

MEMORANDUM

June 19, 2019

TO: Mayor and Council

CC: Sadhu Johnston, City Manager
Paul Mochrie, Deputy City Manager
Lynda Graves, Administration Services Manager, City Manager's Office
Rena Kendall-Craden, Civic Engagement and Communications Director
Katrina Leckovic, City Clerk
Neil Monckton, Chief of Staff, Mayor's Office
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Malcolm Bromley, General Manager, Park Board
Gil Kelley, General Manager, Planning, Urban Design and Sustainability
Lon LaClaire, Director, Transportation

FROM: Jerry Dobrovolsky, General Manager, Engineering Services

SUBJECT: Next Steps Following the Flats Arterial Community Panel Process

Executive Summary

The Flats Arterial Community Panel considered a wide range of perspectives and wrestled with conflicting tensions and priorities between nine different grade separated arterial options. Staff have analyzed the prioritization of the values, evaluation and ranking of routes to inform the next steps before seeking a Council decision on the grade separated arterial alignment.

Staff will no longer pursue alignments on either William or Malkin, and will advance work on the panel's recommended route: the National-Charles Overpass, and the panel's second preferred route: the Prior/Venables Underpass.

Over the next few months, staff will conduct further analysis of the National-Charles Overpass and the Prior/Venables Underpass to explore ways to reduce the drawbacks of each route. Next steps include:

- Further technical analysis of the National-Charles option to identify opportunities to improve road safety or lessen costs;
 - Hiring an independent consultant to refine cost estimates for land and property impacts, including relocating the Fire Training facility;
 - Exploring the levels of support from potential external funding partners;
 - Outreach with directly affected stakeholders;
 - Exploring opportunities to lessen traffic impacts of an arterial on Prior Street; and
 - Incorporating previous stakeholder and public input from the past five years of work.
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Staff will return to Council in the fall of 2019 for a decision on the alignment of a grade separated arterial in the False Creek Flats.

Background

Freight rail activity is increasing in the Flats, and in order to address safety concerns, increase the reliability of local transit and goods movement, and support low-emissions transportation, the addition of arterial streets with grade separation from the rail line is crucial. As was identified in the False Creek Flats Rail Corridor Strategy (2008), the most recent grade separation project was the Powell Street Overpass, which was completed in 2014. It is now important to advance the grade separation of an arterial in the Flats between Hastings Street and Terminal Avenue that maintains an important east-west connection from Main Street to Clark Drive. Along with other local road closures, this would result in full separation of the rail corridor

In 2015, staff were directed to explore alternate routes for the grade separated arterial that could allow Prior Street to be downgraded from an arterial to a local-serving street. Through the public and stakeholder engagement during the False Creek Flats Area Plan process from 2015 to 2017, it became clear that all of the alternate arterial options presented challenges, and no one route emerged as the preferred option.

In order to engage both residents and businesses through a more in-depth conversation that would allow consideration of all the values, factors and trade-offs between the routes, the Flats Arterial Community Panel (FACP) was convened, and facilitated by an independent consultant. The randomly selected 42 panelists¹ were tasked with representing the local neighbourhood, business community, and city-wide residents to evaluate and recommend a route for the grade separated arterial. Their final report² was received by City Council and Park Board in late April 2019.

The outcomes of the Community Panel have informed the broader planning and technical review process led by City staff, in order to recommend a proposed alignment for a future grade separated arterial in this area of the False Creek Flats for Council's decision.

Initial Takeaways from the Community Panel's Evaluation

Participants of the Community Panel devoted an impressive amount of time and energy to serve their community and city. The panel received presentations on a wide range of topics, and heard directly from many different people with varying perspectives. The panel did a thorough analysis of advantages and drawbacks of each route option and its variations. In addition, they also seemed to work well together in their deliberations. Even when panelists had conflicting views, they were respectful and tried to find solutions that addressed a range of community and local business interests.

There is a lot to learn from the Community Panel's work, and what follows is an initial analysis that helped staff to determine next steps.

¹ In the end, 37 panelists participated in the full Community Panel process.

² The Flats Arterial Community Panel Final Report (April 2019) is herein quoted and referenced as FACP.

Values and Important Factors

In their evaluations of the routes, the Community Panel learned about and wrestled with many different issues, perspectives, and considerations. It is clear from the description of the panel's values that there were many important factors guiding their decision making, including but not limited to: community liveability, a desire for a holistic perspective, wanting to hear from all voices, food security, local economy impacts, the importance of parks and green spaces, reliable transportation connections and accessibility to work, school and social activities (FACP, 16).

The panel's description of the most significant advantages and drawbacks for each route shows how these values guided their analysis, alongside information they learned from presenters and community discussions (FACP, 31-44). However, similar to earlier phases of engagement, no one route for the arterial could easily address all the factors that were important to the panel or the broader community they were tasked with representing.

To help in their prioritization, panelists ranked six key factors in order of importance as follows:

1. Impacts on residents and the local neighbourhood.
2. Impacts on parks, recreation, community gardens, and other green spaces in the area.
3. Impacts on the movement of people and goods in the area.
4. Impacts on businesses locally and throughout the region.
5. Considerations of cost and constructability.
6. Impacts on public-serving civic facilities in the area.

This prioritization helps show what the panel considered to be more important in ranking the route options and making their recommendation. For example, the panel's top priorities were not considerations of cost and constructability, nor impacts on public serving facilities in the area. However, it is also evident that the key factors above are interrelated and different elements of each factor were important in the panel's evaluations of the routes. In addition, as the panel noted, "there remain conflicting priorities and tensions", which meant that ultimately they needed to arrive "at a place where everyone was committed to recommend the best option for everyone in the community, not just for our own personal interests" (FACP, 3).

