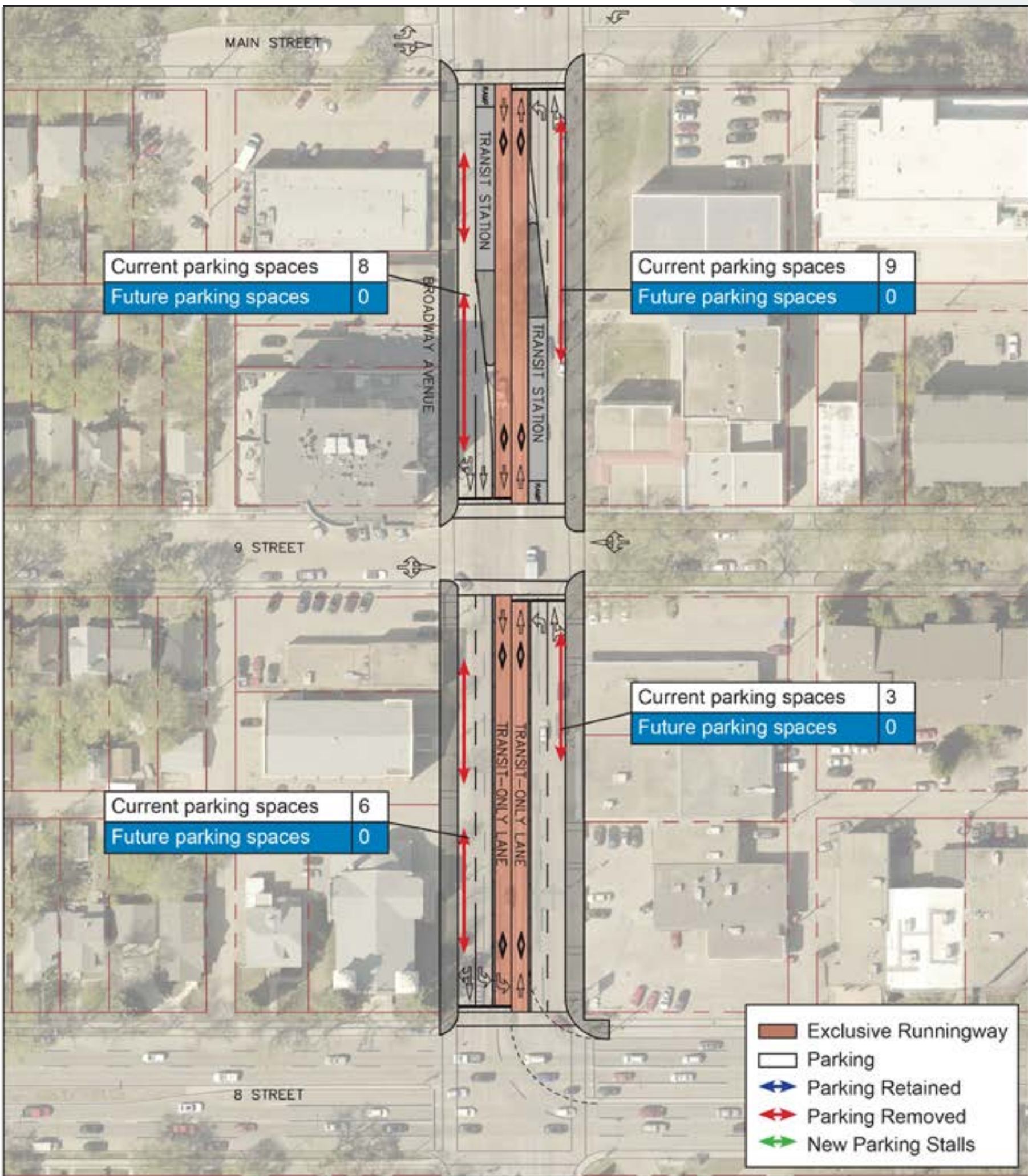
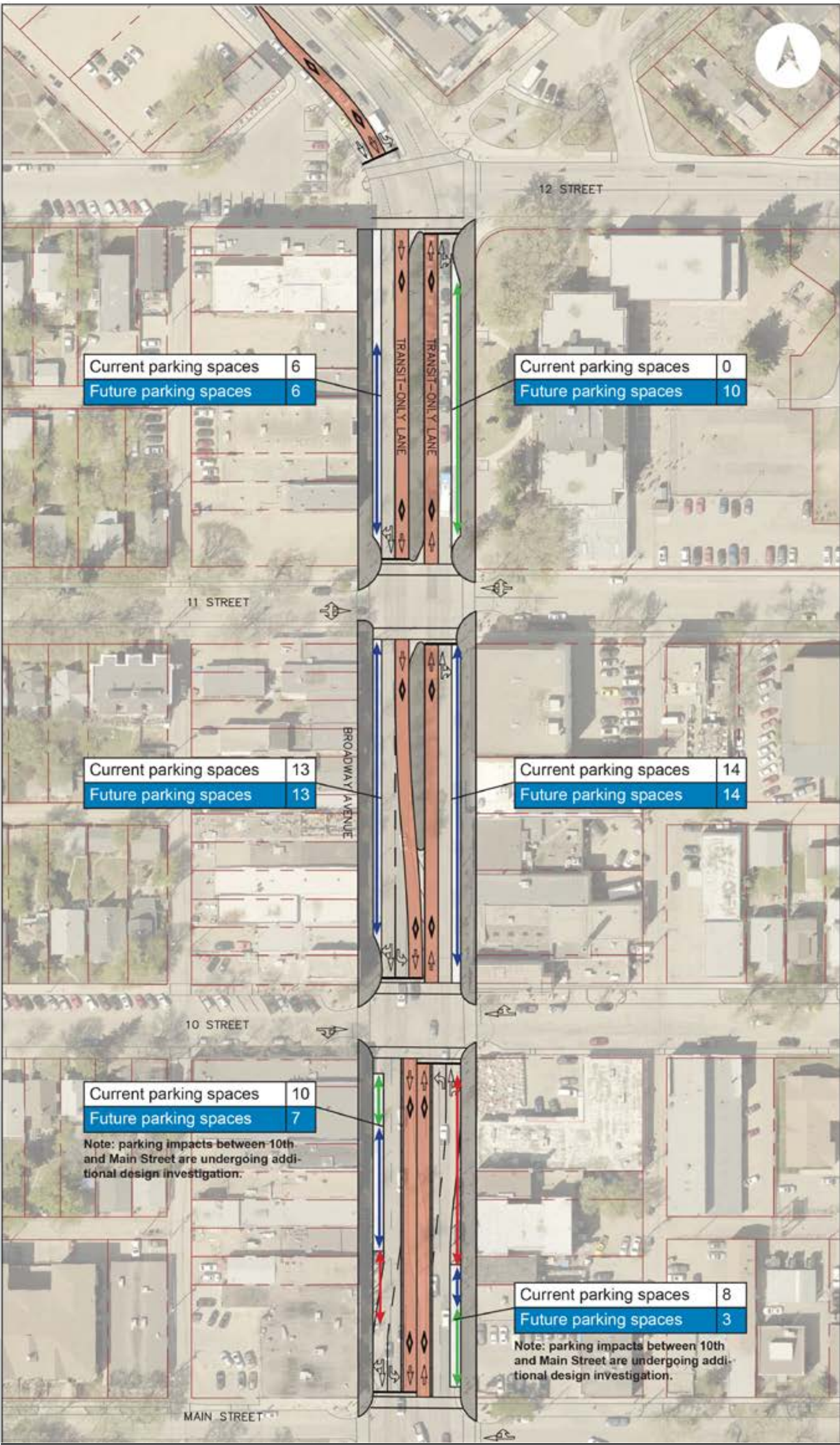


