

City of Ann Arbor Jurisdictional Transfer Study

February 2024

Agenda

1. Project Background
2. Background Research
3. Benefit-Cost Analysis
4. Overall Results
5. Next Steps
6. Discussion

Project Background

- Four prominent corridors in Ann Arbor are state-owned
- 7.8 total centerline miles (17% within DDA)
- Current design prioritizes motor vehicle traffic
- Design contradicts city goals:
 - VMT Reduction
 - Carbon Neutrality
 - Vision Zero



Project Background

Jurisdictional Transfer

- Transfer ownership to the city
- Complete control of design and operations
- Potential to unlock changes that align with goals and yield benefits



Project Background

Background Research

- Policy and process review
- Funding implications
- Peer city interviews

Benefit-Cost Analysis

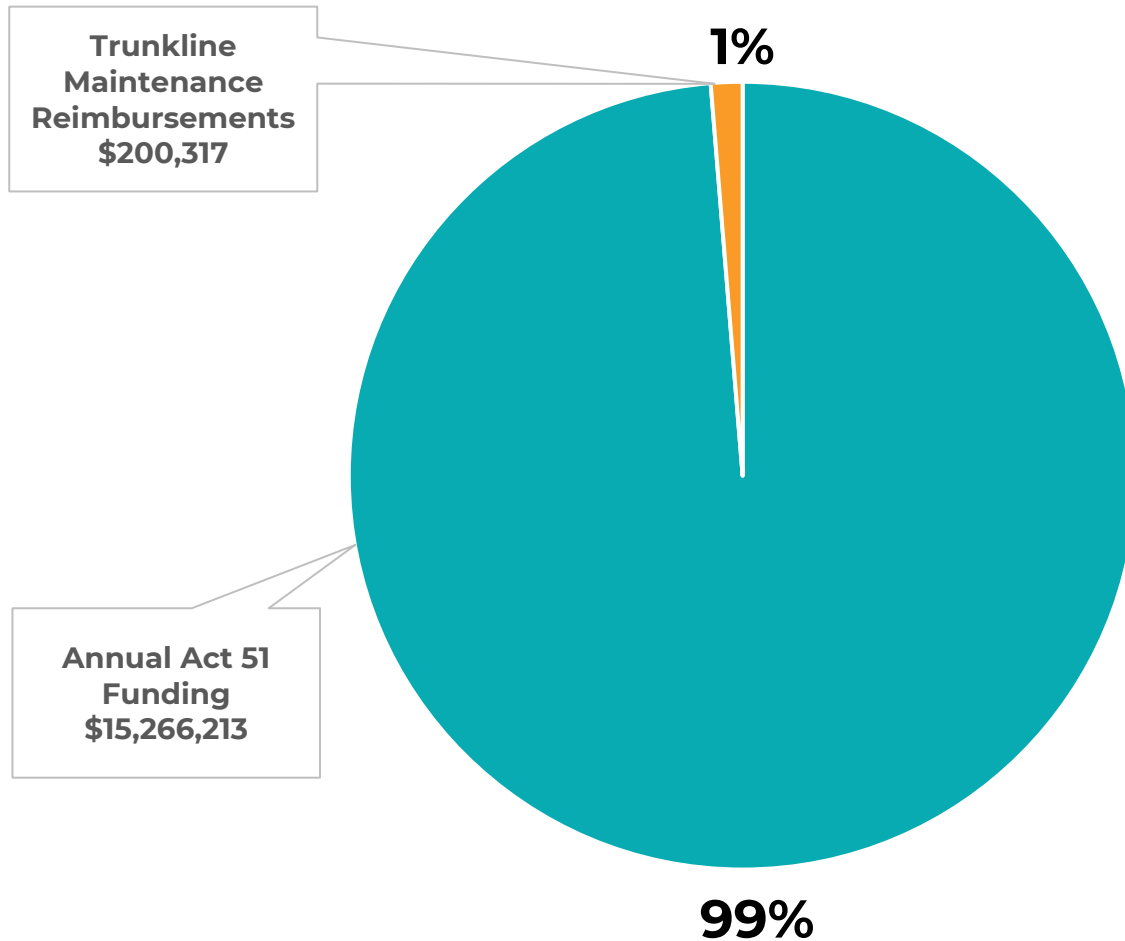
- Development of hypothetical concepts
- Quantitative benefits
- Costs
- Qualitative benefits