Ranking of the Grade separated Arterial Route Options

Given the difficulty of coming to a recommendation of an arterial route by consensus, the panel used multiple rounds of ranked choice voting, accompanied by deliberation, to come to their final recommendation. This method of voting identifies the options with the most support among panelists – even if a particular route is not the first choice of most individual panelists. Importantly, this method of voting also shows which routes had the *least* amount of support among the panel.

In the first round of voting, five shortlisted options had the most support among panelists, including variations along National:

- National-Charles Overpass
- National-Civic Facilities Overpass
- National-Grant Overpass
- Prior/Venables Underpass
- Malkin North Overpass

This first round of voting indicates that neither the William route option, nor the two other variations on Malkin had broad support among panelists. We can assume based on the ranked order of the Community Panel's values that this is because these routes – with significant impacts to Strathcona Park and Produce Row businesses – were not supported by the panel.

After four rounds of voting,³ the shortlist was reduced to two options. The National-Charles route option had a clear majority of support among the panel (67.6%) and the Prior/Venables underpass was the next highest ranked of the options (32.4%). Refer to **Appendix A** for maps of these two route options.

National-Charles Overpass

The advantages of the National-Charles route, as identified by the panel in order of importance: it does not impact Produce Row businesses; it “moves arterial traffic further away from residents” and allows Prior St to be downgraded to a local street; it does not impact Strathcona Park and the community gardens; it generally allows for a more complete street design, and despite its potential cost it has “the least impact on the community of businesses, park lands, and art spaces, all of which have intrinsic and intangible value that cannot be measured in dollars and cents” (FACP, 25-26).

The panel also noted what they saw as the most significant challenges of this route: high costs; longer construction time; high impact to civic services; safety concerns related to the S-curve design of the street; less convenient transit access for Strathcona residents; and some impact to businesses and artists – though importantly less than other National variations. In regards to the costs of this option, some of the panel members expressed a hope that actual costs for the project might be lower than projected and that funding partners would commit to funding a substantial share of the project, while others expressed concern that funding partners may not be secured and there would be compromises to other priorities and projects across the city.

The National-Charles route was a community-generated option proposed by the Strathcona Residents' Association in November 2018, which was shared with staff two months before the Community Panel began. Although panelists had information on the scale of impacts and costs relative to other routes, given the tight timeframe the same level of technical and cost analysis as the original National-Grant option was not available. The panel has asked for more study of this route, including more detail on the costs of acquiring land, mitigating property impacts, and the overpass structure.

Taking into account the different rounds of voting and the alternate proposal of the National-Straight option (refer to **Appendix B** for an explanation of why this variation is not technically feasible), it is apparent that a National alignment was preferred by many panelists. The National-Charles route in particular offered the advantages listed above, and in addition it was a community-generated option with fewer impacts than other National variations. It also presented a variation that some panelists hope will ultimately be less costly than the initial projected estimates.

Prior/Venables Underpass

The Prior/Venables underpass was the route option with the second most support after the National-Charles route. The panel identified the advantages of this route in order of importance as: it is the lowest cost option thereby enabling “opportunities for local community enhancements”; it does not impact Produce Row businesses; it has fewer impacts to parks and gardens, in particular the “wild spaces”; it provides easier and better transit access to local amenities and services; and it provides

³ For a full account of the rounds of voting, see the FACP report p.27-28.

more reliable and resilient access to the new St. Paul's hospital (FACP, 31-32). An underpass was preferred more than an overpass because it would reduce the tendency for vehicles to speed downhill and could provide opportunities for better connections between the park and the neighbourhood (FACP, 32).

The ordered drawbacks were: the narrower street doesn't allow for large sidewalks or dedicated cycling facilities; the arterial on Prior St would continue to be perceived as "a separation between residents and Strathcona Park"; selecting Prior as an option could "further erode trust between the community and government" given previous Council commitments to downgrade the street; there is "significant resident opposition to Prior St as the arterial"; and a concern about the potential increase of traffic, including noise and air pollution (FACP, 31-32).

During the process, many panelists and community members questioned why the Prior/Venables underpass and overpass were included as options. They were included for consideration because if no alternate route for the arterial is approved by City Council and Park Board, the arterial would need to stay on Prior/Venables Street. Given the significant challenges of all the routes, it was important for the panel to evaluate all feasible options, including grade-separating the existing arterial on Prior/Venables Street. Furthermore, many of the options would necessitate that Prior/Venables Street remain the arterial for a long period of time until an alternate route is built and ready for use.

Based on the panel's report, a significant minority of panel members considered the Prior/Venables route to be the preferred option – whether as an arterial with an underpass, or as a downgraded local-serving street with an underpass only for transit and emergency access (see **Appendix C** for an explanation on why it is essential to maintain an arterial street in the area).

Next Steps

Respecting the Community Panel's evaluation of nine route variations, staff plan to advance work on a narrowed list of route options through the summer months to bring forward a recommendation to City Council in the fall of 2019. Based on our initial analysis of the panel's report, it is clear that the panel does not support routes with significant impacts to Strathcona Park or Produce Row businesses, and staff will no longer pursue alignments on either William or Malkin. Staff will instead focus on the panel's top two route choices for an arterial route with grade-separation: National-Charles overpass and Prior/Venables underpass. Specifically, staff will further evaluate the Community Panel's recommendation of the National-Charles alignment, including taking the time to refine the technical analysis and costing of this option to be on par with the original arterial alignment options.

It is important to highlight that although both these routes avoid the most significant impacts to parks and community gardens, and Produce Row businesses, each route also has serious drawbacks. The most significant of which are that National-Charles has a high cost, and Prior/Venables underpass would not allow Prior to be downgraded to a local-serving street, respecting the longstanding community preference for a new arterial route alignment option. Given this, in the coming months staff will explore different ways the City could address these drawbacks. In particular, staff will explore ways to reduce the cost-burden of the National-Charles option, or lessen the impacts of Prior/Venables as an arterial street on the adjacent neighbourhood.