Parking

What will be the impacts to on-street parking on Broadway?

Exclusive runningways will impact on-street parking along some segments of Broadway Avenue. The drawing and table below depicts current and future parking stalls.

Broadway Avenue - Exclusive Runningway Parking Impacts



Block	Existing Parking Stalls (Excl. Loading Zones)		Stalls After BRT Runningway		Stalls Removed		Stalls Added	
	SB Lanes	NB Lanes	SB Lanes	NB Lanes	SB Lanes	NB Lanes	SB Lanes	NB Lanes
12th - 11th Street	6	0	6	10	0	0	0	10
11th - 10th Street	13	14	13	14	0	0	0	0
10th - Main Street	10	8	7	3	3	5	0	0
Main - 9th Street	8	9	0	0	8	9	0	0
9th - 8th Street	6	3	0	0	6	3	0	0
Sub-Total	43	34	26	27	17	17	0	10
Total	77		53		34		10	

Notes:

- Parking impacts will continue to be reviewed as design progresses.
- Numbers presented are based on Functional-level drawings
- Loading zones and stalls with special conditions (i.e. disabled loading/unloading) were not included in the count.
- A 2m parking-free buffer from the edges of driveways and intersections is assumed if signage is not provided.
- Future local routes may use the median runningway; however, coverage along the north end may require a curbside stop for local routes between 11th and 12th Streets. This has been accounted for.

