



# Trolley Optimization Plan

## 16 Executive Summary Presentation

2024

City of Miami Beach

# Trolley Optimization Plan

## Purpose and Objectives

- ▶ Evaluate all aspects of the Trolley service
- ▶ Survey passengers and general public
- ▶ Identify opportunities to improve service
- ▶ Maintain current cost
- ▶ Help prepare for new service contract



# Miami Beach Trolley System



Established in 2015 to provide a transit option for residents and visitors.



Consists of 4 interconnected routes



Contracted to LSF, a Miami-based transportation company.



Current annual cost is \$9.2 million per year.  
Pre-pandemic annual cost was \$12.1 million.



Service reduced by 20% since 2019.



Augments Miami Dade Transit service, not intended to replace.





# Trolley Optimization Plan

## Approach

- ▶ Evaluation
  - ▶ Field Observations
  - ▶ Passenger and Online Survey
  - ▶ Interviews with Staff and Service Vendor
  - ▶ Operating Materials Review
  - ▶ Data Review
- ▶ Focus Areas
  - ▶ Service Design
  - ▶ Operations
  - ▶ Vehicles
  - ▶ Customer Service

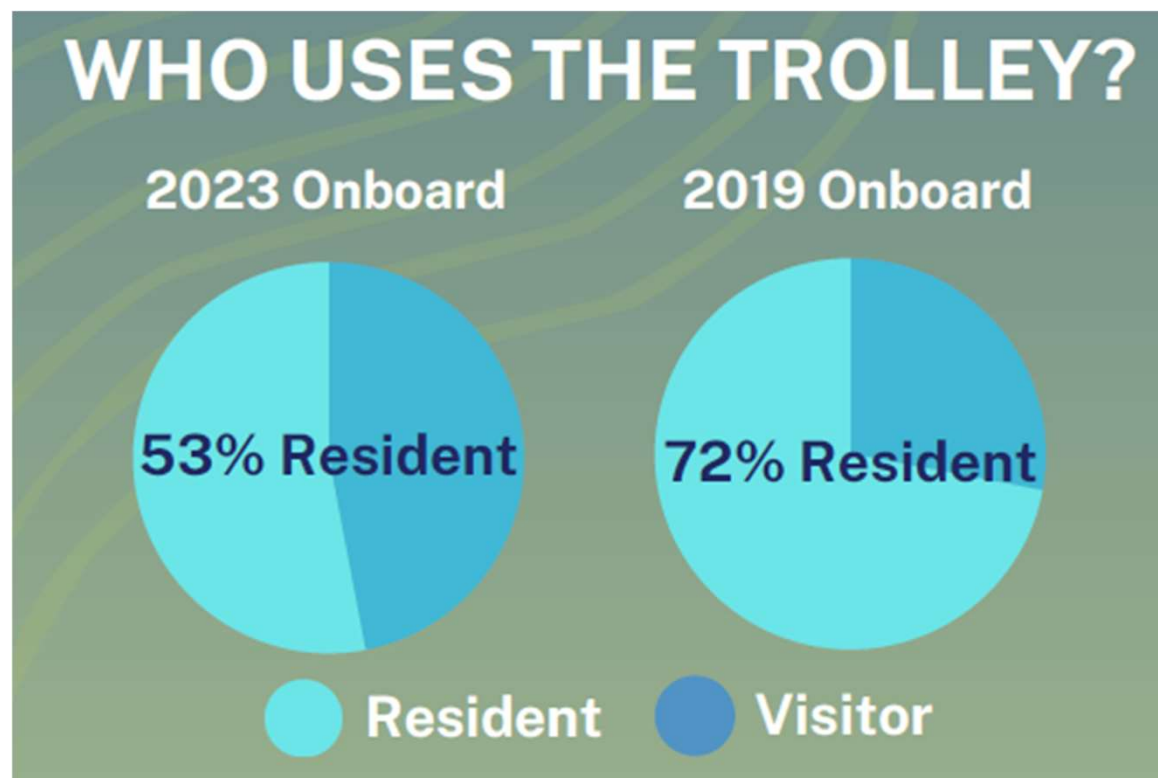


# Trolley Optimization Plan

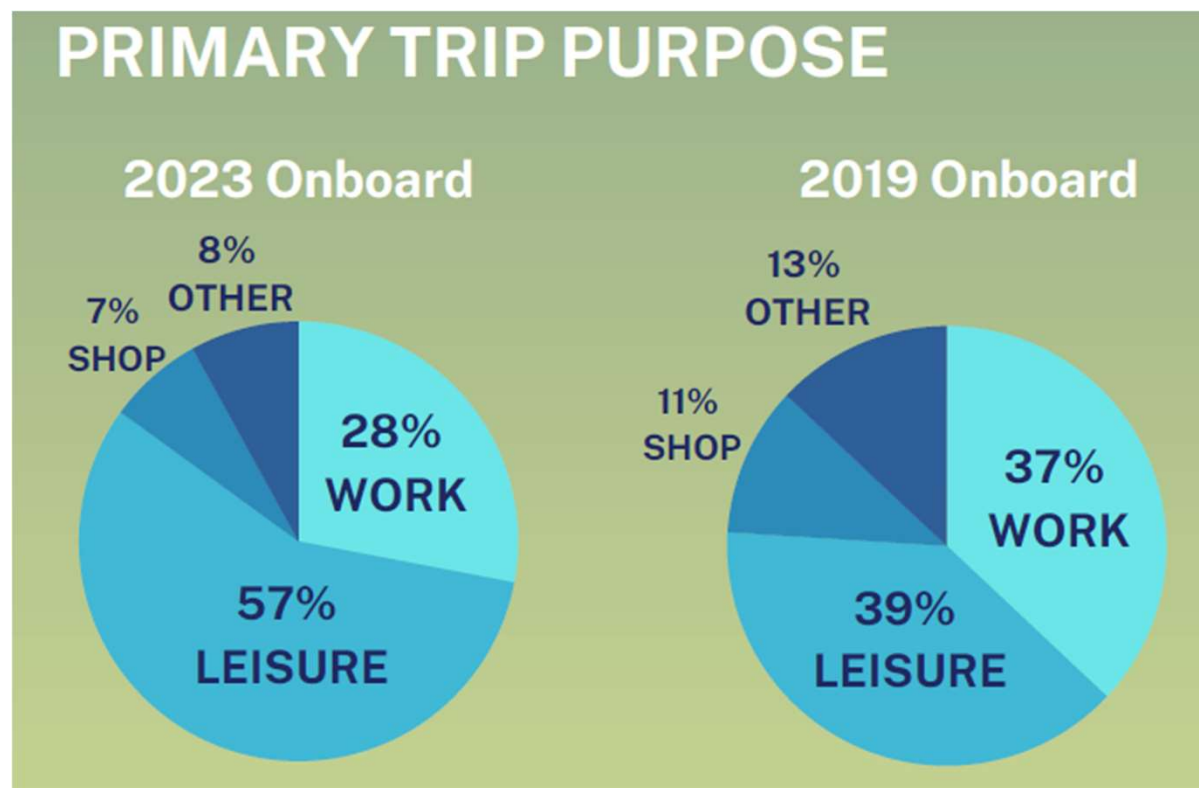
## General Findings

- ▶ Very productive service, high ridership
- ▶ Important part of City's transportation system
- ▶ Receives extremely high satisfaction ratings
- ▶ Good value for City's investment
- ▶ Well managed