Documentation

- Process overview
- Discussion of costs and benefits
- Summary of next steps

Background Research

MDOT Funding for Ann Arbor Roadways (2022)



- Jurisdictional transfer of trunklines would result in a reduction of annual maintenance reimbursement
- Reduction would account for ~1% of annual MDOT roadway funding
- City would be responsible for maintaining 2.5% more roadway mileage

Benefit-Cost Analysis

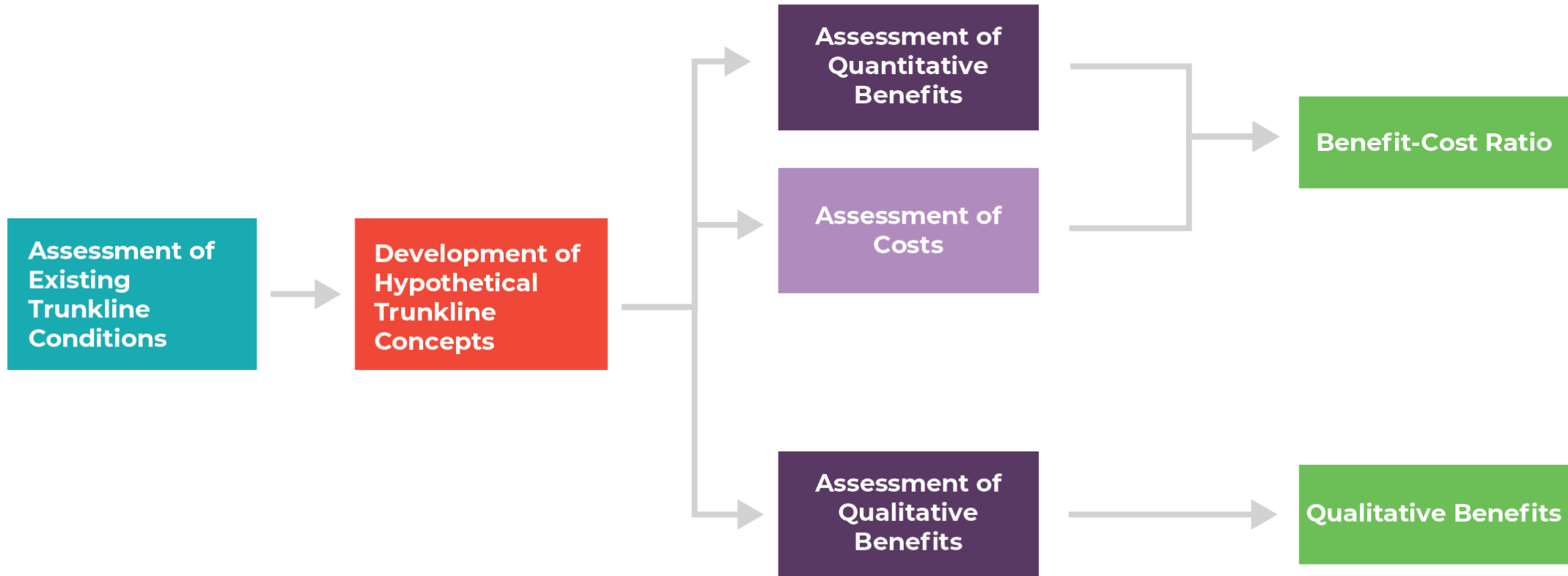
- Benefit-cost analysis was performed for six trunkline segments
- Analysis followed US Department of Transportation Benefit-Cost Analysis Guidance (2023) methodology
- Benefit-cost analysis aims to assess projects by quantifying and comparing benefits and costs in current dollars
- Once benefits and costs are quantified a benefit-cost ratio is calculated
- A benefit-cost ratio **greater than 1** indicates a project where benefits outweigh costs
- A benefit-cost ratio **less than 1** indicates a project where costs outweigh benefits

$$\text{Benefit Cost Ratio} = \frac{\text{Benefits (\$)}}{\text{Costs (\$)}}$$

Segments

- N Main St
(M-14 – Huron)
- Jackson Ave
(I-94 – Huron)
- Huron St
(Jackson – 1st)
- Huron St
(1st – Washtenaw)
- Washtenaw Ave
(Huron – E Stadium)
- Washtenaw Ave
(E Stadium – US-23)

Benefit-Cost Analysis – Flow Chart

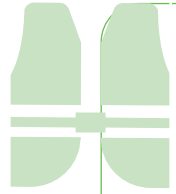


Benefits Recipients

While the BCA monetizes benefits, most are not direct monetary benefits to the City.

