



Transportation Master Plan

Transportation Scenarios

August 10, 2020



Transportation Master Plan



TMP Vision

"Kelowna will be a city with vibrant urban centres where people and places are conveniently connected by diverse transportation options that help us transition from our car-centric culture"



TMP Goals



Budget Allocator Results

1/4 Decreased Budget

3/4 of Respondents Increased Budget

1/2 Increased 0 to 5%

1/4 Increased 6 to 10%

Median Submission: **\$56M** Annual Budget
~0.2% Average Annual Property
Tax Increase



Estimated Tax Increase

City of Kelowna

Coordination with other Plans

- ▶ 2040 Official Community Plan & 20 Year Servicing Plan
 - ▶ Part of a coordinated series of reports to help determine the total cost to service the 2040 OCP
- ▶ Concurrent planning efforts:
 - ▶ Regional Transportation Plan (draft)
 - ▶ Regional Bicycling and Trails Master Plan (draft)
 - ▶ Okanagan Gateway Transportation Study
- ▶ Existing Plans

Option Evaluation

- ▶ Evaluated over 400 options (projects, policies, programs) from existing plans, public engagement, and existing and future conditions analysis
 - ▶ Policy Alignment (Imagine Kelowna, OCP, TMP Vision)
 - ▶ Benefits
 - ▶ Costs
- ▶ Methodology
 - ▶ Multiple Accounts Evaluation
 - ▶ Travel Demand Model
 - ▶ Net Benefit Analysis

Technical Analysis
+
Public Input
= **Scenarios**

Multiple Account Evaluation

▶ Benefits

- ▶ Distance driven (VKT)
- ▶ Travel mode share
- ▶ Travel time
- ▶ Connectivity
- ▶ Transit access
- ▶ Greenhouse gas emissions (GHGs)
- ▶ Travel choice
- ▶ Safety
- ▶ Number of people

▶ Policy Alignment

- ▶ Imagine Kelowna
- ▶ 2040 OCP Pillars
- ▶ TMP Goals

▶ Costs

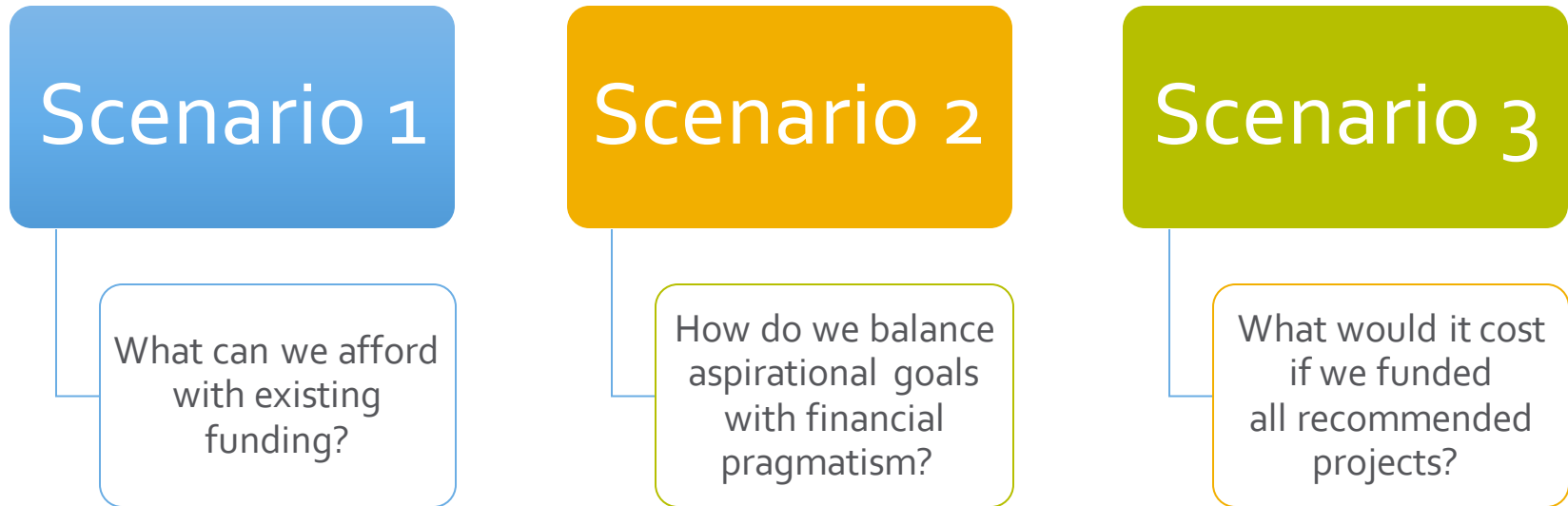
- ▶ Capital
- ▶ Operating

Travel Demand Model & Net Benefit Analysis

- ▶ More than 50 projects / project combinations modeled
- ▶ Net Benefit Analysis
 - ▶ Time savings
 - ▶ Safety
 - ▶ GHGs
 - ▶ Capital & Operating Costs
 - ▶ User costs

Illustrative example only

Scenario Development



- ▶ Scenarios developed using a financial lens
- ▶ Key question: what is the **desired level of funding** for transportation over the next 20 years?

