

B-LINE ROUTING STUDY

Review of Existing Paratransit Service

Prepared for

BUTTE COUNTY ASSOCIATION OF GOVERNMENTS

B-Line Routing Study
*Review of Existing Paratransit
Service*

Prepared for

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B-Line Routing Study

REVIEW OF EXISTING PARATRANSIT SERVICE

INTRODUCTION

This paper presents an overview of the B-Line Paratransit Service. It is prepared as part of the B-Line Routing Study to provide a resource for assessment of potential changes in paratransit services.

B-LINE PARATRANSIT SERVICE

B-Line Paratransit is a shared ride service designed to meet the needs of seniors and persons with qualifying disabilities who are unable to use the B-Line fixed-route services. B-Line Paratransit is available in Chico, Oroville, and Paradise for local trips, but not for inter-city trips or trips within any other portion of Butte County, such as Gridley/Biggs or other unincorporated areas. B-Line offers two types of paratransit services (all served by the same fleet):

1. ADA paratransit for individuals who cannot utilize the fixed-route system. They must receive Americans with Disabilities Act (ADA) certification to utilize this service. This certification ensures trips are given priority status over Dial-a-Ride trips.
2. Dial-a-Ride service for riders who are age 70 or older. Dial-a-Ride trips are not given priority status should individuals with ADA certification need the service.

B-Line Paratransit serves all destinations within $\frac{3}{4}$ of a mile of any B-Line fixed-route service. B-Line also provides supplemental service to areas up to three miles outside the ADA boundaries at an additional cost (given that there is a direct, easily accessible route from the core service area). All trips provided outside the core service area are considered non-ADA and are provided on a space available basis. The paratransit service area showing the core areas and zones is shown in Figure A. Note that Chico, with a core area and zones, represents the “urban area” and the core service area and supplemental zones in Oroville and Paradise/Magalia represent the “rural areas”¹.

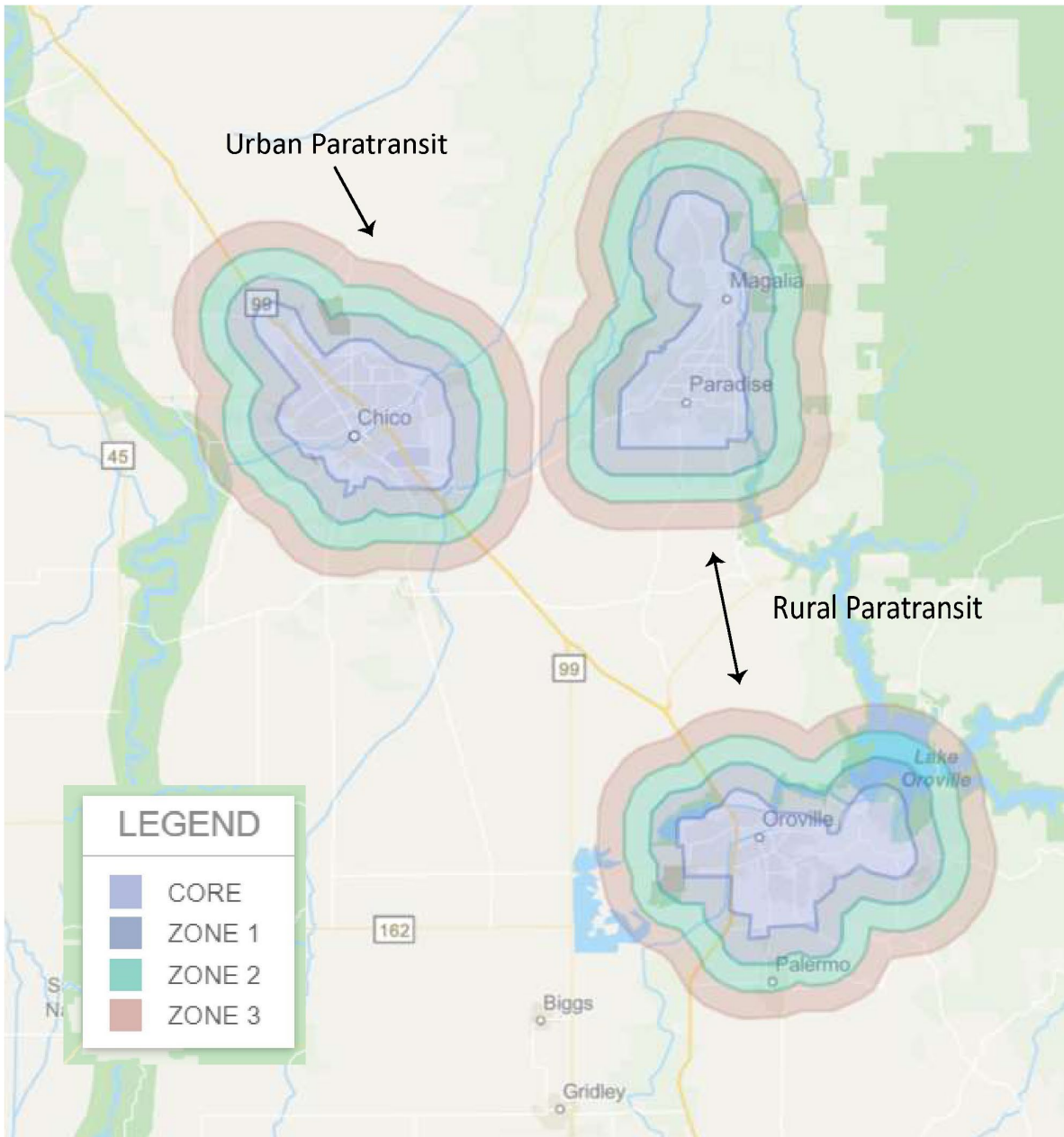
B-Line Paratransit operates between 5:50 AM and 10:00 PM on weekdays, 7:00 AM and 10:00 PM on Saturdays, and 7:50 AM and 6:00 PM on Sundays. The base fare for B-Line Paratransit is \$3.50 per one-way ride, with additional zone-based fares. B-Line Paratransit trips can be scheduled by calling into dispatch up to one week prior to the requested trip.

