

HONOLULU, HAWAII

BRIEF: BUS RAPID TRANSIT PROJECT

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HONOLULU, HAWAII

Bus Rapid Transit Project

CITY CONTEXT

The island of Oahu has a population of about 900,000 people. Most live in Greater Honolulu with over 400,000 residing in the city. The island's geography has strongly influenced its settlement pattern and transportation facility development. There is heavy east-west travel in the corridor linking Waikiki, Honolulu, Pearl City, and Waipahu.

PROJECT DESCRIPTION

Honolulu's Bus Rapid Transit (BRT) system consists of three routes offering all day, limited-stop service along three of the busiest bus corridors in Honolulu. Basic characteristics of these routes are summarized in [Table 1](#). [Figures 1a](#), [1b](#), and [1c](#) show the stops along the three routes.

The CityExpress! and CountryExpress! routes utilize articulated buses and are identified by "rainbow express" wrap. Limited-stop express bus stops are also identified by placards. The route maps and schedules are identified with the limited-stop express bus logo. Bus stops contain system-wide route maps. BRT limited-stop express buses use the (high occupancy vehicle) HOV Zipper Lane (a moveable barrier contra flow lane) on the H-1 Freeway to decrease travel times.

ROUTE A CITY EXPRESS

The City and County of Honolulu began its Bus Rapid Transit (BRT) program with the introduction of a limited-stop fixed route service. In March 1999, CityExpress! (Route A) began operating along the 6.6-mile [10.6-km] primary urban corridor between the Kalihi Transit Center and the University of Hawaii (Phase 1). The service expanded in August 1999 with an additional 6 miles [10 km] to the major retail area of Pearlridge Center (Phase 2). This expansion provided limited-stop service along the primary urban corridor, where slightly more than 40 percent of the population of Honolulu resides. Service was expanded 7 miles [11 km] from Pearlridge to the community of Waipahu in June 2000 (Phase 3).

PHASE 1

The Phase 1 City Express! reduced travel time on the local bus service from 68 minutes to 35 minutes or 49%. The service operates from 5:30 a.m. to 10:30 p.m. 7 days a week. Headways during the week are 15 minutes and 20 minutes on Sundays and holidays. Nine standard 40-foot vehicles are used in the service. The buses are all wheelchair accessible and equipped with bike racks capable of carrying two bicycles. Average weekday ridership in Phase 1 grew from an initial 2,200 to over 3,500.

PHASE 2

The 6-mile [10-km] extension from the Kalihi Transit Center to the Pearlridge Shopping Center started in August 1999 and operates on 15- to 20-minute headways on weekdays and 30-minute

headways on Saturdays. An additional six transit buses were added to the CityExpress! service for Phase II. The average daily ridership in Phase 2 increased to over 6,000.

The expansion of Route A CityExpress! continued in June 2000, with the 7-mile extension from Pearlridge to the community of Waipahu. This extension operates along Kamehameha Highway and Farrington Highway before traveling on the H-1 Freeway to the Kalihi Transit Center and continuing to the University of Hawaii. (See [Figure 2](#).) The service operates on 15- to 20-minute headways and provides the first direct link between Waipahu and the University of Hawaii.

ROUTE B CITYEXPRESS!

The success of CityExpress! Route A resulted in establishing CityExpress! Route B in August 2000. This service operates along and is additive to the Route 2 corridor that experiences over 50,000 boardings daily. The 7-mile corridor is between the Kalihi Transit Center and Waikiki along School Street, King Street, Beretania Street and Kuhio Avenue. Route B operates on 15-minute headways using 60-foot, low-floor, articulated buses.

ROUTE C COUNTRYEXPRESS!

A new limited-stop service, CountryExpress! Route C, started in May 2000. The service operates from the Waianae Coast to the second city of Kapolei and to downtown Honolulu. CountryExpress! Operates 7 days a week with 30-minute headways. The service runs from 5:00 a.m. to 10:00 p.m. daily. CountryExpress! saw the introduction of the city's new 60-foot, low-floor, articulated buses. Ten articulated buses are used in the service. (See [Figure 3](#).)

The introduction of CountryExpress! Route C was part of the city's conversion of Leeward Oahu to a hub-and-spoke bus operation. The conversion resulted in establishing 10 community circulators with unique three-digit numbers, four new transit centers, and modifications to all existing service. CountryExpress! is the focal point of the service providing linkage among the transit centers before transiting to Ala Moana Center.