Full TMP Scenario Report Online

<https://kelowna.ca/tmp-scenarios-report>

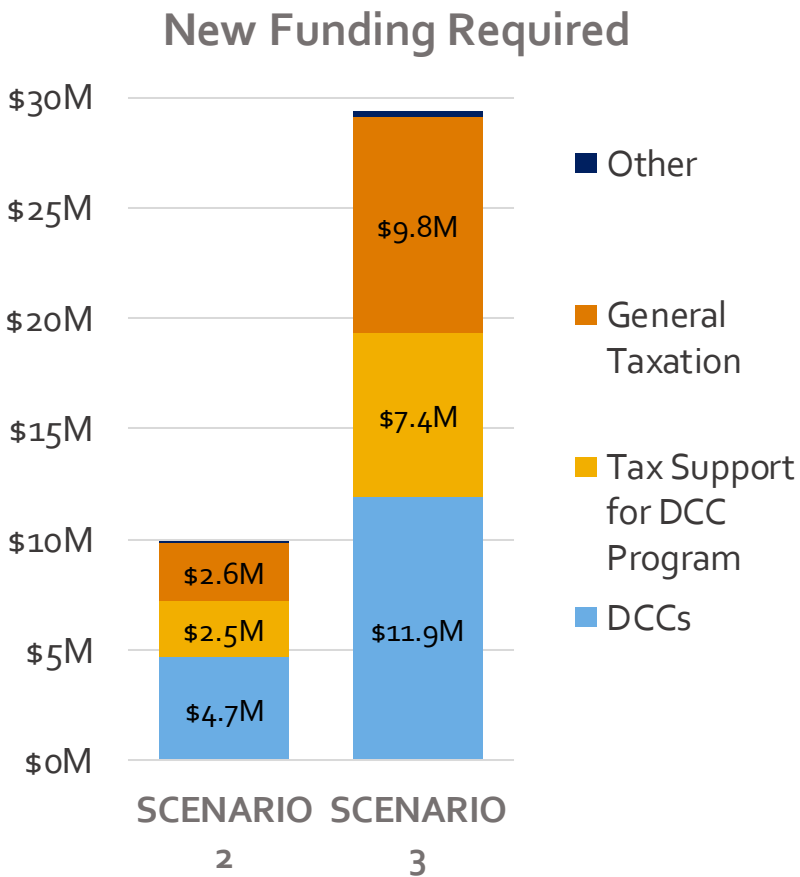
- ▶ Details of methodology
- ▶ Scenario content
 - ▶ Scenarios-at-a-glance (recommended projects)
 - ▶ Scenario maps
 - ▶ Project descriptions
- ▶ Scenario comparison
 - ▶ Financial summary
 - ▶ TMP Goal achievement
 - ▶ Outcomes / service levels

Financial Summary

	Scenario 1	Scenario 2	Scenario 3
Total Budget (20 Years)	\$960 M	\$1.16 B	\$1.55 B
Total Budget (Annual)	\$47.9 M (+0 %)	\$57.8 M (+20%)	\$77.3 M (+60%)
<i>Capital</i>	<i>\$25.2 M</i>	<i>\$32.9 M</i>	<i>\$49.4 M</i>
<i>Operating</i>	<i>\$22.8 M</i>	<i>\$25.2 M</i>	<i>\$28.1 M</i>
Partner Total (20 Years)	\$215 M	\$250 M	\$310 M
DCC Revenue Increase	0.0% / yr	0.3% / yr	4.5% / yr
Property Tax Increase	0.0% / yr	0.2% / yr	0.7% / yr

- ▶ Costs are high-level estimates
- ▶ Revenue increases are shown as annual increases (percent increase each year over the 20 year planning horizon)

