



Duke Street In Motion Project Updates

**City Council
February 14, 2023**



Tonight's Agenda

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Projects
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Future
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Action**

Corridor Projects: Overview

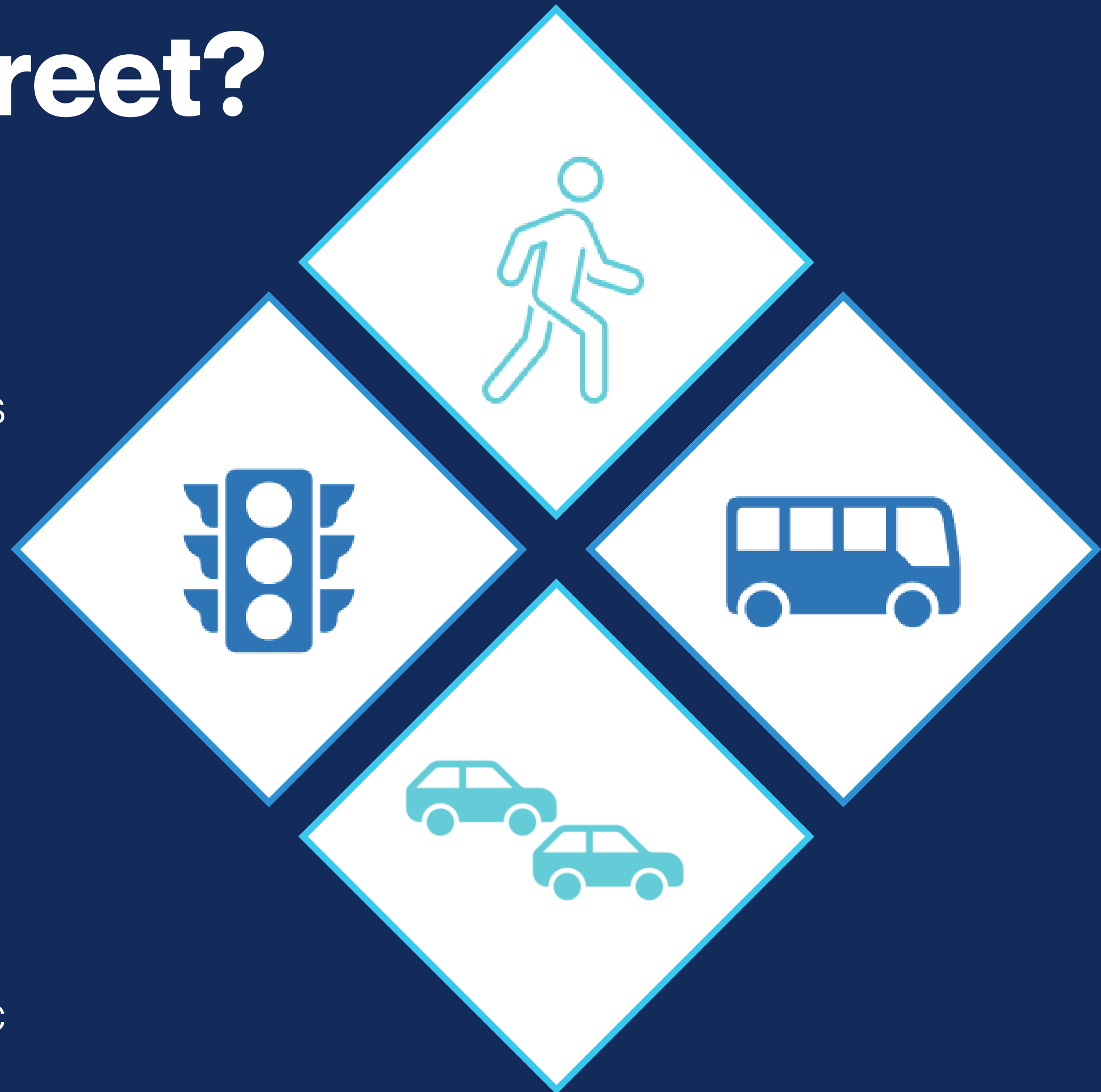
Why Duke Street?

