

Inclusive Infrastructure Moves Millennials

Jonathan L. Harris



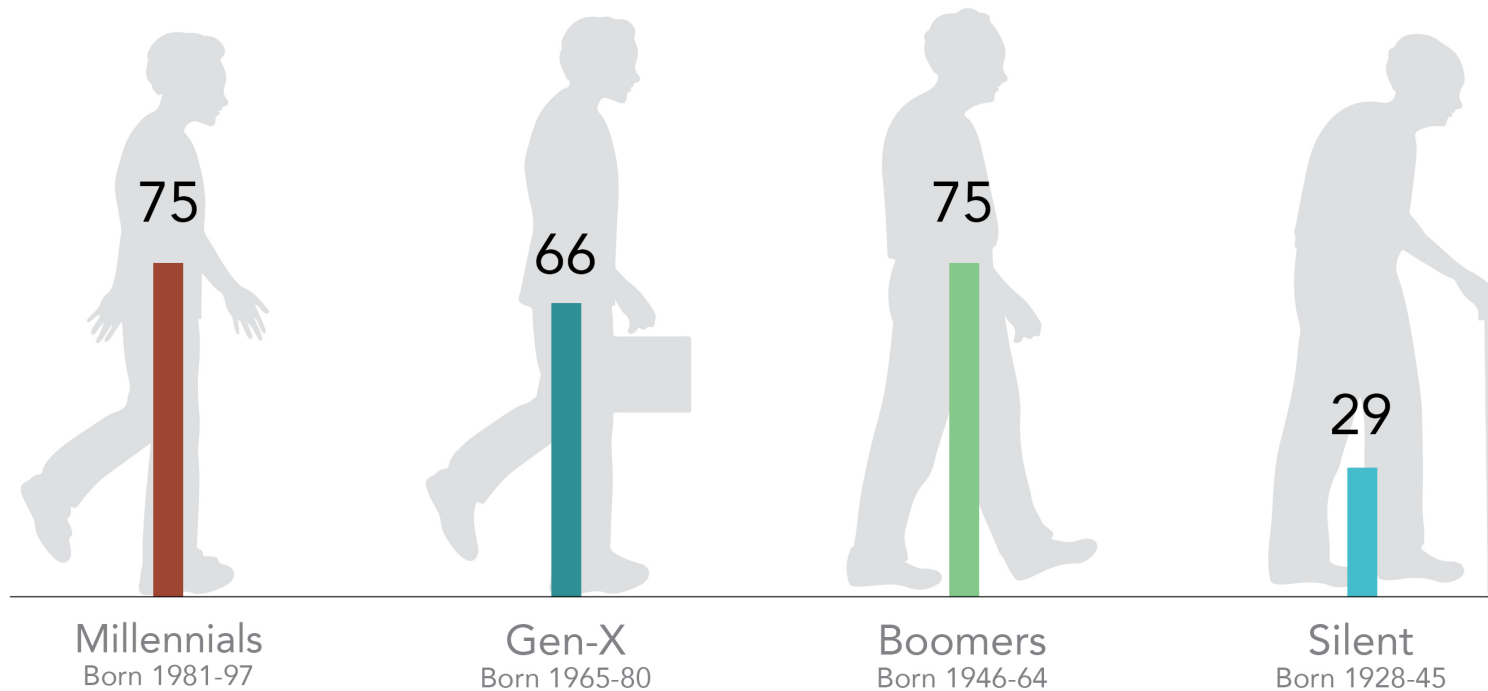
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As I head downstairs for breakfast, I hear a chime from my phone. The next bus will be arriving in 10 minutes, hardly time to make coffee. I check the weather forecast, and it's sunny outside, so I decide to ride my bike to work. If I'm too tired to bike home at the end of the day or if the weather goes south, I can throw my bike on the bus and be on my way.