B-Line Paratransit Fares

The B-Line has a complex system of fares, divided by type of service, type of rider, zone or region, and finally by type or number of rides. Paratransit fares (including Dial-a-Ride) for the ADA paratransit service area are \$3.50 for an advanced reservation and \$5.25 for a same day request. For service to outlying areas, fares are \$8.75 for Zone 1, \$10.75 for Zone 2, and \$12.75 for Zone 3. A 2-Ride Pass can

¹ The urban and rural designations are for the purposes of tracking FTA 5307 (urbanized) and FTA 5311 (rural) grant funding.

Figure A
B-Line Paratransit Service Areas



be purchased for \$7.00 (good for the core zone only), and for convenience, a \$25.00 value card can be purchased and used until the value is expended.

B-Line Paratransit Application Process

As mentioned, there are two types of services offered: ADA paratransit for those with qualifying disabilities, and Dial-a-Ride for riders over the age of 70. Both types of riders require an application to access services, as described below:

- **Dial-a-Ride Application:** A form must be completed which asks for the rider's name, address, date of birth, and whether the applicant requires a Personal Care Attendant (PCA) or mobility device (such as a wheelchair). A photocopy of proof of age must be provided with the application. Acceptable documents include an official State Identification/Driver's License, Birth Certificate, Passport or any other State or Federal issued identification.
- **ADA Paratransit Application:** A form must be completed which asks for contact information, whether a Personal Care Attendant (PCA) is required, the nature of the rider's disability and functional mobility. After completing the form, the applicant must provide information for a healthcare or social service professional who can certify to their functional mobility needs and who may be contacted if staff needs clarification on the application. B-Line takes up to 21 days to review the application and grant or deny eligibility.²

B-LINE PARATRANSIT RIDERSHIP ANALYSIS

B-Line ridership characteristics are evaluated below, with additional detailed supporting tables and figures presented in Appendix C.

Annual Ridership by Month and Area

Ridership by route by month is depicted for the past four years in Figure B and Table A. As shown, ridership has historically peaked in July to October, while spring ridership was lowest. The impacts of COVID are also evident, showing a sharp decline in March and April 2020, with some recovery starting in spring 2021. Prior to COVID (July 2018 to February 2020), paratransit ridership averaged 11,418 trips per month. The year after COVID started, this dropped to an average of 3,653 passengers per month, or 32 percent of the pre-COVID average. Over the year from July 2021 to June 2022 the average was 5,381 passenger trips per month, which is 47 percent of the pre-COVID average. Table A also shows the urban paratransit ridership (including the Chico core service and the three zones around Chico) versus rural paratransit ridership (all non-Chico service). The urban ridership was just over half of all ridership from July to December 2018 but while the number of passengers has decreased since the pandemic, the urban ridership has since increased as a percentage to make up approximately three quarters of the paratransit ridership.