CHALLENGES

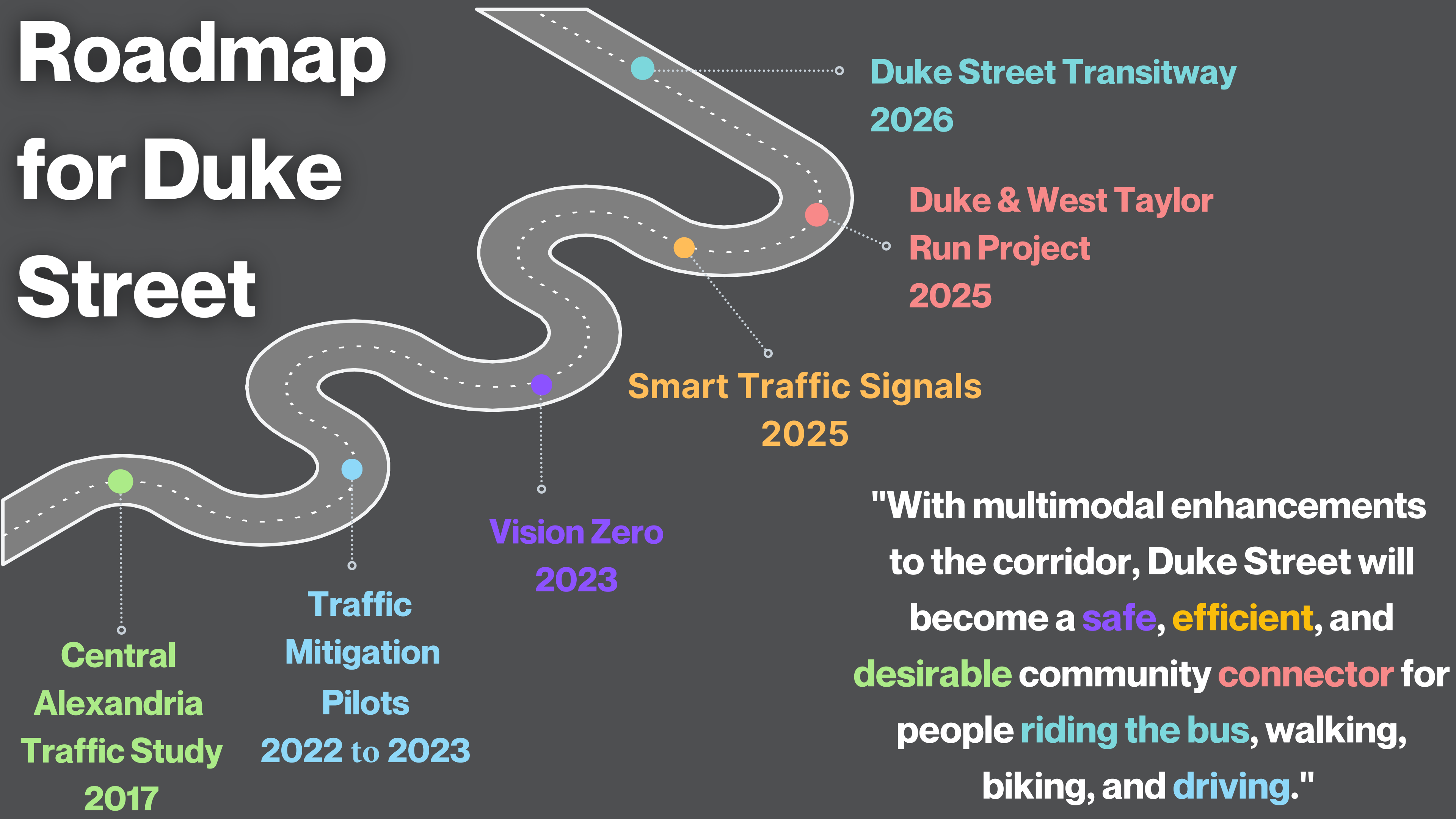
- Traffic congestion
- Cut-through traffic on residential streets
- Safety
- Bus experience

OPPORTUNITIES

- Improve options for people to use other modes
- Redesign intersections for safety
- Use technology to better manage traffic
- Build on strong transit ridership



Roadmap for Duke Street



**Duke Street Transitway
2026**

**Duke & West Taylor
Run Project
2025**

**Smart Traffic Signals
2025**

**Vision Zero
2023**

**Traffic
Mitigation
Pilots
2022 to 2023**

**Central
Alexandria
Traffic Study
2017**

"With multimodal enhancements to the corridor, Duke Street will become a **safe, **efficient**, and **desirable** community **connector** for people **riding the bus**, walking, biking, and **driving**."**