## Trolley Optimization Plan - Survey Results



# Trolley Optimization Plan - Survey Results

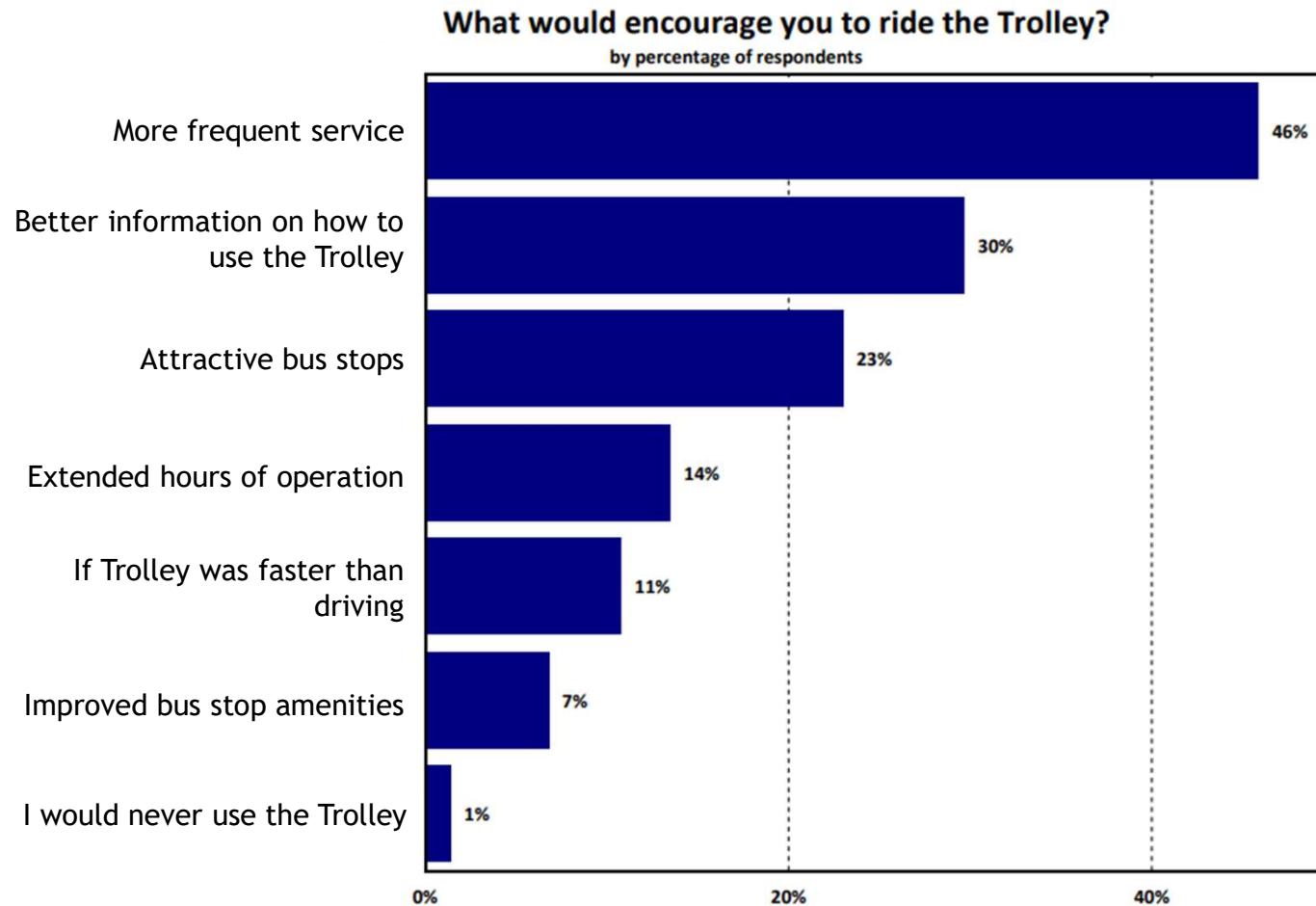


## Trolley Optimization Plan - Survey Results





# Trolley Optimization Plan - Survey Results



# Trolley Optimization Plan

## Opportunities for Improvement

- ▶ Route and service design
- ▶ Reliability and service frequency
- ▶ Vehicles better suited to the service
- ▶ Customer service - better communication with customers

# Trolley Optimization Plan

## Opportunities for Improvement - Service Design

- ▶ Increase service frequency on all four routes
  - ▶ Current frequency inadequate for unscheduled service
  - ▶ Restore service closer to 2019 levels - goal of under 15-minute frequency
  - ▶ Collins Express and South Beach experience overcrowding
- ▶ Simplify loop routes by reducing diversions and turns

# Trolley Optimization Plan

## Opportunities for Improvement - Service Design

### ► North Beach Alternative 2

- + Removes loop pattern in favor of bidirectional service north of 71<sup>st</sup> and to Normandy Isle for more direct trips & faster travel times.
- + Doubles service on Hawthorne and Dickens and removes duplication of service on Collins Ave.
- Peak headways would be 6 minutes more than existing 20 minutes OR requires an additional vehicle to meet current frequencies.