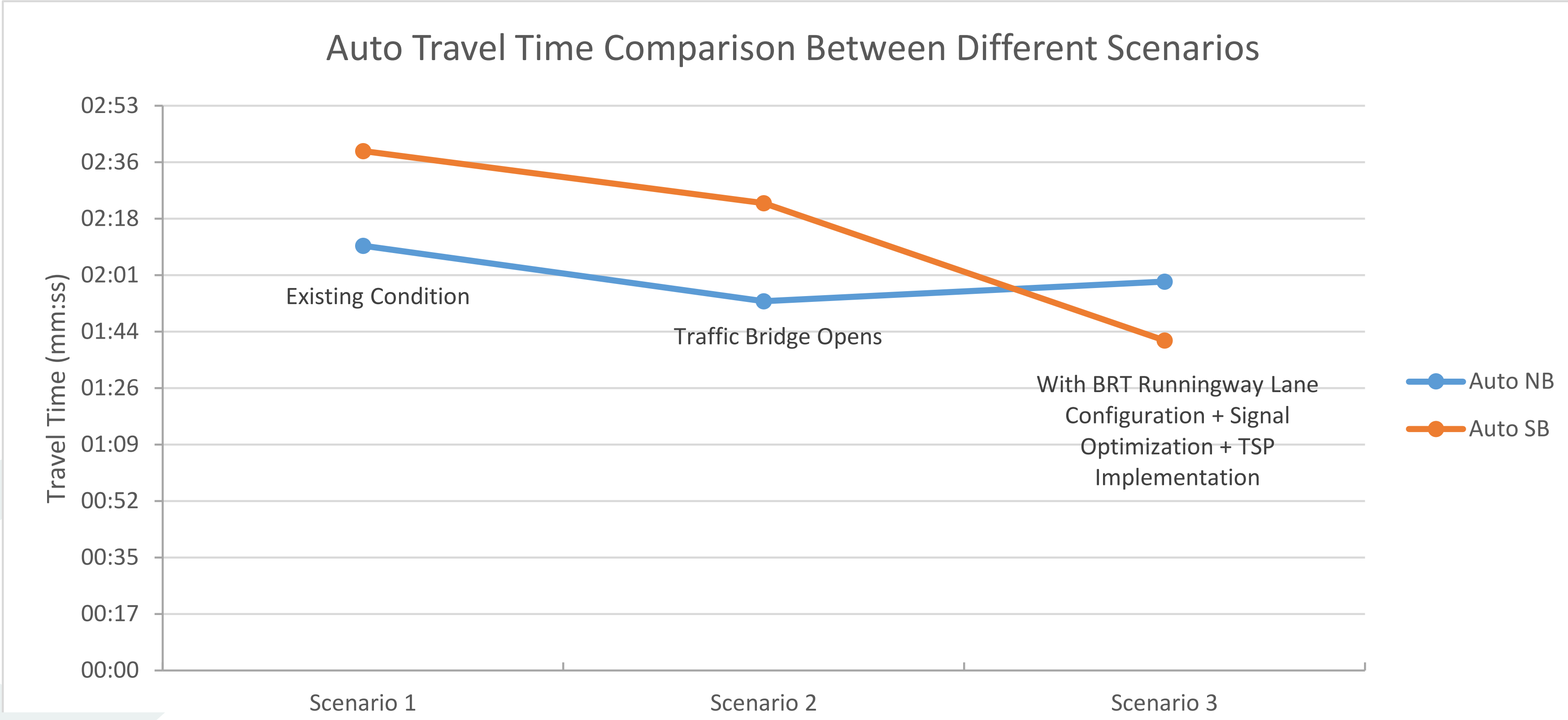
Traffic

What will be the impact to traffic with the opening of the Traffic Bridge and proposed dedicated transit lanes on Broadway?

Broadway Impacts

Traffic analysis for locations where dedicated transit runningways are present shows mixed impacts; some streets are expected to see a modest travel time increase and others are expected to see a modest reduction. The following table shows expected, calculated traffic along Broadway Avenue during peak PM traffic.

Broadway Avenue	0.6 km		
Direction	Scenario 1	Scenario 2	Scenario 3
	Existing Travel Time (mm:ss)	Future Travel Time with Traffic Bridge Open (mm:ss)	Scenario 2 + BRT Runningway Lane Configuration + Signal Optimization + TSP Implementation (mm:ss)
Northbound	02:10	01:53	01:59
Southbound	02:39	02:23	01:41
Annual Average Daily Traffic (AADT) on Broadway Avenue.	13000	10000	10000



Roadway Capacity

The BRT improves the roadway capacity without having to add lanes to the existing street. For example, based on existing transit and auto volumes, Broadway moves 1700 people per hour. With the addition of BRT and the reconfiguration of local routes Broadway will realistically move 2260 people per hour, with plenty of capacity to move even more people by transit, by foot, and by car as the city grows.

System Impacts

Across the majority of the system, travel times for automobiles will be improved, along with times for transit vehicles. The BRT system includes Transit Signal Priority (TSP) measures. TSP uses the existing traffic signal infrastructure, bus arrival detection and software logic to determine the optimum way to limit bus delay at traffic signals. If a vehicle is moving in the same direction as the BRT, the travel times generally improve for both autos and transit vehicles. Some select locations are anticipated to have relatively minor delays for automobiles as a result of BRT, but over the entire system there is a net benefit for both modes.

Route Selection

How was Broadway selected for the BRT route?

Routing for the BRT system was selected based on criteria necessary to both support high-frequency transit and as corridors that support the City's city-building objectives.