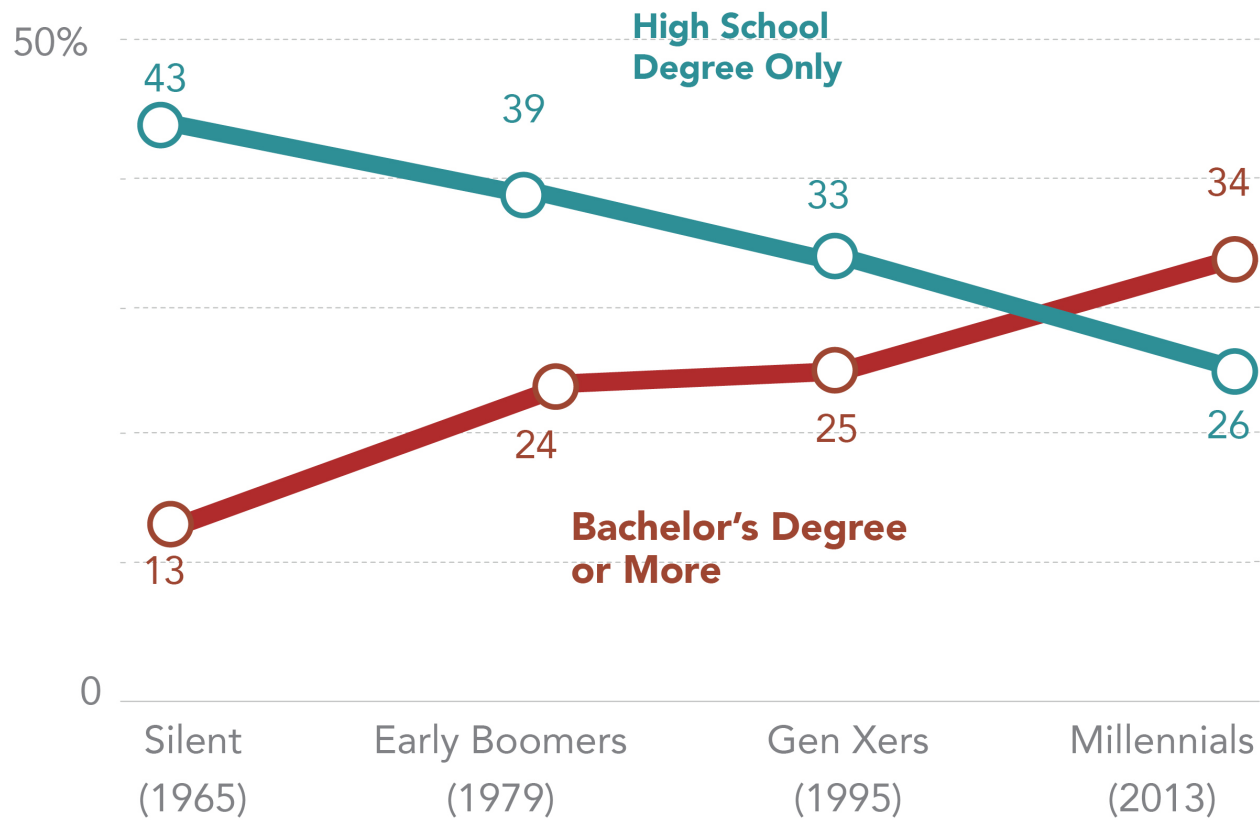
A DAY IN THE LIFE OF A MILLENNIAL



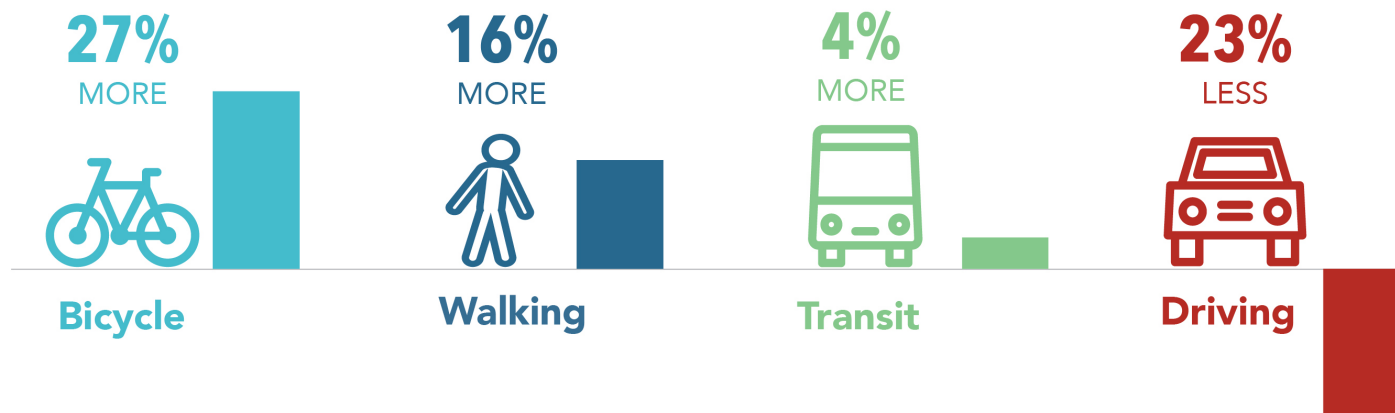
