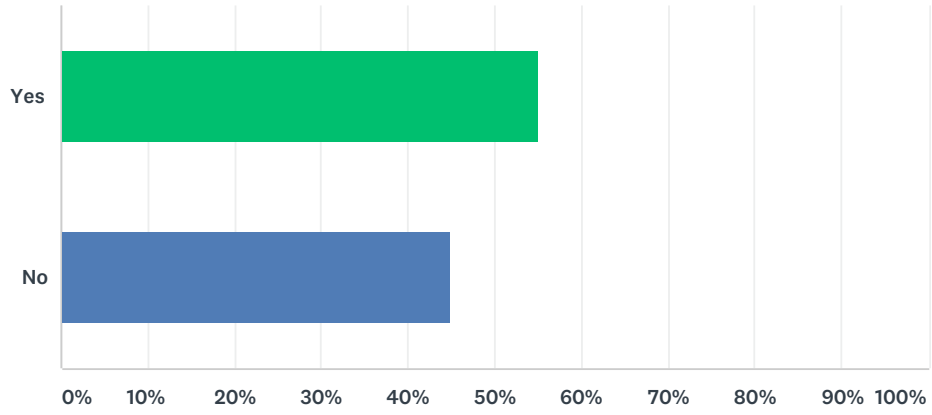
   c. High School
   d. Junior High School
   e. Elementary School
   f. Medical Appt
   g. Court/Legal Appt
   h. Other Personal Appt
   i. Shopping/Errands
   j. Social/Recreational

Q1 Do you ride Eureka Transit Service?

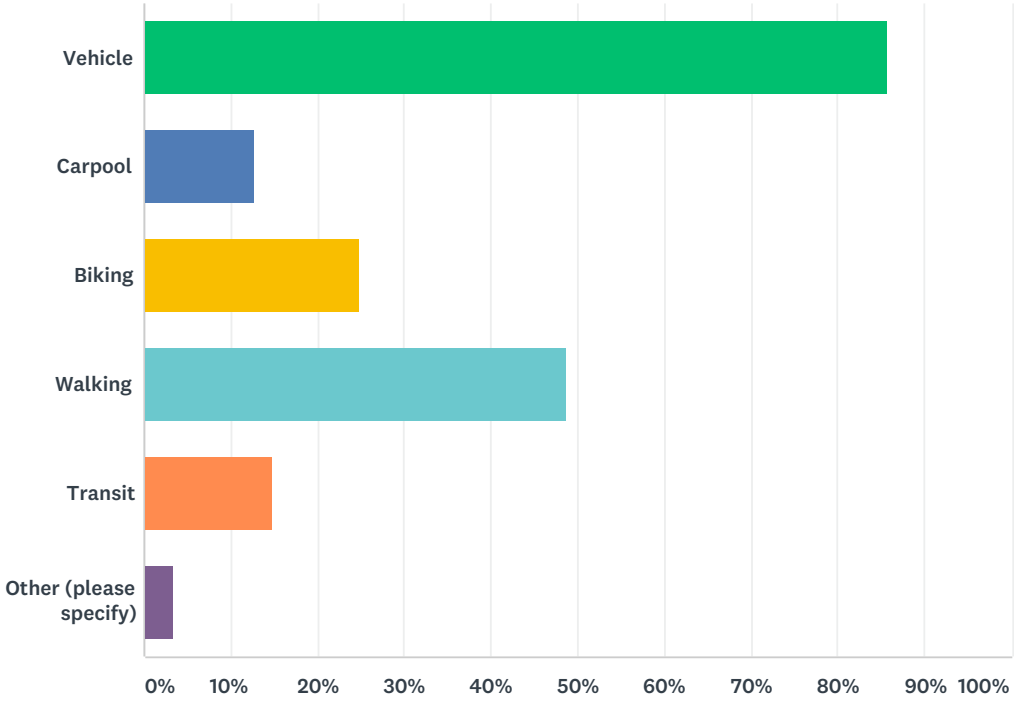
Answered: 343 Skipped: 2



ANSWER CHOICES	RESPONSES	
Yes	55.10%	189
No	44.90%	154
TOTAL		343

Q2 What modes of travel do you use locally?

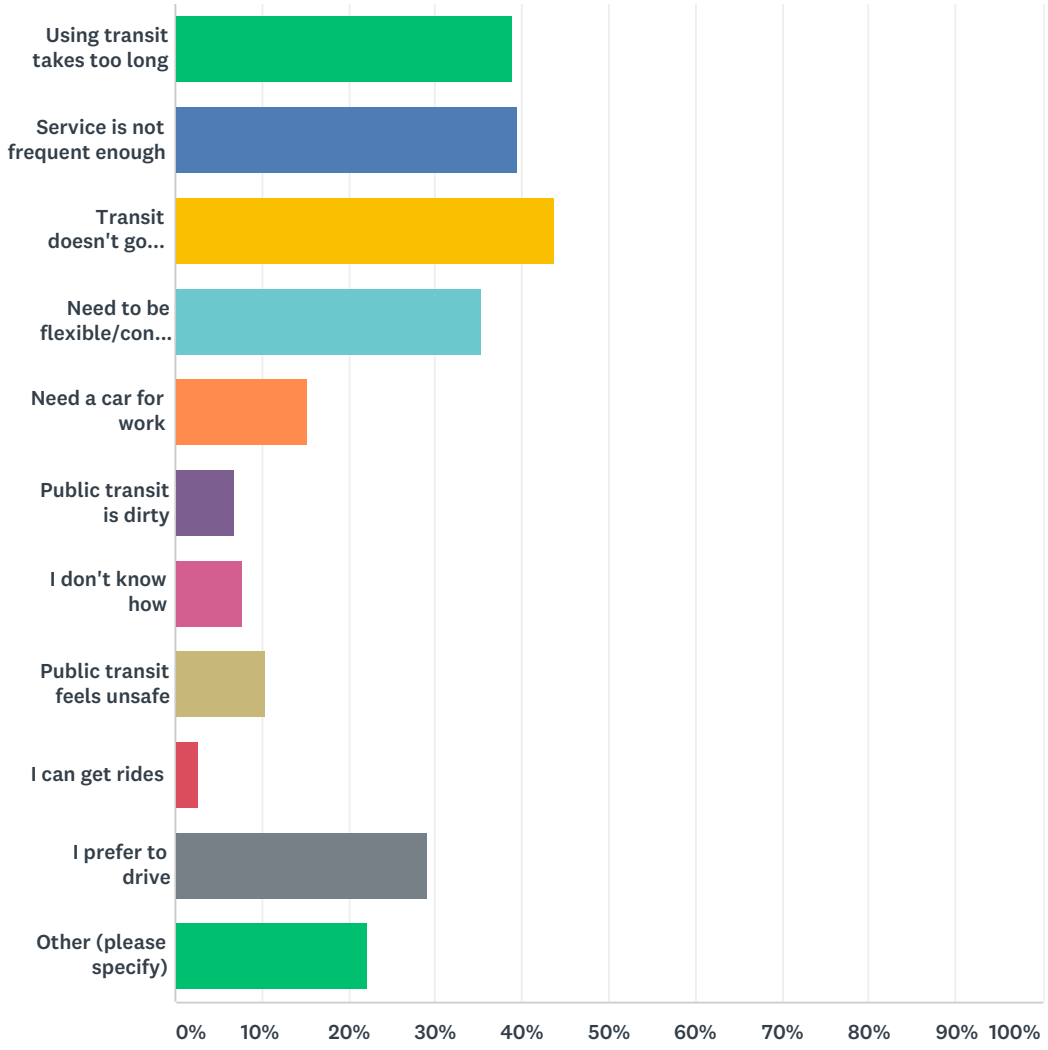
Answered: 148 Skipped: 197



ANSWER CHOICES	RESPONSES	
Vehicle	85.81%	127
Carpool	12.84%	19
Biking	25.00%	37
Walking	48.65%	72
Transit	14.86%	22
Other (please specify)	3.38%	5
Total Respondents: 148		

Q3 If you are not a regular user of ETS, what are the primary reasons you choose not to use public transportation in Eureka. Choose all that apply.

Answered: 144 Skipped: 201

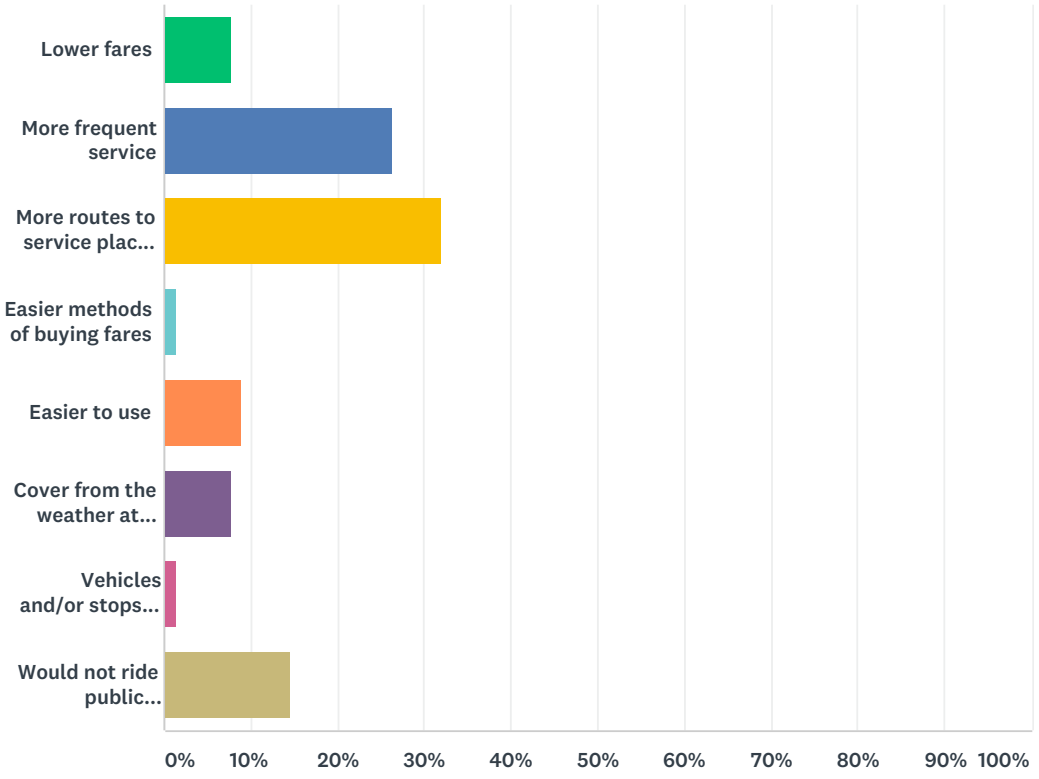


ANSWER CHOICES	RESPONSES	
Using transit takes too long	38.89%	56
Service is not frequent enough	39.58%	57
Transit doesn't go where I need to go	43.75%	63
Need to be flexible/control when I come and go	35.42%	51
Need a car for work	15.28%	22
Public transit is dirty	6.94%	10
I don't know how	7.64%	11
Public transit feels unsafe	10.42%	15
I can get rides	2.78%	4

I prefer to drive	29.17%	42
Other (please specify)	22.22%	32
Total Respondents: 144		

Q4 From the following features and amenities that ETS could add to its current transit service, choose one that would make it more appealing for you to use public transportation more frequently or at all.

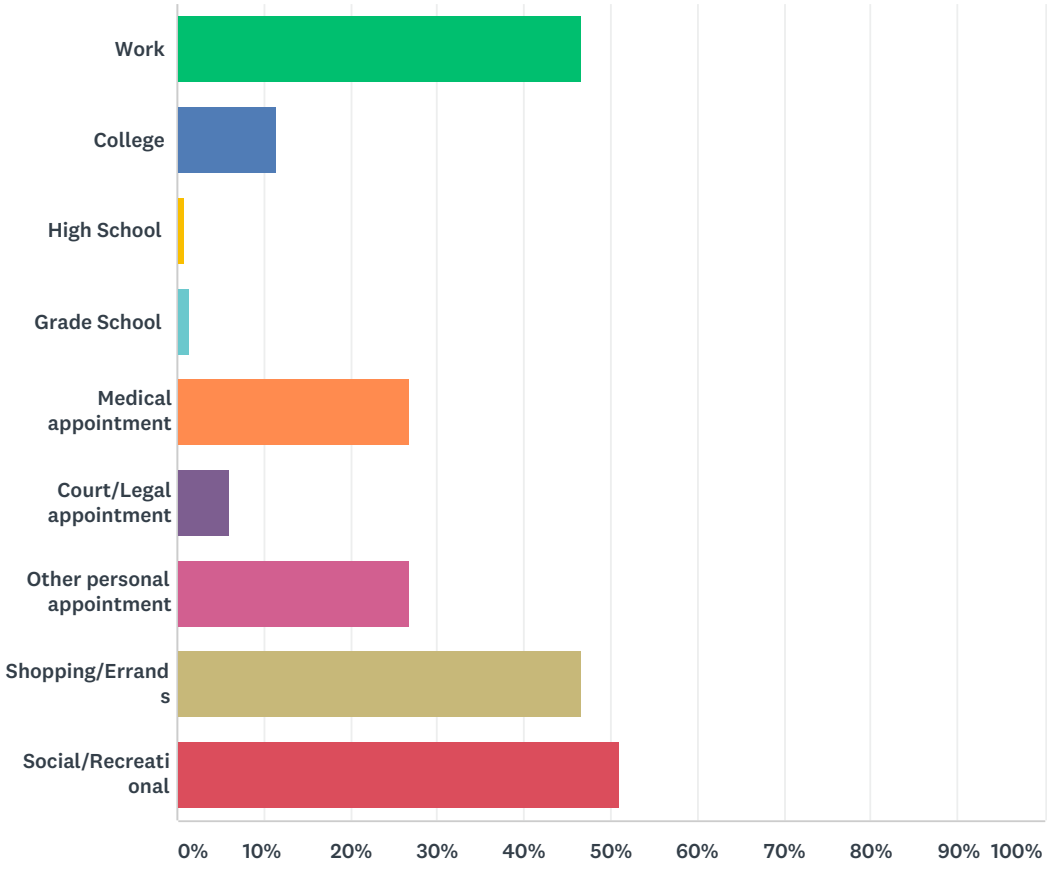
Answered: 144 Skipped: 201



ANSWER CHOICES	RESPONSES	
Lower fares	7.64%	11
More frequent service	26.39%	38
More routes to service places I need to go	31.94%	46
Easier methods of buying fares	1.39%	2
Easier to use	9.03%	13
Cover from the weather at transit stops	7.64%	11
Vehicles and/or stops in better condition	1.39%	2
Would not ride public transportation under any circumstances	14.58%	21
TOTAL		144

Q5 What type of trip would you like to make on ETS if you are not already?

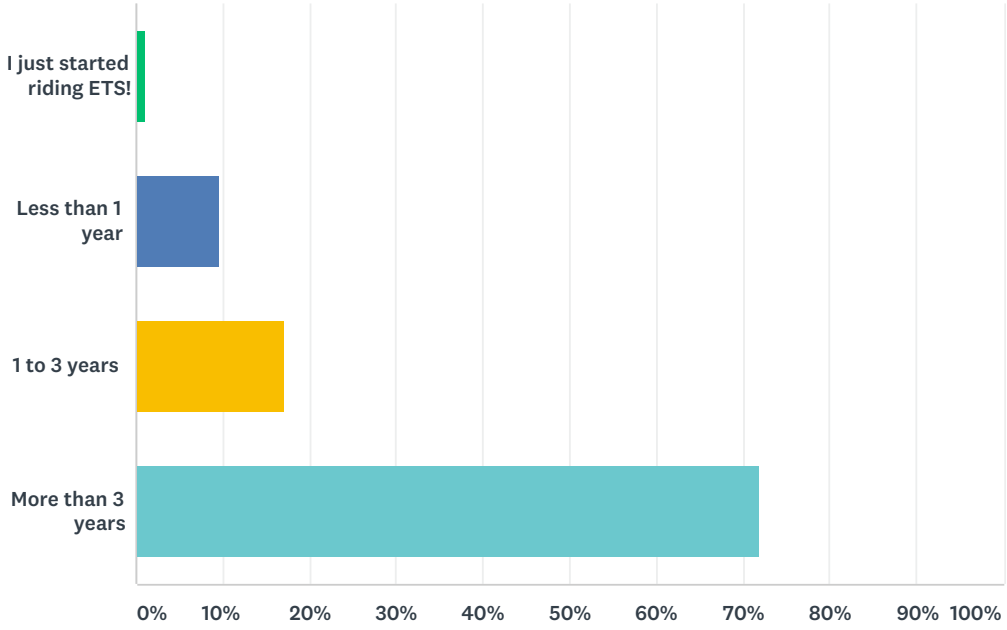
Answered: 131 Skipped: 214



ANSWER CHOICES	RESPONSES	
Work	46.56%	61
College	11.45%	15
High School	0.76%	1
Grade School	1.53%	2
Medical appointment	26.72%	35
Court/Legal appointment	6.11%	8
Other personal appointment	26.72%	35
Shopping/Errands	46.56%	61
Social/Recreational	51.15%	67
Total Respondents: 131		

Q6 How long have you been riding ETS?