Criteria:

- Proximity to and coverage of areas with existing activity – residents, jobs, students, retail and commercial destinations
- Built form and block/site characteristics that provide opportunities for street-oriented, transit-supportive development
- Suitable right-of-way and street characteristics for transit – width, roadway structure, street classification, etc.
- Interchange with local transit lines
- Reasonable spacing between stops
- Avoidance of conflicts with property/lane access and infrastructure

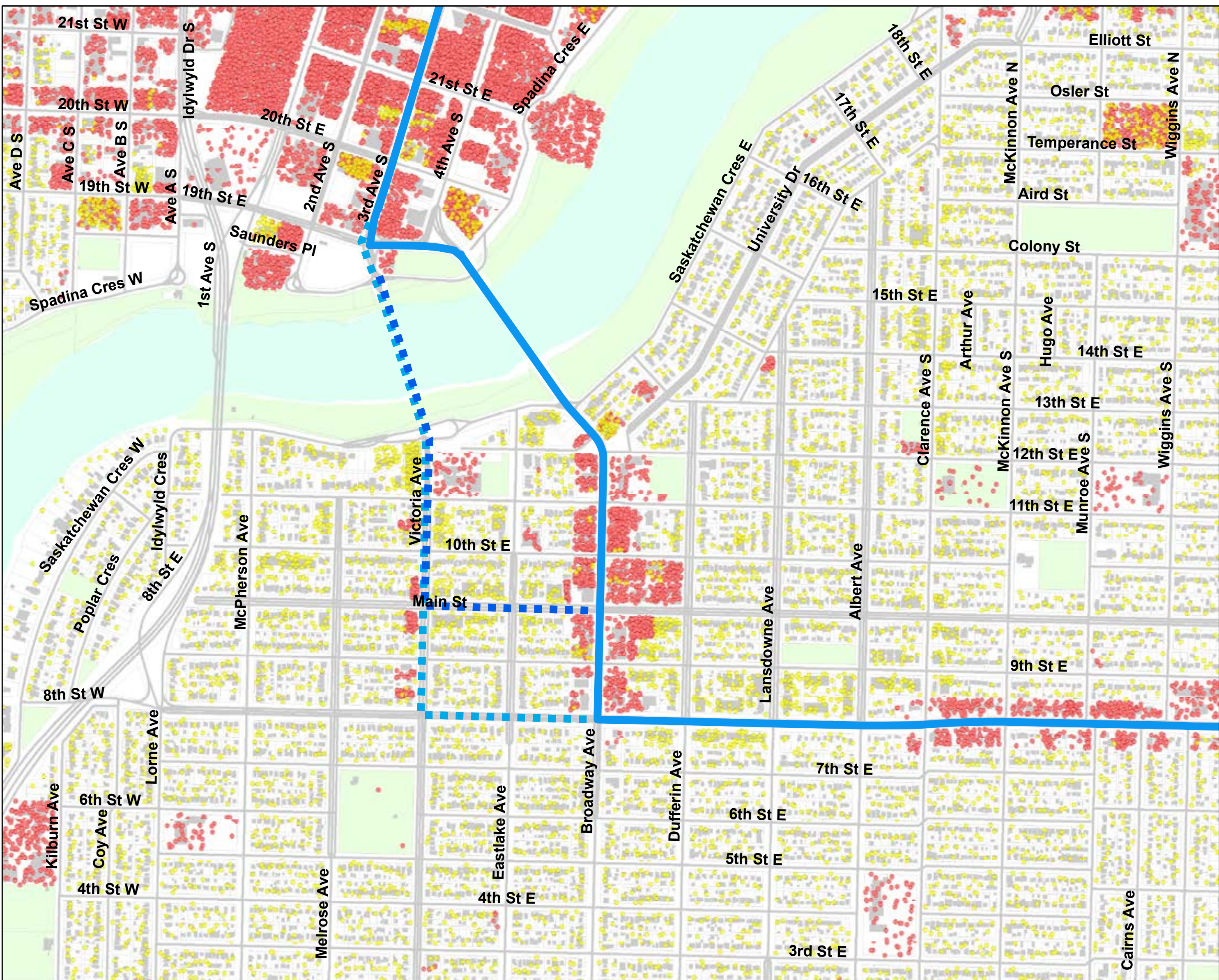
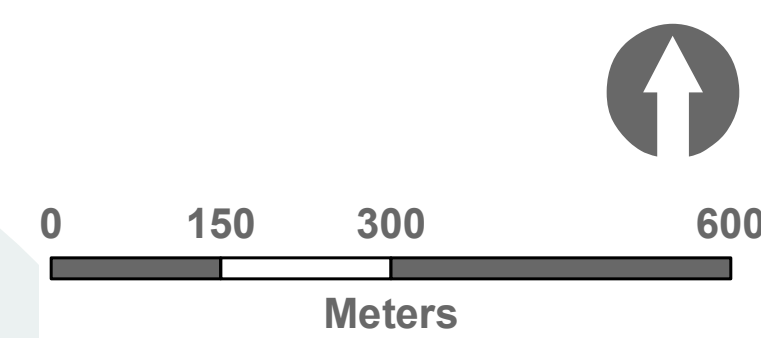
At various stages of the project, alternatives were considered – Broadway Avenue, Victoria Avenue (with variations) and Idylwyld Drive. Broadway Avenue best satisfies all of these criteria.

The following map shows the current housing and job density for the Broadway and Victoria area.