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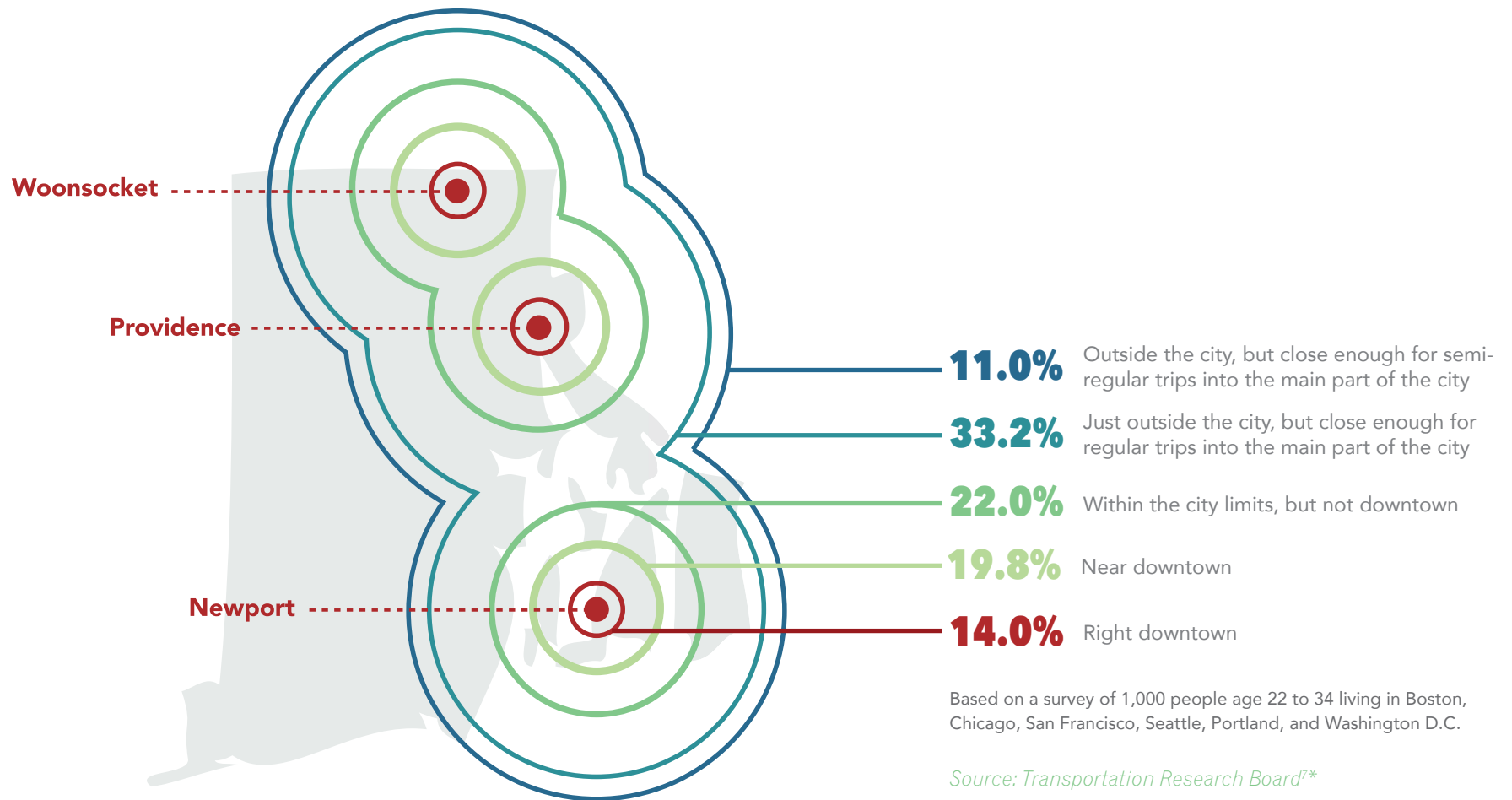