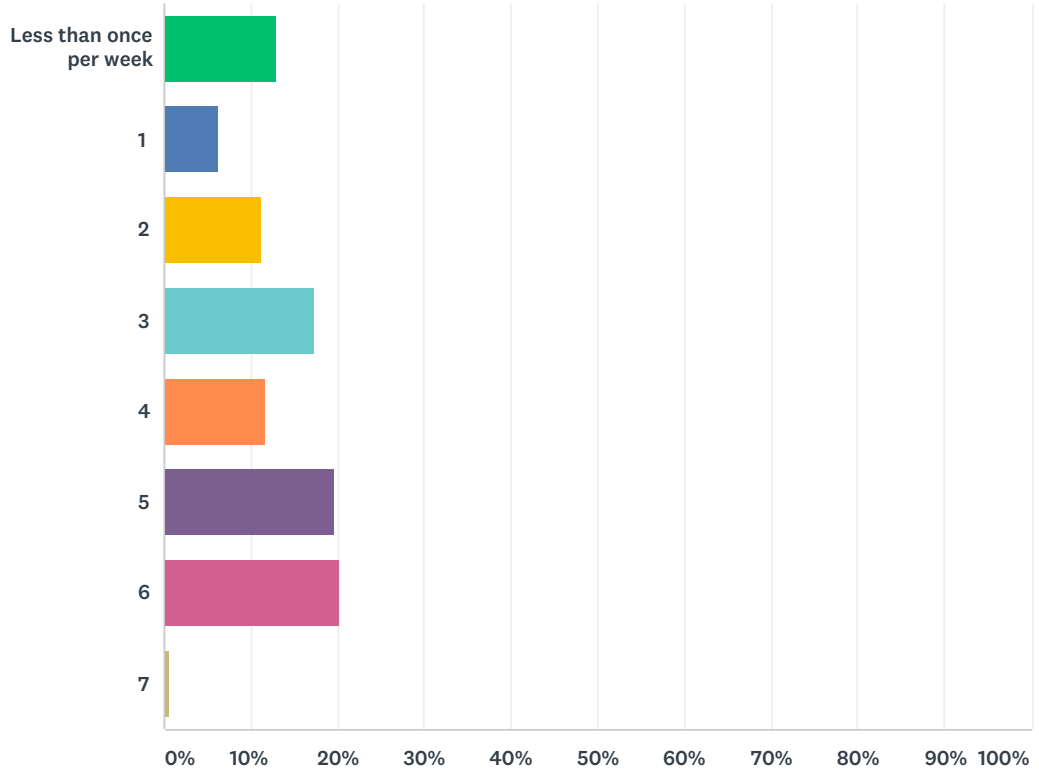
Answered: 175 Skipped: 170



ANSWER CHOICES	RESPONSES	
I just started riding ETS!	1.14%	2
Less than 1 year	9.71%	17
1 to 3 years	17.14%	30
More than 3 years	72.00%	126
TOTAL		175

Q7 How many days per week do you ride ETS?

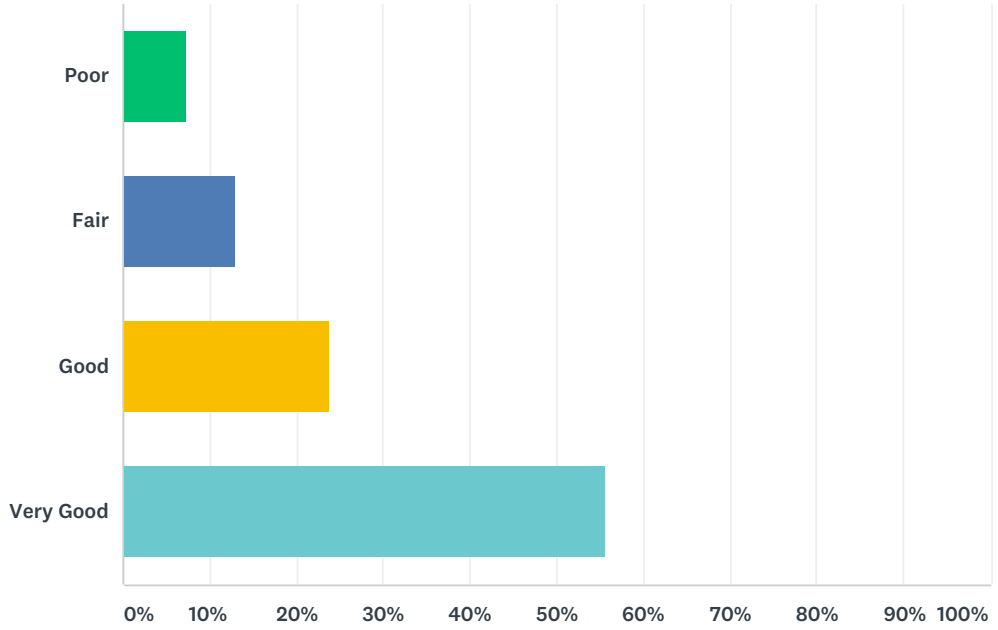
Answered: 178 Skipped: 167



ANSWER CHOICES	RESPONSES	
Less than once per week	12.92%	23
1	6.18%	11
2	11.24%	20
3	17.42%	31
4	11.80%	21
5	19.66%	35
6	20.22%	36
7	0.56%	1
TOTAL		178

Q8 Overall how would you rate your satisfaction with the bus routes you ride?

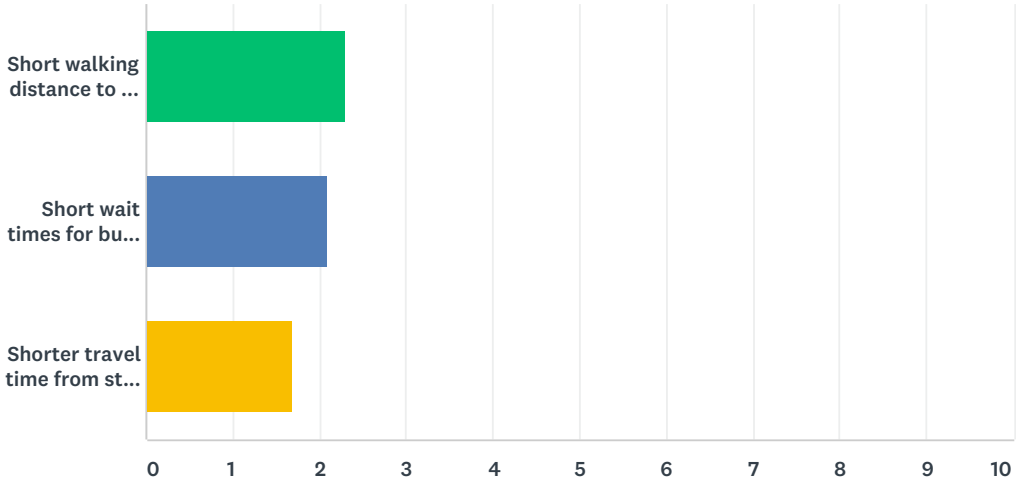
Answered: 176 Skipped: 169



ANSWER CHOICES	RESPONSES	
Poor	7.39%	13
Fair	13.07%	23
Good	23.86%	42
Very Good	55.68%	98
TOTAL		176

Q9 Please rank the following in order of importance where 1 is the most important to you and 3 is the least important to you

Answered: 161 Skipped: 184



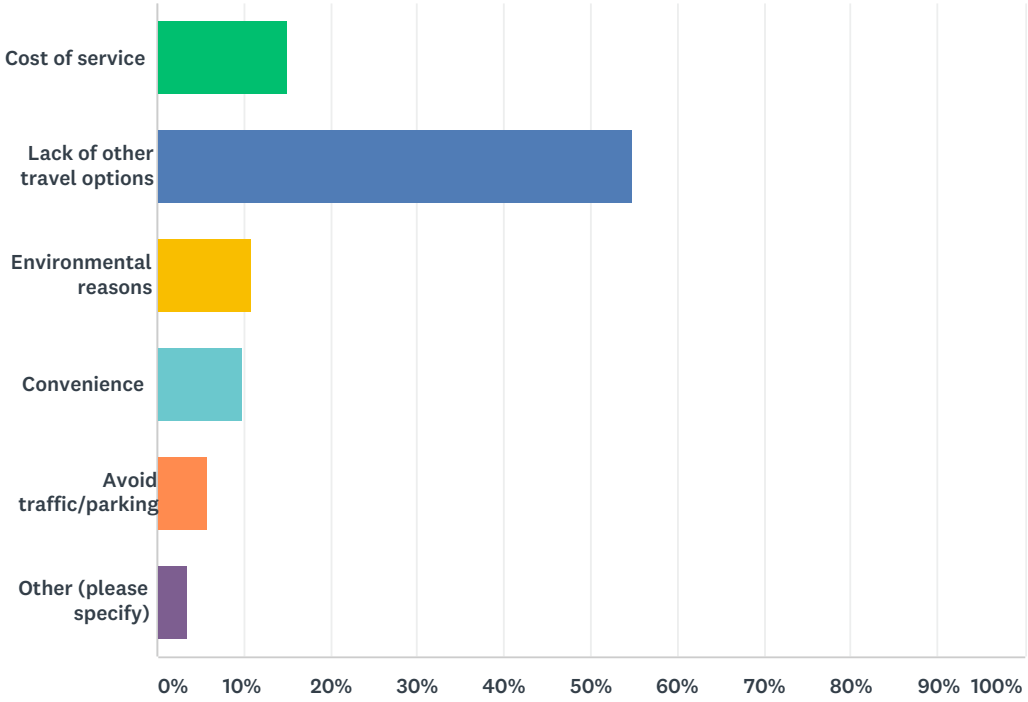
	1	2	3	TOTAL	SCORE
Short walking distance to bus stop from origin/destination location	52.38% 77	25.17% 37	22.45% 33	147	2.30
Short wait times for bus service (every 15 minutes for less)	35.62% 52	39.04% 57	25.34% 37	146	2.10
Shorter travel time from start to end of bus route (arrive at your destination faster)	17.99% 25	33.81% 47	48.20% 67	139	1.70

Q10 What time of day and days of the week do you most frequently ride ETS?

Answered: 162 Skipped: 183

Q11 Why do you choose ETS to make trips? (choose one)

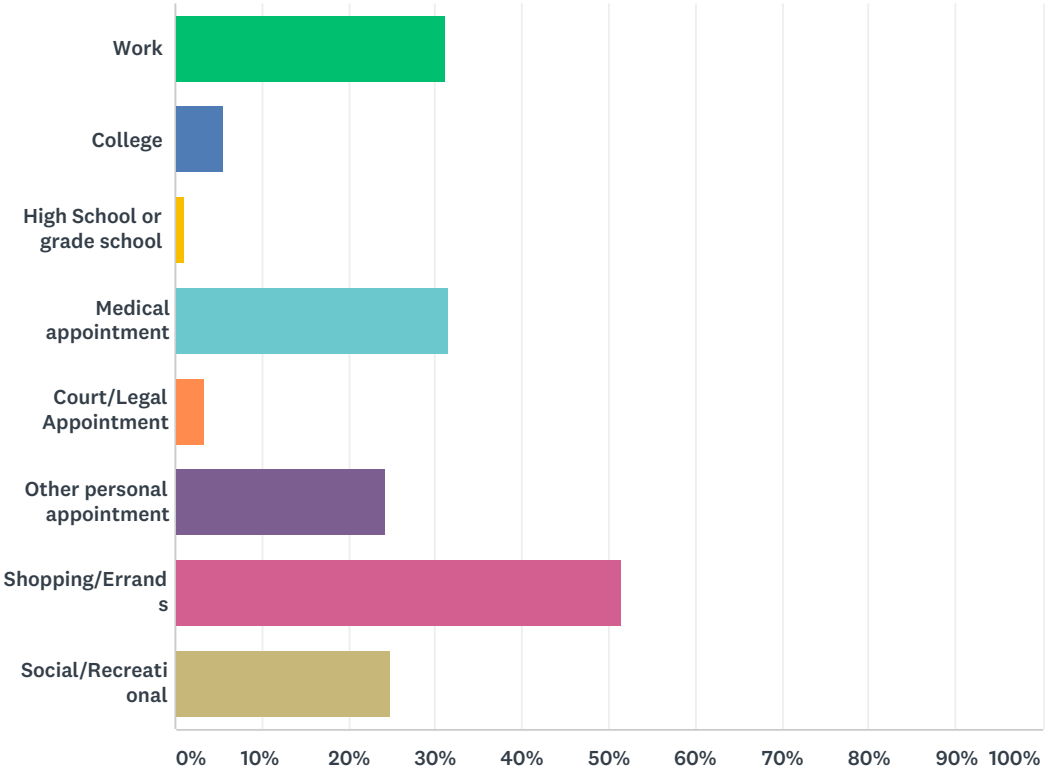
Answered: 173 Skipped: 172



ANSWER CHOICES	RESPONSES	
Cost of service	15.03%	26
Lack of other travel options	54.91%	95
Environmental reasons	10.98%	19
Convenience	9.83%	17
Avoid traffic/parking	5.78%	10
Other (please specify)	3.47%	6
TOTAL		173

Q12 Trip Purpose - Where are you typically traveling on ETS?

Answered: 177 Skipped: 168



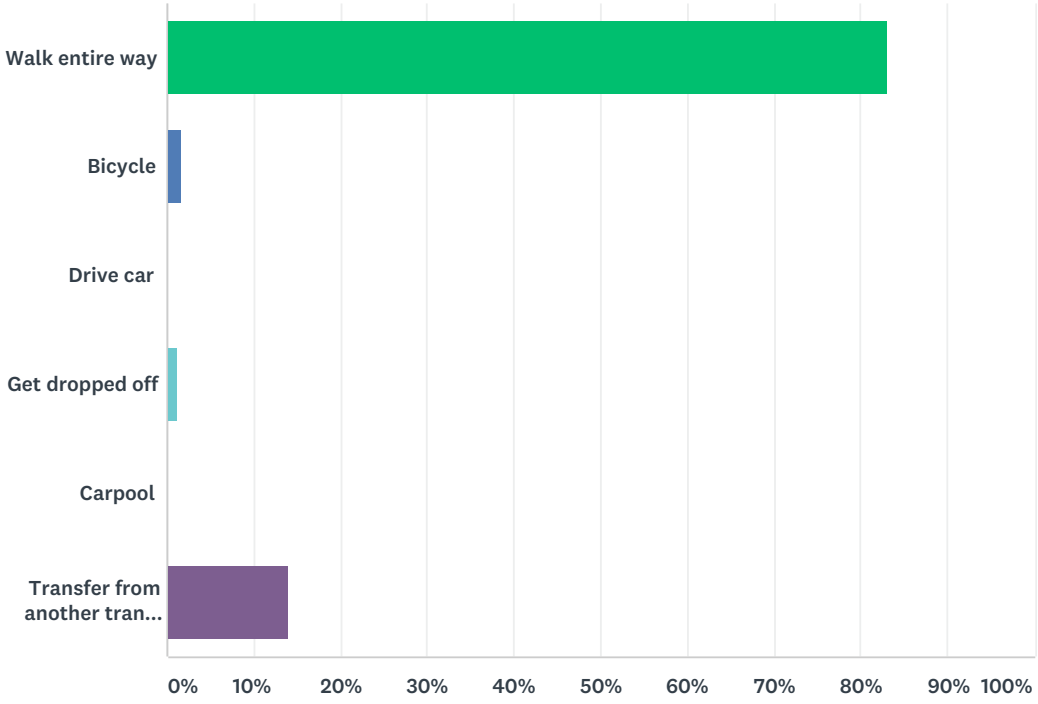
ANSWER CHOICES	RESPONSES	
Work	31.07%	55
College	5.65%	10
High School or grade school	1.13%	2
Medical appointment	31.64%	56
Court/Legal Appointment	3.39%	6
Other personal appointment	24.29%	43
Shopping/Errands	51.41%	91
Social/Recreational	24.86%	44
Total Respondents: 177		

Q13 What is your home street and closest cross street?

Answered: 156 Skipped: 189

Q14 How do you typically get to an ETS transit stop?

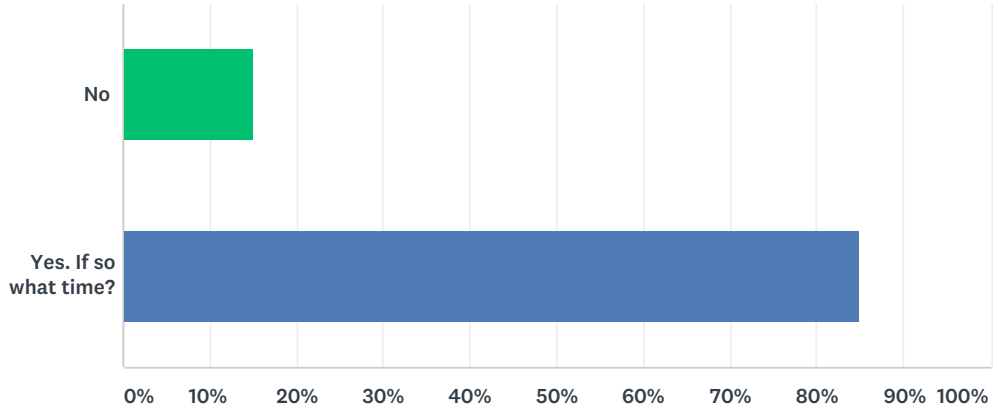
Answered: 171 Skipped: 174



ANSWER CHOICES	RESPONSES	
Walk entire way	83.04%	142
Bicycle	1.75%	3
Drive car	0.00%	0
Get dropped off	1.17%	2
Carpool	0.00%	0
Transfer from another transit service such as Redwood Transit Service. If so please specify:	14.04%	24
TOTAL		171

Q15 Would you frequently utilize ETS service on Sundays if it was offered?