Benefit	Direct Monetary Benefit to the City	Indirect Monetary Benefit to the City	Public Benefit
Safety Benefit		✓	✓
Emissions Reduction			✓
Noise Reduction Benefit			✓
Facility Amenity Benefit		✓	✓
Transit Travel Time Savings		✓	✓
Health Benefits		✓	✓
Household Cost Savings		✓	✓
Street Maintenance Savings	✓		
Property Values		✓	✓
Ecosystem Services			✓

Benefit-Cost Analysis



Safety Benefit | **\$16.5M**
Lane Reconfiguration, roundabouts



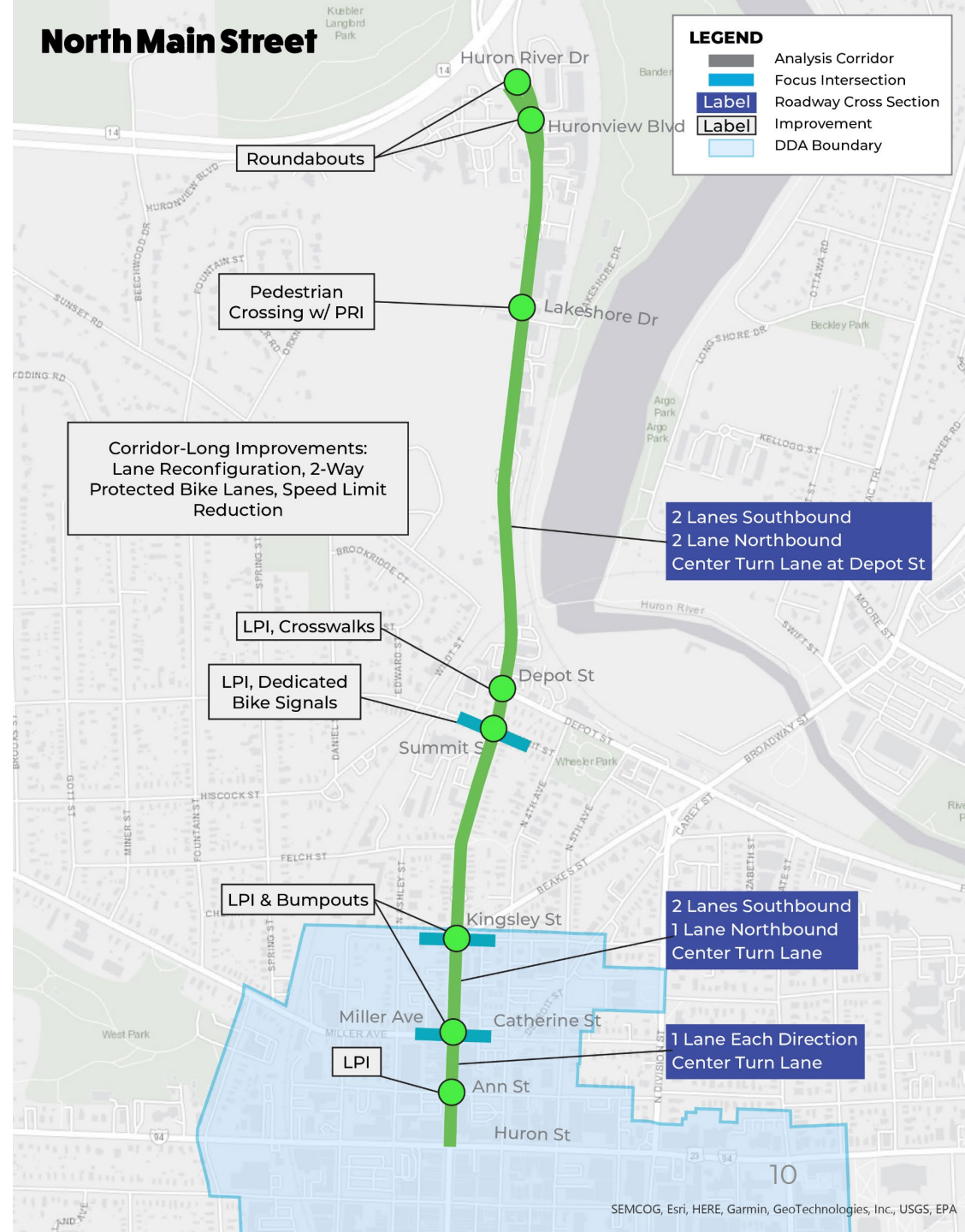
Health Benefit | **\$1.9M**
Protected bike lanes, sidewalk infill