² Presumptive eligibility is given at the start of the application process for 30 days to accommodate more urgent needs to use the system.

Ridership by Day of the Week

Average daily ridership by day of the week for FY 2021-22 is shown in Figure C. As shown, ridership was highest on Thursdays, followed by Wednesdays and then Tuesdays. Ridership was lowest on Sundays, and then Saturdays. Weekdays averaged 220 passengers per day, while weekends averaged 77 passengers per day. Rural ridership accounted for between 17.5 percent of total ridership (on Sundays) to 28.0 percent of total ridership (on Wednesdays).

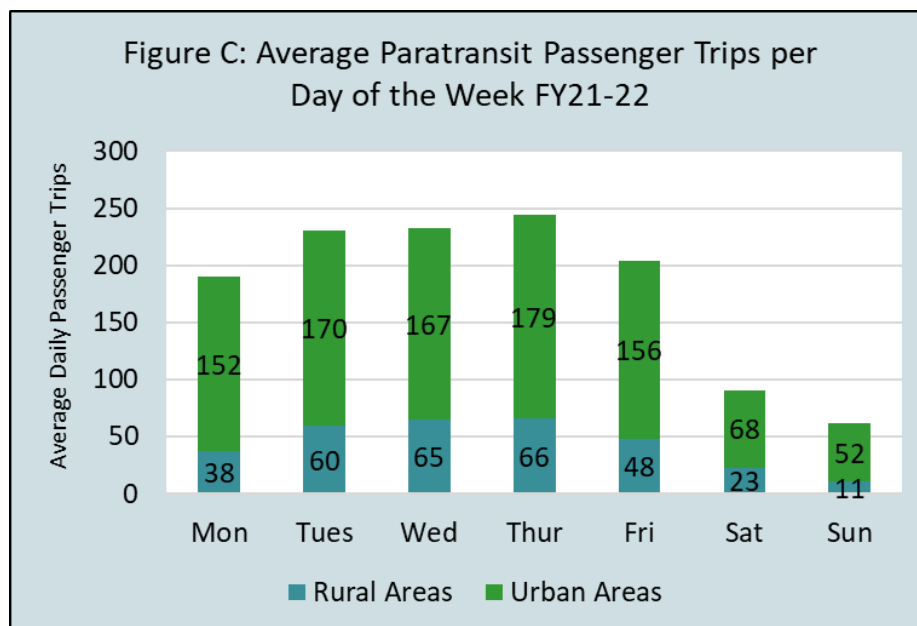
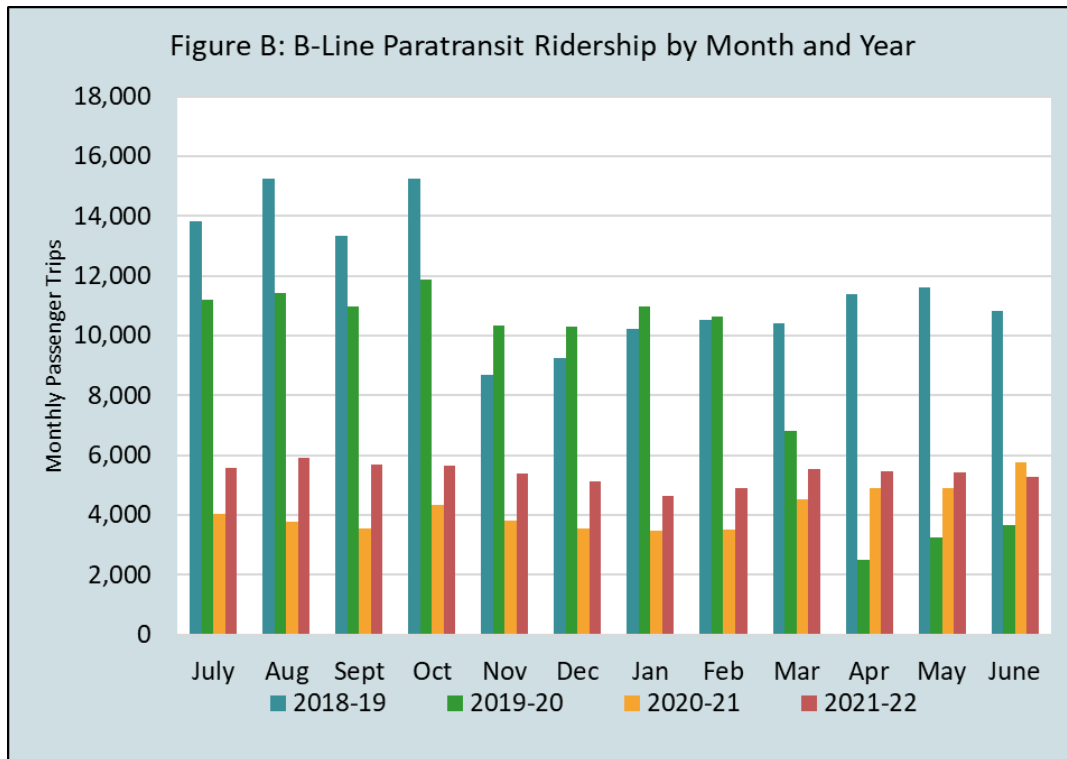