RIDERSHIP AND COMMUNITY RESPONSE

A steady growth in ridership has accompanied the expansion of service. Monthly ridership has increased from about 100,000 in early 1999 to about 300,000 in mid-2001. (See [Figure 4](#).) Ridership surveys continue to document the community's acceptance of a bus service that has frequent arrivals, fewer stops, and is simply faster. The University of Hawaii faculty and students strongly support CityExpress! and its contribution to reducing a severe parking problem at and near the University of Hawaii campus. Residents' input at the numerous community meetings, both before implementation and now, strongly supports the limited-stop service. The service is widely accepted by the community, as is evidenced by the growing ridership and continual requests for CityExpress! stops. The city has a policy, however, not to establish new Express! stops for at least a year after service starts. Ridership on all the Express! routes continues to increase.

FUTURE PLANS

Honolulu expects to initiate a proactive marketing campaign to further raise the visibility and ridership of the BRT routes. In addition, the BRT limited-stop express routes are a key element

in the planned conversion to a hub-and-spoke operation that will use circulator buses to feed the limited-stop express buses at transit hubs.

Signal prioritization for five major intersections on the CityExpress! (Route B) route is planned to further decrease travel times. Plans are being developed to eventually expand signal prioritization across all three BRT limited-express routes. Traveler information systems have been planned to announce the arrival times for the next CityExpress! (Route B) bus at the bus stops. A Global Positioning Satellite (GPS) tracking system is planned to enable bus riders to track buses on their personal computers. Monitors are planned at selected transit hubs to display bus arrival information. Smart card technology for the payment of transit fares is being explored to reduce boarding time and to obtain more accurate ridership statistics and travel data to use in route planning. Future plans also include all-door boarding to further reduce dwell times.

Honolulu is actively pursuing the planning, engineering, and environmental studies for a system of dedicated BRT facilities. The Regional BRT component is being planned as a continuous BRT corridor on the H-1 Freeway, including a PM zipper lane and new express lanes, to create an uninterrupted transitway from Kapolei to Middle Street. A rendering of a proposed vehicle is shown in [Figure 5](#). The in-town BRT component is being planned as an arterial BRT to create a high-capacity transit spine from Middle Street to Downtown. A University Branch from Downtown to the University of Hawaii is also being planned, as is a Downtown to Kakaao/Waikiki Branch.

BIBLIOGRAPHY

Draft City and County of Honolulu Bus Rapid Transit (BRT) Project, October 2001.

Table 1: Summary of City and County Express Service

| Route | Service Between | Date Started | Length (Miles) | Weekday Riders |
|--------------------|-------------------------------|--------------|----------------|----------------|
| A- CityExpress! | University of Hawaii-Waipahu | March 1999 | 19 | 10,900 |
| B- CityExpress! | Waikaki-Kalihi Transit Center | August 2000 | 7 | 5600 |
| C- CountryExpress! | Makaha-Aladat Transit Center | May 2000 | N/A | 3640 |