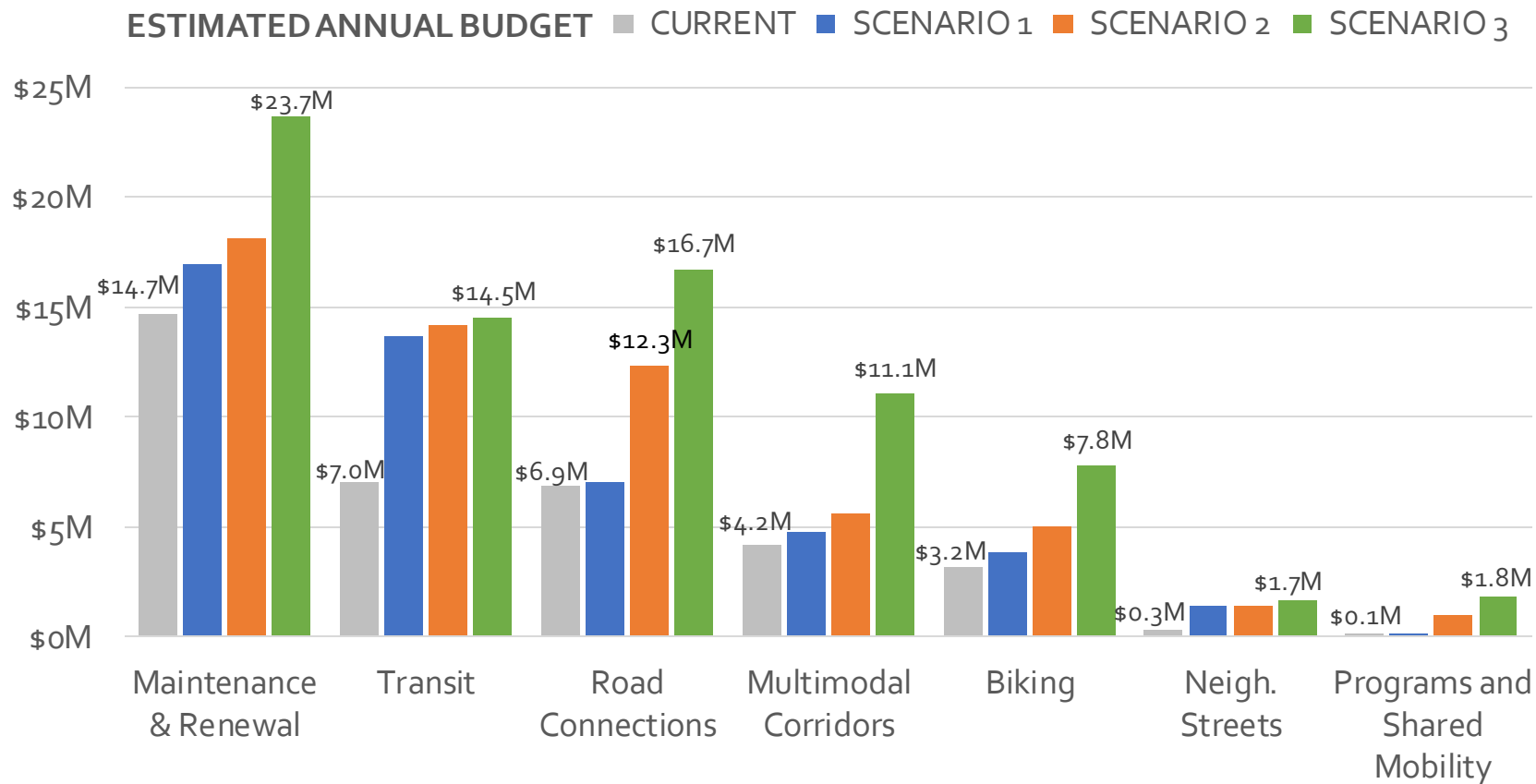
Funding Sources



▶ Est. Annual Increases for Scenario 2

- ▶ Property Tax - **0.2% / yr**
- ▶ DCC Revenue - **0.3% / yr**

Funding by Category



City of Kelowna

Spotlight on Transit: 'Big Moves'

- ▶ Dedicated transit lanes on Harvey (RTP project)
- ▶ Better & more reliable service (~45% increase in service hours)
- ▶ Transit priority infrastructure (Scenarios 2 and 3 only)
- ▶ Improved exchanges
- ▶ New transit garage
- ▶ Leverages external funding sources
~ \$200 M



TRANSPORTATION MASTER PLAN - ROAD CONNECTIONS AND MULTIMODAL CORRIDORS

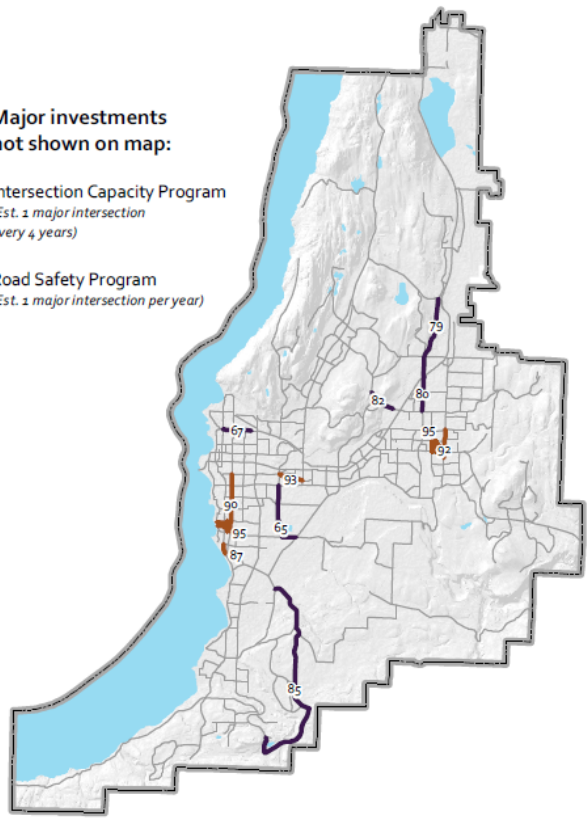
SCENARIO 1

- Road Connections in Scenario 1
- Multimodal Corridors in Scenario 1

Major investments not shown on map:

Intersection Capacity Program
(Est. 1 major intersection every 4 years)

Road Safety Program
(Est. 1 major intersection per year)



Estimated Annual Funding:

Road Connections - **\$7M**
Multimodal Corridors - **\$5M**

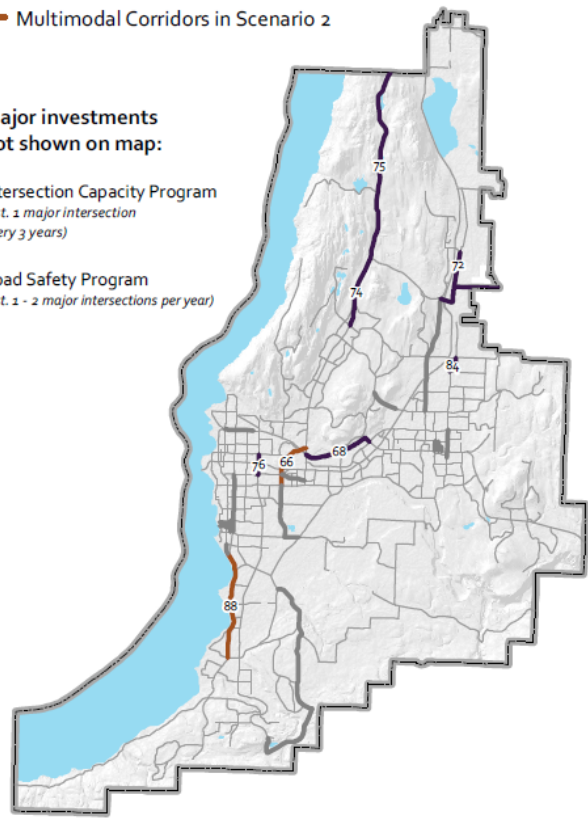
SCENARIO 2

- Projects in Scenario 1
- Road Connections in Scenario 2
- Multimodal Corridors in Scenario 2

Major investments not shown on map:

Intersection Capacity Program
(Est. 1 major intersection every 3 years)

Road Safety Program
(Est. 1 - 2 major intersections per year)



Estimated Annual Funding:

Road Connections - **\$12M**
Multimodal Corridors - **\$6M**

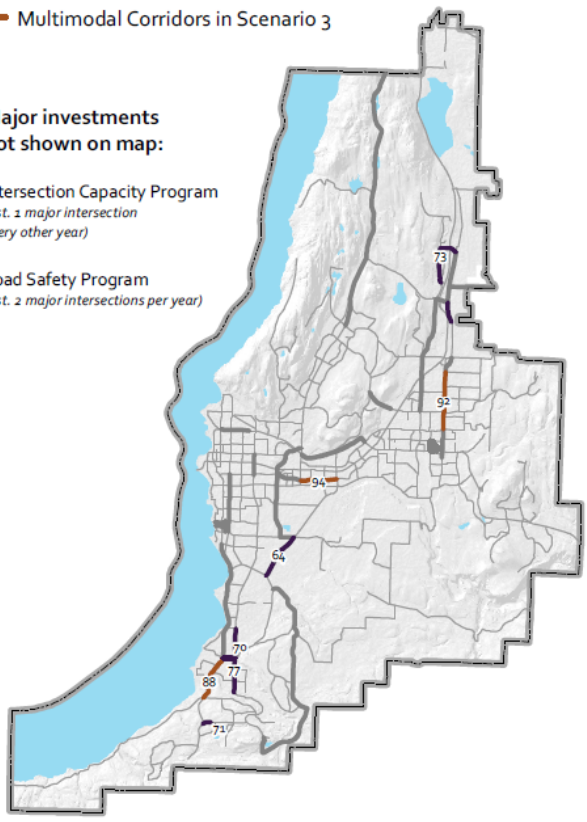
SCENARIO 3

- Projects in Scenario 1 + 2
- Road Connections in Scenario 3
- Multimodal Corridors in Scenario 3

Major investments not shown on map:

Intersection Capacity Program
(Est. 1 major intersection every other year)

Road Safety Program
(Est. 2 major intersections per year)



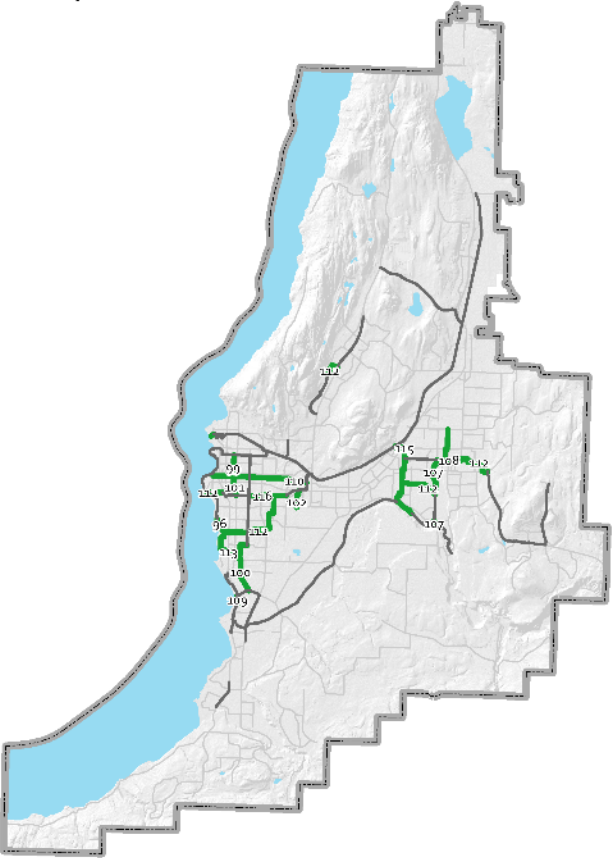
Estimated Annual Funding:

Road Connections - **\$16M**
Multimodal Corridors - **\$11M**

TRANSPORTATION MASTER PLAN - BIKING

SCENARIO 1

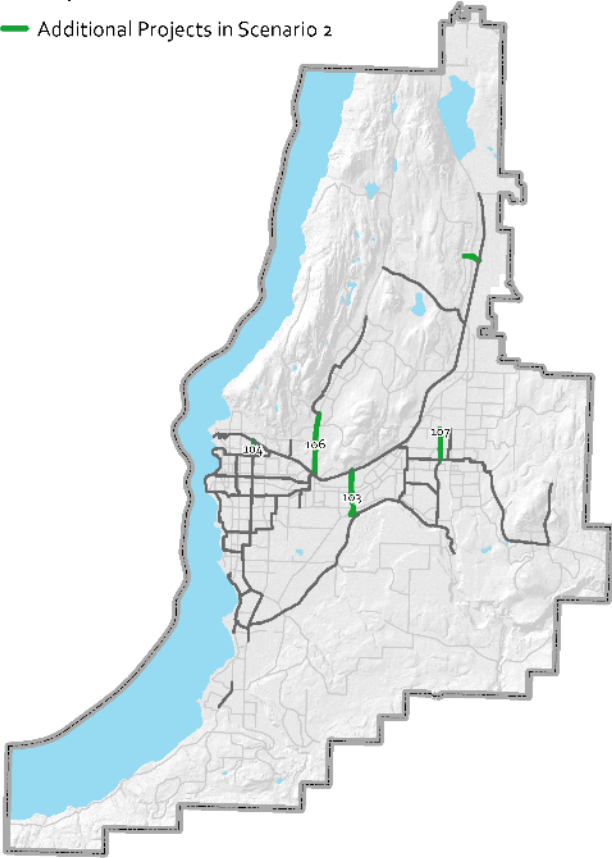
Primary Bike Network
— Projects in Scenario 1



Estimated Annual Funding:
Primary Bike Network - \$3.75M

SCENARIO 2

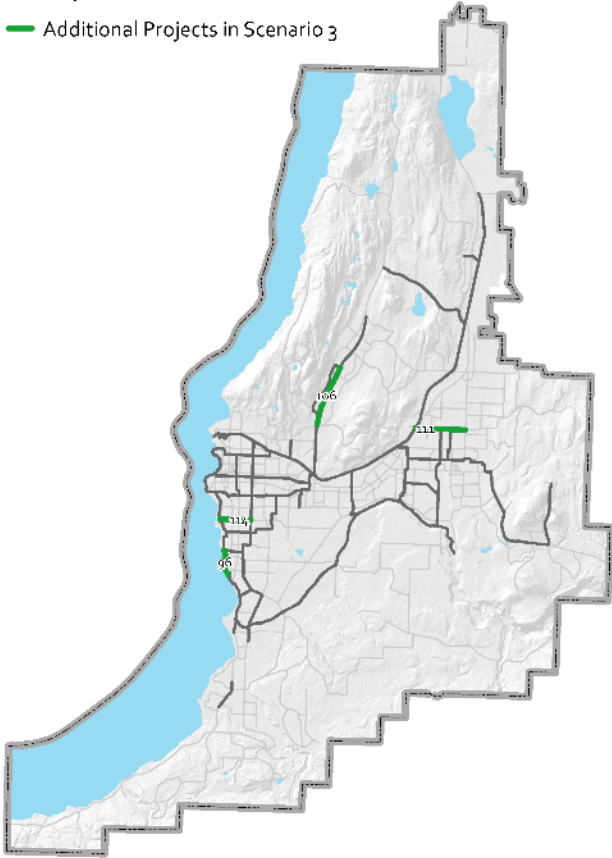
Primary Bike Network
— Projects in Scenario 1
— Additional Projects in Scenario 2