This work will include:

- **Further technical analysis of the National-Charles option:** Staff have engaged an engineering consulting firm to refine the conceptual design of the National-Charles overpass. The firm will test the alignment as proposed by the Strathcona Residents' Association, along with any variations that would improve road safety or provide opportunities to lessen the structure length or property impacts, thereby also reducing costs.
- **Hire an independent consultant to refine cost estimates:** Staff will hire a consultant with expertise in commercial real estate to refine the cost estimates of the National-Charles alignment. This will include providing a third-party market valuation of the land and property impacts, including the costs of relocating the Fire Training facility.
- **Explore external funding opportunities:** This project requires support from external partners. Given that grade-separation supports regional goods movement, potential funding partners include the Port of Vancouver, railway operators (CN and BNSF), TransLink, and senior governments. Staff previously applied for Transport Canada funding through the National Trade Corridors Fund and earlier programs, but have so far been unsuccessful in the absence of a decision about the route for the arterial. Staff will reach out to potential funding partners to gauge their likely levels of support for the shortlisted options noted above.
- **Explore opportunities to lessen traffic impacts on Prior St:** Staff will build on the findings from previous safety and livability studies (refer to **Appendix D** for a summary) to explore ways to improve the walking environment of Prior St, in particular the crossings to/from the park and address perceived traffic safety concerns, which can impact livability as much as observed safety issues. Staff will also identify how to monitor long-term change to travel patterns in the area, once the highway-like infrastructure of the viaducts are replaced with a more complete and urbanized street network.
- **Review input from previous planning and engagement work:** Staff will review and incorporate input from all the previous work during the past 5 years for the National and Prior/Venables options, including public engagement feedback from the local community, affected businesses, and goods movement stakeholders.

After extensive planning and community engagement spanning almost 5 years, it is important that Council come to a decision on the grade separated arterial route in fall 2019. Rail activity is expected to increase and some of its impacts to the community, such as serious injuries or fatal train incidents, can be prevented by grade-separating trains from people walking, biking, and driving.

As well, a reliable street network is fundamental to serving employment lands including a new regional healthcare campus. In order to deliver a significant public benefit to the city and region, certainty on one arterial route is needed to advance the St. Paul's Hospital through rezoning and towards opening in 2026. The arterial route can either be accommodated through the St. Paul's site as a Malkin alignment (to support the National-Charles option) or on Prior (to support the Prior/Venables underpass option). However, without a Council decision on a route, the street right-of-way would need to be preserved for both alignments; land which could otherwise be integrated for other aspects of the hospital design. Furthermore a letter to the City Manager dated May 17, 2019 from Providence Health Care has indicated "the cost for delay is approximately \$7 million per month" in delivering the regional hospital.

A summary of the next steps leading to, and following Council's route decision is as follows:

Timeline	Next Steps
May to August 2019	<ul style="list-style-type: none"> • Further analysis of Community Panel's recommendation and evaluation • Further technical analysis of the National-Charles Overpass and Prior/Venables Underpass options • Outreach with potential funding partners, and directly impacted stakeholders • Review of other public and stakeholder input from previous engagement during the False Creek Flats Area planning process
September to November 2019	<ul style="list-style-type: none"> • Staff complete a report to Council on a final recommended route • Council decision on the route for the grade separated arterial (October 2) • St. Paul's Hospital and Healthcare Campus rezoning referral and public hearing (dates to be determined)
2020 and beyond	<ul style="list-style-type: none"> • Secure funding from external partners • Detailed design and mitigations with directly impacted property owners, businesses, and stakeholders • Construction, following design and financing approval

Conclusion

The Flats Arterial Community Panel put a substantial amount of effort and thought into their work; they considered a wide range of perspectives, wrestled with conflicting priorities and tensions, and thoroughly assessed the advantages and drawbacks of many routes and variations. Staff have gained a deeper understanding of the considerations and values that the community prioritizes.

Over the next few months, staff will conduct further analysis of the panel's recommended route, the National-Charles Overpass, as well as the panel's second preferred route, the Prior/Venables Underpass. Incorporating what has been learned over five years of evaluation and engagement, staff will return to Council in the fall of 2019 for a decision on the alignment for a grade separated arterial in the False Creek Flats.

Should you require further information, please contact me directly.