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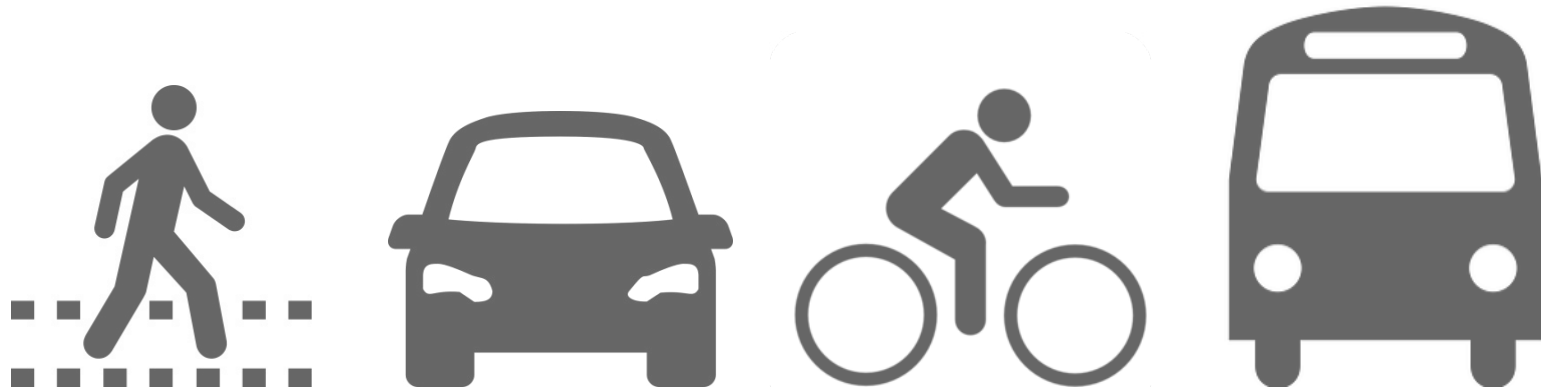


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WHERE URBAN MILLENNIALS LIVE



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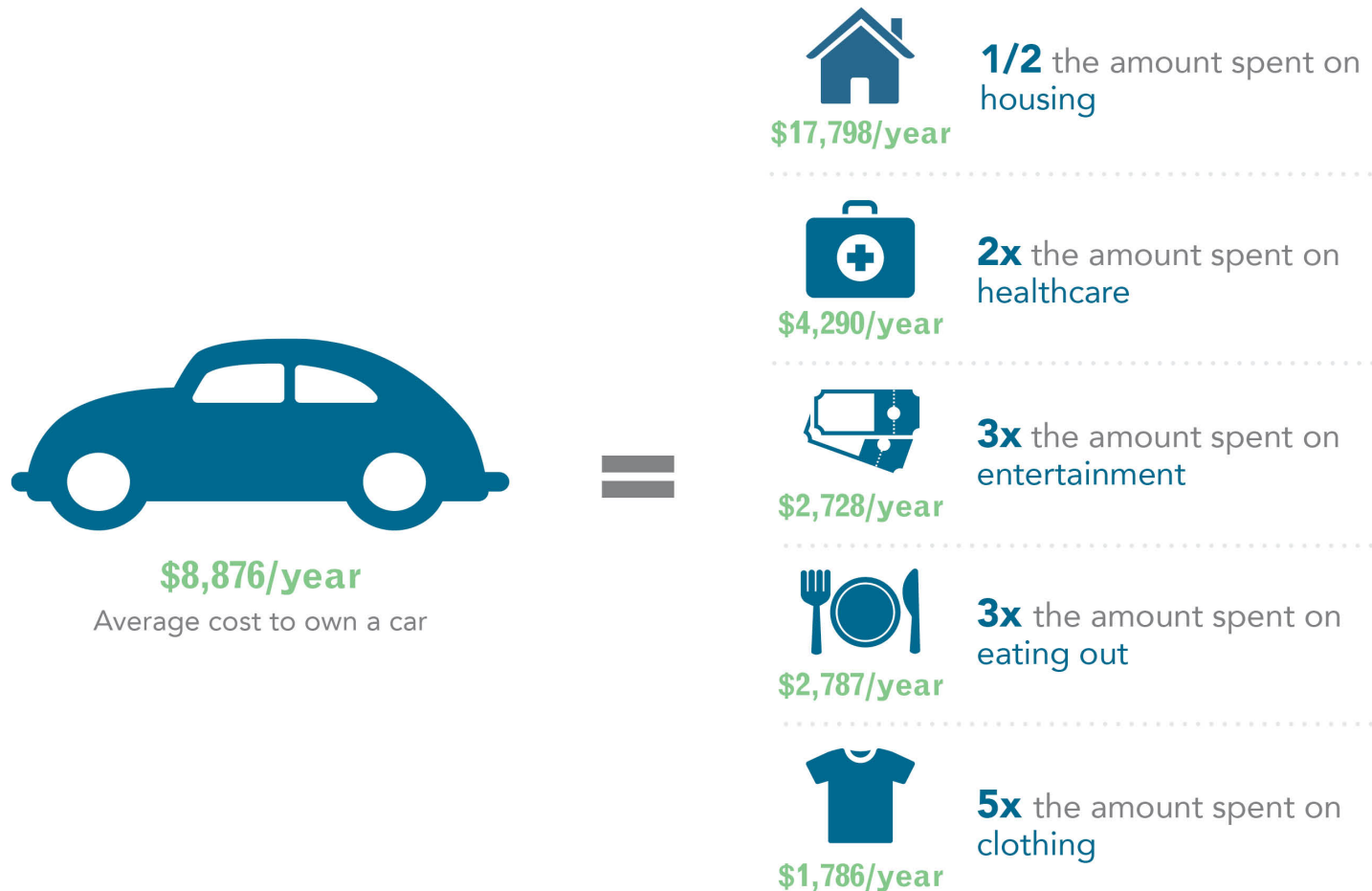