Estimated Annual Funding:
Primary Bike Network - \$5M

SCENARIO 3

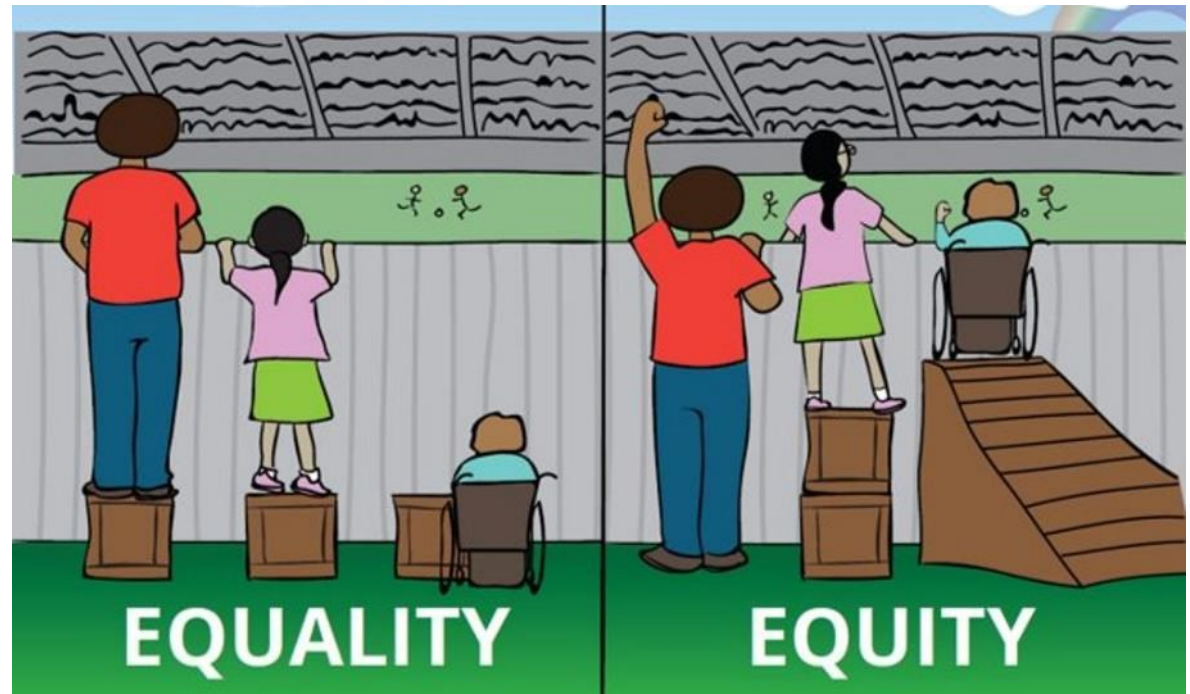
Primary Bike Network
— Projects Scenario 1 + 2
— Additional Projects in Scenario 3



Estimated Annual Funding:
Primary Bike Network - \$7.75M

TMP Scenarios: Equity Analysis







- Number of people served
- Geographic distribution of investments
- Population groups served
 - All ages
 - All incomes
 - All abilities



TMP Goal Performance

TMP Goal	SCENARIO 1 (+0% Funding)	SCENARIO 2 (+20% Funding)	SCENARIO 3 (+60% Funding)
Improve safety 	Somewhat better than today	Moderately better than today	Much better than today
Foster a growing economy 	Somewhat better than today	Moderately better than today	Much better than today
Improve travel choices 	Somewhat better than today	Moderately better than today	Much better than today
Enhance urban centres 	Somewhat better than today	Moderately better than today	Much better than today
Support livable communities 	Somewhat better than today	Moderately better than today	Much better than today
Be innovative and flexible 	Somewhat better than today	Moderately better than today	Much better than today

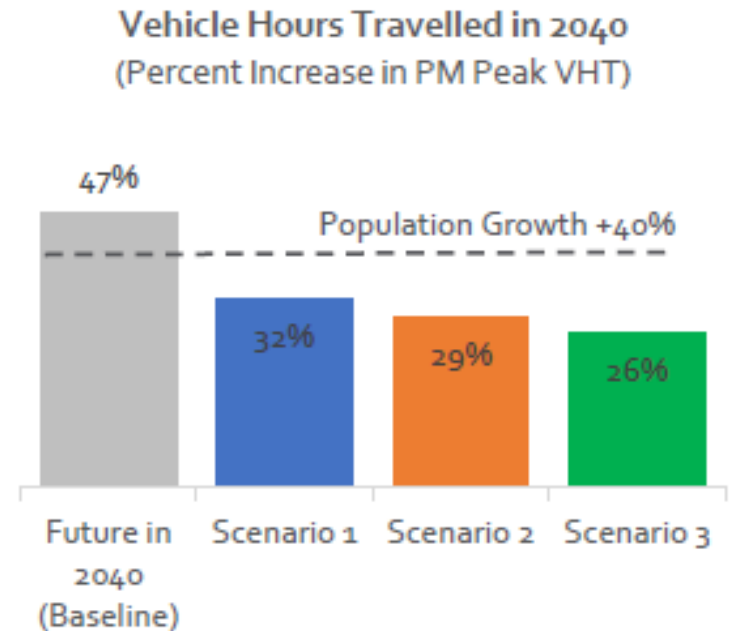
TMP Goal Performance

TMP Goal	SCENARIO 1 (+0% Funding)	SCENARIO 2 (+20% Funding)	SCENARIO 3 (+60% Funding)
Enhance travel affordability 	Somewhat better than today	Moderately better than today	Much better than today
Improve health 	Somewhat better than today	Moderately better than today	Much better than today
Promote inclusive transportation 	Somewhat better than today	Moderately better than today	Much better than today
Ensure value for public investment 	Much better than today	Moderately better than today	Somewhat better than today
Optimize travel times 	Much worse than today	Moderately worse than today	Somewhat worse than today
Protect the environment 	Much worse than today	Moderately worse than today	Moderately worse than today