Housing Units and Jobs

Legend

- Proposed Blue Line
- Victoria Route Option 1
- Victoria Route Option 2
- 1 Dot = 1.90023083
- CountOfHab
- 1 Dot = 1.00012149
- Total
- 1 Dot = 1.00012149
- Total
- Ownership
- Building_Rooflines
- Roads
- Water
- Parks



What We Heard and What We Have Done About It

Feedback	Response/Solution
Construction impacts	The City will continue engaging with potentially-affected property-owners and businesses as implementation and construction plans are developed to mitigate construction impacts to the best of our abilities.
Festival impacts	The BRT system is designed to be rerouted along a designated parallel corridor, enabling streets like Broadway Avenue to be closed to all traffic for festivals and similar events.
Traffic flow impacts	Traffic analysis for locations where dedicated runningways are present shows mixed impacts; some streets are expected to see a modest travel time increase and others are expected to see a modest reduction.
Cyclist Impacts	Each corridor is unique. In some cases, such as the Downtown, BRT and All Ages and Abilities (AAA) Cycling Network planning has been done concurrently to ensure both networks function well together. Along College Drive, BRT design includes adding a multi-use pathway to meet the needs of people walking and cycling. In other cases, cycling will occur in shared lanes and along parallel streets.
Needs to be a more unique and hip experience compared to transit today	<p>BRT will provide a unique experience through improved functionality and measures that are designed to improve customer comfort and let everyone know that BRT is something different.</p> <p>BRT stations will be unlike any transit stop that Saskatoon has today. Station platforms will be designed for universal accessibility. They will also be highly visible and well lit, with large shelters to provide passengers with wind, rain and snow protection and be equipped with on-call radiant heat. Real-time next bus information will be visible from the platform or inside the shelter. Stations will also have seating as well as waste and recycling bins.</p> <p>Where dedicated runningway is present, BRT will have a significant presence on the street that signals a high level of service and comfort.</p>

Feedback	Response/Solution
Economic uplift to property and businesses	<p>Research indicates that commercial and residential properties near transit stations have, on average, higher property values than other properties of similar size and quality. Several BRT studies - Brampton, ON; Cleveland, OH; Los Angeles, CA; Boston, MA; Pittsburg, PA; and Eugene, OR - show a positive relationship between BRT and property value increases.</p> <p>In addition, the City will be undertaking corridor planning along BRT corridors which is expected to lead to land use and zoning changes and urban design improvements that could further benefit properties and businesses.</p>
Rationale for choosing specific locations over others	<p>Generally, BRT locations are determined by:</p> <ul style="list-style-type: none">» Proximity to and coverage of areas with existing activity – residents, jobs, students, retail and commercial destinations» Built form and block/site characteristics that provide opportunities for street-oriented, transit-supportive development» Suitable right-of-way and street characteristics for transit – width, roadway structure, street classification, etc.» Interchange with local transit lines» Reasonable spacing between stops» Avoidance of conflicts with property/lane access and infrastructure
The need for safe pedestrian crossings and stations	<p>The Transit Plan adopts a pedestrian-first approach, which recognizes that every passenger is a pedestrian at the beginning and end of trips. It acknowledges the importance of well-designed stops, crosswalks and streetscapes.</p> <p>The design process for all station locations has included an analysis of all pedestrian connections to and from the station platforms. Where necessary, new pedestrian infrastructure is being planned to ensure that all BRT stations are safe and accessible to all transit customers.</p>
Gaps in local services along the transit network	BRT is being planned as the “spine” of a redesigned transit system based on a grid rather than circuitous loops. Local service will improve through more direct connections with greater frequency and service over a longer period, including weekends. In some cases, coverage is decreased but the frequency of bus service overall is increased.

BUS RAPID TRANSIT

WHY BRT?

52,000 residents live within walking distance of the proposed Bus Rapid Transit corridors.

43,000 jobs are within walking distance of the proposed BRT.

saskatoon.ca/growth

#GrowYXE

Plan for GROWTH



WHY BRT?

One bus with 30 passengers is equivalent to **27 cars** along the same route.

Those cars also require 27 parking spots!

saskatoon.ca/growth

#GrowYXE

Plan for GROWTH



WHY BRT?

Cities with higher transit ridership are **healthier**.

A short walk twice daily significantly improves health.

Source: Government of Canada

saskatoon.ca/growth

#GrowYXE

Plan for GROWTH



WHY BRT?

The cost of owning and operating a vehicle averages **\$11,000*** per year compared to **\$913** for an annual Saskatoon Transit adult pass.

Parking in downtown Saskatoon costs up to \$225 a month compared to \$83 for a monthly Saskatoon Transit pass.

* Source: Canadian Automobile Association

saskatoon.ca/growth

#GrowYXE

Plan for GROWTH



WHY BRT?


The Bus Rapid Transit will operate **every 10 minutes** during peak periods compared to an average 30-minute bus frequency today.

Reconfiguring Saskatoon Transit routes will provide more direct travel options and reduce the need for transfers.

saskatoon.ca/growth

#GrowYXE

Plan for GROWTH



WHY BRT?

Average transit travel times will **decrease by 10-15%** with Bus Rapid Transit.

Transit travel time from Confederation Mall to the University will decrease by 7 minutes with the BRT.

saskatoon.ca/growth

#GrowYXE

Plan for GROWTH



WHY BRT?

Bus Rapid Transit stations may include:

- » passengers shelters with radiant heat
- » real-time schedule info
- » security cameras
- » customer seating
- » internal lighting

saskatoon.ca/growth

#GrowYXE

Plan for GROWTH



WHY BRT?