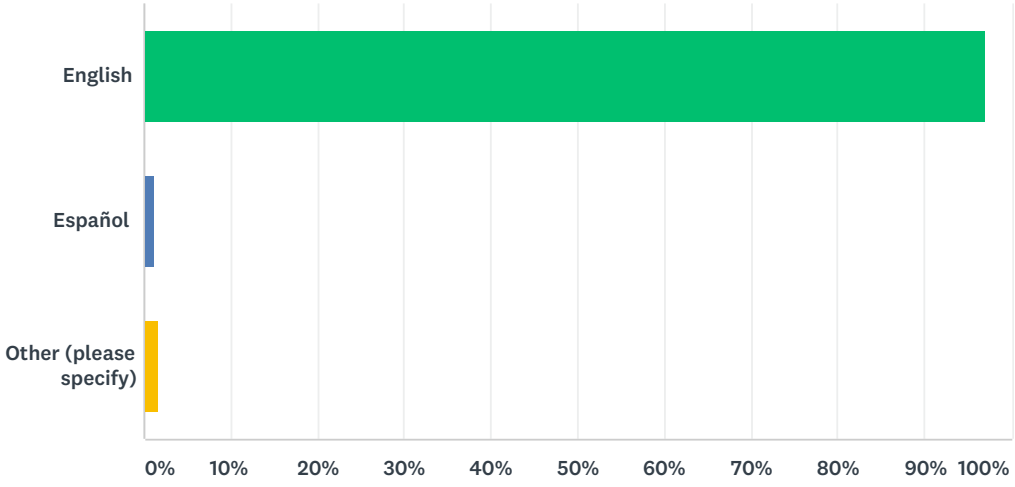
Answered: 160 Skipped: 185



ANSWER CHOICES	RESPONSES	
No	15.00%	24
Yes. If so what time?	85.00%	136
TOTAL		160

Q16 What is the main language you speak at home?

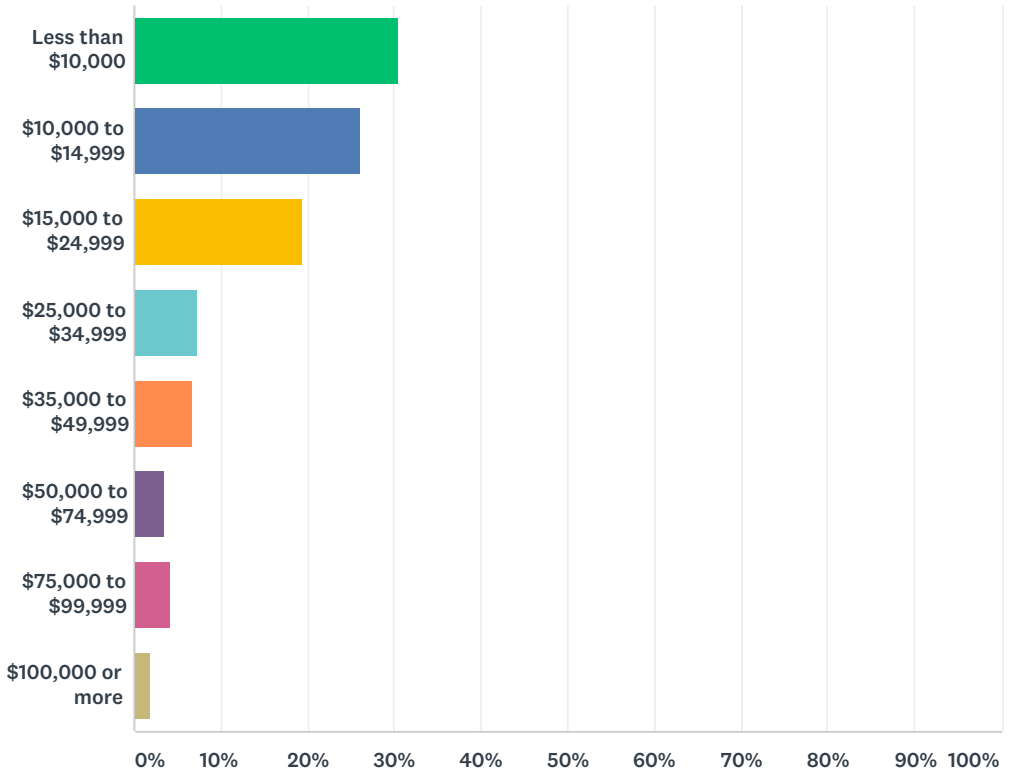
Answered: 170 Skipped: 175



ANSWER CHOICES	RESPONSES	
English	97.06%	165
Español	1.18%	2
Other (please specify)	1.76%	3
TOTAL		170

Q17 What is your approximate household income?

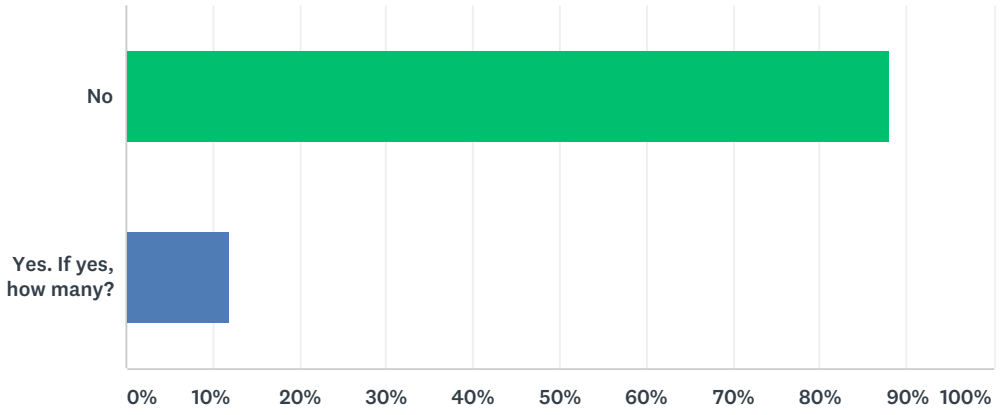
Answered: 164 Skipped: 181



ANSWER CHOICES	RESPONSES	
Less than $10,000	30.49%	50
$10,000 to $14,999	26.22%	43
$15,000 to $24,999	19.51%	32
$25,000 to $34,999	7.32%	12
$35,000 to $49,999	6.71%	11
$50,000 to $74,999	3.66%	6
$75,000 to $99,999	4.27%	7
$100,000 or more	1.83%	3
TOTAL		164

Q18 Do you have children that ride the bus with you

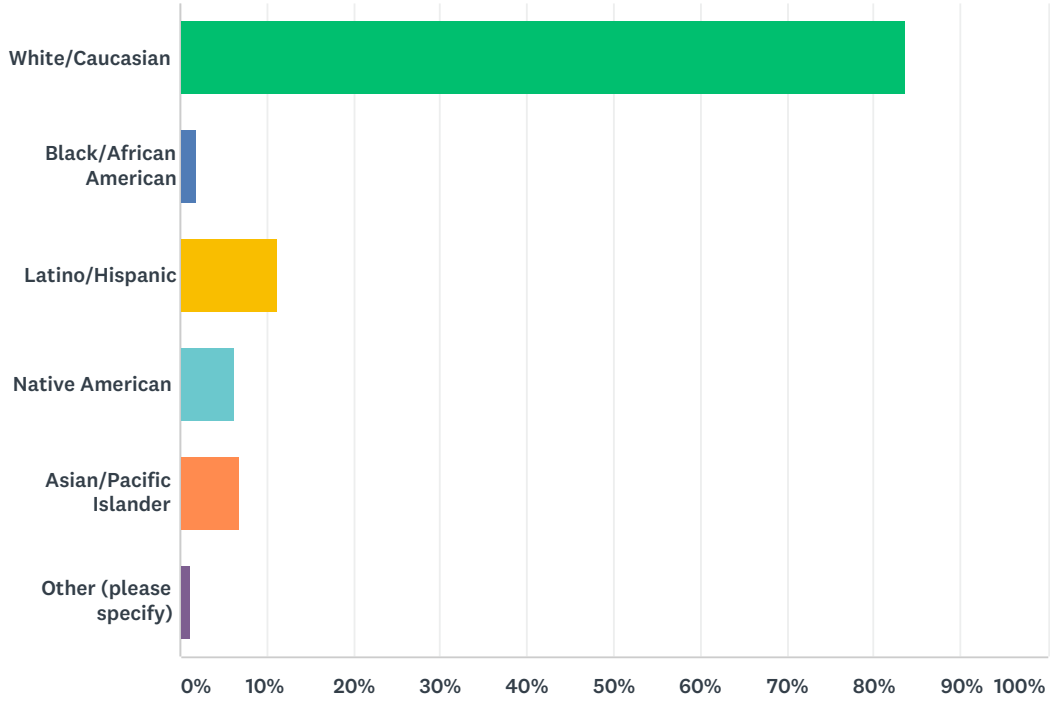
Answered: 169 Skipped: 176



ANSWER CHOICES	RESPONSES	
No	88.17%	149
Yes. If yes, how many?	11.83%	20
TOTAL		169

Q19 What is your race/ethnicity? Check all that apply.

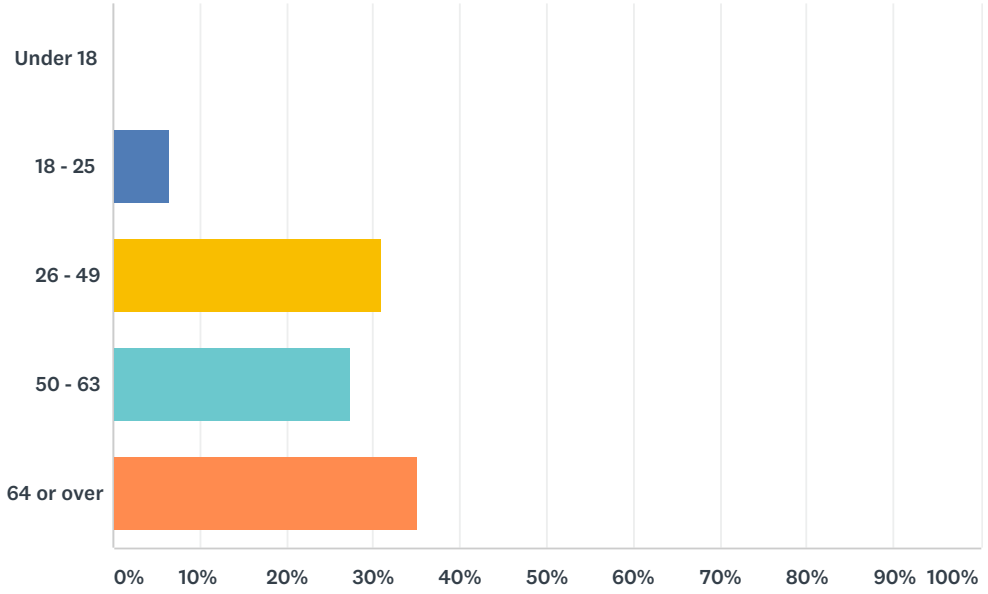
Answered: 160 Skipped: 185



ANSWER CHOICES	RESPONSES	
White/Caucasian	83.75%	134
Black/African American	1.88%	3
Latino/Hispanic	11.25%	18
Native American	6.25%	10
Asian/Pacific Islander	6.88%	11
Other (please specify)	1.25%	2
Total Respondents: 160		

Q20 What is your age?

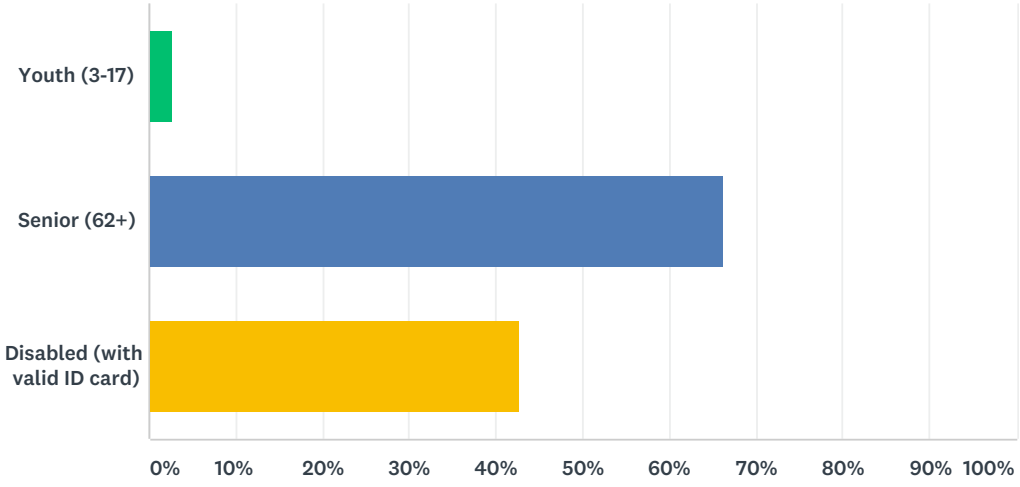
Answered: 171 Skipped: 174



ANSWER CHOICES	RESPONSES	
Under 18	0.00%	0
18 - 25	6.43%	11
26 - 49	30.99%	53
50 - 63	27.49%	47
64 or over	35.09%	60
TOTAL		171

Q21 Do you qualify for any of the following discounted fares?

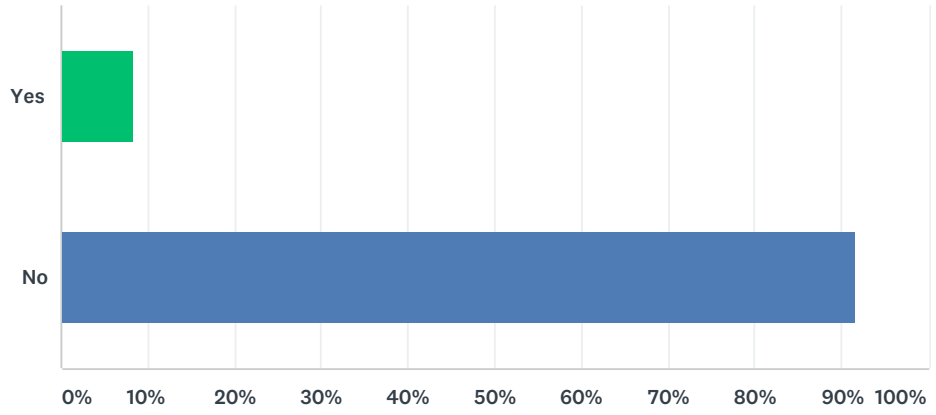
Answered: 110 Skipped: 235



ANSWER CHOICES	RESPONSES	
Youth (3-17)	2.73%	3
Senior (62+)	66.36%	73
Disabled (with valid ID card)	42.73%	47
Total Respondents: 110		

Q22 Do you ever use Dial-A-Ride services?

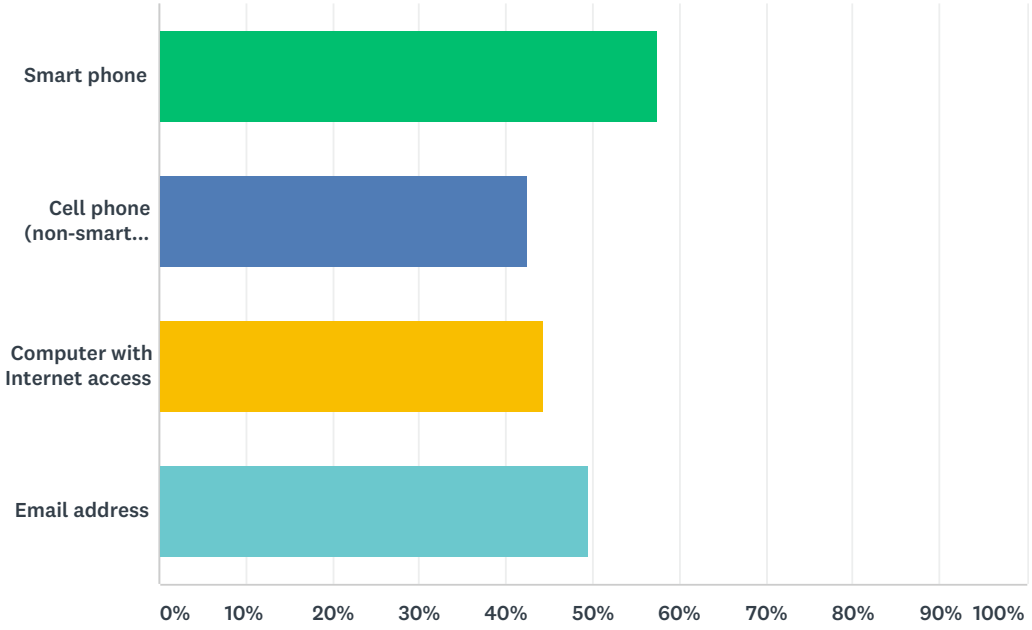
Answered: 167 Skipped: 178



ANSWER CHOICES	RESPONSES	
Yes	8.38%	14
No	91.62%	153
TOTAL		167

Q23 Do you have access to any of the following?