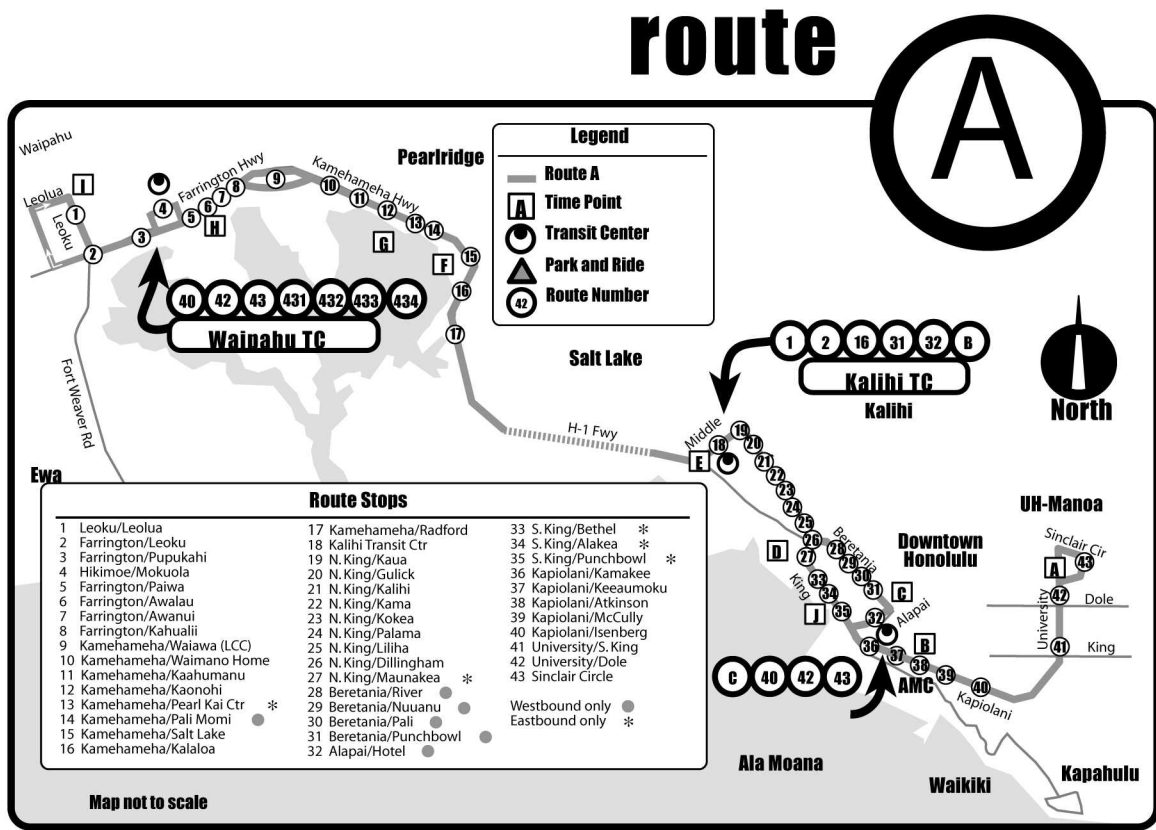


Figure 1a: Route A - Bus Stops

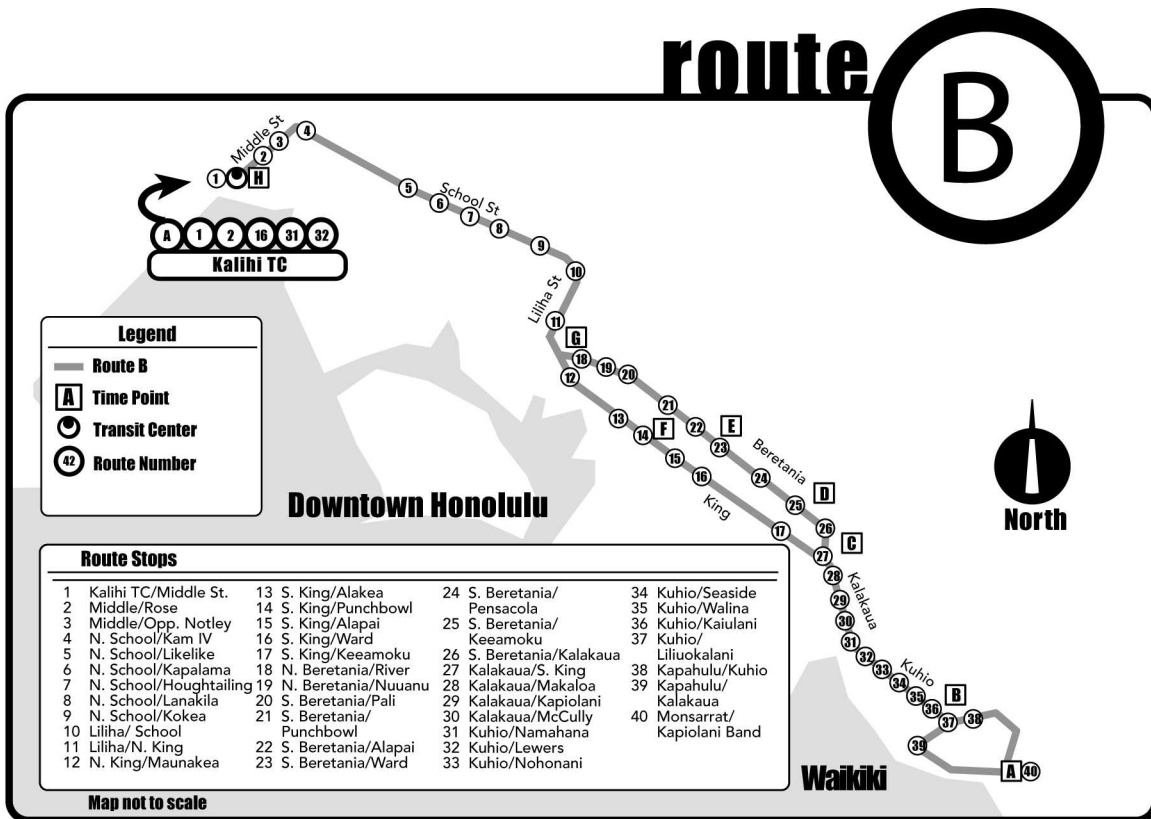


Figure 1b: Route B - Bus Stops

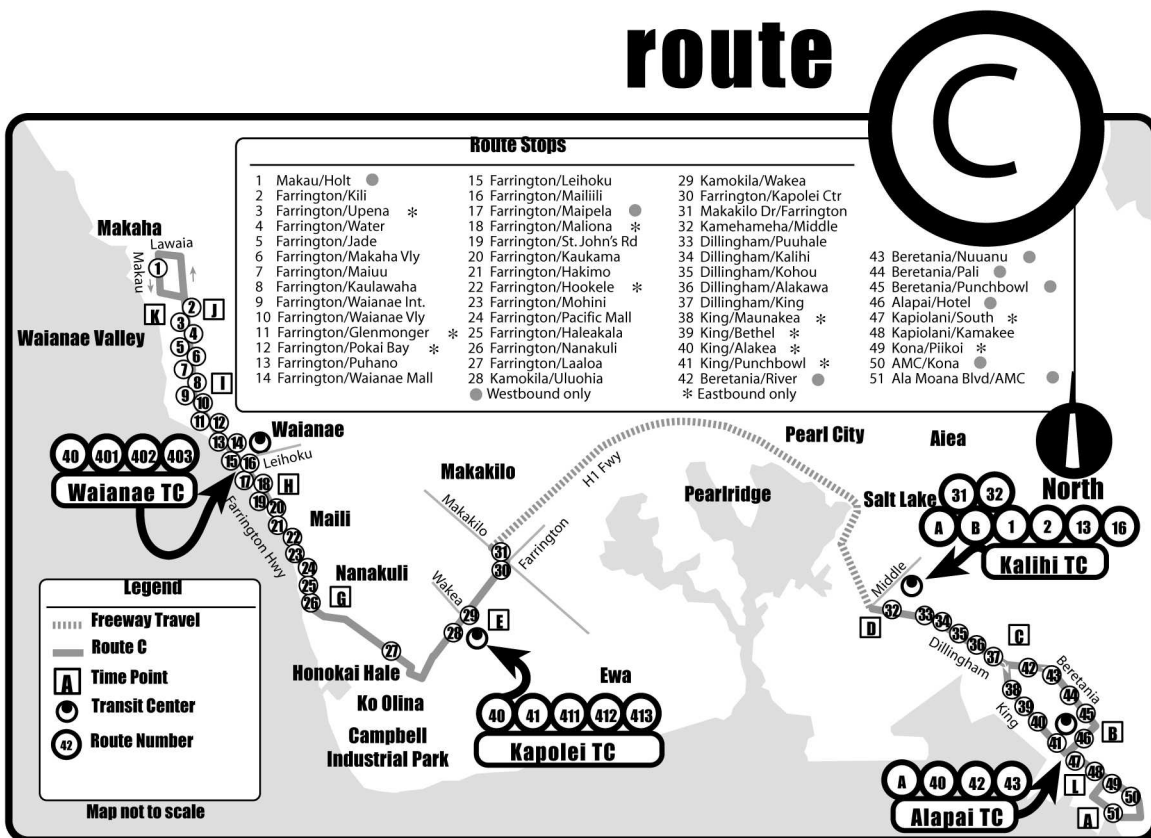


Figure 1c: Route C - Bus Stops