Moving people on Duke Street

**DUKE
STREET
TRAFFIC
MITIGATION
PILOTS**

TRAFFIC

**Reduce
congestion &
cut-through
traffic**

**SMART
TRAFFIC
SIGNALS**

TECHNOLOGY

**Manage traffic
with
technology**

**DUKE
STREET AT
WEST
TAYLOR
RUN**

ACCESS

**Provide new
access to
highway**

**VISION
ZERO
EFFORTS**

SAFETY

**Reduce
serious
crashes**

**DUKE
STREET
BRT**

OPTIONS

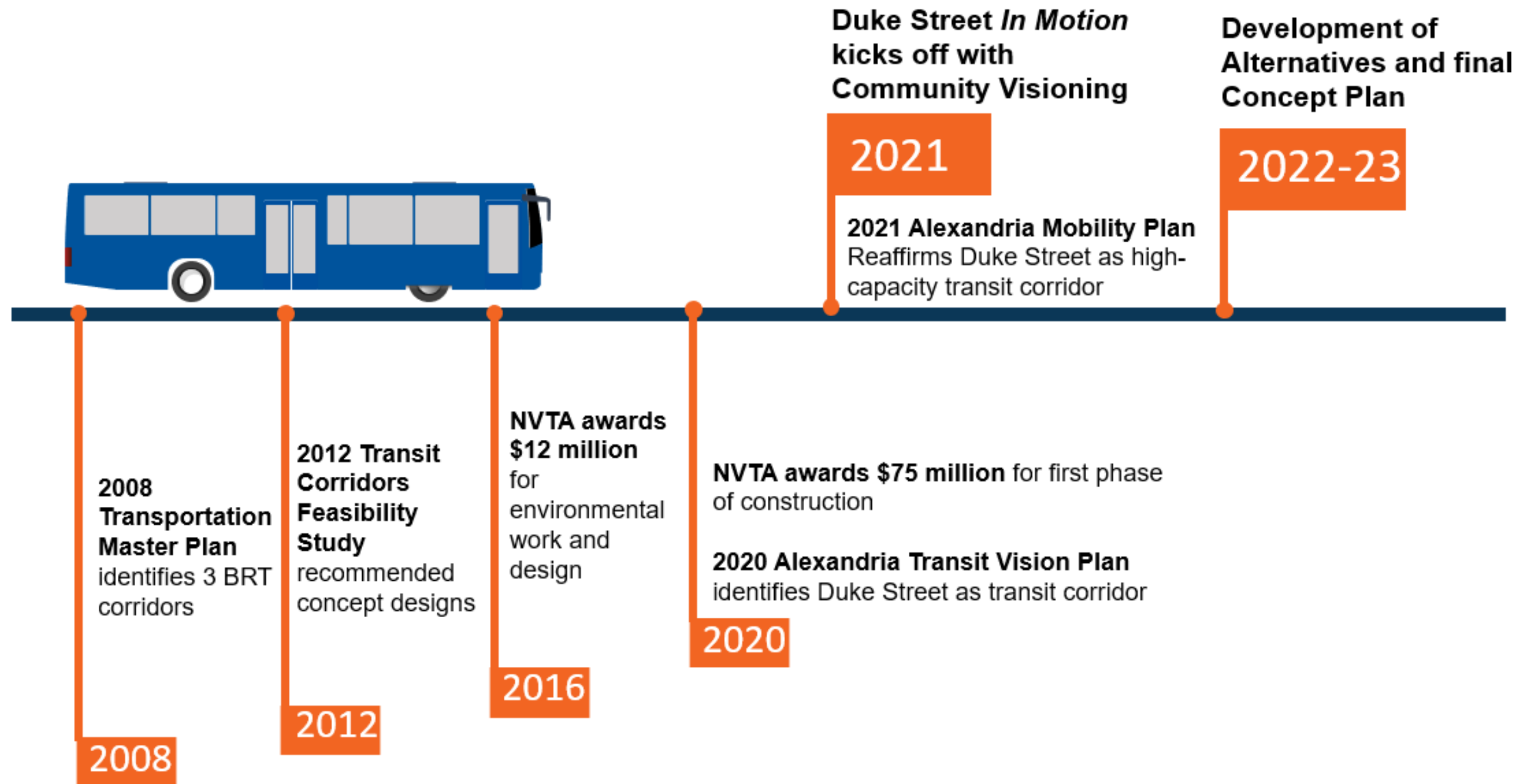
**Enhance bus
service &
provide
options**