TMP Goal: Optimize Travel Times



- ▶ Total VHT projected to increase
- ▶ The scenarios are able to reduce the amount of that increase



TMP Goal: Optimize Travel Times

- ▶ Average driving trip estimated to be 1.5 minutes longer by 2040 in all scenarios

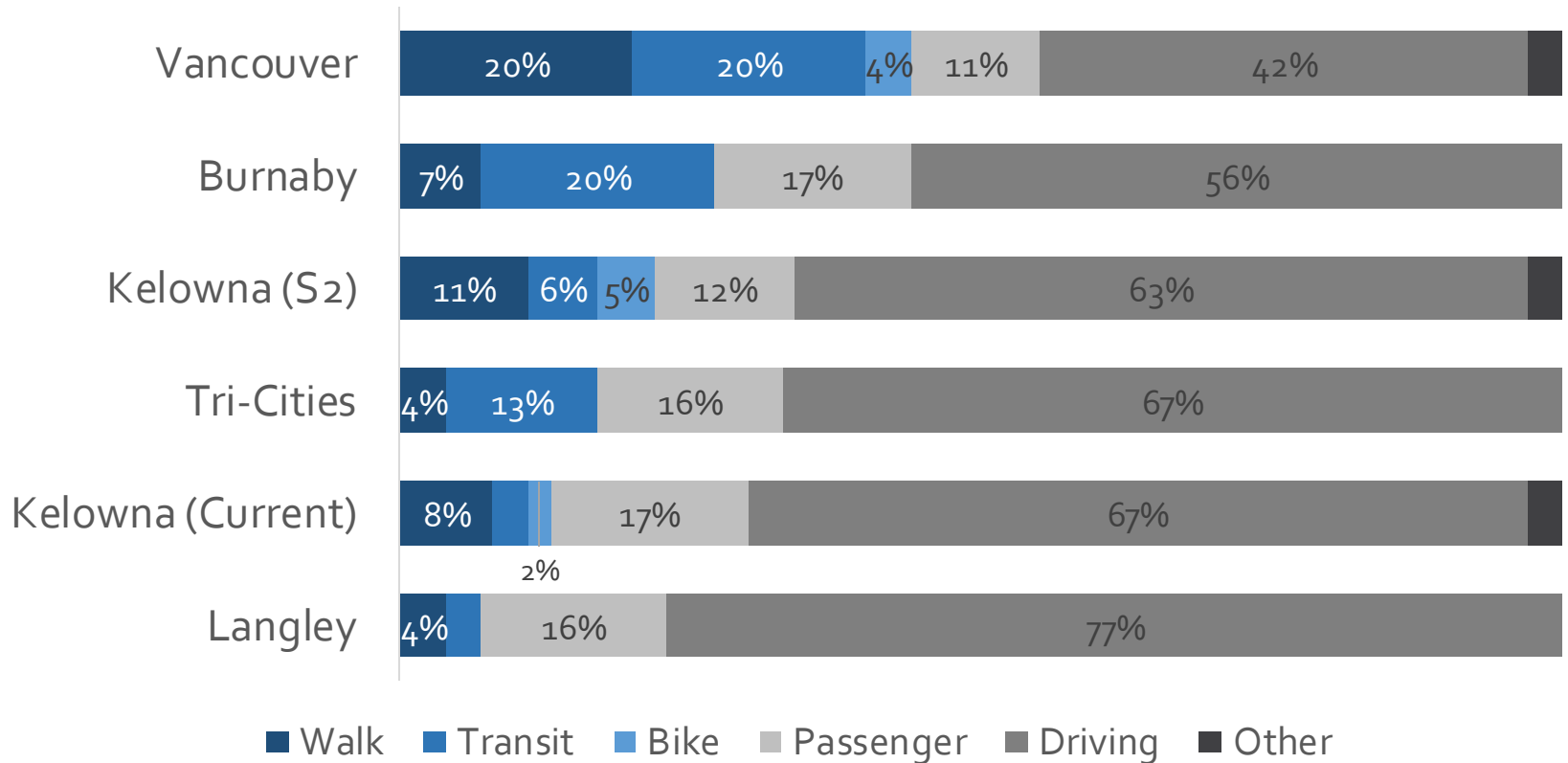
Current and Estimated Future Driving Travel Times in the PM Peak (minutes)

Route	Current	Scenario 1	Scenario 2	Scenario 3
Downtown to Lake Country (via Glenmore)	27.8	32.3	32.5	31.3
Downtown to Lake Country (via Hwy 97)	26.8	32.0	32.5	30.8
Downtown to Black Mountain	22.5	26.3	27.0	26.5
Downtown to Kettle Valley	18.8	22.5	22.8	22.5
Capri to Glenmore	9.5	12.0	12.0	12.3
Downtown to Rutland	15.8	19.3	20.0	19.5
Downtown to Pandosy	7.0	8.8	9.3	9.3
Rutland to UBCO	12.0	13.0	13.3	13.3
Landmark to Capital News Centre	9.3	12.5	12.5	12.5
KGH to Farmers Market	10.0	12.0	11.8	11.3