Sincerely,



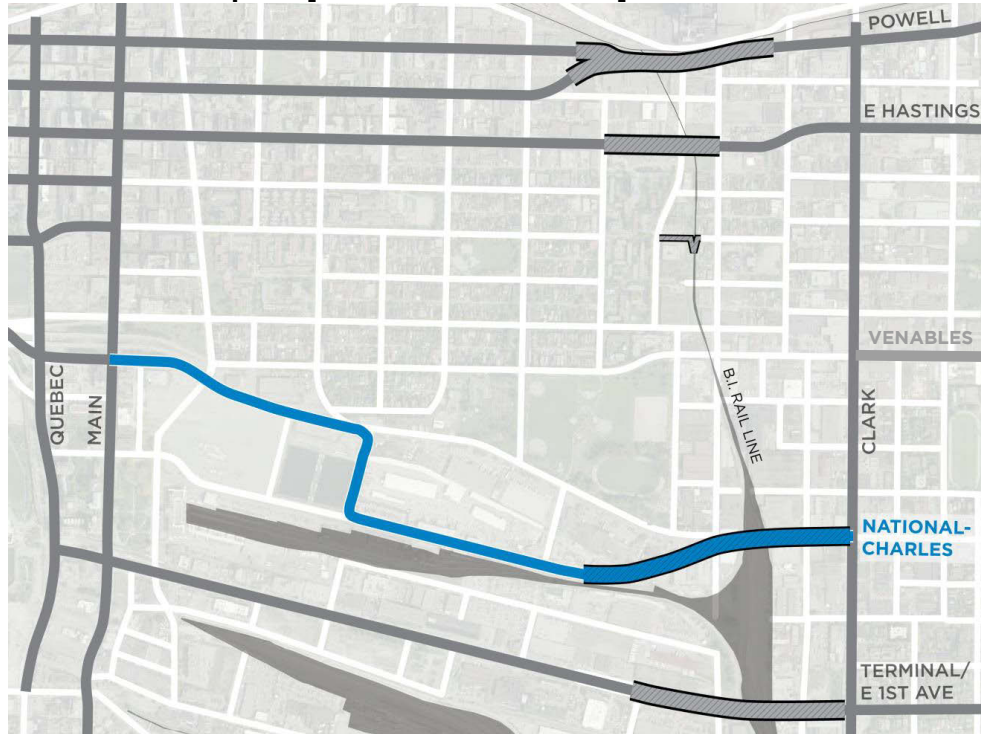
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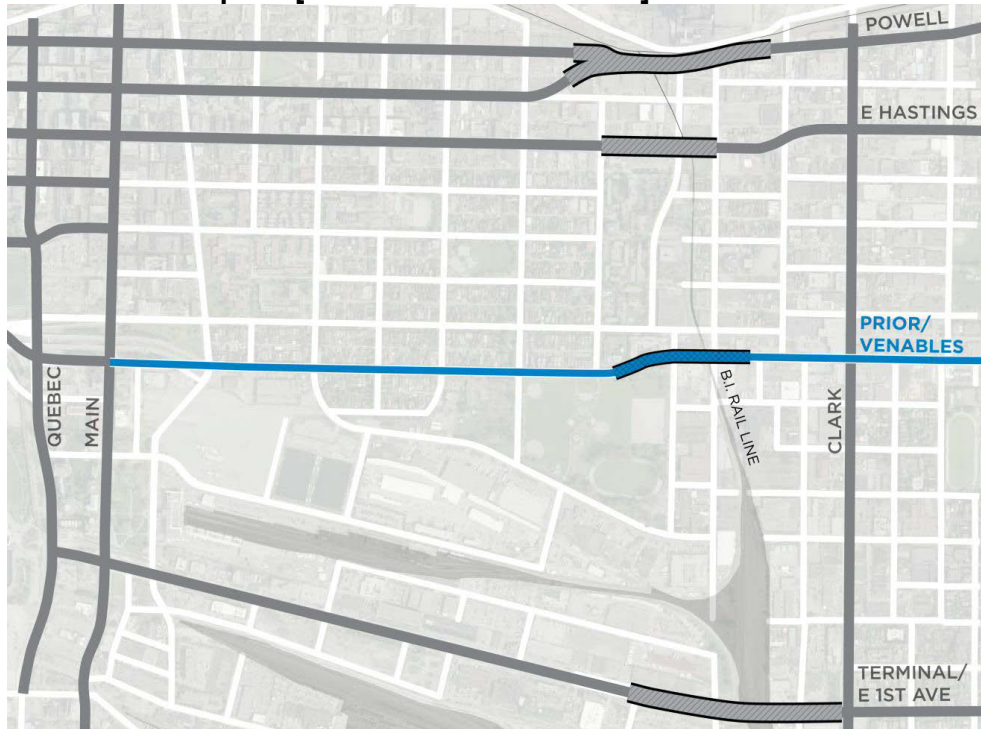
Appendix A

The following are route maps of the Community Panel's top two preferred route options.

National-Charles Overpass [Recommended Route]

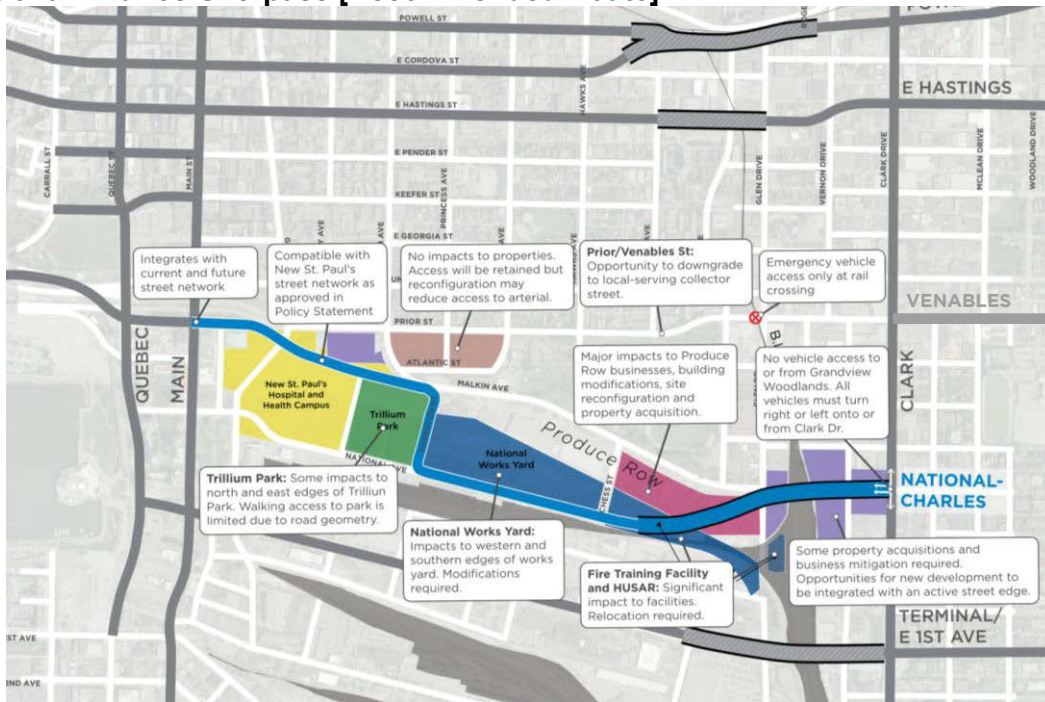


Prior/Venables Underpass [Second Preferred Route]