Duke Street Transitway: Purpose & Background

Duke Street Transitway

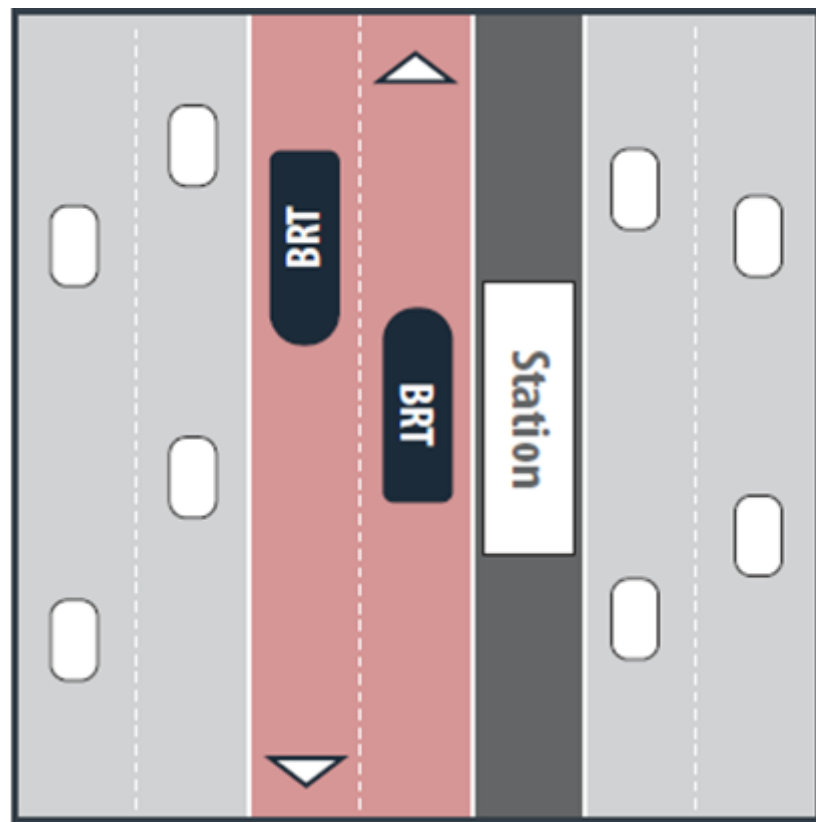
Project Purpose & Background

- Pursue high-capacity transit to achieve City sustainability and equity goals
- Reconsider concept plans in context of 2021 community visioning

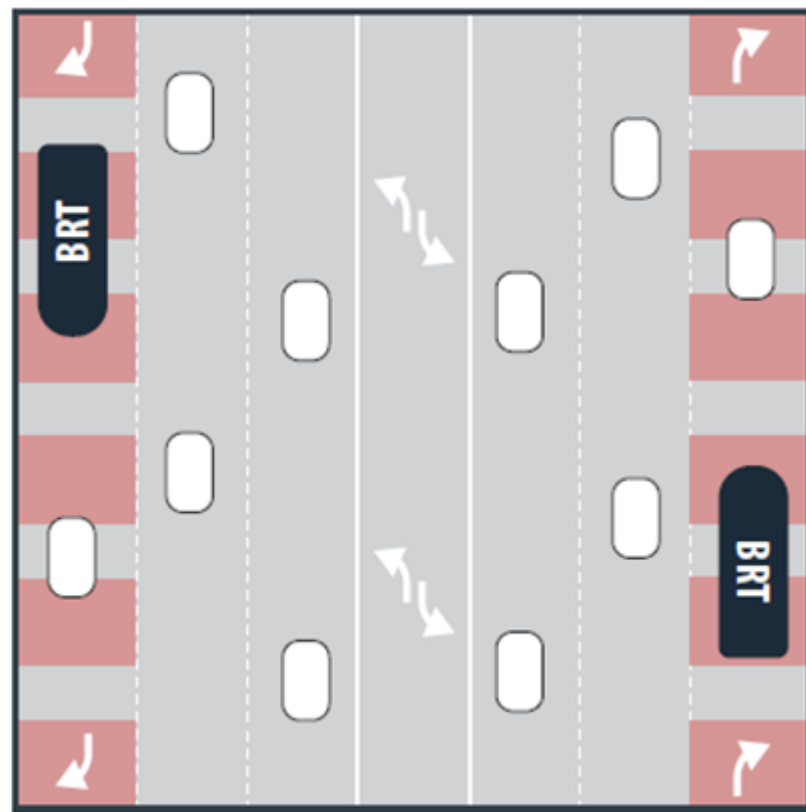


Street Design Concepts for Consideration

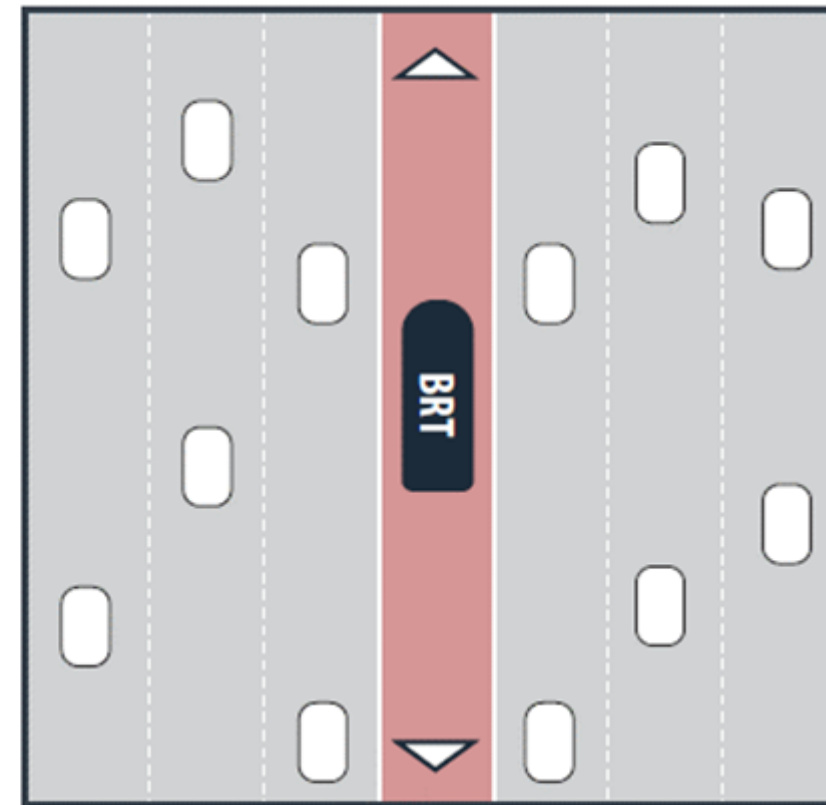
Busways can take different forms...