NOT anti-car

Pro options for shifting mode

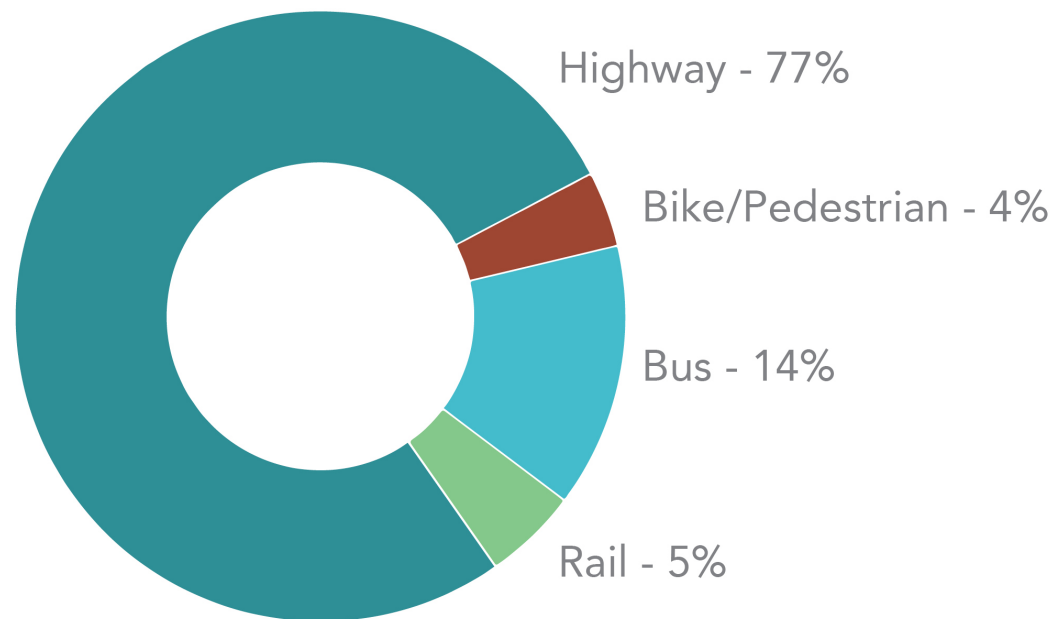
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Cost of Car Ownership in the United States