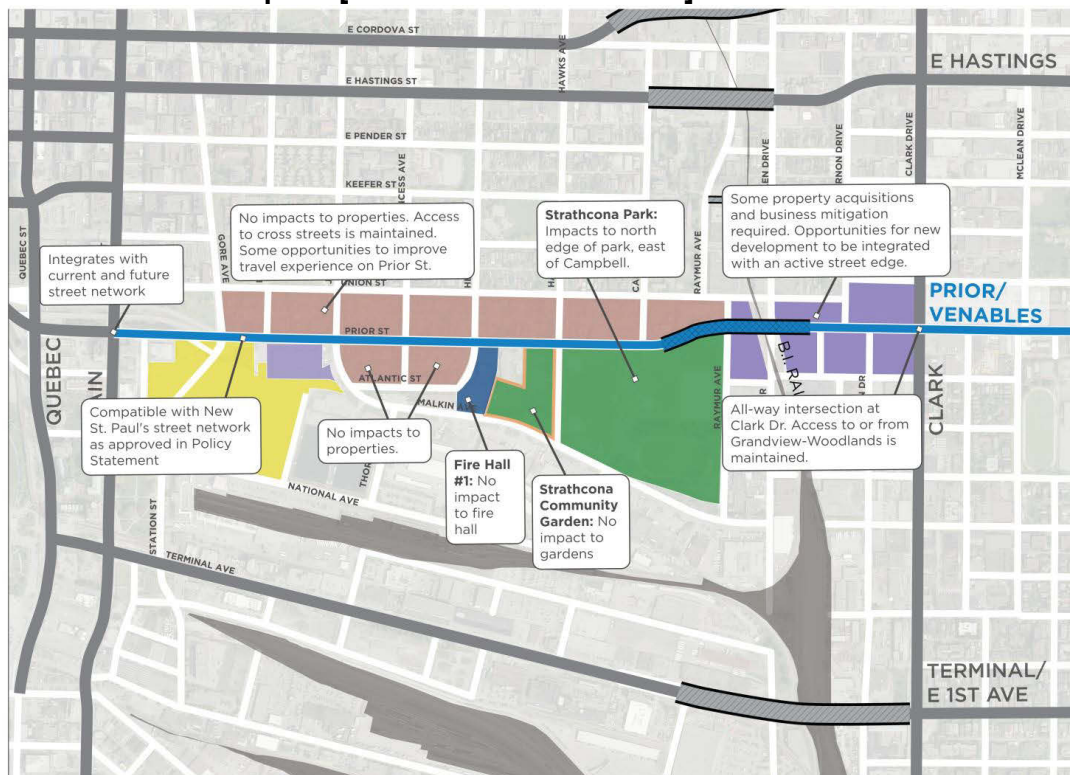


The following are maps of the key considerations for land uses adjacent to the Community Panel's top two preferred route options.

National-Charles Overpass [Recommended Route]



Prior/Venables Underpass [Second Preferred Route]



Appendix B

The information below includes explanations on why the National-Straight variation, an alternate arterial proposal identified by the Community Panel, is not technically feasible. Similar information was provided to the Community Panel, both through presentations and Q&A response between panel sessions.

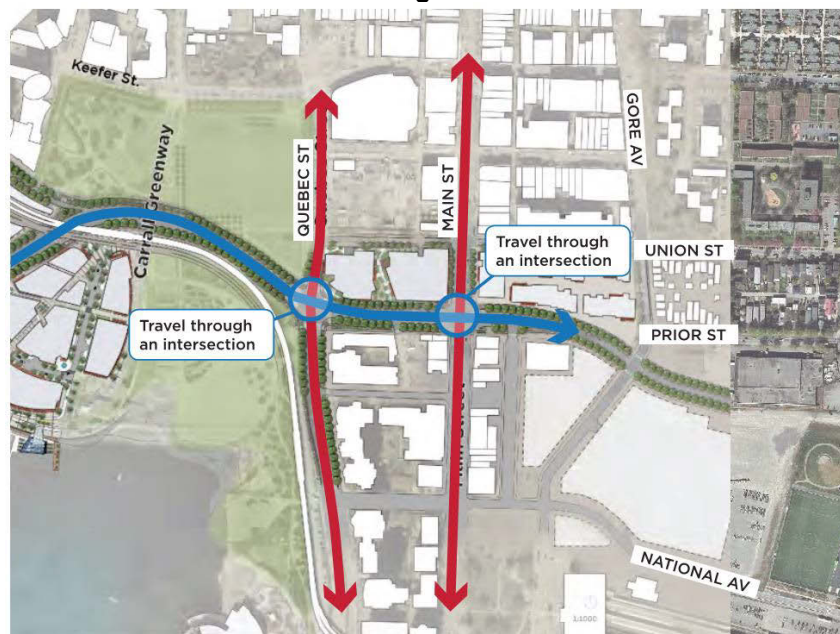
Adapted from Q&A response during the Community Panel

According to the plan for the Northeast False Creek street network, the new Pacific Boulevard would replace the existing Georgia and Dunsmuir viaducts and would run along Prior Street east of Quebec Street, and intersect with Main Street. The arterial through the Flats needs to provide a direct east-west route between downtown and east Vancouver, and connect with Pacific Boulevard at the intersection of Main Street and Prior Street. Hence, all of the Flats arterial route options, including all the variations of National (National-Grant, National-Charles, National-Civic), need to ultimately connect to Main Street at Prior Street.

In the options presented to the panel, continuous east-west travel would connect from Pacific Boulevard, travelling straight through the two intersections on Quebec Street and Main Street (see **Figure 1**). Both Quebec and Main are major arterial streets and truck routes running north-south, and Main Street is part of TransLink's Frequent Transit Network and regional Major Road Network (MRN). This supports effective travel across the street network, including in the east-west direction on new Pacific Boulevard and the Flats arterial, as well as busy north-south routes along Main and Quebec Streets.