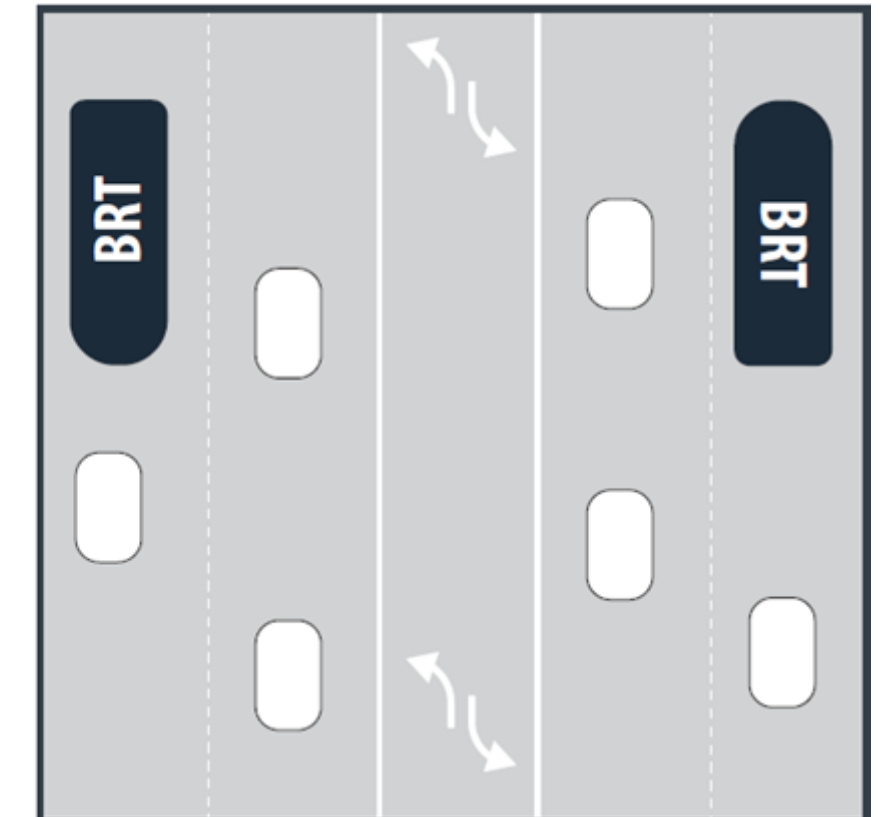
Center Running



Curb Running



Bidirectional Lane



Mixed Traffic

A transitway can mix different treatments to make bus service faster and more reliable

Street Design Concepts

Busway and Curb features

Step 1: Busway

The diagrams show various busway layouts: a station with two BRT lanes, a street with BRT lanes and traffic flow, a street with a central BRT lane, and a street with BRT lanes on both sides.



Step 2: Curb features

The icons represent different curb features: Sidewalks Widened, Shared-use path, Cycle track, Service Roads, and Streetscaping.