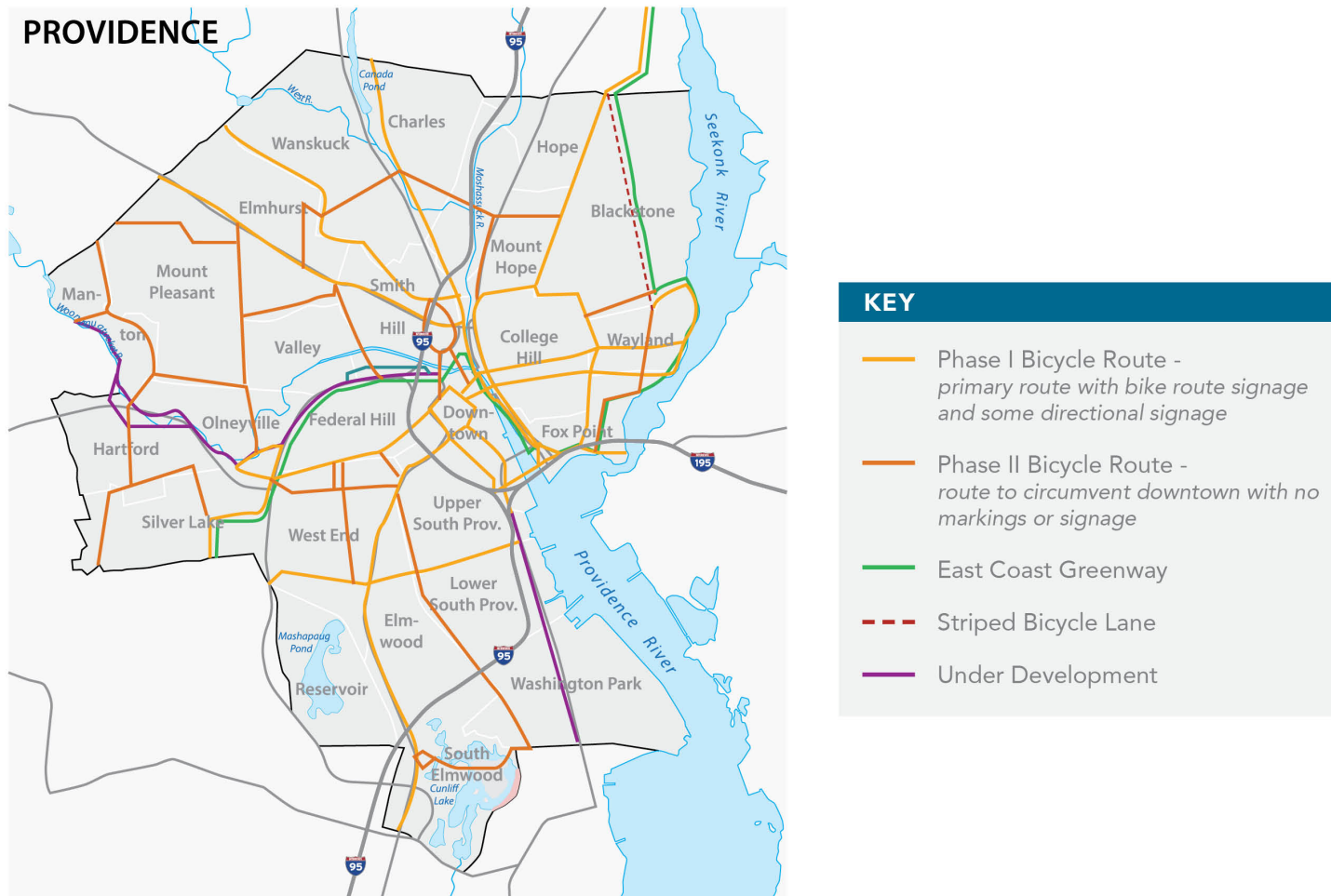
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Rhode Island Transportation Spending by Mode






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Bike Paths in Providence



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Bike Paths in Providence by Type

TYPE OF PATH	USERS	EXAMPLES	MILES
Shared Lanes & Paved Shoulders	 Bicycles & Automobiles	On roads throughout the city	24.3 Miles
Bike Lanes	 Bicycles Only	Blackstone Blvd, Allens Ave, & Broadway	10.8 Miles
Shared Use Paths	 Bicycles & Pedestrians	Woonasquateucket River Greenway	3.0 Miles

Total Miles = 38.1 Miles

Providence has only **1 mile of bike paths for every 10 miles of roadway**, leaving the majority of the city inaccessible to new riders.