Updated traffic signals along the Bus Rapid Transit corridors will improve both car and transit travel times.

saskatoon.ca/growth

#GrowYXE

Plan for GROWTH

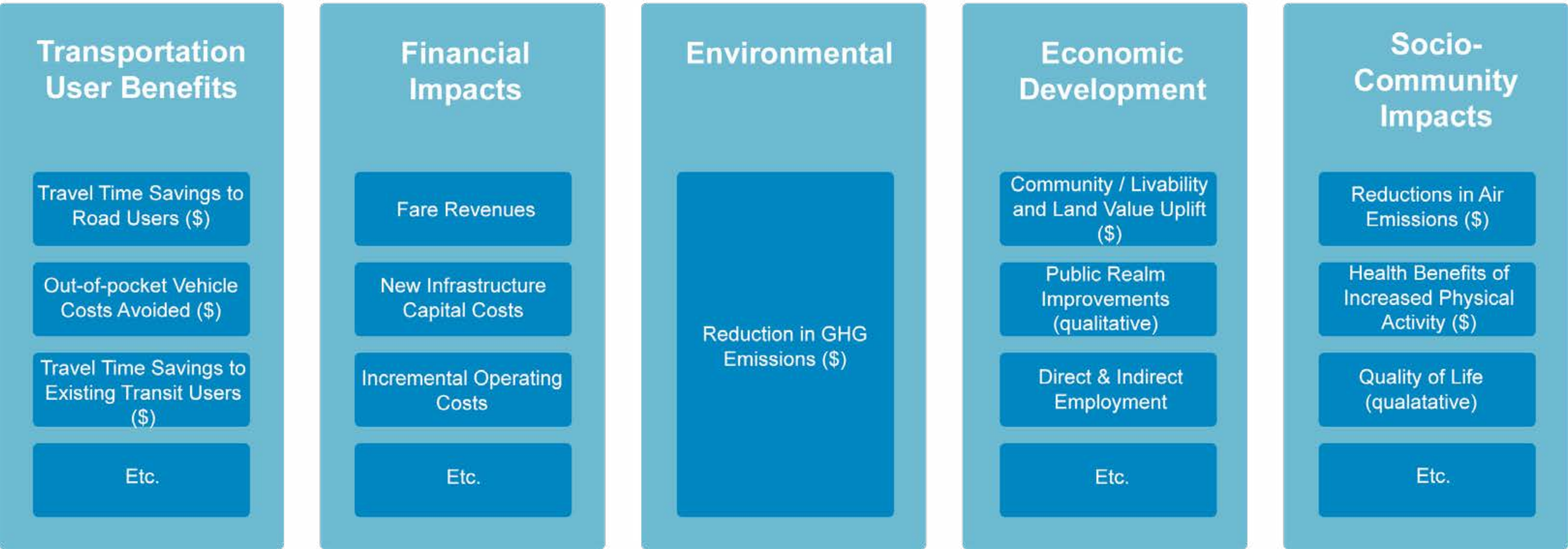


Benefits: Economic

What are the economic benefits in implementing a BRT system?

Economics of BRT

The City has used a multiple account evaluation method to determine the economics of building a BRT system in Saskatoon. The analysis considered the following criteria:



Cost-Benefit Analysis Results

The following table summarizes the analysis of the quantified and monetized benefits, impacts and costs of the proposed BRT, and presents the cost-benefit analysis outcomes. The table shows that the net present value of the proposed BRT amounts to \$169.4 million at the 3% discount rate and \$69.3 million at the 8% discount rate. The benefit-cost ratio amounts to 2.5 at the 3% discount rate and 1.7 at the 8% discount rate.

Cost-benefit Analysis Outcomes, by Scenario:

Financial Indicators	3% Discount Rate	8% Discount Rate	Undiscounted
Total Costs, \$M	\$110.4	\$95.6	\$123.0
Total Qualified Net Benefits, \$M	\$279.8	\$164.9	\$404.0
NPV, \$m	\$169.4	\$69.3	\$281.0
Benefit-Cost Ratio, Ratio	2.5	1.7	3.3
Internal Rate of Return (IRR), Percent	16.9%		

Note: All monetary impacts are in terms of 2017 dollars, expressed in present value terms over the period 2019-2041 discounted to 2018.

Benefits: Property/Business

What are the economic outcomes other communities have seen for properties and businesses along BRT corridors?

Business Impacts

BRT in Canada has been developed in several cities, including smaller cities such as Waterloo, Halifax, Kelowna, Saint John, Brampton, and York Region, and larger cities including Winnipeg, Toronto, Vancouver and Ottawa. In Ottawa, the construction of the BRT system led to over \$675 million U.S. in new economic development around transit stations.[1]

The implementation of BRT has been shown to have positive economic impacts. Effects can include:

- increases in property values;
- creation of new jobs;
- increasing business revenues; and
- redevelopment of land.

Corridors along BRT lines greatly benefit from high-density use and mixed-use of land, through prospective developments capitalizing on the premium proximity to transit stations. Higher concentrations of people along a BRT corridor also provide an increased customer base and a larger labour pool. BRT offers increased accessibility to key economic and employment hubs, and combined with lower transportation costs, provides the opportunity to have more money spent in the local economy.