TMP Goal: Protect the Environment

Mode Share



Sources: 2017 Translink Trip Diary (4PM Mode Share), Central Okanagan Regional Transportation Model



TMP Goal: Protect the Environment

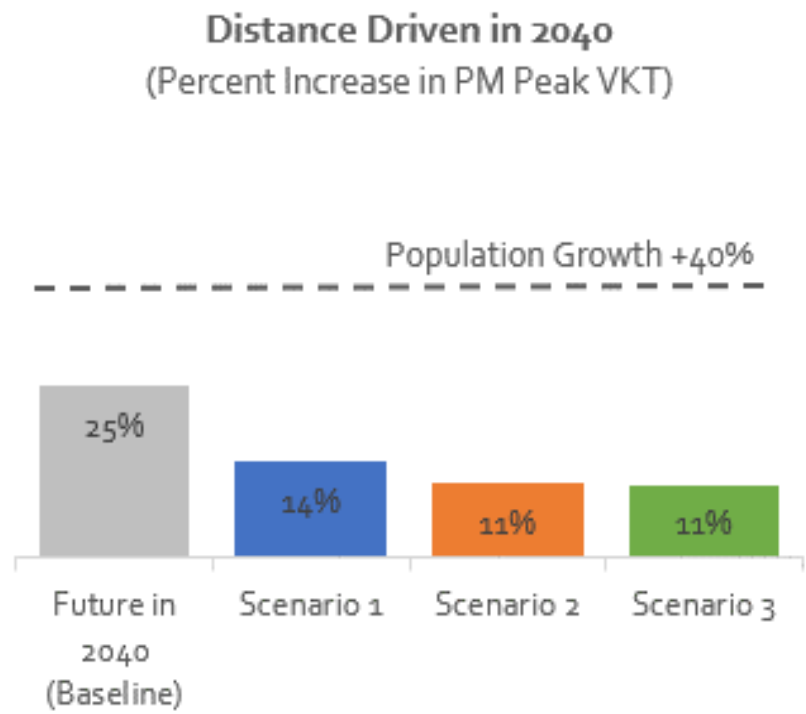
Mode Share and Distance Driven:

- ▶ Distance driven (VKT) is a better measure of emissions and congestion than mode share
- ▶ Relationship between traffic volumes and delay is not linear
 - ▶ Small shifts in volume can have a big impact on congestion

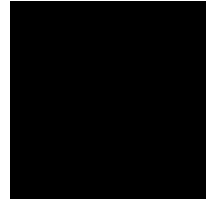


TMP Goal: Protect the Environment

- ▶ Distance driven (VKT) is projected to increase
- ▶ The scenarios are able to reduce the amount of that increase



TMP Goals – Balancing Tradeoffs



- ▶ The TMP ‘Big Moves’ will benefit *both* travel times and the environment
 - ▶ VHT and VKT are connected
 - ▶ Investing in travel options allows those who want to bike, walk or take transit to do so
 - ▶ Frees up road space for trips that must be made by auto/truck
- ▶ Scenario 2 tailored to optimize benefits and balance tradeoffs, while avoiding “induced demand”

Alignment with Servicing Plan

Service Level Summary

Transportation	Scenario 1		Scenario 2		Scenario 3	
Category	Funding Increase	Service Level	Funding Increase	Service Level	Funding Increase	Service Level
Roads	Minor	↓↓	Moderate	↓	Significant	↓
Transit	Moderate	↑	Moderate	↑↑	Moderate	↑↑
Active Transportation	Minor	↑	Moderate	↑↑	Significant	↑↑↑
Annual Transportation Budget	Current + 0% (Model A)		Increased Funding + 20% (Model C)		Increased Funding + 60% (Model D)	

TMP Scenarios Summary

	SCENARIO 1	SCENARIO 2	SCENARIO 3
Financial Summary			
Annual Transportation Budget	\$48 M (+0 %)	\$58 M (+20 %)	\$77 M (+60 %)
DCC Revenue Increase	0.0%/yr	0.3%/yr	4.5%/yr
Average Property Tax Increase	0.0%/yr	0.2%/yr	0.7%/yr
Outcome Summary			
Support of 2040 OCP	minimal	moderate	most
TMP Goal Progress	minimal	moderate	most
Alignment with Regional Transportation Plan & Gateway Study	minimal (many projects not included)	moderate (most projects included)	most (all projects included)
Number of funded projects	71	99	111

Conclusion

- ▶ Transportation is important to the public and critical for supporting the 2040 OCP
- ▶ Increased investment over the next 20 years is necessary to keep Kelowna moving and protect our quality of life
- ▶ Scenario 2 (staff recommendation):
 - ▶ Crafted to support the 2040 OCP & Imagine Kelowna
 - ▶ Balances aspirational goals with financial pragmatism
 - ▶ Aligns with the median budget submitted by the public

Next Steps

- ▶ Phase 4:
Implementation
Strategy
- ▶ Phase 5:
Development of
draft TMP (fall 2020)
 - ▶ Public engagement
- ▶ Development of final
2040 TMP

