

Buses with Optional Left-side Boarding

Planning & Programming Committee

April 2021

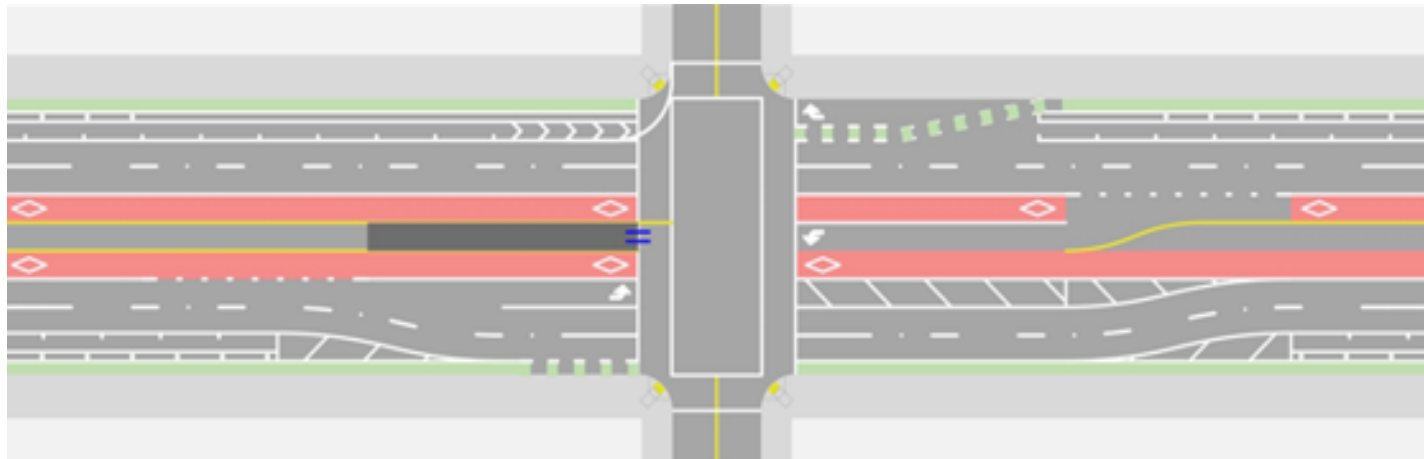
Item 20



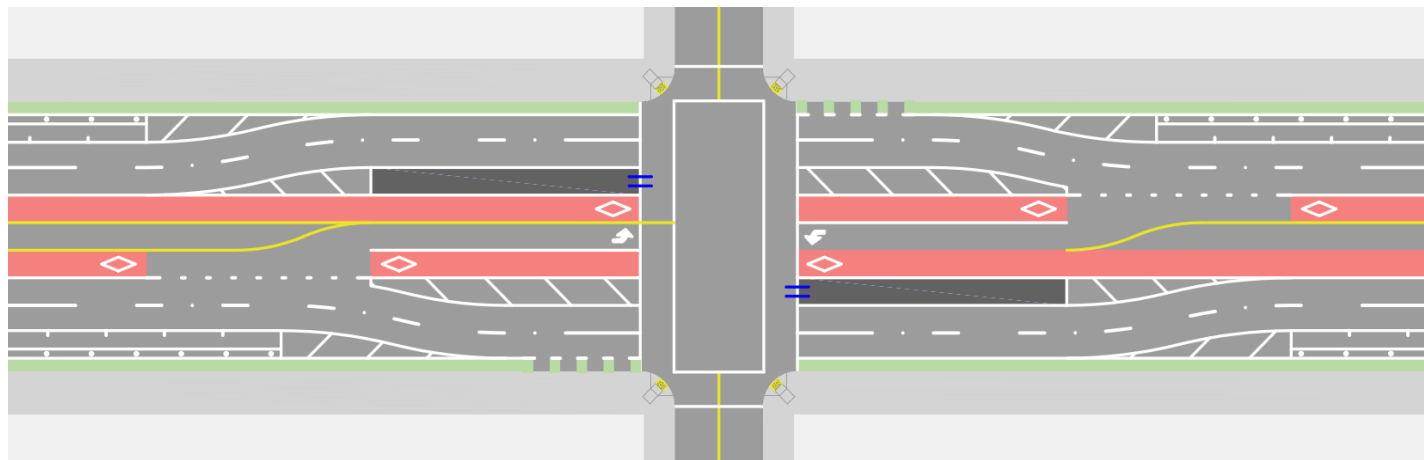
Background

- > Measure M provided funding for BRT capital improvements.
- > Metro operates the G (Orange) Line and J (Silver Line) BRTs.
- > BRT Vision & Principles Study identified 5 new BRT corridors.
- > Bus speed improvement is part of NextGen implementation.
- > December 2020 – Board approved motion directing staff to report on buses with optional left-side boarding, including:
 - Existing and future BRT corridors that could benefit
 - Operational and maintenance benefits and/or tradeoffs
 - Future bus procurement opportunities and/or challenges

Center-/Median-Running BRT



Single platform BRT station with left-side boarding



Split platform BRT station with right-side boarding

Advantages/Challenges

Advantages:

- > Center-/median-running bus lane configuration allows for a single "center platform" similar to rail.
- > Potential to reduce station footprint; shared passenger amenities may also reduce infrastructure/operating costs
- > Center platform buffers passengers from general travel lanes.

Some Operations/Maintenance Challenges

- > Reduced passenger capacity - loss of 4-6 seats on typical 40-ft bus
- > Reduced operational and maintenance flexibility at divisions
- > Boarding/alighting from single left-side door on 40-ft buses could affect dwell times and passenger experience
 - 60-ft buses include two doors on left. However, plan is to standardize fleet to mostly 40-ft electric buses for operational efficiencies (one charging lane size)

Bus Corridors with Potential Left-side Boarding

> NoHo to Pasadena

- 18-mile corridor with 7 potential center station locations
- Glenoaks stations would remain split platforms due to right-of-way constraints

> Vermont

- 12.4-mile corridor will include two alternatives in the environmental study with center-running BRT
- 4 potential left-side boarding stations south of Gage where right-of-way is widest

• BRT Vision & Principles Study

> 5 new potential corridors identified

> Each corridor can be evaluated to identify potential opportunities for center stations with left-door boarding

NoHo to Pasadena Transit Corridor



Vermont Transit Corridor



Other Bus Services

Existing BRT Corridors

- > Facilities for both G (Orange) Line or J (Silver) Line were specifically designed and constructed for right-side boarding
- > J Line stations on I-10 & I-110 are served by several transit agencies
 - Any modifications, if possible, to accommodate left-side boarding would require them to operate vehicles with dual-side boarding

North San Fernando Valley BRT

- > Center-running configuration removed from consideration due to right-of-way constraints and required street reconstruction

NextGen Bus Plan

- > Implementing several bus speed/reliability improvements including curb-running lanes; buses would not use center/median lanes

Procurement Considerations and Next Steps

Bus Procurement/Manufacturers

- > Metro is transitioning to a 100% electric fleet by 2030.
 - Opportunity to consider buses with dual-side boarding
- > Several agencies operate buses with dual-side doors, but not electric.
- > Few manufacturers have indicated they could produce electric buses with dual-side doors in multiple sizes.
 - Manufacturers could pass on initial engineering/testing costs to Metro.
- > Type of bus (and its capacity) will affect quantity of buses needed.

Next Steps

- > Staff will continue to work on the planned BRT corridors, NextGen Bus Plan and conversion to a fully electric bus fleet.
- > Staff will continue to identify left-door boarding opportunities as future bus corridors are evaluated and in coordination with the Zero Emissions Bus Plan.