Studies have examined the differences in consumer behaviour by mode of transportation. The results have indicated that drivers will spend more disposable income in a single visit at an establishment over other modes of transportation. Transit users however, visited establishments significantly more often, and would spend on average more than drivers in the course of a month, except at supermarkets.[2]

Transit is often seen as a catalyst for economic development. Benefits from transit corridors can include increases in property value, employment, revenues, and the redevelopment of land. Bus rapid transit (BRT) corridors that are able to capitalize on transit-oriented development share some key characteristics: they improve connectivity between hubs, and have land available for development or redevelopment.

BRT corridors across the United States have resulted in additional economic development. A majority of those lines have generated over \$1 in development for every dollar spent on transit, shown in Table 1.

Table 1: BRT Lines and Transit-Oriented Development[3]

City	BRT Line	Development per Transit Dollar Invested
Los Angeles	Orange Line	\$0.83
Boston	Waterfront Silver Line	\$1.39
Pittsburgh	MLK Jr. East Busway	\$3.59

[1] Levinson, Herbert et al. "Bus Rapid Transit Volume 1: Case Studies in Bus Rapid Transit," TCRP Report 90. 2003.

[2] Clifton, Kelly J. et al. "Examining Consumer Behaviour and Travel Choices," Oregon Transportation Research and Education Consortium, February 2013.

[3] Greater Cleveland Regional Transit Authority. "RTA's HealthLine -- the world-class standard for BRT service." Accessed February 12, 2018.

Benefits: Station

What will new BRT stations mean to moving around Saskatoon?

The Transit Plan adopts a pedestrian-first approach, which recognizes that every passenger is a pedestrian at the beginning and end of trips. It acknowledges the importance of well-designed stops, crosswalks and streetscapes.

The design process for all station locations has included an analysis of all pedestrian connections to and from the station platforms. Where necessary, new pedestrian infrastructure is being planned to ensure that all BRT stations are safe and accessible to all transit customers.

If the station is along the curb, the station will be connected to the adjacent sidewalk or pathway. Stations will have ramps leading up to them since they may be slightly higher than the existing curb to facilitate level-boarding for people using wheelchairs, strollers, or other mobility aids.

If the station is in the middle of the roadway, such as in an exclusive runningway situation, passengers use a crosswalk to access stations. They would cross at the corner (like they do now) and half-way across the roadway there will be a ramp leading up to a station.

How many people do we expect to use the BRT?

Saskatoon's current transit system is designed to meet the needs of a small city. As we grow, we need to find ways to move more people in the same amount of road space. Investing in transit - both in introducing a new type of service in the BRT and in making the existing bus service more effective - is the only way we can shift mode share (or the share of trips made by transit) from 4.5% to 8%. This benefits all road users - even automobiles. Higher transit ridership reduces the amount of private vehicles on the roads, which can help to delay the need for both maintenance and roadway capacity costs.

The future BRT system is estimated to carry 10,000 people a day using the current ridership, employment, residential, and student populations along the BRT routes.

Proposed shelter design options:



BUS RAPID TRANSIT

Benefits: Design

Runningway and station imagery from other communities.