Facility Amenity Benefit | **\$1.0M**
Added crosswalk, protected bike lanes, pedestrian crossing w/ PRI

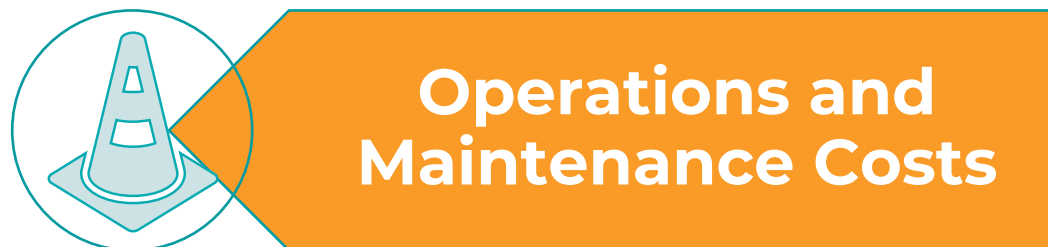


Household Cost Savings | **\$0.1M**
Protected bike lanes, sidewalk infill

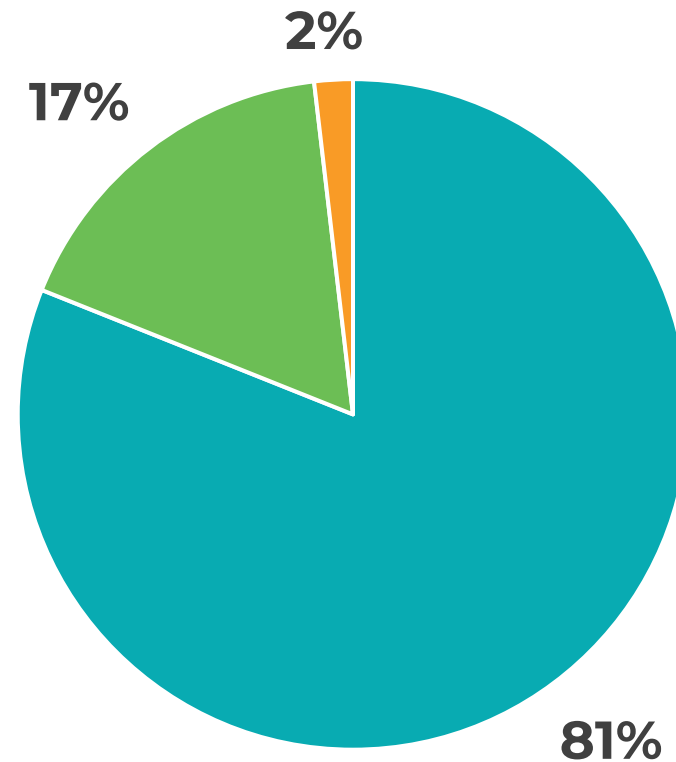


Benefit-Cost Analysis

Costs Estimates



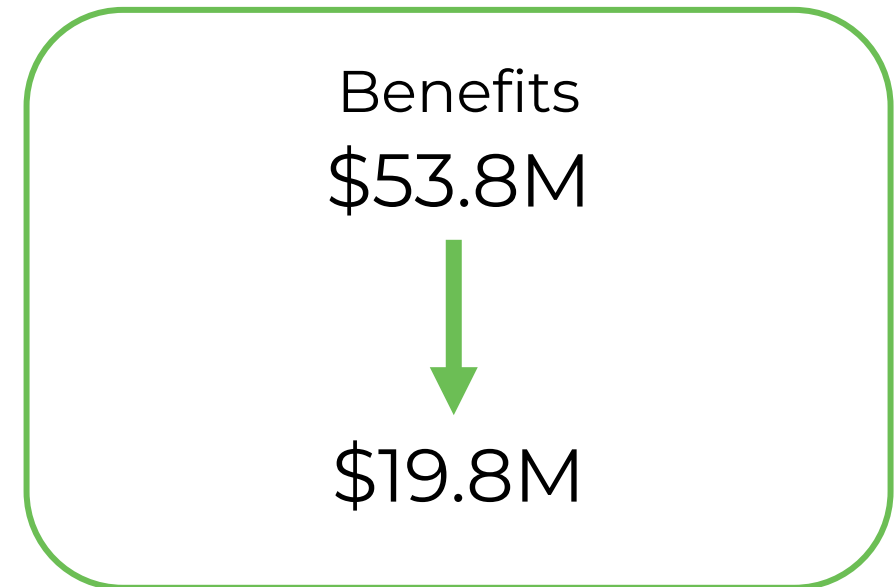
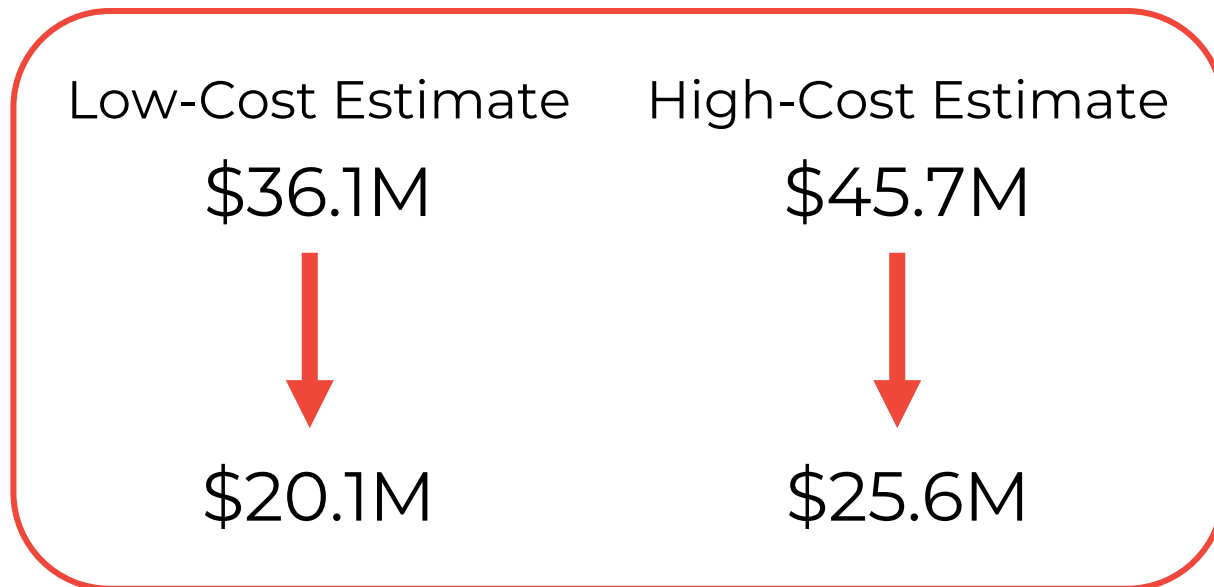
N. Main St Cost Shares