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Madison | Providence Bicycle Showdown



Madison, WI

Population	248,951
Bike Lanes:	268 miles
Protected Bike Lanes:	152 miles



Providence, RI

Population	179,207
Bike Lanes:	38 miles
Protected Bike Lanes:	13.8 miles

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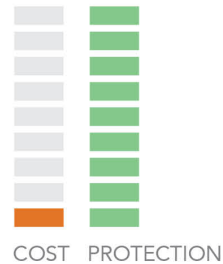
Types of Bicycle Lanes, costs per lane-mile

Parked Cars with Striped Buffer

Cost: <\$15K Bang for Buck: 10



Photo by Eric Fischer



Linear Barriers - Short

Cost: \$10-75K Bang for Buck: 8



Linear Barriers - Tall

Cost: \$80-400K Bang for Buck: 8



Curbing

Cost: \$25-600K Bang for Buck: 6.5



Raised Bikeway

Cost: \$8-26M Bang for Buck: 6



Striped Buffer

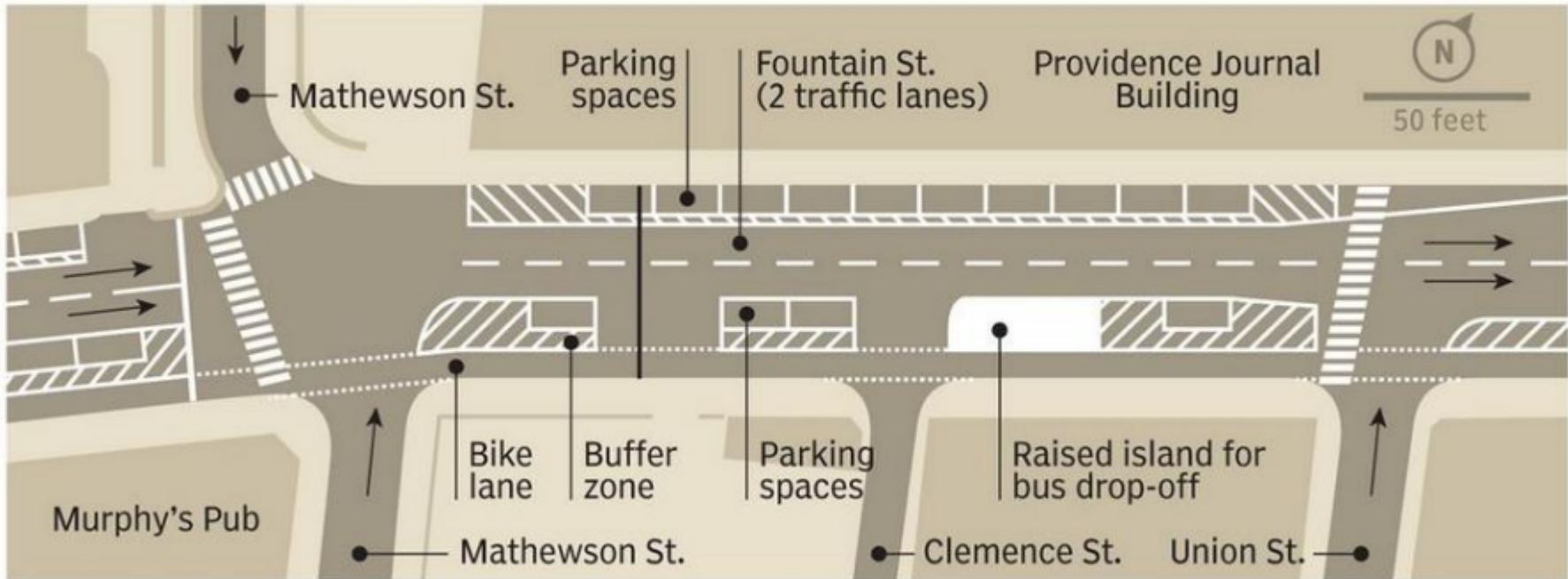
Cost: <\$15K Bang for Buck: 6



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Providence's First Protected Bike Lane