The maps below help explain how the Flats arterial connects with the arterial network (specifically with the new Pacific Boulevard), and how people would travel between downtown and east Vancouver. Blue lines indicate the east-west travel movements, and red lines indicate the north-south travel movements.

Figure 1: East-west movements connecting to Pacific Blvd at Quebec and Main Streets



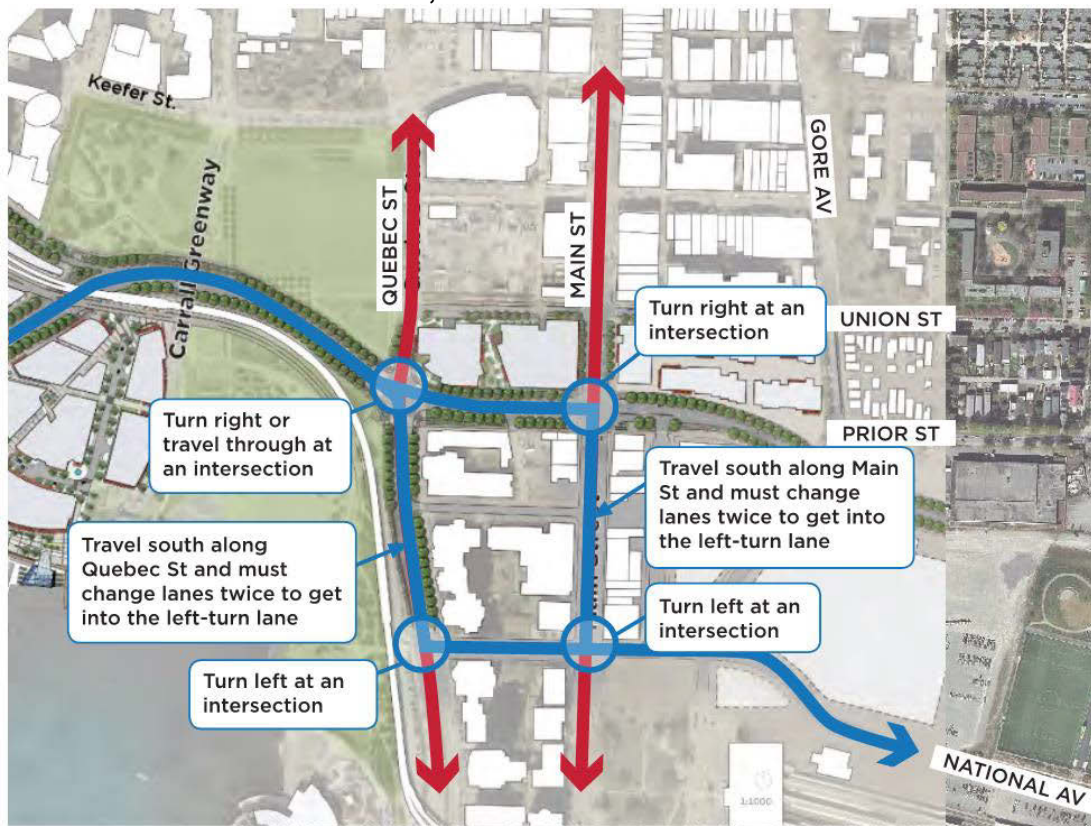
Recognizing that the arterial street on Pacific Boulevard ends at Main Street and Prior Street, staff have explored the Flats arterial proposal of “National-Straight” which aspires to a continuous National route connecting to Quebec and Main Streets along National Avenue, and does not directly connect to Pacific Boulevard.

As seen in **Figure 2**, people travelling east would need to make a right-turn at either Quebec Street or Main Street, then change three lanes in one block to get into a left-turn lane, and then make a left turn onto the Flats arterial. People travelling west would do a similar movement in reverse. This condition creates additional turns and lane changing and does not provide a continuous east-west arterial.

Most important, the intersections cannot accommodate the high volume of vehicles travelling north-south on Quebec and Main Streets, the high volume of vehicles turning left across their path to travel east-west, and the high volume of people walking and cycling across the street. Comprehensive traffic modelling was conducted as part of the Northeast False Creek Refined Area Plan (2018), and showed that the only functionally possible street network was one where the Flats arterial directly connects to Pacific Boulevard at Main Street.

Furthermore, National Avenue is currently a local street between Quebec Street and Main Street, with many residents living on both sides of the street. There is not adequate width for an arterial on National Avenue between Quebec Street and Thornton Avenue without property impacts to residents, Thornton Park, and Trillium Park.

Figure 2: East-west movements with intersections on National Ave at Quebec and Main Streets, to connect to Pacific Blvd



Comparatively, the National S-Curve routes have two 90 degree turns around Trillium Park and the National Works Yard (see **Figure 3**). This condition is feasible and unlike the “National-Straight” proposal because the turns occur at Thornton Street, which is not a north-south arterial street. This allows the arterial to be continuous around these turns, rather than intersecting with high volumes of traffic travelling north-south. This design is similar to the curve at McGill Street and Nanaimo Street (which similarly does not intersect with a north-south arterial street) and the continuous turn design cannot be replicated at Quebec Street or Main Street intersections, where the north-south arterial streets must be maintained.

Figure 3: Graphic of east-west movements along a National route



Appendix C

This provides a primer on the importance of arterial streets, the role they play as a network, and the important places in the False Creek Flats and surrounding area that rely on an arterial street that is grade-separated from the rail corridor.

The role of arterial streets

Streets are the backbone of a city, and each street has a role in the overall network. Local streets primarily provide local access to residents, businesses, and other destinations. Arterial streets are the heavy-lifters in the network, carrying the majority of longer-distance trips and non-local traffic, while also providing access to local areas. Arterial streets connect neighbourhoods across the city; move large volumes of goods and people, particularly on transit; and can also be at the centre of vibrant public life.