# Trolley Optimization Plan

## Opportunities for Improvement - Service Design

### ► Middle Beach Alternative 1

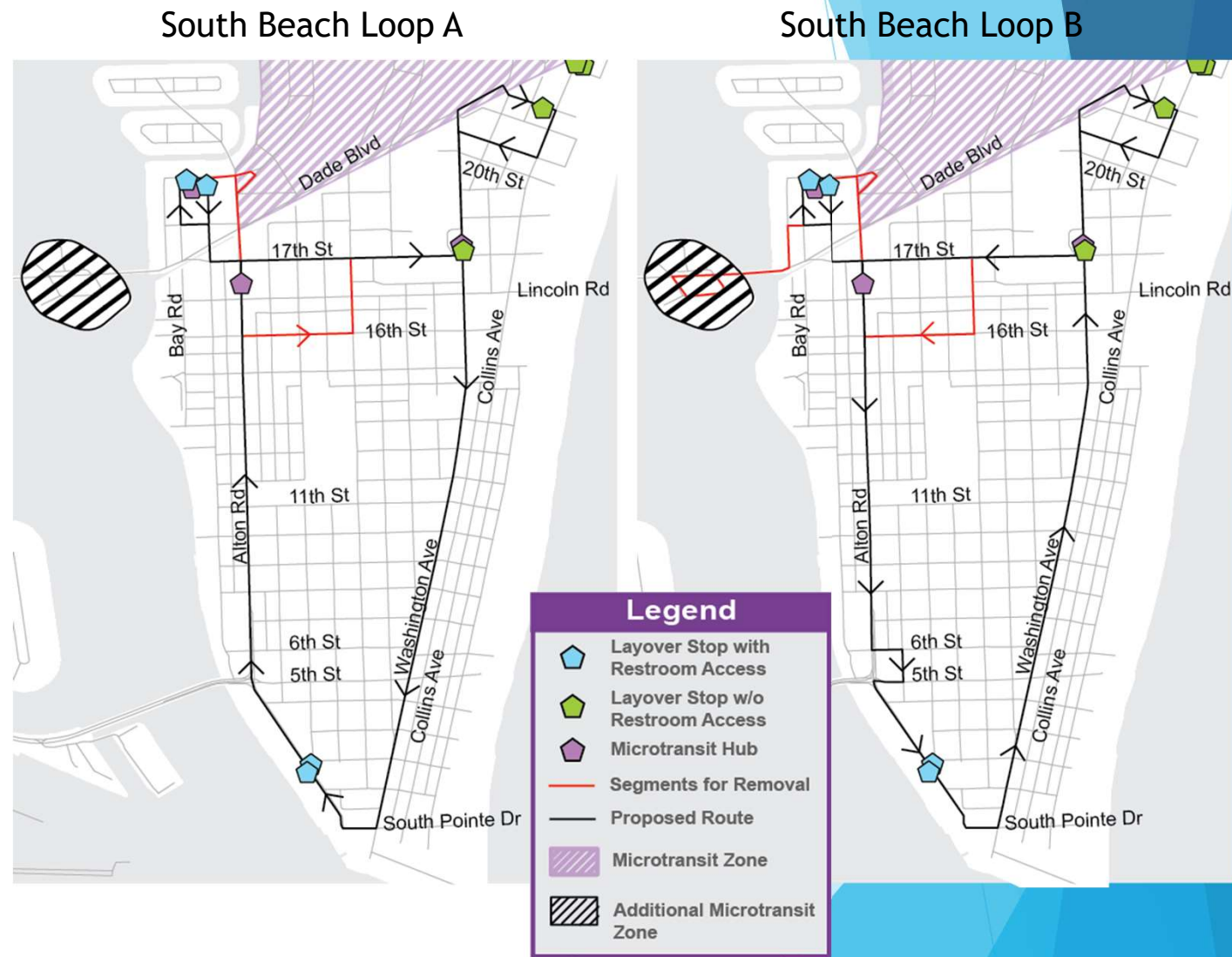
- + Shortens route on south end to remove duplication of service with South Beach Loop.
- + Route improves headways for 13- to 16-minute headways OR allows reallocating one vehicle to another route.
- Fifty percent of existing trips would have their trips served with a one-seat ride. All other trips would require a transfer to or from the areas west of 17<sup>th</sup> Street and Washington Ave.