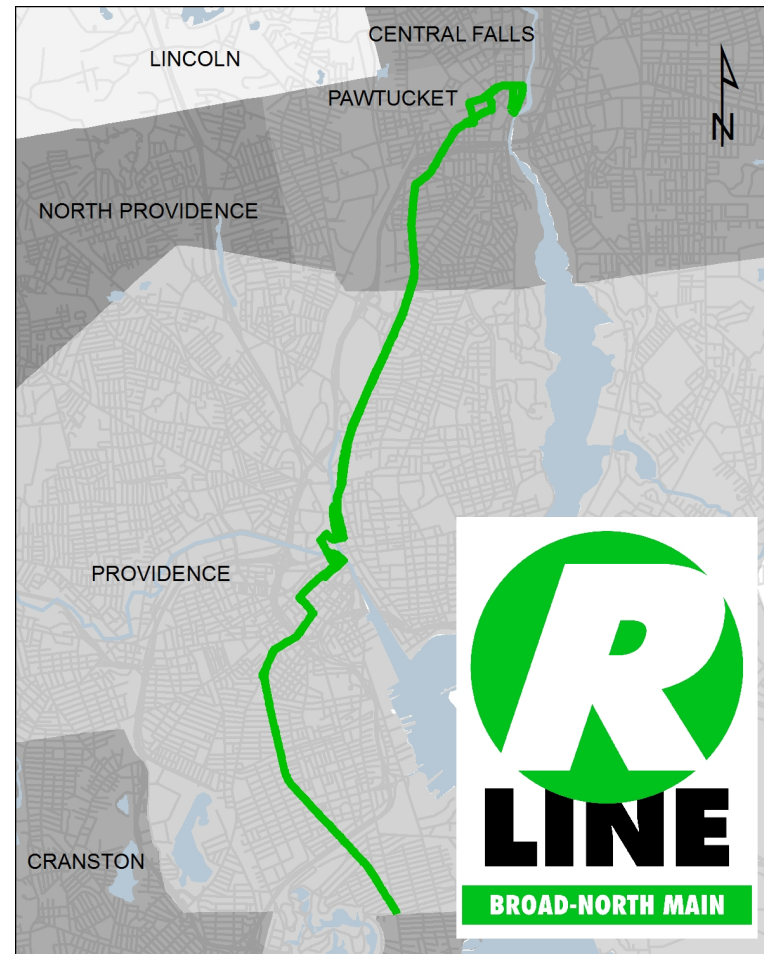
Downtown Circulator Plan



SOURCE: Providence Department of Planning & Development

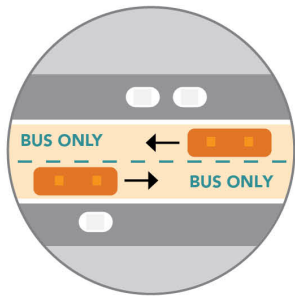
PROVIDENCE JOURNAL/TOM MURPHY

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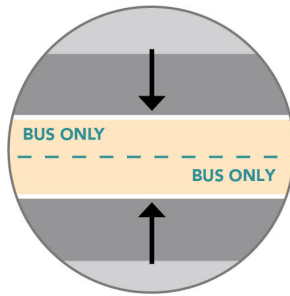
Key Features of an Efficient Bus Rapid Transit (BRT) System



Dedicated Right-of-Way

Bus-only lanes fully segregated from mixed traffic

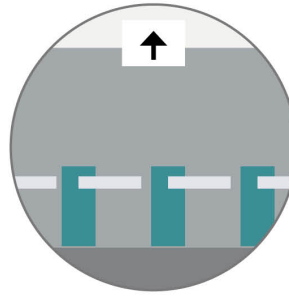
Buses move faster by avoiding traffic



Busway Alignment

Bus-only lanes aligned to the middle, not the curb, of a road

Buses move faster by avoiding turning cars and parked vehicles



Off-Board Fare Collection

Turnstile-controlled or proof-of-payment fare collection

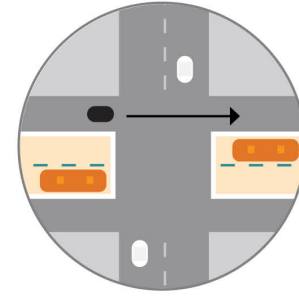
Passengers board more quickly without stopping to pay



Platform-Level Boarding

Station platforms level with bus floors when boarding and alighting

Disabled and elderly passengers board more quickly



Intersection Treatments

Mixed-traffic is prohibited from making turns across the busway

Buses move more quickly when they don't have to wait for turning cars

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