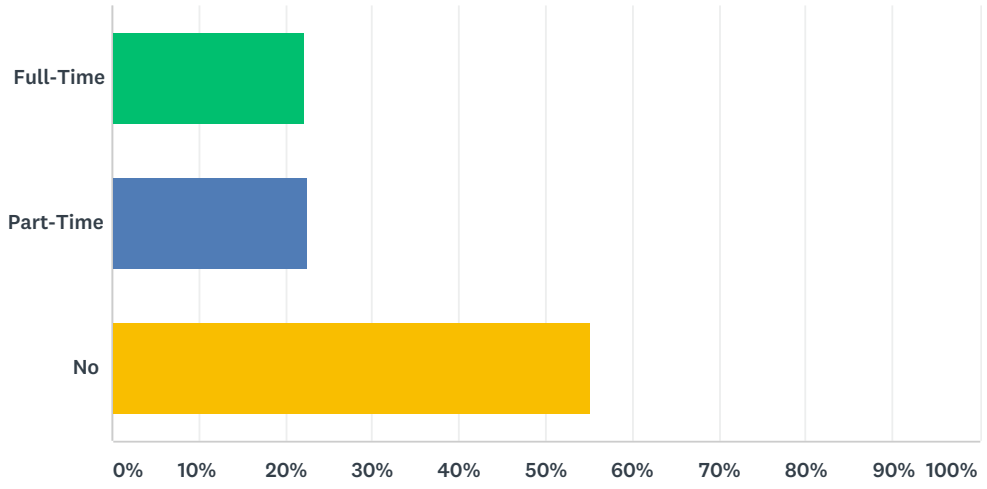
Answered: 151 Skipped: 194



ANSWER CHOICES	RESPONSES	
Smart phone	57.62%	87
Cell phone (non-smart phone)	42.38%	64
Computer with Internet access	44.37%	67
Email address	49.67%	75
Total Respondents: 151		

Q24 Do you have a job?

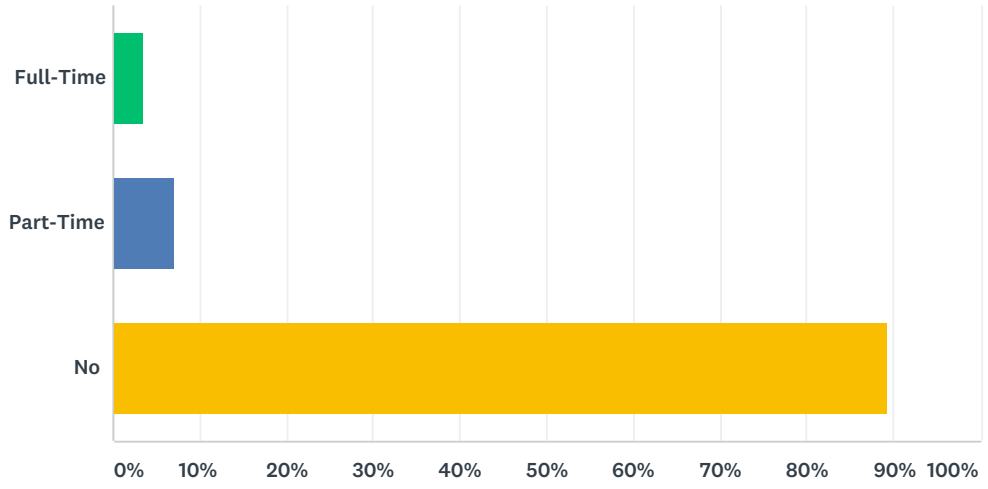
Answered: 172 Skipped: 173



ANSWER CHOICES	RESPONSES	
Full-Time	22.09%	38
Part-Time	22.67%	39
No	55.23%	95
TOTAL		172

Q25 Are you a student?

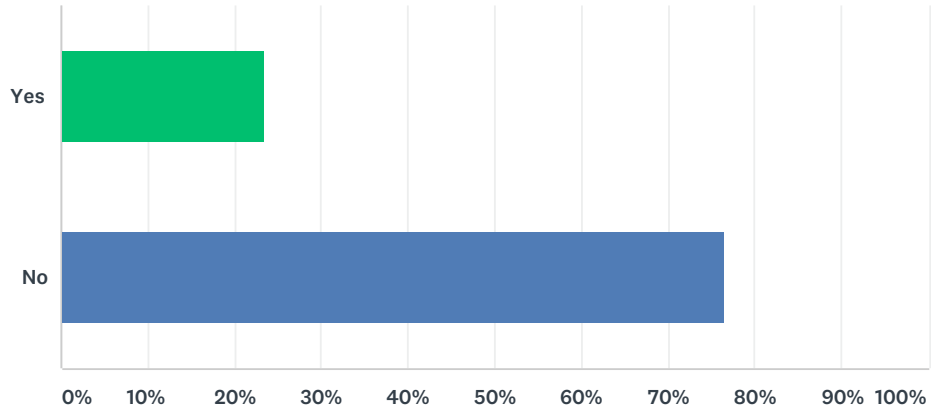
Answered: 169 Skipped: 176



ANSWER CHOICES	RESPONSES	
Full-Time	3.55%	6
Part-Time	7.10%	12
No	89.35%	151
TOTAL		169

Q26 Do you have access to a vehicle?

Answered: 171 Skipped: 174



ANSWER CHOICES	RESPONSES	
Yes	23.39%	40
No	76.61%	131
TOTAL		171

Q27 Do you have any additional comments or suggestions regarding local transit?

Answered: 83 Skipped: 262

Q27 Do you have any additional comments or suggestions regarding local transit?

Answered: 83 Skipped: 262

#	RESPONSES	DATE
1	I know it is the question of chicken or the egg - but I really feel Eurekans would use the bus system more if the bus came much more frequently. A normal work day, midday, one should not have to wait more than 15-20 minutes to get the next bus. More of my staff would use the bus system more and even I would consider it for myself.	1/30/2018 1:07 PM
2	Please install bike racks on the city buses. It would make it so much easier.	1/23/2018 1:53 PM
3	WIFI would be helpful	1/12/2018 11:14 AM
4	I sometimes ride on Saturdays but bus schedule is horrible. Starts too late and ends too early. Walk a lot longer.	1/12/2018 11:12 AM
5	A quick ongoing shuttle on roadways: h and I, Harris, 6th and 7th	1/6/2018 11:41 AM
6	Get wifi on bus	1/5/2018 3:17 PM
7	Favorite driver is Brian	1/5/2018 3:15 PM
8	Wish that the Saturday bus ran until 6 p.m.	1/5/2018 2:43 PM
9	Purple Stop desired @ Open Door (Tydd st). Red and Gold stops needed at Eureka Inn (7th and F) for access to Government and Professional offices	1/5/2018 2:38 PM
10	I ride gold route to Eureka Mall, sometimes 6 days a week. Would go on Sundays also if I could!	1/5/2018 2:35 PM
11	Add wifi on buses	1/5/2018 2:30 PM
12	It should be free for riders to boost ridership because the planet isn't getting any cooler.	1/4/2018 7:26 PM
13	I know that seniors need transportation as many can no longer drive. They need safe transportation, frequent routes, shorter wait times, and seating while waiting.	1/4/2018 5:04 PM
14	Benches and maybe even shelter at the stops would be nice but I'm aware of the problems that creates.	1/4/2018 3:20 PM
15	I find the loop route system inconvenience. I wish ETA would switch to line system. Thanks.	1/4/2018 9:19 AM
16	Scheduling of appointments in bus services when more than one bus is required. Those using a wheelchair may require more time to get from one bus to the other	12/30/2017 12:27 PM
17	Appreciate having the transit service available ... thank you	12/24/2017 7:08 PM
18	Again - how could there not be a bus running on Old Arcata Road? There are so many of us driving on it every day. Right now I am looking for a new place to live so I don't have to drive every day, but it's so hard to find a place - I would not have to move if there was a bus running on Old Arcata Road, the second busiest road in the county. When I first moved here 5 years ago I thought I could get rid of my car. The first stunner came when I found out there was no bus running straight down 5th Street to Myrtle - the path that is driven by over a thousand cars every day. I worked at CASA of Humboldt then. I got online to figure out what bus to take, and the first suggestion - on the bus website - was to WALK because that took less time than the 2 buses I would have to take (and then walk to my workplace). CRAZY! Public transportation is extremely critical to economic development, as well as health. Seriously - no bus down 5th Street to Myrtle to Old Arcata Road? WHY NOT, give me one logical reason why this bus route does not exist. Just one. I'm waiting....	12/20/2017 4:39 PM
19	Thank you so much for your services and Merry Christmas!	12/20/2017 2:27 PM
20	WI-FI needed	12/20/2017 2:23 PM
21	I'd like to suggest considering somehow making stops more lit. I have been skipped a few times.	12/20/2017 2:16 PM
22	Walked from zoo to Joanns because work makes me miss the red route by 10 minutes.	12/20/2017 2:04 PM

23	I really enjoy my usual bus (purple route). My only complaint is the inconsistency of availability but I come from Portland, OR so I was spoiled.	12/20/2017 12:28 PM
24	Need 7pm run to visit friends. Saturday service useless because it stops to early. Daily need later service as well.	12/20/2017 12:07 PM
25	Need wi-fi on the buses please	12/20/2017 11:57 AM
26	Need east-west cross-town options from Wabash to Del Norte	12/20/2017 11:37 AM
27	People who are disabled can't cross the street when let off near the Eureka Mall. The old stop on the east side of Winco worked better. Most drivers are good but get rid of Dan. Hope he never comes back. Lets one woman distract him daily by standing right near him talking the whole time. He hates carts and takes it out on you. Nasty. Tracy is rude and abusive, talks and flirts too much, makes me late.	12/20/2017 10:52 AM
28	Bus from Henderson and Summer takes 5 minutes to get to senior center. Takes 40 minutes to get back.	12/19/2017 3:20 PM
29	All routes across town for better connections. Red and Gold stops are the same but red doesn't stop at gold stops.	12/19/2017 3:07 PM
30	The gentleman driving the Gold route on 12/12/17 at 3 p.m. is one of my favorite drivers!	12/19/2017 2:37 PM
31	Comments from Dustin Cox (new manager at Bayshore Mall): Buses drive way too fast on the property. Especially the morning and evening drivers. Bus stops are not maintained. They are dirty and attract homeless people who cause problems. These bus stops are not bringing people who are coming to shop at the mall, people are just stopping here and dispersing to the areas surrounding the mall.	12/19/2017 2:11 PM
32	Need service later on weekends	12/18/2017 2:23 PM
33	Need earlier service	12/18/2017 1:58 PM
34	Might ride if it felt safer	12/18/2017 1:55 PM
35	Need service to Freshwater	12/18/2017 1:54 PM
36	Need bike racks on ETS buses	12/18/2017 1:44 PM
37	Buses need to be timed better to work with out of town buses.	12/18/2017 1:00 PM
38	Later at night transfers should be more frequent. Not worth the money. Drivers are nice and courteous. Stopping twice an hour at F and Harris is too much. Takes 5 minutes to get home from the Senior Center but takes 40 minutes to get to the Senior Center from home.	12/18/2017 12:55 PM
39	Need service to Indianola cutoff	12/18/2017 12:54 PM
40	Influxes of mentally disabled persons at certain stops cause the bus to be overcrowded. These folks use the buses regularly and should have to make other accommodations so people already on the bus aren't overcrowded and uncomfortable.	12/18/2017 12:51 PM
41	Buses should have seatbelts	12/18/2017 12:47 PM
42	Please remove old schedules from 2013-2014 that are posted at bus stops all over town. Please also clean up the tagging/spray paint at 17th and West.	12/18/2017 12:41 PM
43	Sundays would be very good. Later in evenings also	12/18/2017 7:39 AM
44	I previously depended heavily on ETS.I now have a car and do not. My friends and family depend on it and it often forces them to cancel coming to social events due to no bus etc.	12/15/2017 1:54 PM
45	Need Sunday service. More buses.	12/14/2017 1:36 PM
46	My biggest issue is that it may only take 10 minutes to get where I am going, but the return trip is 40 minutes. I am not savvy enough to figure out how to get around in less time.	12/14/2017 12:59 PM
47	Thank you. I think it would be good to ask about Ethnicity at the end of the survey and state it as optional with the choice of "decline to state".	12/13/2017 3:30 PM
48	Would love to see a transit bus circling the bay on OAR-Samoa-Myrtle. I live in Bayside and would use it to go to the beach, and to do errands in Eureka. Further, I know elderly people who can't always afford to drive their own car, so having a bus they can use from Indianola to Sunny Brae to get groceries is critical. Also, the Bayside Community Hall would benefit from bus service from Eureka, as many people can't attend events there without bus service.	12/12/2017 10:19 PM

49	The Bus Drivers are very kind and they know me by my name. I like that	12/12/2017 3:35 PM
50	later night rides up and down the safety corridor, for music venues and night life	12/12/2017 2:36 PM
51	Need improved stops for individuals using chairs to board and debark at. More room for landings at undeveloped stops. Bus stops need to be a higher priority	12/12/2017 1:11 PM
52	People have misconceptions about the bus for sure. When I was in SF, everyone rode MUNI. Here, it's only for people who "have" to. Maybe a Free Ride The Bus Day where you get County Supervisor, city council, other business and agency leaders to "Take a Ride!" Somehow message that "The Bus is for all of US!"	12/12/2017 11:32 AM
53	Bring ETS to King Salmon and Fields Landing	12/12/2017 11:28 AM
54	make it easier to get passes	12/12/2017 11:24 AM
55	A line rather than a loop would provide more frequent service efficiently. I thought money had been received to study the issue but that was years ago and it's still a slow loop service with buses coming once/hour.	12/12/2017 11:22 AM
56	perhaps, running later? till like 1 or 2 am	12/12/2017 11:12 AM
57	Even with access to a vehicle, I would ride more if service were better. The loop routes are confusing, and uninviting, especially when coupled with timing - both interval and time to get somewhere with the loop system. "After ETS hours" Eureka could also use alternating busses on RTS to serve via Henderson Ctr one ways streets (Maybe the Manila RTS route?).	12/12/2017 11:06 AM
58	Run on dedicated, direct two-way routes. No more meandering.	12/12/2017 6:40 AM
59	More frequent and longer hours	12/11/2017 3:18 PM
60	I live on Spruce St. and work at HSU. I would ride the bus to work if the route was convenient, as would several of my neighbors in the same situation.	12/10/2017 12:27 PM
61	Locations: Indeanola cut off. Lumbar Hills, King Salmon and their are other locations that the bus goes right by but does not and will not stop at.	12/9/2017 9:59 PM
62	I prefer to travel in a compact automobile.	12/9/2017 4:10 PM
63	Almost all of the time the city bus is on time, however I find that the intercity transit buses are usually late which causes me to miss the Eureka bus. There should be a Eureka bus every 30 minutes on gold and red routes	12/9/2017 9:30 AM
64	Sunday service or Saturdays after 5 p.m. would be a big help. I can't attend church otherwise.	12/9/2017 12:46 AM
65	Need stop at 2440 6th st	12/8/2017 1:42 PM
66	I'm hugely in favor of Sunday service, more physical bus stops, and also express buses.	12/7/2017 11:18 PM
67	I have to pay the mother of a student at my kids' school to drive my kids home because the bus routes are only convenient to go TO the school (Pacific View Charter) and are very inconvenient FROM the school. To take the bus to their school and then get the kids and then wait for another bus and take that home, would take over two hours and cost $98 a month. On top of that it is still a half mile walk home. For some reason all the buses generally run toward the south end of town all at the same time and I live in the north end of town. Getting home is difficult.	12/7/2017 10:46 PM
68	Sometimes have to cross many lanes of highway traffic to return by bus. Drop off and pick up are not at the same stop.	12/7/2017 9:29 PM
69	From East Eureka to my job at HSU would currently take 2 buses and an hour and 40 minutes. An alternate route between Eureka and Arcata that runs from Myrtle Avenue/Redwood Acres to Arcata via Old Arcata Road would solve these problems.	12/7/2017 9:01 PM
70	Would be great to see a commuter rail car run between Eureka-Arcata on the mostly existing tracks. Could be solar powered with wi-fi, provide tourist activity as well as service for daily commuters, link to current ETS routes, and would reduce traffic on 101 if run frequently during high traffic times.	12/7/2017 8:14 PM
71	No	12/7/2017 8:07 PM
72	Running later at night would help!	12/7/2017 7:59 PM
73	As a kid we rode the bus all the time with our mom. Need better times and at better intervals. Lower the fare- the overhead can't be that bad.	12/7/2017 6:39 PM

74	Fast service between Henderson Center and old town.	12/7/2017 6:19 PM
75	More benches at bus stops for sitting. Or perhaps an electronic sign showing when the next bus will be arriving in "" minutes and then showing current time similar to that of the BART stations in the bay area so travelers can keep track of time and know when the bus will be arriving.	12/7/2017 5:52 PM
76	Make buses run later -- otherwise it's pointless if one has to work or wants to go get drinks and not drive	12/7/2017 5:46 PM
77	Too many dirty druggies using the bus stop as a hangout spot.	12/7/2017 5:38 PM
78	I would use it if it was available and convenient. The routes are extremely inconvenient	12/7/2017 5:29 PM
79	If the Eureka bus ran more often and later I would take it more often. I cant take it home from work because it stops to early. If I miss the last one I walk 2.5 miles in the rain.	12/7/2017 4:54 PM
80	It would be nice to coordinate the schedules with the humboldt wide transit better as well.	12/7/2017 4:45 PM
81	Covered bus stops	12/7/2017 4:39 PM
82	You need a transit board as we had in Alameda County to work closely with the population and your transit employees to run your transit service. I was on the board for AC Transit and am also well trained and experienced in writing successful grant proposals. You need more drivers and more hours for them. We could get money for this.	12/7/2017 4:35 PM
83	Bus service to Woodley Island would be very useful.	12/7/2017 4:29 PM

Eureka Transit Service Line System Feasibility Study

Project Brief for SSTAC meeting January 3

The City of Eureka, Eureka Transit Service (ETS), and Humboldt Transit Authority initiated the Eureka Transit Service Line System Feasibility Study this fall to better understand how ETS routes, schedules, and overall experience could be improved so more Eureka residents, workers, and visitors are able to regularly use public transit for their everyday needs.