The location and spacing of arterial streets impact the way people get around and experience city life. Some of the important roles that arterial streets have among the city's street network are as follows:

- **Provides reliable and effective transit service to communities** – Transit is an essential service that aims to serve as many people as possible along a direct and reliable route. All major or frequent transit routes operate on arterial streets in Vancouver. Typically, 400m is considered a walkable distance to reach a bus stop. A more compact network of arterial streets means that more people and places are closer and within walking distance to transit.
- **Reduces neighbourhood shortcutting and manages congestion** – People who drive tend to choose the most convenient, direct, and fastest route. A network of arterial streets that is efficient and reliable provides an attractive driving option for people traveling through the city. This discourages non-local traffic from shortcutting through residential neighbourhoods, and as a result reduces noise, pollution, and aggressive driving behaviour on local streets.
- **Supports emergency response and resiliency** – Emergency vehicles rely on well-functioning arterial streets to respond in a timely manner. A connected network provides redundancy, reliability, and resiliency in the event of road closures or disruptions from collisions, weather, construction, filming and special events, and other emergencies.
- **Supports the local economy and quality of life** – Goods and services are delivered across the city in commercial vehicles of all sizes, and about 90% of all consumer goods in Vancouver are delivered by trucks¹. Because trucks can also be disruptive to communities, their operations on streets are strictly regulated. Trucks must travel on arterial streets that are designated as truck routes and can only travel on local streets to reach their destination. Arterial streets reduce the impact of goods movement on neighbourhoods while also supporting safe and efficient goods movement for a thriving economy.

¹ Flats Arterial Community Panel Presentation, British Columbia Trucking Association, January 2019

- **Provides opportunities for diversity and vibrancy in neighbourhoods** – Having streets that serve different purposes provides opportunities to support a greater variety of land uses and activities that take place on streets and in neighbourhoods. Because arterial streets support the movement of greater volumes of people, they can be opportunities for hubs of activity. Some parts of arterial streets are places where people want to be – to gather, shop, eat, socialize, and experience public life. It is not a coincidence that many of Vancouver’s most lively and active places are located on arterial streets – Main Street, Commercial Drive, South Granville, Broadway, Cambie Village, and many more.

However, arterial streets also come with challenges, such as congestion, safety, noise and air quality concerns. These challenges exist throughout the city, and are best addressed by encouraging more people to choose sustainable trips and managing congestion.

Destinations that rely on an arterial street network

The False Creek Flats and Strathcona areas are located directly in between downtown Vancouver and multiple neighbourhoods in east Vancouver including Grandview-Woodland and Hastings-Sunrise. This area is also between the Metro Core and other cities in the region, as shown in **Figure 1**.

Given its central location, the area is home to important city-wide and regional destinations that rely on a well-connected arterial network to support walking, cycling and transit trips; facilitate goods movement; and provide opportunities to support the variety of activities taking place in the neighbourhood. The mixed-use community includes:

- **Produce Row and Other Industrial Businesses** – False Creek Flats today is home to over 600 businesses that span a wide variety of sectors from logistics to arts and culture; food to software; and construction to clean technology. These businesses employ over 8,000 jobs and that figure is expected to grow to up to 30,000 by 2041². Access for large trucks is essential or important to most (69%) of businesses in the eastern area of the False Creek Flats, and nearly half (46%) require weekly access for large trucks³. Some of these businesses form “Produce Row” which is known as a hub to BC’s food distribution supply chain network and sees about 4,000 truck trips per week⁴.

The majority (74%) of new businesses in the Flats identify the proximity of the area to downtown markets as essential or important⁵. Being closely connected to their clients by a network of streets not only reduces the transportation costs incurred by business and their customers, but also reduces the greenhouse gas emissions and the environmental cost to society.

² False Creek Flats Area Plan, City of Vancouver, May 2017

³ False Creek Flats Area Profile, City of Vancouver, 2015

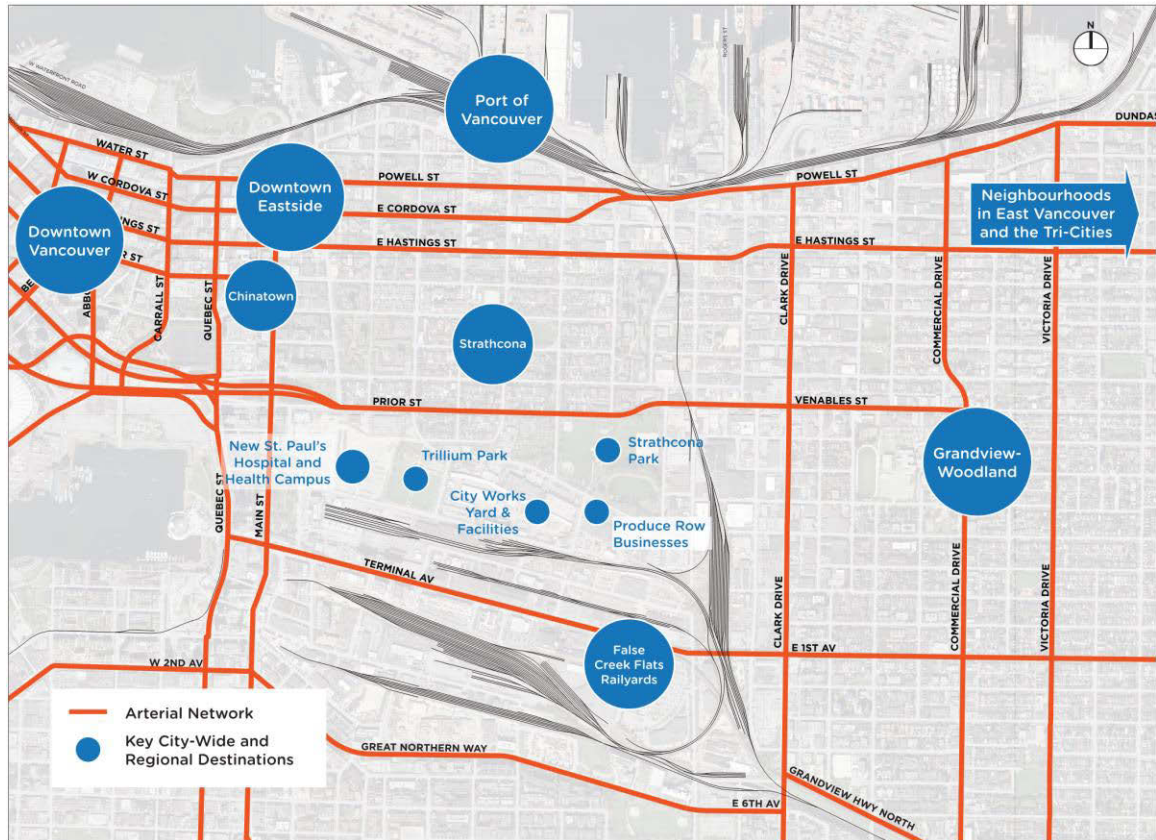
⁴ Flats Arterial Community Panel Presentation, BCTA, January 2019