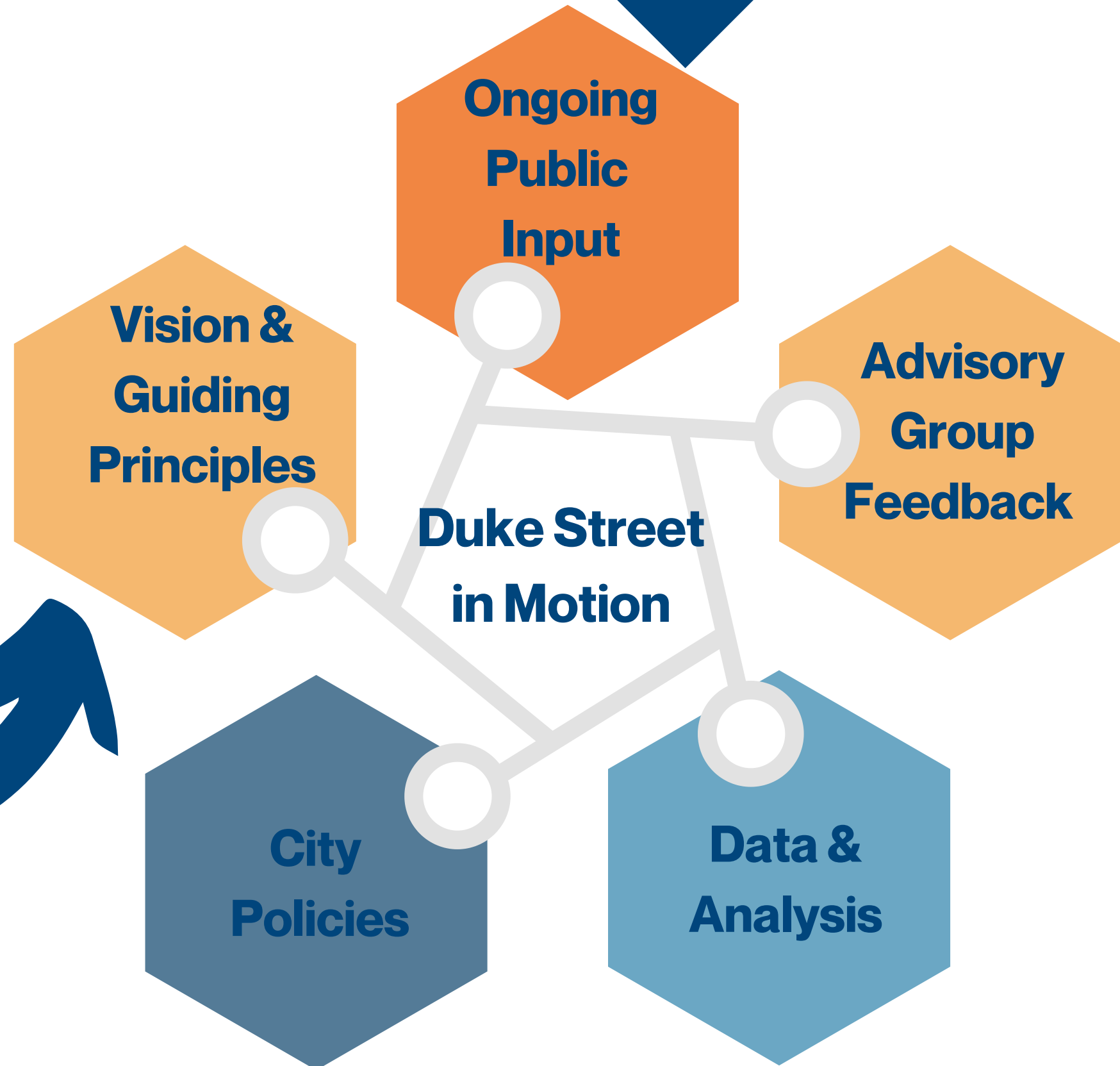


Community Engagement & Outcomes

Phase I Community Outreach

Vision for transit on Duke St.

-  **1,785** feedback form responses
-  **3,587** project handouts
-  **6,393** received eNews blast
-  **95,889** on social media
-  **2,552** reached at **22** pop-ups
-  **92** webinar attendees

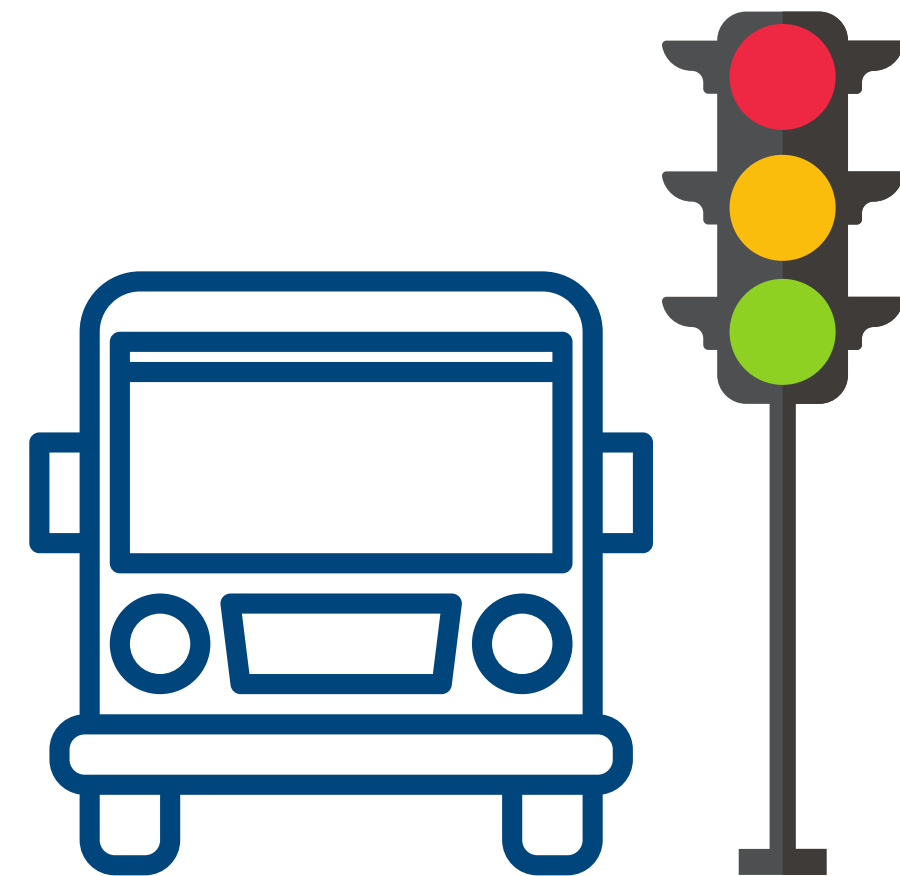


Outreach → Project Vision

*Advisory Group adopted

This project will provide an **efficient and desirable bus rapid transit (BRT) option along Duke Street by improving the transit experience for current and potential riders.**