# Trolley Optimization Plan

## Opportunities for Improvement - Service Design

- ▶ South Beach Loop
  - ▶ Discontinue service to Belle Isle and replace with microtransit
  - ▶ Simplify route by reducing turns

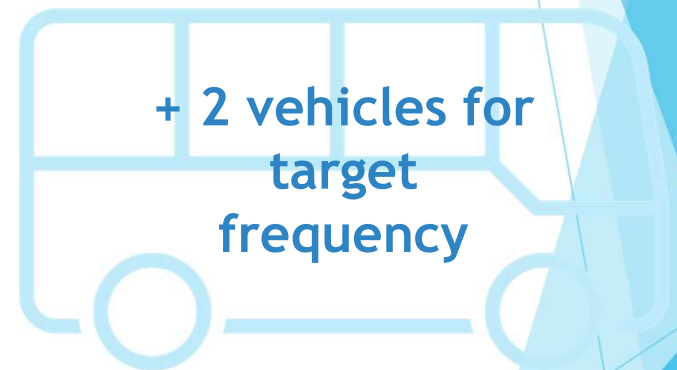


# Trolley Optimization Plan

## Opportunities for Improvement - Service Design

### ► Collins Express

- No routing changes recommended
- Increased frequency the priority through adding vehicles



# Trolley Optimization Plan

## Opportunities for Improvement - Service Design

### ▶ Microtransit

- ▶ Effective in filling fixed route service gaps
  - ▶ Proposed to add Belle Isle into service area
- ▶ Cannot replace fixed route service efficiently





# Trolley Optimization Plan

## Summary of Recommended Service Revisions

| Route           | Daily Ridership | Existing Service |             |         | High Service Level |              |         | Recommended Service Change |              |         |
|-----------------|-----------------|------------------|-------------|---------|--------------------|--------------|---------|----------------------------|--------------|---------|
|                 |                 | Vehicles         | Cost        | Headway | Vehicles           | Cost         | Headway | Vehicles                   | Cost         | Headway |
| North Beach     | 1,140           | 3                | \$1,379,700 | 19      | 6                  | \$2,759,400  | 12      | 5                          | \$2,299,500  | 14      |
| Middle Beach    | 1,540           | 4                | \$1,839,600 | 23      | 6                  | \$2,759,400  | 12      | 5                          | \$2,299,500  | 14      |
| South Beach A   | 3,170           | 4                | \$1,839,600 | 18      | 6                  | \$2,759,400  | 12      | 5                          | \$2,299,500  | 14      |
| South Beach B   |                 | 4                | \$1,839,600 | 21      | 6                  | \$2,759,400  | 12      | 5                          | \$2,299,500  | 14      |
| Collins Express | 3,650           | 6                | \$2,759,400 | 16      | 8                  | \$3,679,200  | 13      | 8                          | \$3,679,200  | 13      |
| Total System    | 9,500           | 21               | \$9,657,900 |         | 32                 | \$14,716,800 |         | 28                         | \$12,877,200 |         |

# Trolley Optimization Plan

## Opportunities for Improvement - Operations

- ▶ Improved headway adherence
  - ▶ Revise schedules for realistic running times
  - ▶ More reliable technology to control operations
  - ▶ Revised operating procedures
- ▶ Revised contract provisions
  - ▶ Constructive penalty clauses
- ▶ Vehicles
  - ▶ More reliable vehicles engineered for transit service
  - ▶ Reduced passenger loading times