Albuquerque, NM ART



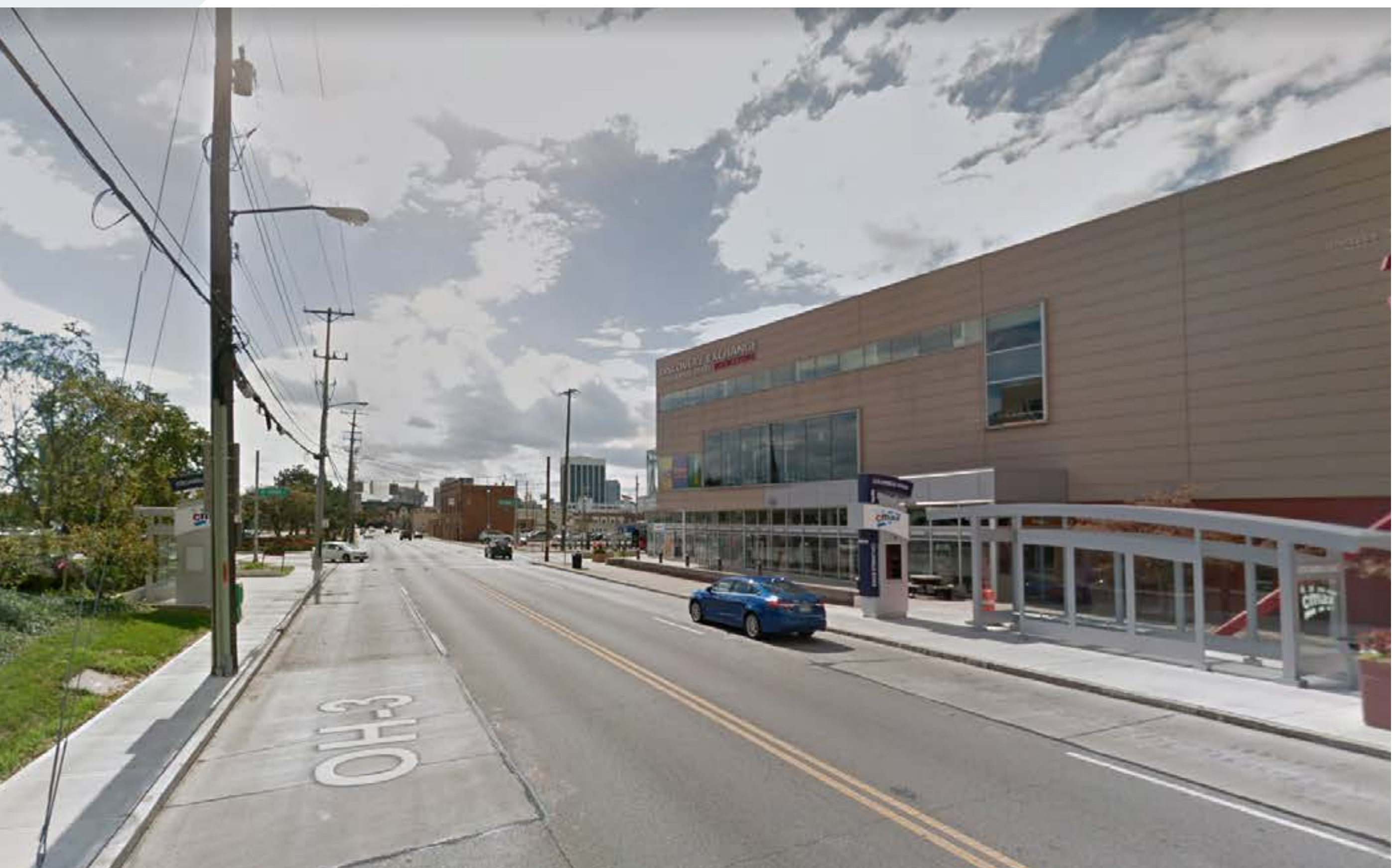
Cleveland, OH Health



Toronto, Ont



Eugene,



Columbus OH, CMAX Cleveland



Vancouver, BC

Streetscaping

What streetscaping improvements would you like to see near your business? Innovative Street Furniture? Art? Lighting? Paving? Trees? Other?

Opportunities for Streetscaping

BRT will require some reconfiguration of the public realm, especially in the areas of Broadway, College Drive, and Third Avenue. This will translate into some temporary disruption, but it also creates many opportunities to improve and renew streetscaping, improve the growing conditions for street trees, incorporate creative street furniture, and incorporate new public art and street activation elements.



Use a post-it note to provide your response.

Construction

Place a dot to indicate your response.

What time of year is best for construction to take place?

Q1 JANUARY-MARCH	Q2 APRIL-JUNE	Q3 JULY-SEPTEMBER	Q4 OCTOBER-DECEMBER

What time of day do you prefer?

MORNING	AFTERNOON	EVENING

What level of impact would you prefer?

MINIMUM IMPACT

Staggered Build

Longest Construction Time

MAXIMUM IMPACT

Full Closure

Shortest Construction Time

Next Steps

Work on the Transit Plan will continue to build momentum in 2018:

The BRT network and locations for dedicated runningways will be presented to Governance and Priorities Committee on June 20th with a target to be at City Council on June 25th of 2018.

This will allow the City to proceed to detailed design of the system and completion of an implementation plan. The final Transit Plan with implementation plan and funding request is targeted for approval in fall 2018.

The City has begun to develop an implementation plan, involving BRT preliminary work (land survey, utility locates, geotechnical work, etc.).

While feedback has been addressed in the concept designs, the City must still complete and finalize the following items:



BRT Functional Plan
Finalize the functional plan and identify what works/doesn't work about the plan



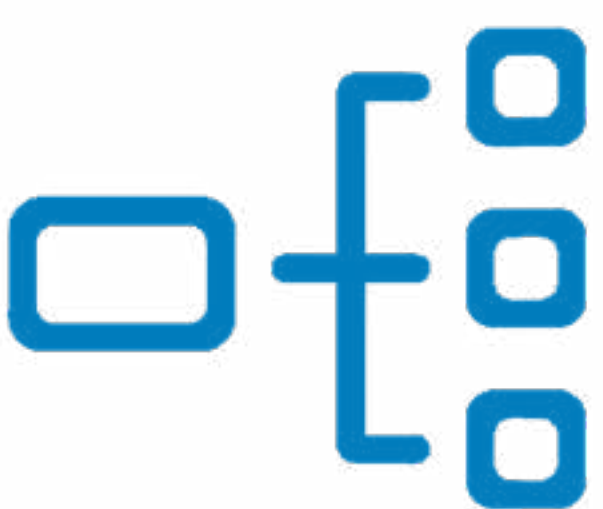
Detailed Design
Identify site-specific design considerations including building/property access needs, drainage considerations etc.



Station Design
Finalize the design of the station shelters, platforms and customer features.



Park and Ride Strategy
Finalize the potential locations and strategies for the implementation of Park and Ride.



Streetscaping Designs (the street's appearance, greenery and role as a public place)
Identify the opportunities to improve and renew streetscapes. Engage with impacted stakeholders and undertake design work.