ETS provides weekday and Saturday transit service within the greater Eureka area and connects to the regional north-south Redwood Transit Service. Weekday ETS service is comprised of four loop routes operating every 60 minutes.

Fehr & Peers is the lead consultant working on the study and has partnered with Redwood Community Action Agency (RCAA) to provide locally based community outreach. The consultant team conducted ride checks in October to better understand boarding and alighting patterns across all ETS loops during weekdays and Saturday. Community outreach was initiated in December with surveys developed for both current ETS passengers and non-riders. The goal of the survey and associated tabling and outreach is to better understand existing transit users' travel choices and needs and how the ETS system could be improved to help more community members efficiently get to work, school, appointments, and other destinations. RCAA staff have outreached for the project and survey at bus transfer locations, public library, North Coast Co-op, Humboldt Senior Resource Center, HCAR, Tri-County Independent Living, Silvercrest Residences, and through local media postings and social media. RCAA is also conducting outreach to key organizations within the Spanish-speaking community in early January such as Paso a Paso and LatinoNet. This initial community survey will be available on ETS buses and online through early January (https://www.surveymonkey.com/r/NYNRVFT).

Upon analyzing community survey results, the project team plans additional focus groups with key stakeholders in early February. A concept plan for potential transit route improvements is expected in April at which time the project team will seek community feedback. The Eureka Transit Service Line System Feasibility Study is expected to be complete by June 2018.

RCAA staff will be in attendance at the January 3 SSTAC meeting to introduce the project and invite feedback on ETS service to inform project next steps.

Eureka Transit Service Line Feasibility Study

SSTAC meeting April 4, 2018

SSTAC comments

- The group was all more in favor of concept #2 with coverage to Cutten and Bayview and more coverage in general. As mostly social service providers this group definitely wants to prioritize that people without other transportation options still have access to transit.
- The group thought concept #1 would be very viable but at a significant cost to people who depend on ETS
- Would it be possible to have 30 minute headway on red route plus serve both Cutten and Bayview?
- Or every 2 hours to Cutten, or hourly at key commute times then every 2 hours?
- Concept #1 – the County would likely contribute less TDA $ as Cutten would no longer have coverage
- Group would have liked to have seen more concepts to further examine the cost/benefits
- These concepts do not provide access to the Koster Street DHHS Social Services office. Would these ETS route changes go hand in hand with RTS making a small diversion from 101 to drive down Koster Street?
- Need to ensure that the Humboldt Plaza offices have their back gate open so that the public can access these offices from a bus stop by Silvercrest/Open Door on Tydd Street.
- Sequoia Park is a destination…ensure would not have to walk far to get there from transit
- It is good to get ETS off Broadway to avoid the duplication with RTS.
- Any future changes would need to be communicated clearly so current riders do not get confused. Also there would need to be a meaningful benefit to the change the system.
- Dial a Ride will still cover all current areas. If ETS changes, more funding for Dial a Ride may come out of the regional fund at HCAOG.
- What is the plan to present to the public?
    - Present to City Council in June
    - Talk with people at transfer points
    - Meet with key stakeholder organizations
    - Put concepts on Next Door
    - Put an article in Tri-County Independent Living newsletter and Senior News (content due April 12 for May edition)

Driver's Input from ETS

April 2018

What works well within the existing ETS system?

- Our policies in regards to passengers
- The coverage of Eureka and the greater Eureka are is excellent. Transfers between the routes are very helpful for many people.

What does not work well within the existing ETS system?

- It takes too long to get to your destination.
- Not enough red curbs.
- Cars block bus stops causing buses to block traffic.
- Dealing with cash takes up too much time.
- The route schedules won't work when you stop at every stop to pickup or drop off.
- Need a better time gap then we don't get down on time 15 to 20 minutes and not make transfers.
- It can take a long time to get to one's destination and then back again. It does not connect to Northbound RTS in a very timely fashion (I think a lot of the wait times are between 15 and 45 minutes.)

What is your top desired improvement for the ETS system?

- New routes.
- Changing it so it's less than one hour wait per round.
- Faster service from the outlying areas (Pine Hill, Cutten, Myrtletown) to downtown and then back again

Are there any areas within the ETS system that you could envision service expansion or reduction?

- Library and south of Broadway and McCullens could use service.

ETS Outreach – Eureka Visitor's Center
March 27, 2018

Do visitors ask about transit routes?

- No. The person I spoke with had never had someone ask about transit services in the area.

Would you push the transit system to visitors?

- They want to cater to visitors to find simpler ways to get them to the different historical sites in the area. This is especially true for visitor on cruise ships. They are here for 6 hours and have no means of obtaining vehicles. They would also be interested in having a wrapped image on one of the buses if they did incorporate access to historical sites into their routes.

How do visitors typically travel in Eureka?

- Typically in their own personal RV's or in rental cars. Some are walking from the harbor (cruise ships).

Do you/would you carry RTS and ETS maps in the visitor center?

- Yes! They do not currently carry any maps but I will be dropping some off for them this week.

Other input:

- Routes should happen more than once an hour.

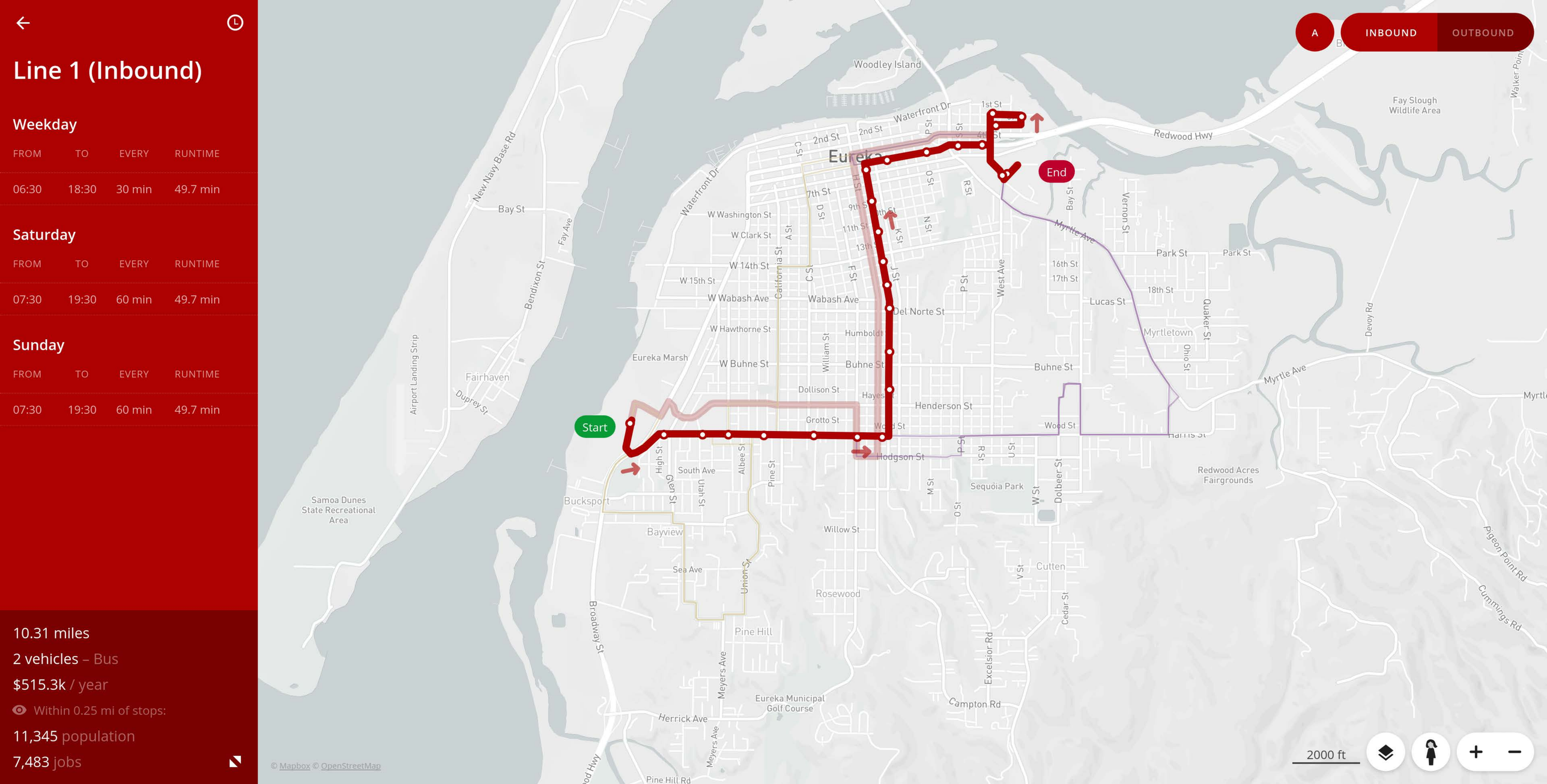
Input from Eureka Community Resource Center
March – April 2018

Brian Olson – ECRC Senior Communities Program/Service Coordinator

"I do have clients that use both ETS and RTS services for transport. I would say one of the limiting factors is that some of my clients have dogs and bikes. They also are extremely low income, which means affordability is an issue. Many are on limited income - SSI or perhaps only General Relief. The location of pick-up is not much of an issue, as we are only about a block away from the south bound stop by the Co-Op and within walking distance to the H and 4th Street bus stop."

Here's some feedback I've gotten so far:

- Sunday service/more weekend services
- More bus stops for ETS
- Driver's don't seem happy
- More comfortable access for the blind, deaf and disabled
- Lower cost
- More free bus passes available through community partners (such as the Community Resource Centers)
- ETS buses need bike racks
- Long weight times
- More stops on 101 (where the RTS stops, the ETS should stop on Hwy 101 (5th/4th St and Broadway)


A
INBOUND
OUTBOUND
Start
End
Woodley Island
Fay Slough Wildlife Area
Redwood Hwy
Waterfront Dr
1st St
2nd St
Eureka
New Navy Base Rd
Bay St
Fay Ave
Bendixon St
Airport Landing Strip
Fairhaven
Duprey St
Samoa Dunes State Recreational Area
Bucksport
Bayview
Sea Ave
Broadway St
Pine Hill
Meyers Ave
Herrick Ave
Eureka Municipal Golf Course
Pine Hill Rd
Rosewood
Willow St
Union St
Pine St
Albee St
High St
South Ave
Grotto St
Hodgson St
Dollison St
Wood St
Henderson St
Buhne St
W Buhne St
Eureka Marsh
W Hawthorne St
W Wabash Ave
Wabash Ave
W 14th St
W 15th St
W Clark St
W Washington St
7th St
9th St
11th St
13th St
Del Norte St
Humboldt
William St
California St
West Ave
Myrtle Ave
Park St
16th St
17th St
18th St
Lucas St
Myrtletown
Vernon St
Quaker St
Ohio St
Devoy Rd
Redwood Acres Fairgrounds
Sequoia Park
Dolbeer St
Cutten
Cedar St
Excelsior Rd
Campton Rd
Pigeon Point Rd
Cummings Rd
Walker Point
Harris St
Line 1 (Inbound)
Weekday
FROM TO EVERY RUNTIME
06:30 18:30 30 min 49.7 min
Saturday
FROM TO EVERY RUNTIME
07:30 19:30 60 min 49.7 min
Sunday
FROM TO EVERY RUNTIME
07:30 19:30 60 min 49.7 min
10.31 miles
2 vehicles – Bus
$515.3k / year
Within 0.25 mi of stops:
11,345 population
7,483 jobs
2000 ft
© Mapbox © OpenStreetMap

Line 1 (Outbound)

Weekday

FROM	TO	EVERY	RUNTIME
06:30	18:30	30 min	49.7 min

Saturday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	49.7 min

Sunday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	49.7 min

10.31 miles

2 vehicles – Bus

$515.3k / year

Within 0.25 mi of stops:

11,345 population

7,483 jobs

A
INBOUND
OUTBOUND
Start
End
Eureka
Woodley Island
Waterfront Dr
Redwood Hwy
Fay Slough Wildlife Area
2nd St
7th St
W Washington St
W Clark St
W 14th St
W 15th St
W Wabash Ave
Wabash Ave
Del Norte St
W Hawthorne St
W Buhne St
Buhne St
Eureka Marsh
Dollison St
Henderson St
Grotto St
Harris St
Wood St
Hodgson St
South Ave
Bucksport
Bayview
Sea Ave
Willow St
Rosewood
Pine Hill
Sequoia Park
Cutten
Myrtle Ave
Myrtletown
Park St
Lucas St
18th St
16th St
17th St
Redwood Acres Fairgrounds
Bay St
Fairhaven
Samoa Dunes State Recreational Area
New Navy Base Rd
Airport Landing Strip
Bendixon St
Broadway St
Meyers Ave
Herrick Ave
Eureka Municipal Golf Course
Campton Rd
Excelsior Rd
Cedar St
Dolbeer St
West Ave
California St
Pigeon Point Rd
Cummings Rd
Pine Hill Rd
2000 ft
© Mapbox © OpenStreetMap

Line 2 (Outbound)

Weekday

FROM	TO	EVERY	RUNTIME
06:30	18:30	60 min	51.8 min

Saturday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	51.8 min

Sunday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	51.8 min

10.79 miles

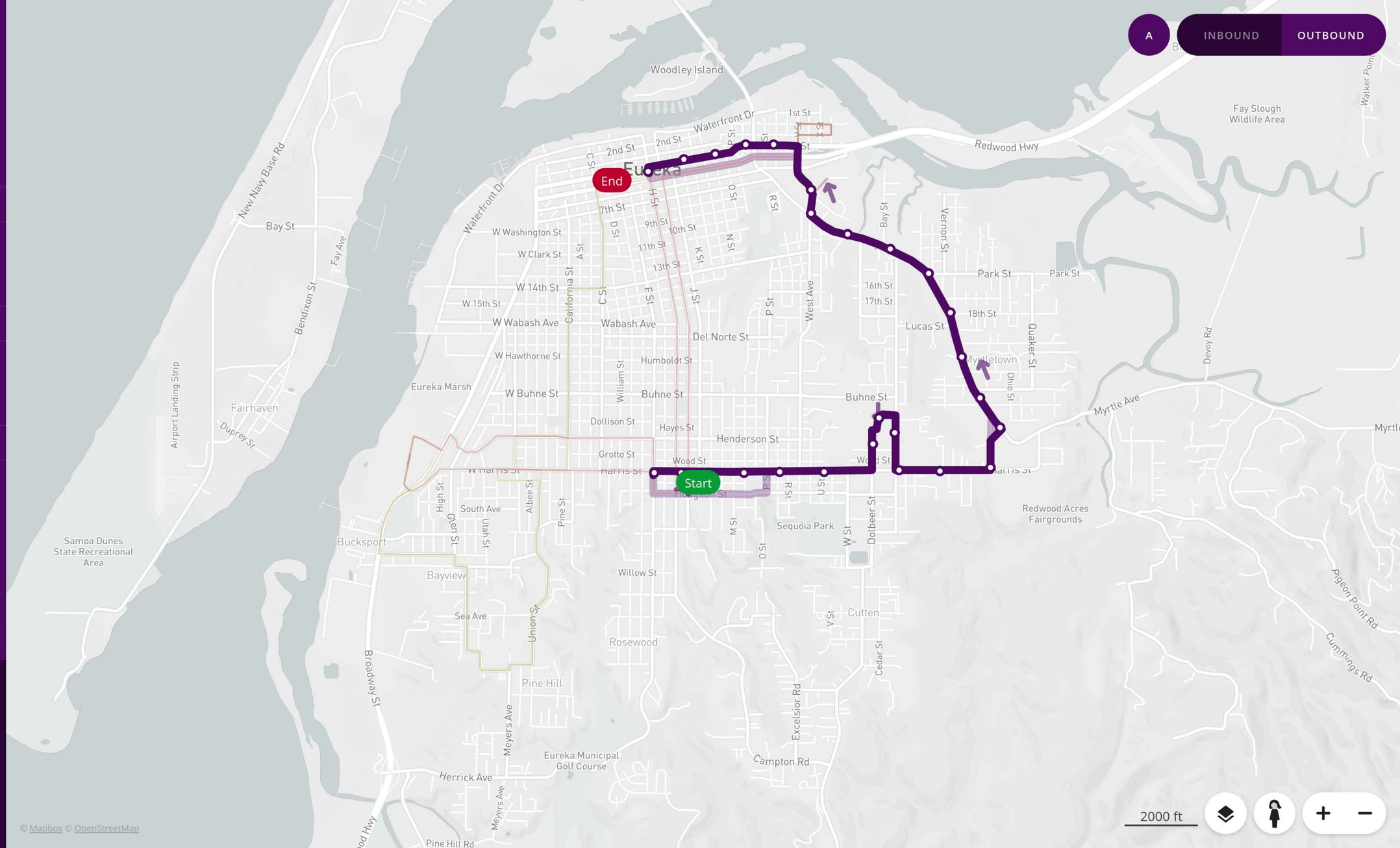
1 vehicle – Bus

$324.8k / year

Within 0.25 mi of stops:

8,412 population

6,889 jobs



Line 2 (Outbound)

Weekday

FROM	TO	EVERY	RUNTIME
06:30	18:30	60 min	51.8 min

Saturday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	51.8 min

Sunday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	51.8 min

10.79 miles

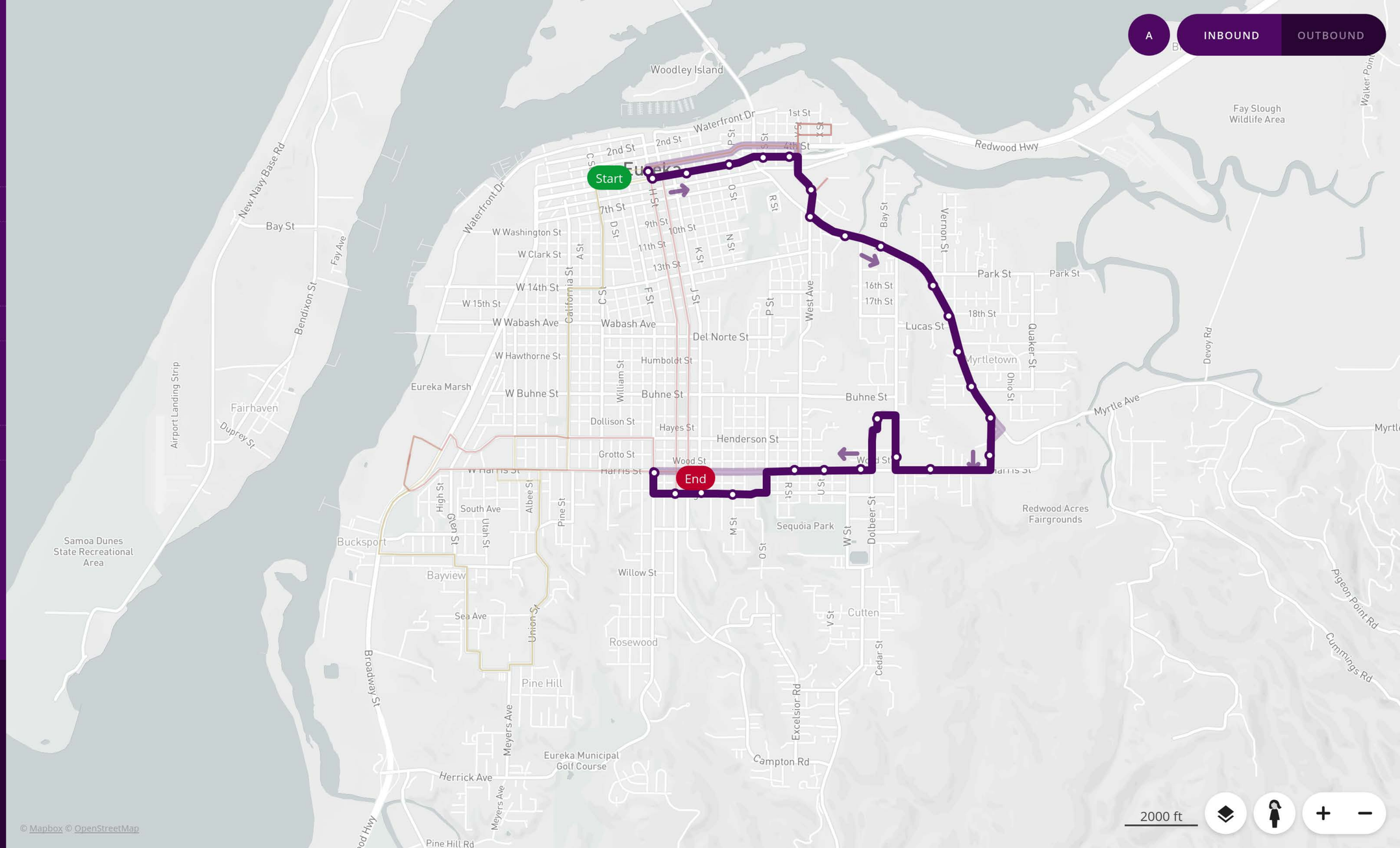
1 vehicle – Bus

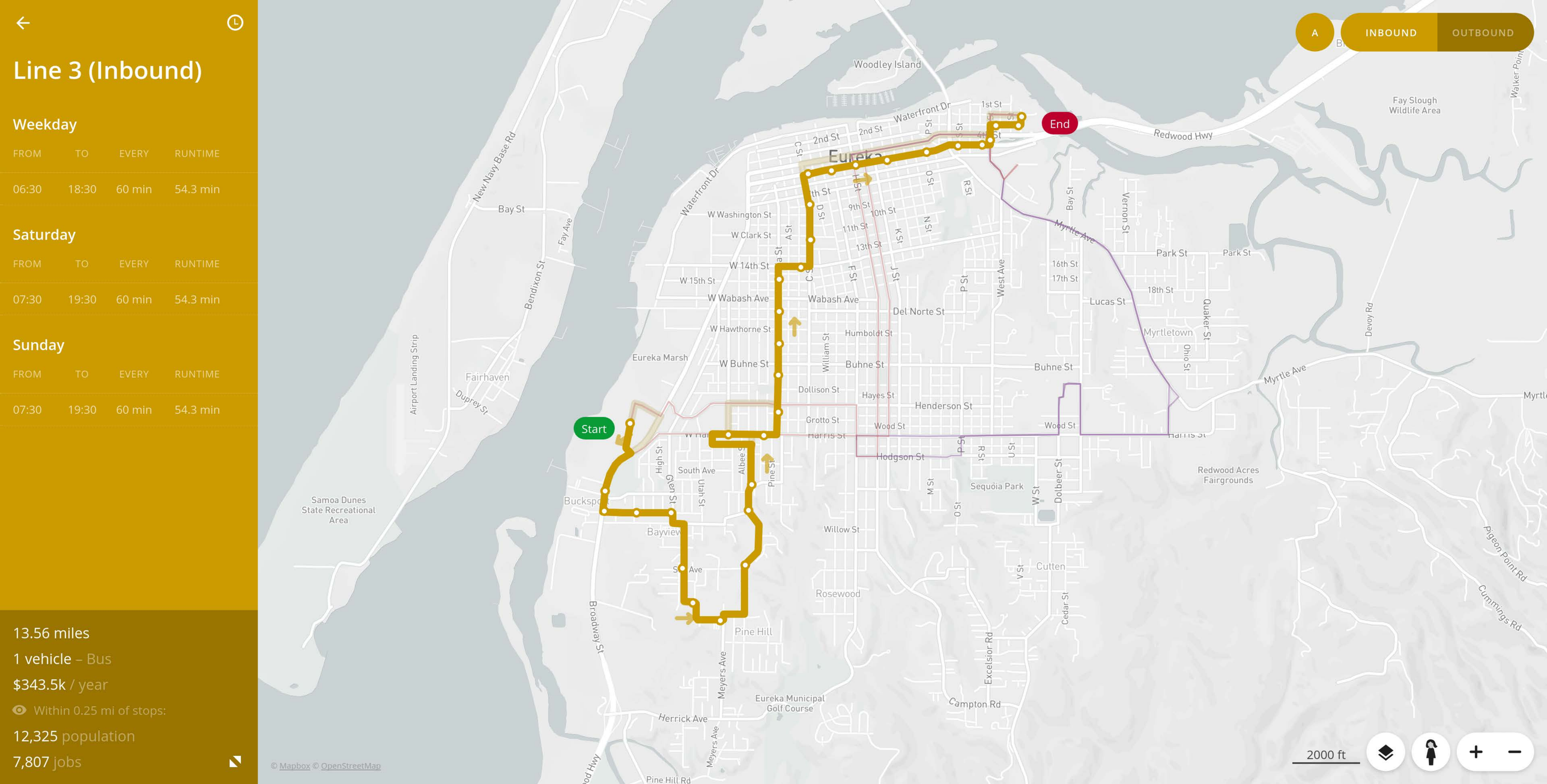
$324.8k / year

Within 0.25 mi of stops:

8,412 population

6,889 jobs




Line 3 (Inbound)
Weekday
FROM TO EVERY RUNTIME
06:30 18:30 60 min 54.3 min
Saturday
FROM TO EVERY RUNTIME
07:30 19:30 60 min 54.3 min
Sunday
FROM TO EVERY RUNTIME
07:30 19:30 60 min 54.3 min
13.56 miles
1 vehicle – Bus
$343.5k / year
Within 0.25 mi of stops:
12,325 population
7,807 jobs
A
INBOUND
OUTBOUND
Start
End
Woodley Island
Fay Slough Wildlife Area
Eureka
Waterfront Dr
1st St
2nd St
Redwood Hwy
New Navy Base Rd
Bay St
Fay Ave
Bendixon St
W Washington St
W Clark St
W 14th St
W 15th St
W Wabash Ave
W Hawthorne St
W Buhne St
Eureka Marsh
Fairhaven
Duprey St
Airport Landing Strip
Samoa Dunes State Recreational Area
Wabash Ave
Del Norte St
Humboldt St
Buhne St
Dollison St
Hayes St
Henderson St
Grotto St
Wood St
Harris St
Hodgson St
Myrtle Ave
Park St
Lucas St
Myrtletown
Quaker St
Ohio St
Devoy Rd
Redwood Acres Fairgrounds
Sequoia Park
Dolbeer St
Cutten
Willow St
Rosewood
Pine Hill
Bayview
South Ave
High St
Pine St
Albee St
Broadway St
Meyers Ave
Herrick Ave
Eureka Municipal Golf Course
Excelsior Rd
Campton Rd
Cedar St
Pigeon Point Rd
Cummings Rd
Walker Point
Pine Hill Rd
2000 ft
© Mapbox © OpenStreetMap

Line 3 (Outbound)

Weekday

FROM	TO	EVERY	RUNTIME
06:30	18:30	60 min	54.3 min

Saturday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	54.3 min

Sunday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	54.3 min

13.56 miles

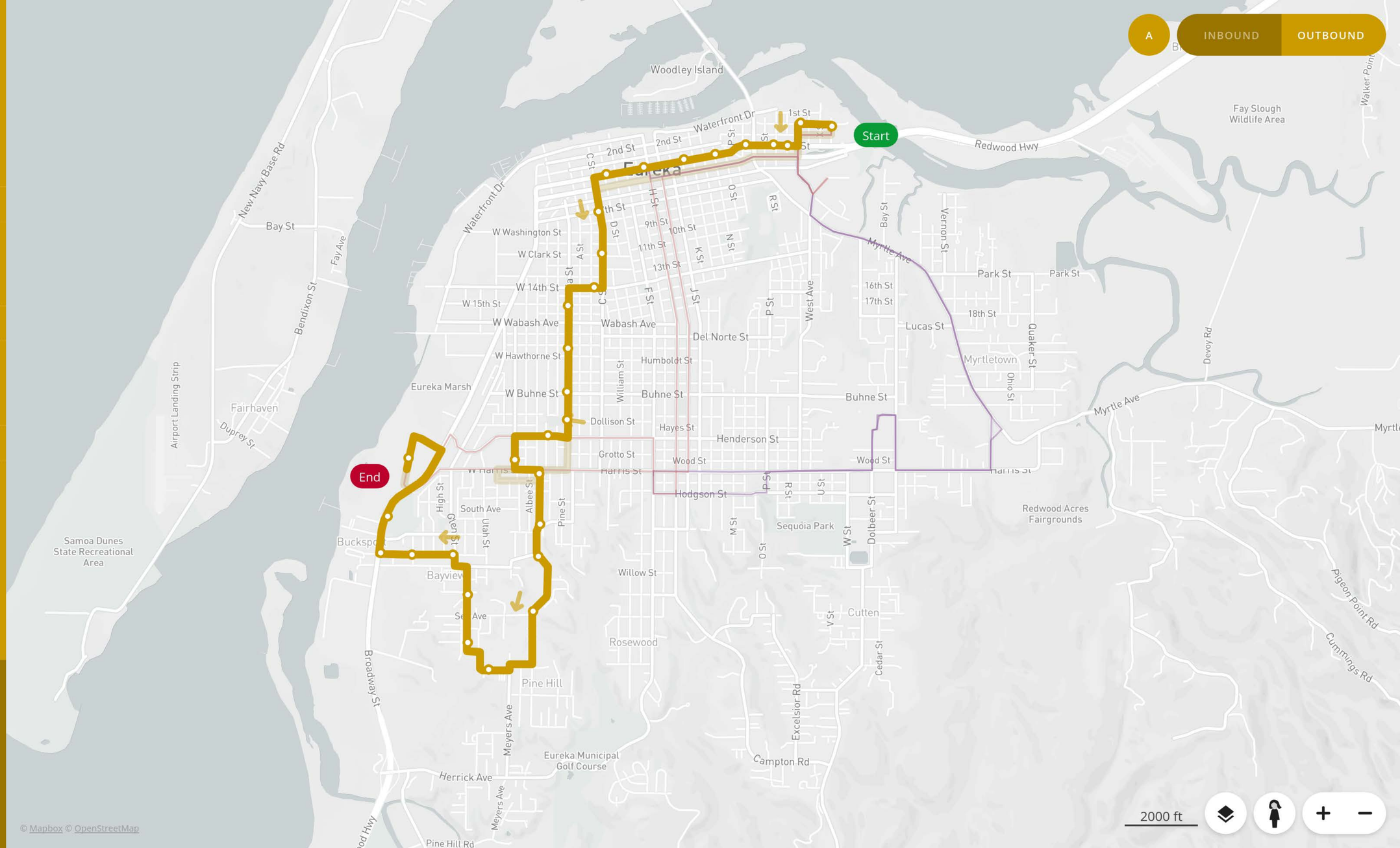
1 vehicle – Bus

$343.5k / year

Within 0.25 mi of stops:

12,325 population

7,807 jobs



Line 1 (Inbound)