# Trolley Optimization Plan

## Opportunities for Improvement - Contractual

- ▶ Current contract is detailed and inclusive
- ▶ Contract management is effective
- ▶ Contract penalties are not effective currently
  - ▶ Revise penalty clauses to be constructive

# Trolley Optimization Plan

## Opportunities for Improvement - Vehicles



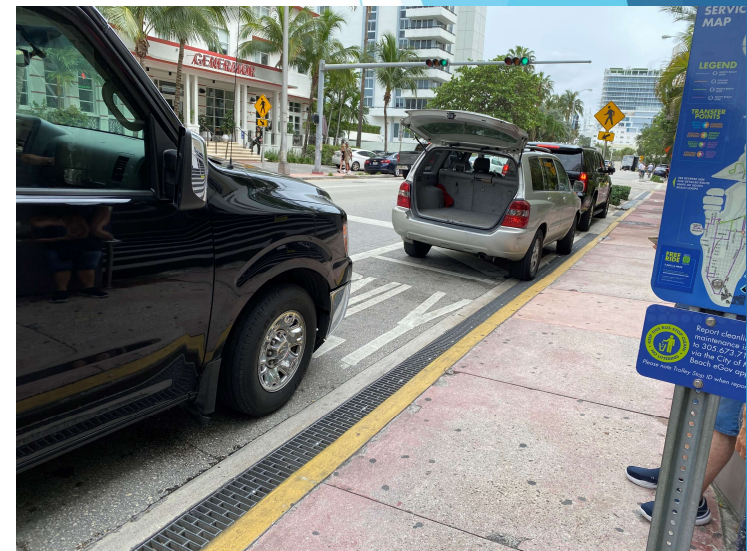
- ▶ Acquire vehicles suited to the service demands
  - ▶ High rate of mechanical road calls
  - ▶ Reduced passenger loading times - 2 door vehicles
  - ▶ Enhanced passenger comfort
- ▶ Continue to pursue grants to acquire vehicles
  - ▶ Financial benefits
- ▶ Short term - revise contractual requirements for vehicles



# Trolley Optimization Plan

## Opportunities for Improvement - Customer Service

- ▶ Require drivers to speak English and Spanish
- ▶ Require more driver communication for unplanned stops
- ▶ Advertise the City of Miami Beach eGov app and future Transit App
- ▶ Address “slow” driving through improved operations
- ▶ Enforce policy on curbing the bus and create SOP for obstacles at the stop
- ▶ Coordinate with other agencies on needs for homeless individuals or unruly passengers



# Trolley Optimization Plan

## Existing and New Performance Measures

- ▶ Reliability
  - ▶ On Time Performance
- ▶ Safety & Security
  - ▶ Mystery Rider reporting on safety practices
  - ▶ Collision rate
- ▶ Cost Effectiveness
  - ▶ Ridership by route
  - ▶ Cost per passenger
- ▶ Customer Service
  - ▶ Complaint responses
  - ▶ Mystery Rider reporting on service standards
  - ▶ Crowding on vehicles
  - ▶ Complaint rate
- ▶ Vehicle Maintenance
  - ▶ Vehicle appearance and cleanliness
  - ▶ Mystery Rider reporting on mechanical reliability
  - ▶ Miles Between Road Calls

# Trolley Optimization Plan

## Opportunities for Improvement - Service Design

### ► North Beach Alternative 1

- + Removes loop pattern in favor of bidirectional service north of 71<sup>st</sup> for more direct trips & faster travel times.
- + Doubles service on Hawthorne and Dickens and removes duplication of service on Collins Ave.
- Peak headways would be 2-3 minutes more than existing 20 minutes OR requires an additional vehicle to meet current frequencies.



# Trolley Optimization Plan

## Opportunities for Improvement - Service Design

### ► Middle Beach Alternative 2

- + Shortens route to 41<sup>st</sup> Street corridor. Route reduction improves headways by 10 minutes OR allows reallocating one vehicle to another route.
- Sixteen percent of existing trips would have their trips served with a one-seat ride. All other trips would require one or two transfers