Benefit-Cost Analysis

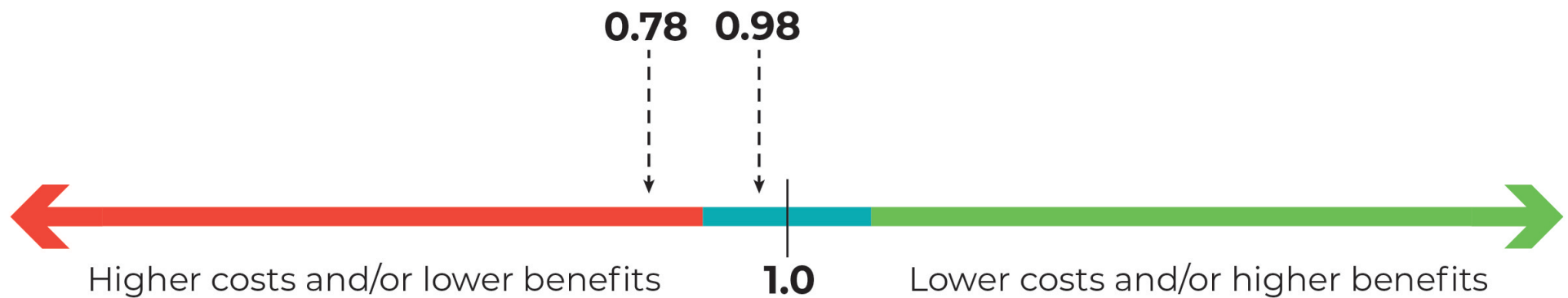
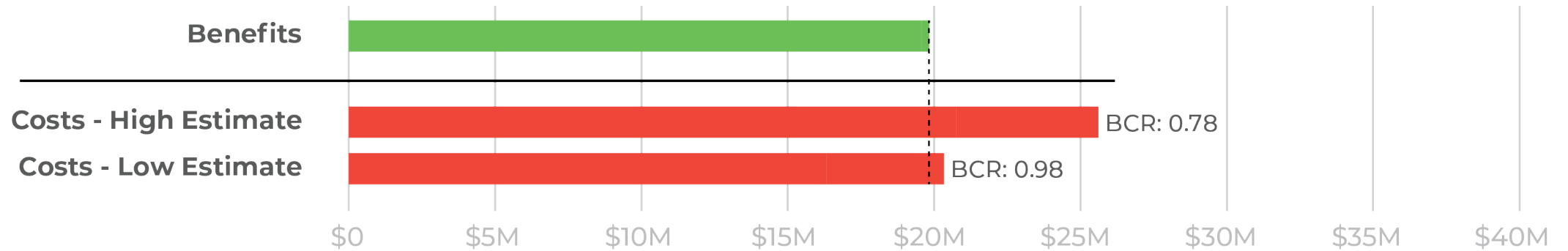
Cost and Benefit Discounting

- All costs and benefits must be brought down to a base year to make an apples-to-apples comparison.
- USDOT guidance is for 7% annual discount to 2021 \$s.



Benefit-Cost Analysis

N. Main St. Benefit-Cost Ratio



Overall Results

Benefit-Cost Ratio by Segment

Segment	Benefit-Cost Ratio (Low-Cost)	Benefit-Cost Ratio (High-Cost)
N Main St (M-14 – Huron)	0.98	0.78
Jackson Ave (I-94 – Huron)	0.02	0.01
Huron St (Jackson – 1 st)	1.88	1.50
Huron St (1 st – Washtenaw)	2.03	1.61
Washtenaw Ave (Huron – E Stadium)	1.55	1.23
Washtenaw Ave (E Stadium – US-23)	1.23	0.97

Jurisdictional Transfer Options

- MDOT will want to maintain a route in and a route out
- *5 potential options available*



Option 1

No Trunklines Transferred

Segment	Benefit-Cost Ratio (Low-Cost)	Benefit-Cost Ratio (High-Cost)
MDOT-Retained		
N Main St (M-14 – Huron)	0.98	0.78
Jackson Ave (I-94 – Huron)	0.02	0.01
Huron St (Jackson – 1 st)	1.88	1.50
Huron St (1 st – Washtenaw)	2.03	1.61
Washtenaw Ave (Huron – E Stadium)	1.55	1.23
Washtenaw Ave (E Stadium – US-23)	1.23	0.97



Option 2

Jackson/Huron to Main St Transferred

Segment	Benefit-Cost Ratio (Low-Cost)	Benefit-Cost Ratio (High-Cost)
Transferred to City		
Jackson Ave (I-94 – Huron)	0.02	0.01
Huron St (Jackson – 1 st)	1.88	1.50
MDOT-Retained		
N Main St (M-14 – Huron)	0.98	0.78
Huron St* (1 st – Washtenaw)	2.03	1.61
Washtenaw Ave (Huron – E Stadium)	1.55	1.23
Washtenaw Ave (E Stadium – US-23)	1.23	0.97

*2 Blocks of Huron (1st – Washtenaw) Segment Transferred to City



Option 3

Main St Transferred

Segment	Benefit-Cost Ratio (Low-Cost)	Benefit-Cost Ratio (High-Cost)
Transferred to City		
N Main St (M-14 – Huron)	0.98	0.78
MDOT-Retained		
Jackson Ave (I-94 – Huron)	0.02	0.01
Huron St (Jackson – 1st)	1.88	1.50
Huron St (1st – Washtenaw)	2.03	1.61
Washtenaw Ave (Huron – E Stadium)	1.55	1.23
Washtenaw Ave (E Stadium – US-23)	1.23	0.97