With multimodal enhancements to the corridor, Duke Street will become a **safe, efficient, and desirable community connector** for people riding the bus, walking, biking, and driving.




Phase II Community Outreach

Tradeoffs & Priorities



Concerns with **design impacts** to property



Input **varied by segment** and space available

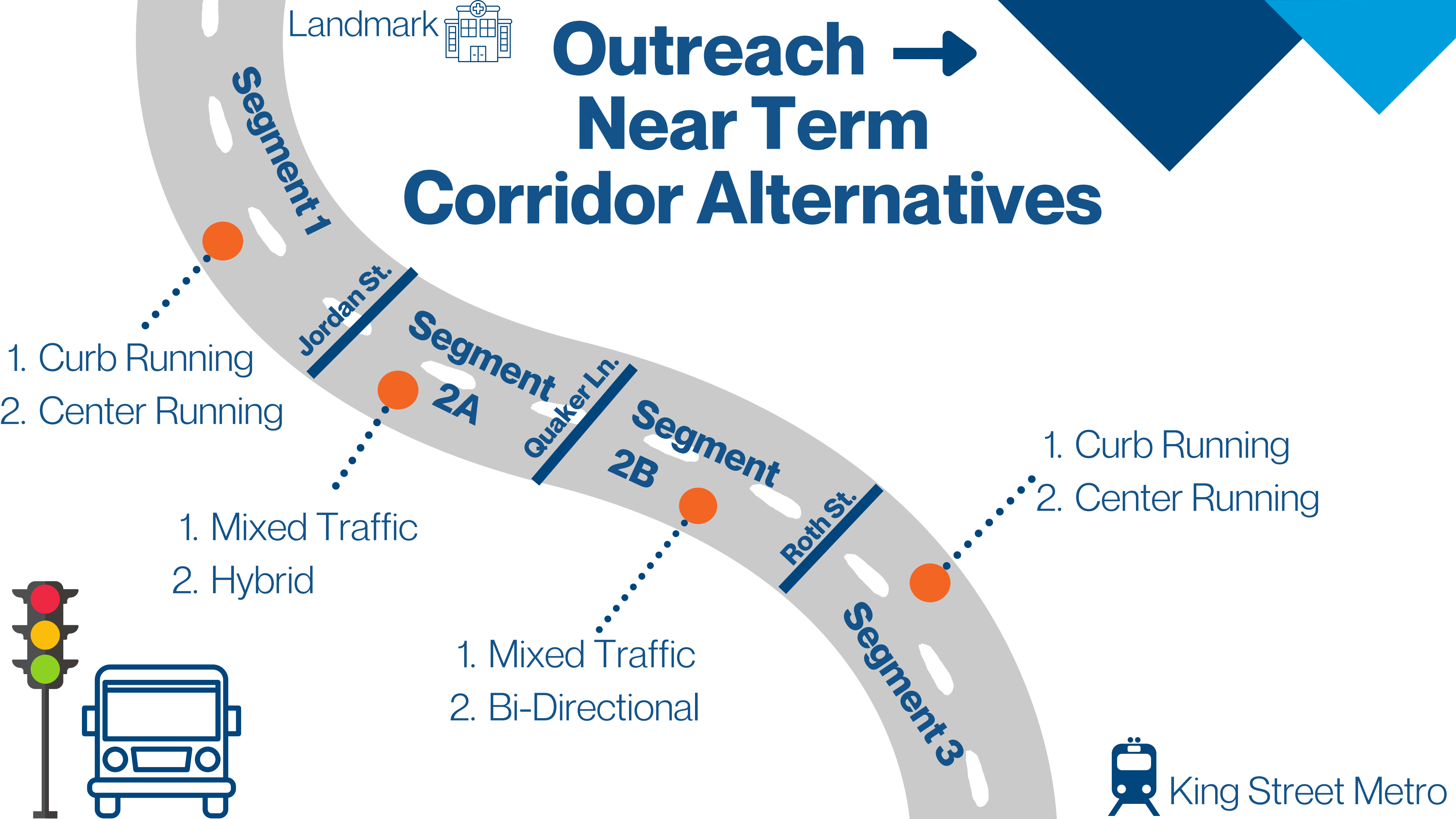


Buffer space was a key benefit of service roads

-  **8,000** Direct mailings
-  **450** Webinar attendees
-  **1,228** Feedback form responses
-  **4** Focus groups (**28** participants)
-  **800+** reached at **9** pop-ups
-  **200+** people at **4** public meetings