Table A: B-Line Paratransit Annual Ridership by Month

Fiscal Year	Months (Fiscal Calendar)												Annual
	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	
Urban	7,264	7,946	7,079	8,201	5,708	6,704	7,613	7,981	7,588	8,333	8,492	8,151	91,060
Rural	6,556	7,286	6,276	7,057	2,978	2,549	2,614	2,553	2,825	3,062	3,127	2,674	49,557
2018-19	13,820	15,232	13,355	15,258	8,686	9,253	10,227	10,534	10,413	11,395	11,619	10,825	140,617
Urban	8,422	8,626	8,366	8,983	7,894	7,892	8,366	8,125	5,130	1,674	2,090	2,273	77,841
Rural	2,790	2,807	2,611	2,908	2,432	2,418	2,592	2,505	1,683	809	1,169	1,387	26,111
2019-20	11,212	11,433	10,977	11,891	10,326	10,310	10,958	10,630	6,813	2,483	3,259	3,660	103,952
Urban	2,596	2,522	2,592	3,020	2,612	2,393	2,453	2,428	3,242	3,731	3,781	4,450	35,820
Rural	1,422	1,233	941	1,298	1,188	1,137	1,014	1,081	1,264	1,158	1,102	1,317	14,155
2020-21	4,018	3,755	3,533	4,318	3,800	3,530	3,467	3,509	4,506	4,889	4,883	5,767	49,975
Urban	4,260	4,535	4,404	4,426	4,148	3,798	3,396	3,627	3,943	3,982	4,017	3,796	48,332
Rural	1,321	1,375	1,282	1,237	1,240	1,307	1,247	1,285	1,593	1,465	1,420	1,470	16,242
2021-22	5,581	5,910	5,686	5,663	5,388	5,105	4,643	4,912	5,536	5,447	5,437	5,266	64,574
Urban Average	5,636	5,907	5,610	6,158	5,091	5,197	5,457	5,540	4,976	4,430	4,595	4,668	63,263
Rural Average	3,022	3,175	2,778	3,125	1,960	1,853	1,867	1,856	1,841	1,624	1,705	1,712	26,516
Average	5,772	9,083	8,388	9,283	7,050	7,050	7,324	7,396	6,817	6,054	6,300	6,380	89,780

Note 1: Urban paratransit includes the core area and three zones in Chico. Rural paratransit includes the core of Oroville and Paradise and their three zones.
 Source: BCAG

B-Line Paratransit Trip Requests

For paratransit to run efficiently, policies must be in place to limit the number of missed and cancelled trips, both by the contractor and by the passenger. The contractor had no missed trips in FY 2021-22. Of 57,821 paratransit trip requests in FY 2021-22, 8.2 percent of trips were cancelled in advance, meaning the prospective rider cancelled by 5:00 PM the day before the requested trip. An additional 7.8 percent were same day cancellations, meaning they cancelled between 5:00 PM of the day before the requested trip and 2 hours before the requested trip. Additionally, 2.4 percent were late cancellations with less than two hours' notice before the requested trip. B-Line also tracks site closures³, which affected 0.5 percent of trip requests. Finally, in tallying the data, there are inherently data errors which in FY 2021-22 accounted for 2.7 percent of the trip requests. These errors could be from incomplete calls, mis-entered data, etcetera. Trip request data is summarized in Table B.