Weekday

FROM	TO	EVERY	RUNTIME
06:30	18:30	60 min	49.6 min

Saturday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	41.3 min

Sunday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	41.3 min

10.30 miles

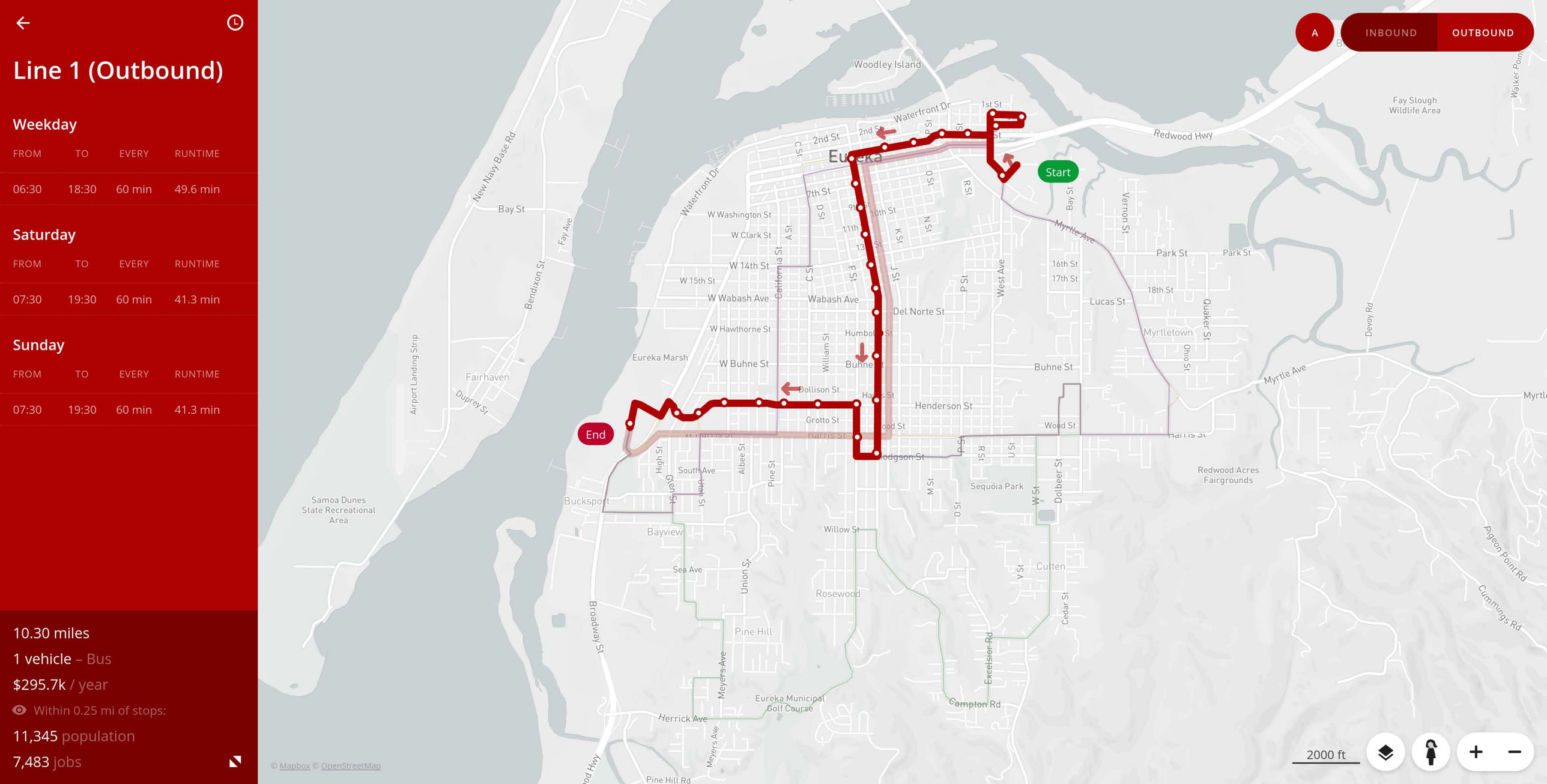
1 vehicle – Bus

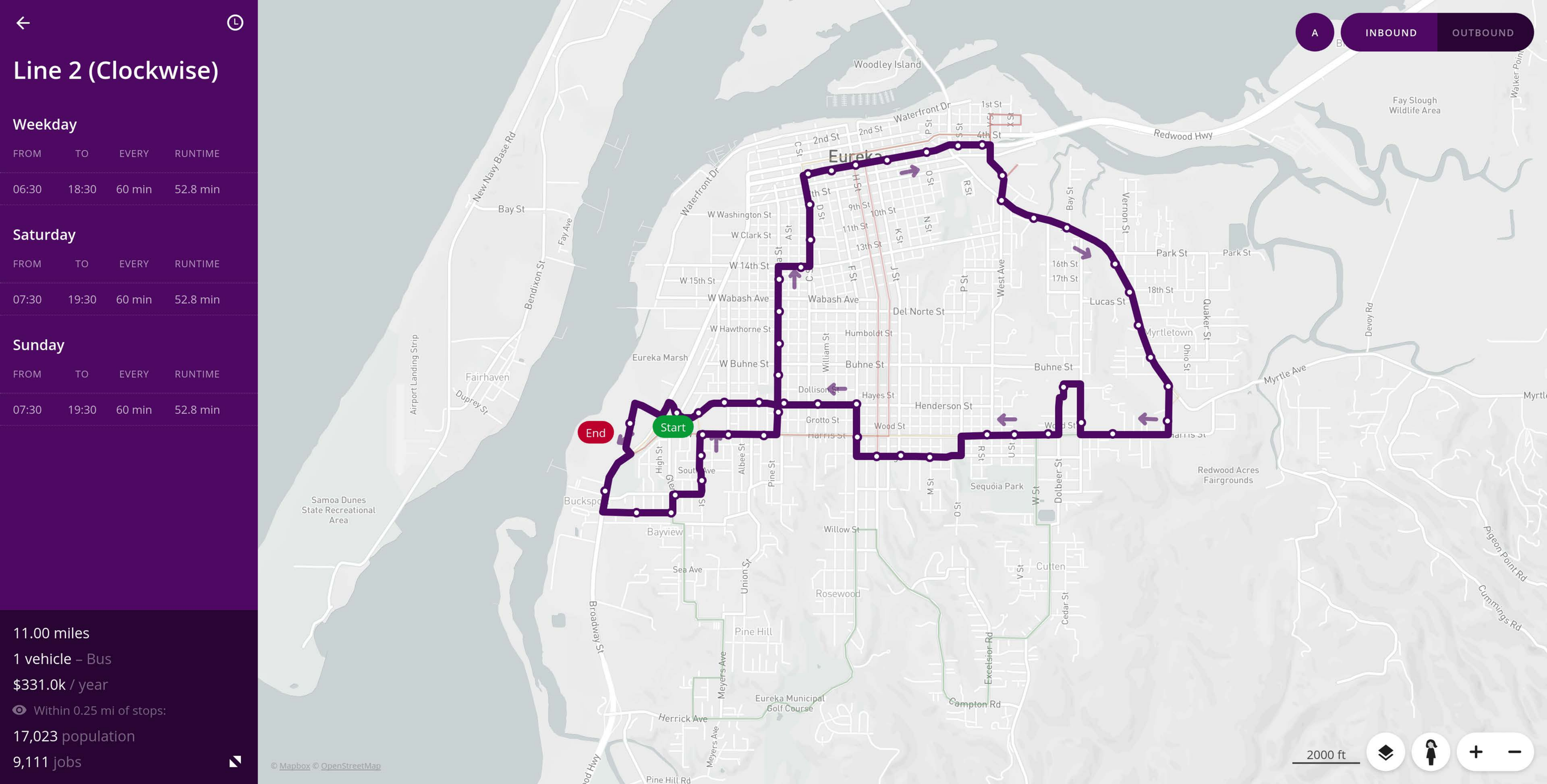
$295.7k / year

Within 0.25 mi of stops:

11,345 population

7,483 jobs


Line 1 (Outbound)
Weekday
FROM TO EVERY RUNTIME
06:30 18:30 60 min 49.6 min
Saturday
FROM TO EVERY RUNTIME
07:30 19:30 60 min 41.3 min
Sunday
FROM TO EVERY RUNTIME
07:30 19:30 60 min 41.3 min
10.30 miles
1 vehicle – Bus
$295.7k / year
Within 0.25 mi of stops:
11,345 population
7,483 jobs
A
INBOUND
OUTBOUND
Start
End
Eureka
Woodley Island
Fay Slough Wildlife Area
Redwood Hwy
Waterfront Dr
1st St
2nd St
New Navy Base Rd
Bay St
Fay Ave
Bendixon St
W Washington St
W Clark St
W 14th St
W 15th St
W Wabash Ave
Wabash Ave
Del Norte St
W Hawthorne St
W Buhne St
Buhne St
Eureka Marsh
Fairhaven
Dupre St
Airport Landing Strip
Dollison St
Grotto St
Henderson St
Wood St
Harris St
Myrtle Ave
Park St
Lucas St
Myrtletown
Vernon St
Quaker St
Ohio St
Devoy Rd
West Ave
Redwood Acres Fairgrounds
Samoa Dunes State Recreational Area
Buckspoint
Bayview
Sea Ave
South Ave
Willow St
Sequoia Park
Dolbeer St
Cutten
Rosewood
Pine Hill
Cedar St
Broadway St
Union St
Pine St
Albee St
High St
Meyers Ave
Herrick Ave
Eureka Municipal Golf Course
Excelsior Rd
Campton Rd
Pigeon Point Rd
Cummings Rd
Pine Hill Rd
2000 ft
© Mapbox © OpenStreetMap


A
INBOUND
OUTBOUND
Line 2 (Clockwise)
Weekday
FROM TO EVERY RUNTIME
06:30 18:30 60 min 52.8 min
Saturday
FROM TO EVERY RUNTIME
07:30 19:30 60 min 52.8 min
Sunday
FROM TO EVERY RUNTIME
07:30 19:30 60 min 52.8 min
End
Start
11.00 miles
1 vehicle – Bus
$331.0k / year
Within 0.25 mi of stops:
17,023 population
9,111 jobs
Woodley Island
Eureka
Waterfront Dr
Redwood Hwy
Fay Slough Wildlife Area
New Navy Base Rd
Bay St
Fay Ave
Bendixon St
Airport Landing Strip
Fairhaven
Dupree St
Samoa Dunes State Recreational Area
Eureka Marsh
W Washington St
W Clark St
W 14th St
W 15th St
W Wabash Ave
W Hawthorne St
W Buhne St
Wabash Ave
Del Norte St
Humboldt St
Buhne St
Dollison St
Hayes St
Henderson St
Grotto St
Wood St
Harris St
Park St
Lucas St
Myrtletown
Myrtle Ave
Devoy Rd
Quaker St
Ohio St
Redwood Acres Fairgrounds
Sequoia Park
Dolbeer St
Bayview
Willow St
Sea Ave
Union St
Rosewood
Pine Hill
Cutten
Cedar St
Broadway St
Meyers Ave
Herrick Ave
Eureka Municipal Golf Course
Campton Rd
Excelsior Rd
Pine Hill Rd
Pigeon Point Rd
Cummings Rd
2000 ft
© Mapbox © OpenStreetMap

Line 3 (Counterclock

Weekday

FROM	TO	EVERY	RUNTIME
07:00	19:00	60 min	53.4 min

Saturday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	53.4 min

Sunday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	53.4 min

11.12 miles

1 vehicle – Bus

$331.0k / year

Within 0.25 mi of stops:

16,449 population

9,305 jobs

A
INBOUND
OUTBOUND
Start
End
Woodley Island
Waterfront Dr
Redwood Hwy
Fay Slough Wildlife Area
Eureka
2nd St
W Washington St
W Clark St
W 14th St
W 15th St
W Wabash Ave
Wabash Ave
Del Norte St
W Hawthorne St
Humboldt St
W Buhne St
Buhne St
Dollison St
Hayes St
Henderson St
Grotto St
Wood St
Hodgson St
Park St
16th St
17th St
18th St
Lucas St
Myrtletown
Myrtle Ave
Redwood Acres Fairgrounds
Sequoia Park
Eureka Marsh
Fairhaven
Bay St
New Navy Base Rd
Samoa Dunes State Recreational Area
Airport Landing Strip
Bayview
Sea Ave
Willow St
Rosewood
Cutten
Pine Hill
Eureka Municipal Golf Course
Herrick Ave
Compton Rd
Pine Hill Rd
Broadway St
Union St
Meyers Ave
Excelsior Rd
Cedar St
Dolbeer St
West Ave
Quaker St
Devoy Rd
Pigeon Point Rd
Cummings Rd
2000 ft
© Mapbox © OpenStreetMap

Line 4 (Counterclock

Weekday

FROM	TO	EVERY	RUNTIME
07:30	17:30	60 min	53.9 min

Saturday

FROM	TO	EVERY	RUNTIME
—	—	—	—

Sunday

FROM	TO	EVERY	RUNTIME
—	—	—	—

11.66 miles

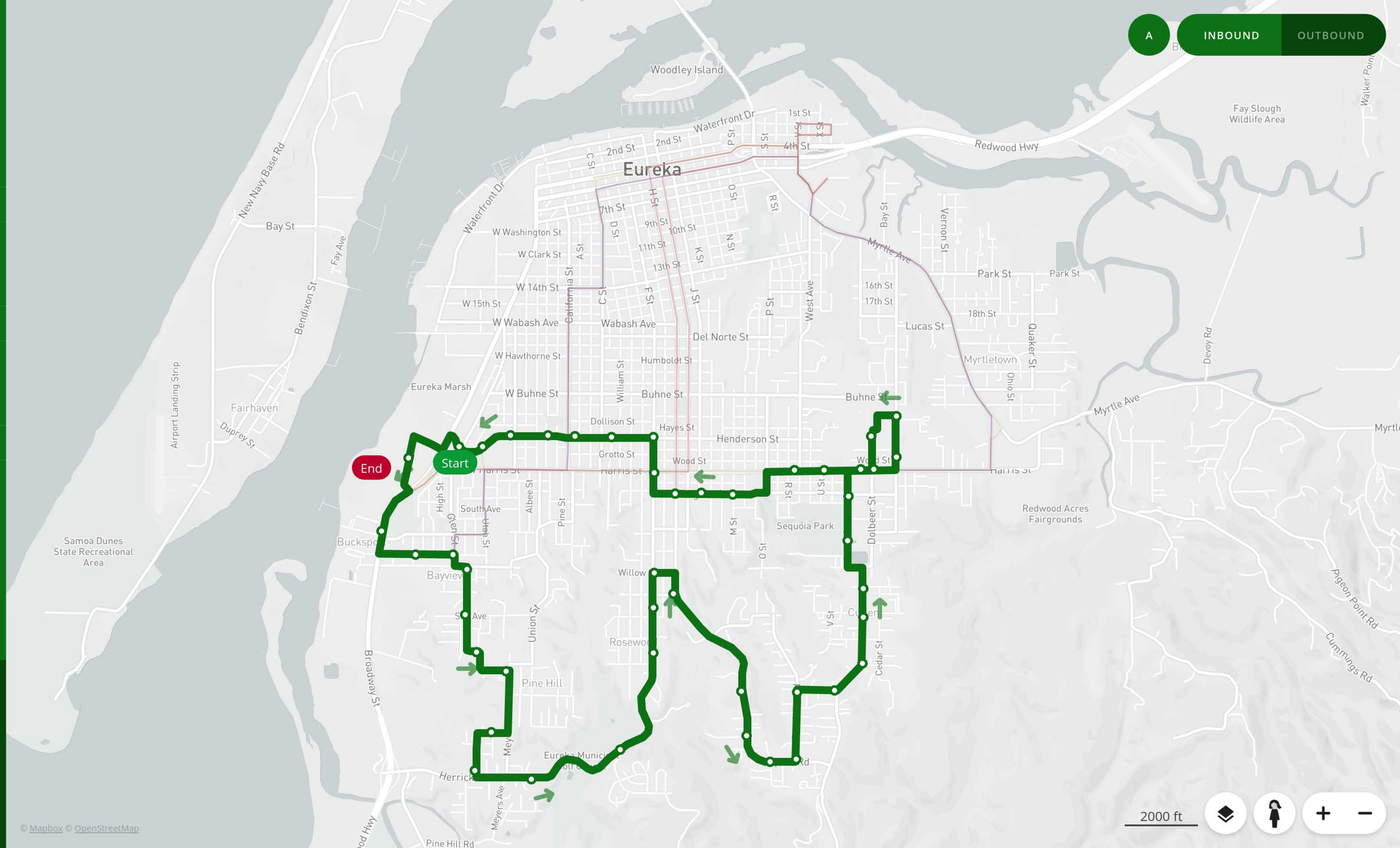
1 vehicle – Bus

$201.0k / year

Within 0.25 mi of stops:

12,865 population

3,958 jobs



Appendix Item #13. Route Details for Network Concept C

Line 1 (Inbound)

Weekday

FROM	TO	EVERY	RUNTIME
06:30	18:30	60 min	53.3 min

Saturday

FROM	TO	EVERY	RUNTIME
—	—	—	—

Sunday

FROM	TO	EVERY	RUNTIME
—	—	—	—

12.42 miles

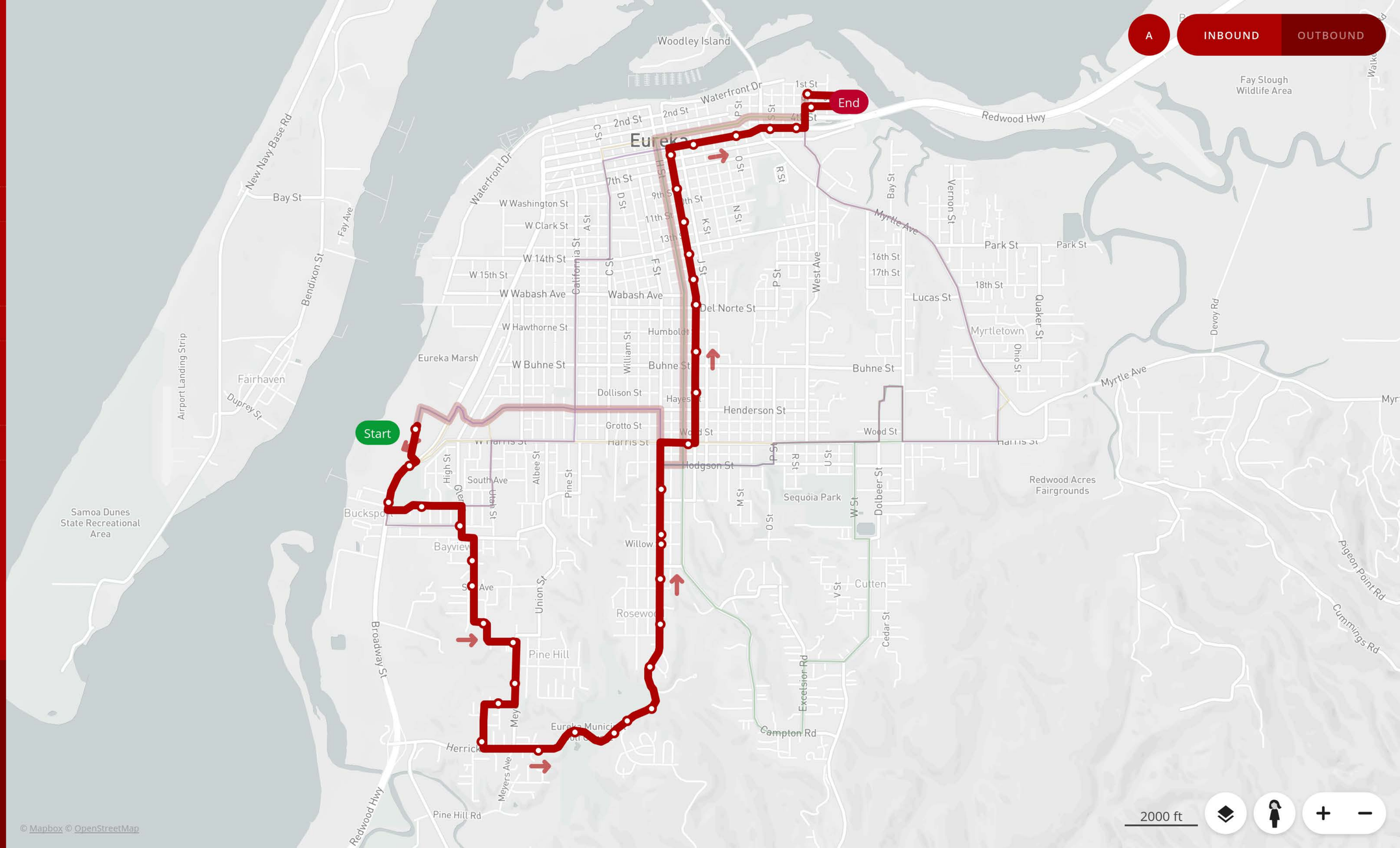
1 vehicle – Bus

$233.1k / year

Within 0.25 mi of stops:

15,561 population

7,985 jobs



Line 1 (Outbound)

Weekday

FROM	TO	EVERY	RUNTIME
06:30	18:30	60 min	53.3 min

Saturday

FROM	TO	EVERY	RUNTIME
—	—	—	—

Sunday

FROM	TO	EVERY	RUNTIME
—	—	—	—

12.42 miles

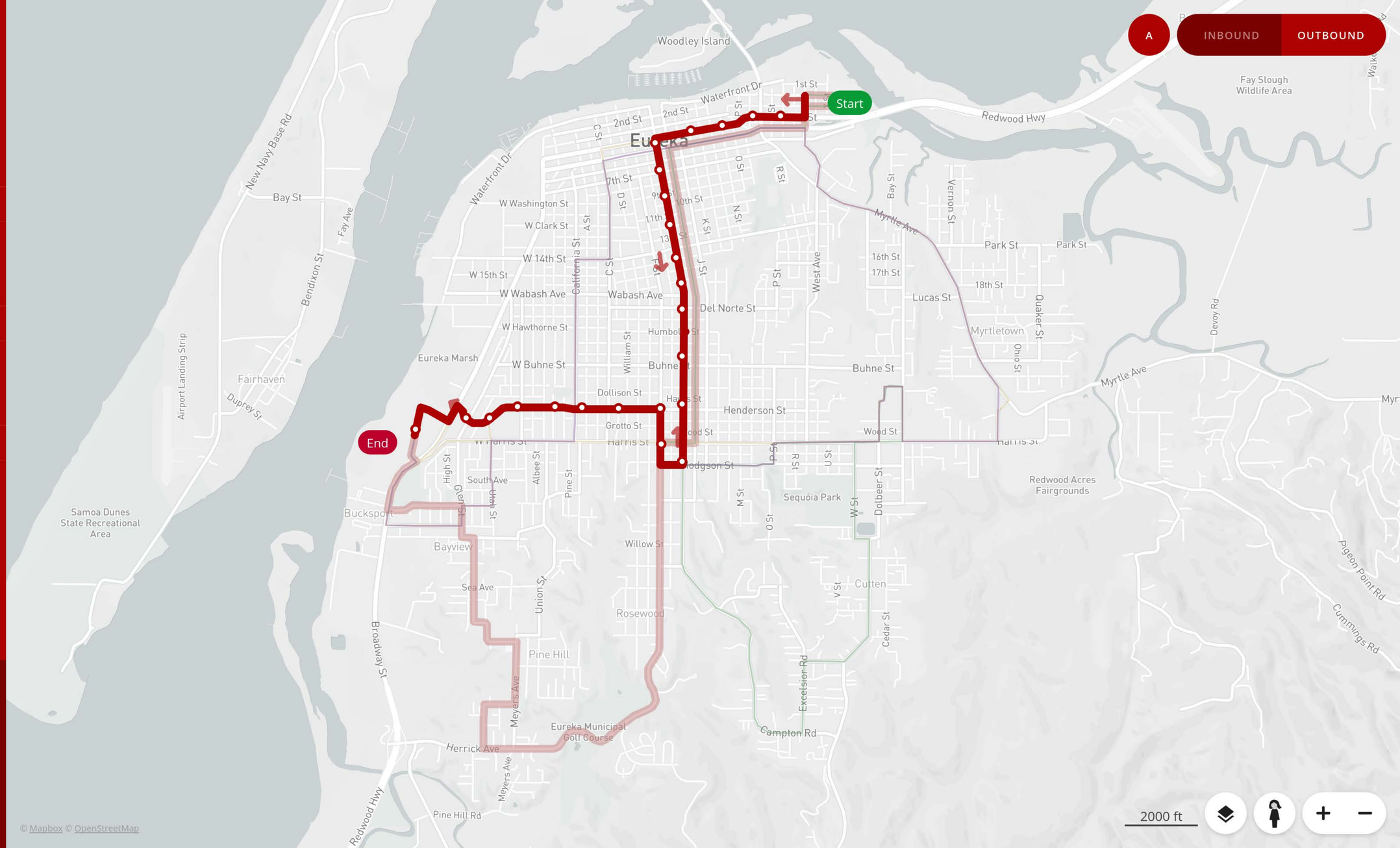
1 vehicle – Bus

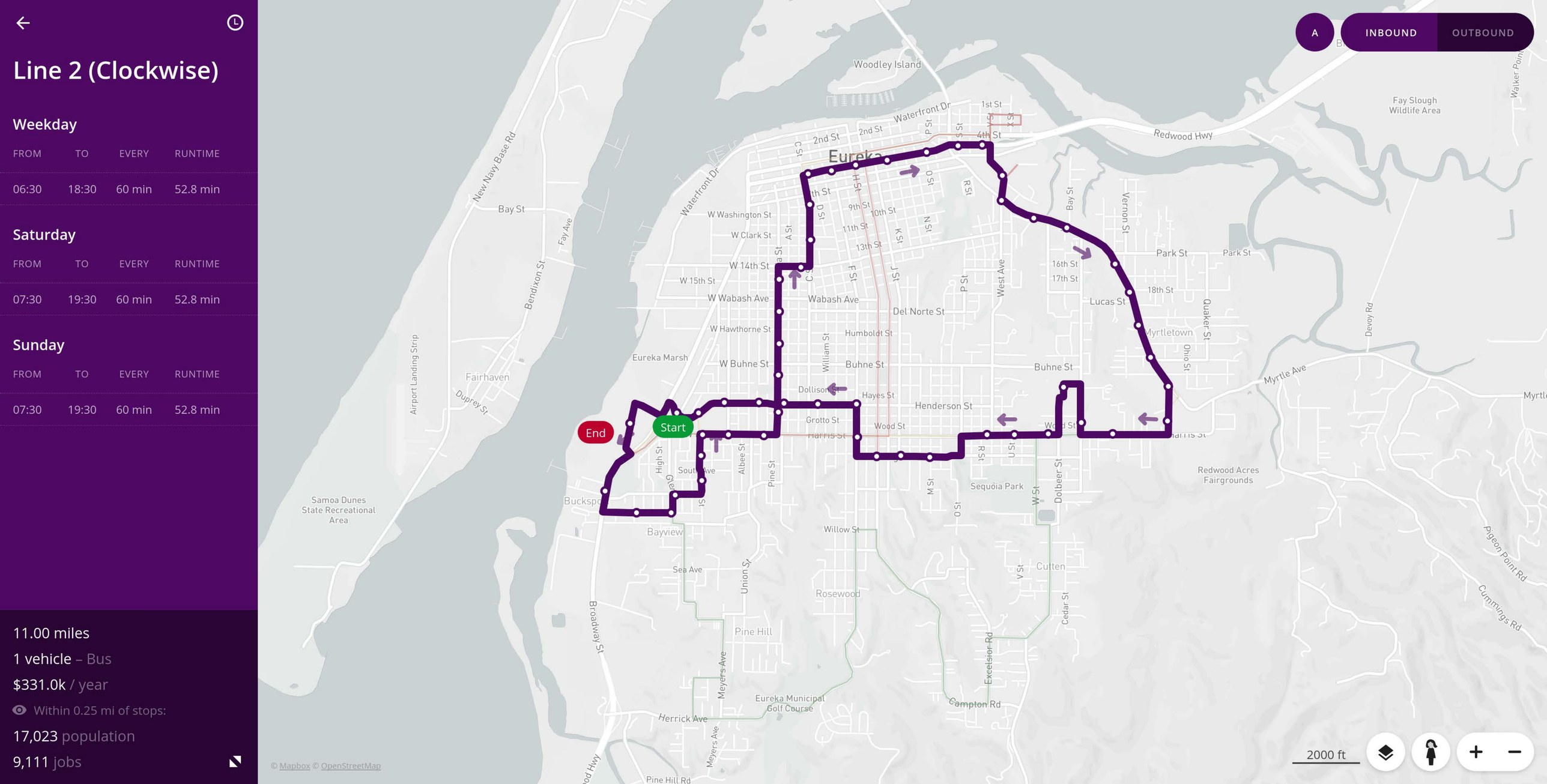
$233.1k / year

Within 0.25 mi of stops:

15,561 population

7,985 jobs




A
INBOUND
OUTBOUND
Line 2 (Clockwise)
Weekday
FROM TO EVERY RUNTIME
06:30 18:30 60 min 52.8 min
Saturday
FROM TO EVERY RUNTIME
07:30 19:30 60 min 52.8 min
Sunday
FROM TO EVERY RUNTIME
07:30 19:30 60 min 52.8 min
End
Start
11.00 miles
1 vehicle – Bus
$331.0k / year
Within 0.25 mi of stops:
17,023 population
9,111 jobs
Woodley Island
Eureka
Waterfront Dr
Redwood Hwy
Fay Slough Wildlife Area
New Navy Base Rd
Bay St
Fay Ave
Bendixon St
Airport Landing Strip
Fairhaven
Dupree St
Samoa Dunes State Recreational Area
Eureka Marsh
W Washington St
W Clark St
W 14th St
W 15th St
W Wabash Ave
W Hawthorne St
W Buhne St
Wabash Ave
Del Norte St
Humboldt St
Buhne St
Dollison St
Hayes St
Henderson St
Grotto St
Wood St
Harris St
Park St
Lucas St
Myrtletown
Myrtle Ave
Devoy Rd
Quaker St
Ohio St
Redwood Acres Fairgrounds
Sequoia Park
Dolbeer St
Bayview
Willow St
Sea Ave
Union St
Rosewood
Pine Hill
Cutten
Cedar St
Broadway St
Meyers Ave
Herrick Ave
Eureka Municipal Golf Course
Campton Rd
Excelsior Rd
Pine Hill Rd
Pigeon Point Rd
Cummings Rd
2000 ft
© Mapbox © OpenStreetMap

Line 3 (Counterclock

Weekday

FROM	TO	EVERY	RUNTIME
07:00	19:00	60 min	53.4 min

Saturday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	53.4 min

Sunday

FROM	TO	EVERY	RUNTIME
07:30	19:30	60 min	53.4 min

11.12 miles

1 vehicle – Bus

$331.0k / year

Within 0.25 mi of stops:

16,449 population

9,305 jobs

A
INBOUND
OUTBOUND
Start
End
Woodley Island
Waterfront Dr
Redwood Hwy
Fay Slough Wildlife Area
Park St
Buhne St
Wabash Ave
Del Norte St
Humboldt St
Henderson St
Harris St
Myrtle Ave
Myrtletown
Lucas St
W 14th St
W Wabash Ave
W Buhne St
W Hawthorne St
W Washington St
W Clark St
W 15th St
Eureka Marsh
Fairhaven
Bay St
New Navy Base Rd
Samoa Dunes State Recreational Area
Airport Landing Strip
Bayview
Sea Ave
Union St
Rosewood
Pine Hill
Meyers Ave
Eureka Municipal Golf Course
Herrick Ave
Broadway St
Sequoia Park
Cutten
Campton Rd
Excelsior Rd
Cedar St
Dolbeer St
Redwood Acres Fairgrounds
Pigeon Point Rd
Cummings Rd
Devoy Rd
Quaker St
Vernon St
West Ave
Willow St
Hodgson St
Wood St
Grotto St
Dollison St
Hayes St
William St
Albee St
Pine St
High St
2000 ft
© Mapbox © OpenStreetMap

Line 4 (Inbound)

Weekday

FROM	TO	EVERY	RUNTIME
06:30	18:30	60 min	52.8 min

Saturday

FROM	TO	EVERY	RUNTIME
—	—	—	—

Sunday

FROM	TO	EVERY	RUNTIME
—	—	—	—

11.86 miles

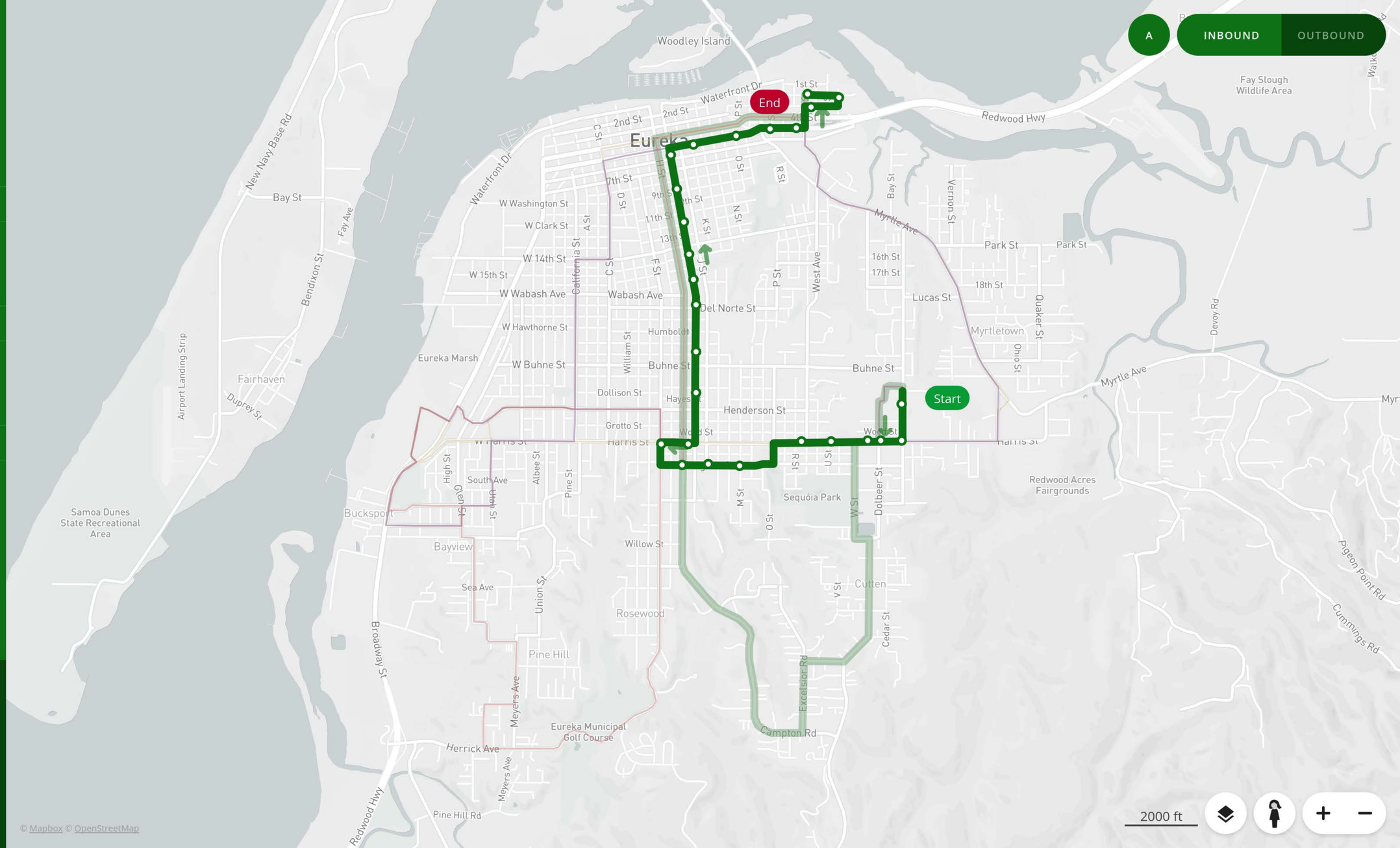
1 vehicle – Bus

$233.1k / year

Within 0.25 mi of stops:

12,844 population

8,131 jobs



Line 4 (Outbound)

Weekday

FROM	TO	EVERY	RUNTIME
06:30	18:30	60 min	52.8 min

Saturday

FROM	TO	EVERY	RUNTIME
—	—	—	—

Sunday

FROM	TO	EVERY	RUNTIME
—	—	—	—

11.86 miles

1 vehicle – Bus

$233.1k / year

Within 0.25 mi of stops:

12,844 population

8,131 jobs

A
INBOUND
OUTBOUND
Start
End
Woodley Island
Fay Slough Wildlife Area
Redwood Hwy
Waterfront Dr
1st St
2nd St
Eureka
7th St
10th St
W Washington St
W Clark St
W 14th St
W 15th St
W Wabash Ave
Wabash Ave
Del Norte St
W Hawthorne St
Eureka Marsh
W Buhne St
Buhne St
Dollison St
Henderson St
Grotto St
Harris St
South Ave
Bucksport
Bayview
Willow St
Sea Ave
Rosewood
Pine Hill
Eureka Municipal Golf Course
Herrick Ave
Pine Hill Rd
Sequoia Park
Dolbeer St
Myrtle Ave
Park St
16th St
17th St
18th St
Lucas St
Myrtletown
Redwood Acres Fairgrounds
Quaker St
Ohio St
Devoy Rd
Pigeon Point Rd
Cummings Rd
New Navy Base Rd
Bay St
Fay Ave
Bendixon St
Airport Landing Strip
Fairhaven
Samoa Dunes State Recreational Area
Broadway St
Redwood Hwy
Meyers Ave
Union St
California St
Vernon St
West Ave
High St
Albee St
Pine St
2000 ft
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