Landmark 

Outreach → Near Term Corridor Alternatives



Next Steps & Future Council Action

Winter 2023

Targeted Outreach

- Community & business outreach
- Curb features

April 2023

Compare near term alternatives

- Analysis
- Community Feedback

May to June 2023

Identify preferred alternative

- Near term design
- Long term vision



Next Steps

City Council

- Near & long term recommendations

July 2023

Full Design

- Environmental
- Roadway & curb
- Right of way

2024 to 2025

July City Council Consideration

AG Recommended Alternative

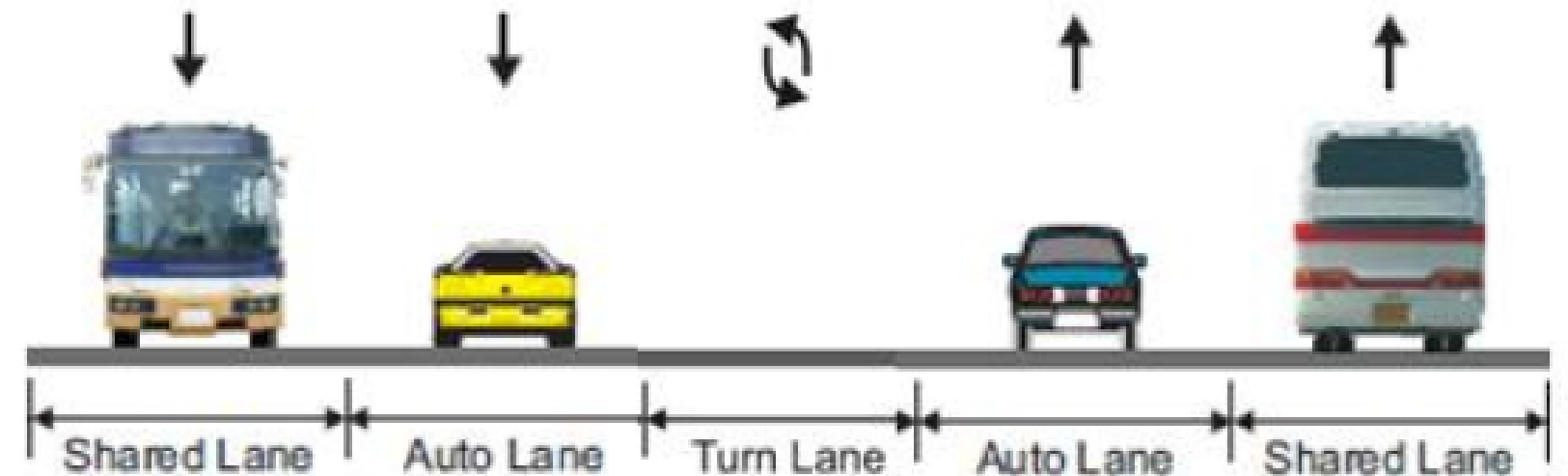
- Near & long term cross sections with curb features

Information

- Advisory Group endorsements
- Public input summary
- Traffic model results
- Necessary land footprint
- Cost estimates

"The combination of Duke Street Alternatives 1a and 3c, are the preferred approach for phased implementation of a dedicated transitway in Corridor B. Alternative 1a would be the first phase of transitway implementation on Duke Street. It would create dedicated transit lanes in existing six-lane sections of Duke Street between Landmark Mall and Jordan Street and between Roth Street and Diagonal Road. In the remaining section of Duke Street between Jordan Street and Roth Street, transit would operate in mixed flow. A parallel off-corridor bicycle facility should be examined to accommodate bicyclists along Duke Street and improved pedestrian facilities would be provided at intersections and near transit stations. Preliminary implementation should prioritize enhanced pedestrian safety and improvements at Taylor Run Parkway.

Alternative 3c would be the subsequent phase of transitway implementation on Duke Street. It would build on Alternative 1a by widening Duke Street to provide a reversible lane between Jordan Street and Roth Street. The reversible lane would be configured to allow Duke Street to accommodate a dedicated transit lane in the peak hour and peak direction of traffic flow during the a.m. and p.m. peak periods along Duke Street. Alternative 3c should continue to examine a bicycle facility along Duke Street along with corridor-wide pedestrian improvements. However, the Work Group believes that bicycles should be accommodated in this corridor if studies demonstrate that the streetscape can still be enhanced."



A street scene with cars and buildings, overlaid with the text "Thank you. Questions?" in large blue font. The scene shows a multi-lane road with traffic, including a white SUV in the foreground, a silver sedan, and a white pickup truck. Buildings and trees are visible in the background under a clear sky.

**Thank you.
Questions?**