Figure 2: BRT Operation in H-1 Zipper Lane



Figure 3: Low-Floor Articulated Bus

EXPRESS! ROUTE MONTHLY RIDERSHIP

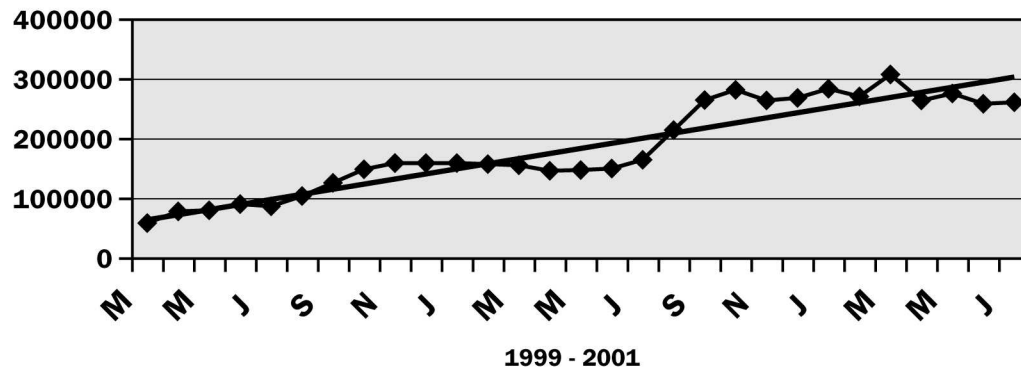


Figure 4: Monthly Ridership



Figure 5: Vehicle Rendering