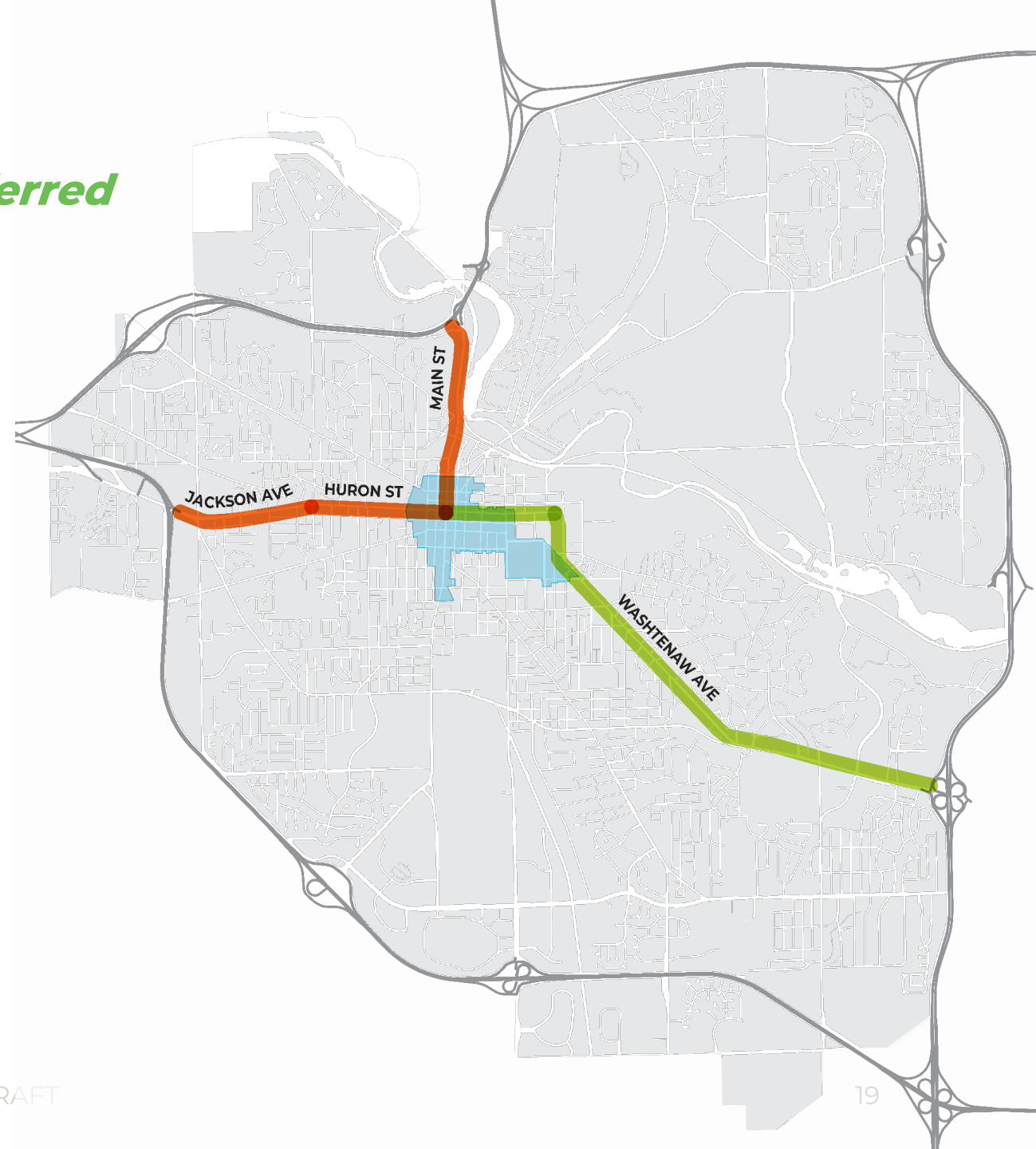


Option 4

Washtenaw/Huron to Main St Transferred

Segment	Benefit-Cost Ratio (Low-Cost)	Benefit-Cost Ratio (High-Cost)
Transferred to City		
Huron St* (1 st – Washtenaw)	2.03	1.61
Washtenaw Ave (Huron – E Stadium)	1.55	1.23
Washtenaw Ave (E Stadium – US-23)	1.23	0.97
MDOT-Retained		
Jackson Ave (I-94 – Huron)	0.02	0.01
Huron St (Jackson – 1 st)	1.88	1.50
N Main St (M-14 – Huron)	0.98	0.78