Table B: B-Line Paratransit Requested Trip Information			
	Urban	Rural	Total
Total Requested	43,880	13,941	57,821
Unscheduled	89	40	129
Cancelled In Advance	3,543	1,223	4,766
Late Cancels	1,049	332	1,381
Same Day Cancels	3,395	1,094	4,489
Site Closure	270	31	301
User Error	1,231	302	1,533
Total Requested	100.0%	100.0%	100.0%
Unscheduled	0.2%	0.3%	0.2%
Cancelled in Advance	8.1%	8.8%	8.2%
Late Cancels	2.4%	2.4%	2.4%
Same Day Cancels	7.7%	7.8%	7.8%
Site Closure	0.6%	0.2%	0.5%
User Error	2.8%	2.2%	2.7%
Source: BCAG, LSC			

B-LINE PARATRANSIT PERFORMANCE ANALYSIS

A performance analysis was conducted on B-Line Paratransit for pre-COVID (FY 2018-19) and during COVID (FY 2021-22). Two key measures of transit performance are productivity (measured by the number of passengers carried per service hour) and effectiveness (measured by the marginal operating cost per passenger trip). This data is depicted in Table C and is discussed below.

³ A “site closure” notation is used to denote cancelled trips when the actual business the trip is planned to serve will not be open at the time of the trip. This became a regular occurrence during COVID and wildfires.

B-Line Paratransit Productivity

Table C shows the passengers carried per service hour by route. Pre-COVID, 3.4 passengers were carried per service hour on paratransit services. The rural services were actually more productive than the urban services, carrying 3.6 passengers per hour compared with 3.3 in the urban areas. After COVID, 3.1 passenger trips were carried overall, with 2.9 on the rural paratransit and 3.2 on the urban paratransit. Both before and after COVID, clients made up 67 to 71 percent of passenger trips, with companions and attendants accounting for 29 to 33 percent of passenger trips.

B-Line Paratransit Efficiency

Efficiency can be measured in part by the number of passengers carried per passenger mile, also shown in Table C. Pre-COVID, 0.4 passenger trips were carried per mile of service. That dropped to 0.3 passengers per service mile in the past year overall, and just 0.2 on the rural services.

B-Line Paratransit Cost Effectiveness

The cost effectiveness of B-Line services since COVID was impacted by both a loss of ridership and an increase in cost. Pre-COVID, the contract cost was \$61.11 per service hour, which when applied to the hours of service and the riders per hour equated to a marginal cost per passenger trip of \$18.25 per urban passenger trip, \$16.94 per rural passenger trip, or \$17.85 overall per paratransit passenger trip. This increased to a marginal cost per passenger trip of \$24.66 per urban passenger trip, \$27.00 per rural passenger trip, or \$25.25 overall paratransit passenger trip—primarily due to increased costs. Using 2018 dollars, this would be \$18.99 per urban passenger trip, \$20.79 per rural passenger trip, or \$19.44 overall marginal cost per paratransit passenger trip, indicating the increase per passenger trip due to lost productivity would have been an 8.2 percent increase.

Table C: B-Line Paratransit Performance

	Pre-COVID (FY 2018-19)			FY 2021-22			Change FY 18/19 to FY 21/22		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Clients	62,859	34,404	97,263	34,129	10,880	45,009	-46%	-68%	-54%
Companions	28,092	15,110	43,202	14,157	5,356	19,513	-50%	-65%	-55%
Attendants	109	43	152	45	10	55	-59%	-77%	-64%
Passenger Trips	91,060	49,557	140,617	48,331	16,246	64,577	-47%	-67%	-54%
Vehicle Hours	27,339	13,735	41,074	15,014	5,526	20,540	-45%	-60%	-50%
Psgs/Hour	3.3	3.6	3.4	3.2	2.9	3.1	-3%	-19%	-8%
Vehicle Miles	230,957	118,582	349,539	150,596	74,775	225,371	-35%	-37%	-36%
Psgs/Mile	0.4	0.4	0.4	0.3	0.2	0.3	-19%	-48%	-29%
Marginal Operating Cost	\$1,670,710	\$839,346	\$2,510,055	\$1,191,811	\$438,654	\$1,630,465	-29%	-48%	-35%
Marginal Op. Cost per Psgr	\$18.35	\$16.94	\$17.85	\$24.66	\$27.00	\$25.25	34%	59%	41%
Note: Based on operating cost of \$61.11 per hour in 2018-19 and \$79.38 per hour, as shown in Tables 11 and 12 of Technical Memorandum 1. Source: BCAG, LSC									