*2 Blocks of Huron (1st – Washtenaw) Segment Retained by MDOT



Option 5

All Trunklines Transferred

Segment	Benefit-Cost Ratio (Low-Cost)	Benefit-Cost Ratio (High-Cost)
Transferred to City		
N Main St (M-14 – Huron)	0.98	0.78
Jackson Ave (I-94 – Huron)	0.02	0.01
Huron St (Jackson – 1 st)	1.88	1.50
Huron St (1 st – Washtenaw)	2.03	1.61
Washtenaw Ave (Huron – E Stadium)	1.55	1.23
Washtenaw Ave (E Stadium – US-23)	1.23	0.97



Next Steps

1. Council direction on jurisdictional transfer
 - Determination of which trunklines to propose transferring
 - If “proceed”, continue to 2
2. Approach MDOT with a proposal
 - Geographic extents of trunklines that City desires to take over
 - Cost estimates to bring these trunklines to a state of good repair
 - Estimated \$82M for 5-year state of good repair funds for all trunklines*

**State of good repair estimate, not included benefit-cost analysis cost estimates*

Next Steps

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 - Estimated \$82M for 5-year state of good repair funds for all trunklines*
3. Negotiate with MDOT
 - Estimated state of good repair funds to serve as a starting point
 - Both parties must agree on necessary capital improvements before transfer can occur

**State of good repair estimate, not included benefit-cost analysis cost estimates*

Next Steps

1. Council direction on jurisdictional transfer
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3. Negotiate with MDOT
 - Estimated state of good repair funds to serve as a starting point
 - Both parties must agree on necessary capital improvements before transfer can occur
4. Draft a Memorandum of Understanding (MOU)
 - Documents all conditions of the transfer
5. Pass resolution in City Council to accept terms of MOU
6. Finalize and sign MOU
7. Complete Transfer

**State of good repair estimate, not included benefit-cost analysis cost estimates*

State of Good Repair Estimate

- Estimates for Jackson, Huron, and Washtenaw follow MDOT 23-26 TIP Milling and One Course or Two Course Asphalt Overlay
- Estimate for N. Main uses existing MDOT cost estimate of \$21.6 plus added design, construction and inspection costs
 - N. Main was an existing programmed street for the state
- Cost estimates are meant to serve as a starting point for negotiations with MDOT

Corridor	Lane Miles	Treatment Type	Cost (\$/Lane Mile)	Total Cost
N Main	5.24	Reconstruct	--	\$30,800,000
Jackson: I-94 to Huron	3.76	Resurface	\$ 600 k	\$3,478,000
Huron: Jackson to 1st	3.00	Resurface	\$ 600 k	\$2,775,000
Huron: 1st to N Main	0.65	Resurface	\$ 600 k	\$601,000
Huron: N Main Street to Division	1.20	Rehabilitate	\$ 1.5 M	\$2,775,000
Huron: Division to Washtenaw	2.12	Rehabilitate	\$ 1.5 M	\$4,903,000
Washtenaw: Huron to Stadium	7.84	Rehabilitate	\$ 1.5 M	\$18,132,000
Washtenaw: Stadium - US 23	8.05	Rehabilitate	\$ 1.5 M	\$18,618,000
Total				\$82,083,000

* All costs include 3% inflation escalation to 2028 \$s

State of Good Repair Impact on BCA

- Benefit-cost analysis is blind to who is responsible for the costs
- If the potential dollars received from MDOT are included as a negative cost the adjusted B/C are shown to the right.

Segment	Adjusted Benefit-Cost Ratio (High-Cost)
N Main St (M-14 – Huron)	3.94
Jackson Ave (I-94 – Huron)	0.02
Huron St (Jackson – 1 st)	2.38
Huron St (1 st – Washtenaw)	2.55
Washtenaw Ave (Huron – E Stadium)	1.98
Washtenaw Ave (E Stadium – US-23)	1.51

Qualitative Considerations

- City would have complete control over roadway design, maintenance, operations and function.
- Potential changes would move Ann Arbor closer to Vision Zero, VMT reduction and carbon neutrality goals.

- Jurisdictional transfer and streetscape improvements come at real costs.
- These costs include both Initial capital costs and ongoing costs/responsibility to maintain



Thank You

Q & A

February 2024