⁵ False Creek Flats Area Profile, City of Vancouver, 2015

- **New St. Paul's Hospital and Healthcare Campus** – The Province of B.C. is investing \$1.9 billion in the new St. Paul's Hospital and Healthcare Campus, anticipated to open in 2026. At the current downtown location, over half of patient visits are from outside the City of Vancouver⁶. Its new location is well suited for people to arrive from all parts of the city and region, and many employees and able-bodied people can choose sustainable ways to get there, including walk, bike, or take transit via the Main Street SkyTrain Station and many bus routes. The hospital will also rely on a redundant and resilient road network for timely emergency response and reliable deliveries and servicing.
- **The City of Vancouver's Operational Yards** – False Creek Flats is home to Fire Hall 1, the Fire Training and Heavy Urban Search and Rescue Facility, and the National Works Yard, which is one of two major engineering services yards in our city. The yard's functions include operations for streets, traffic, electrical, parking, sanitation, and equipment services. These facilities are strategically located close to the city centre to efficiently and effectively serve the City. Having direct and reliable transportation access to a network of arterial streets allow the City to respond to emergencies and provide a high level of service to all, city-wide.
- **Strathcona Park and Trillium Park** – Both parks attract people from across the City of Vancouver. Trillium Park in particular serves a regional catchment and hosts a variety of sports tournaments, including training for the FIFA Women's World Cup. Many residents from across the city and region travel on arterial streets to reach these parks.
- **Residential Neighbourhoods** – Many residents live in nearby neighbourhoods, such as Strathcona, Chinatown, City Gate, Downtown Eastside, and Grandview-Woodland, and rely on the arterial street network to travel from their homes to opportunities such as school, jobs, healthcare, shopping, and social activities throughout the city and region.

⁶ New St. Paul's Hospital Open House Boards, Providence Healthcare, June 2016

Figure 1: Current arterial street network and key destinations in the False Creek Flats, Strathcona, and surrounding areas



Appendix D

The information on the following pages is a summary of the findings from previous safety and livability studies and is an excerpt from the Community Panel's learning materials (the City Resource Guide).

The excerpt includes a summary of the existing safety conditions at the rail crossing and along the corridor, based on the *Prior Street & Venables Street In-Service Road Safety Review* that was conducted in 2015 by an independent engineering consulting firm.

The excerpt also includes a summary of a *Prior Street & Venables Street Livability Assessment* that was conducted in 2015 by an independent engineering consulting firm. The summary includes feedback heard from a community survey and open house, and findings of a review of the air quality and noise levels on Prior/Venables St in comparison with other streets in the City of Vancouver.

PRIOR/VENABLES TODAY

SAFETY

At the Rail Crossing

Safety is top of mind at the existing at-grade rail crossings on both Prior/Venables St and Union St. When trains are on the tracks at Prior/Venables St, the gates close - vehicle traffic is stopped and people cannot walk or bike across the rail line. Due to frequency of trains blocking crossings, pedestrians and cyclists have become frustrated and make unsafe maneuvers like climbing through the train cars. Similarly, drivers have become frustrated and make unsafe maneuvers like U-turns on Prior/Venables St and short-cutting through the neighbourhood.

Along the Corridor

In 2015, an In-Service Safety Review was conducted for the Prior/Venables St corridor, using a standard approach by the Transportation Association of Canada (TAC). The study used site observations, community input, traffic characteristics, and collision data to understand

the safety conditions at intersections and along the entire corridor, behaviour of people driving, and vulnerable road users including people walking, cycling, and using other non-motorized modes.

The study identified various safety improvements that have been implemented by the City over the past several years. These included

- installing pedestrian countdown timers,
- increasing walking times at signals,
- installing more visible traffic signal heads,
- replacing traffic signs,
- left-turn bans, and
- increased speeding enforcement.

Although the experience of walking on Prior/Venables St is not optimal, the review concluded that the type and frequency of collisions along the Prior/Venables St corridor generally compares with other similar arterial routes within the City.

LIVABILITY

In 2015, a Livability Assessment was conducted to understand some of the factors impacting the livability of the street as well as the surrounding neighbourhoods in comparison with other neighbourhoods across the city. The Livability Assessment included community feedback from residents in Strathcona and Grandview-Woodland, including residents on Prior/Venables St.



Factors related to traffic are seen as the most negative influence on local livability

Community Feedback on Livability

The community feedback collected through surveys and public events from the study found that:

- Factors related to traffic, including vehicle volumes and speed, are seen as the most negative influence on local livability.
- Residents living directly on Prior/Venables St have a more negative view of the livability of the neighbourhood than respondents in other parts of the community.
- The most positive factors influencing the livability of the neighbourhood are location and access to downtown, transportation options to get around, as well as the overall sense of community and the great people that live in the neighbourhood.
- Respondents from the larger community found their neighbourhood quite livable and these respondents reported greater levels of livability than respondents living directly on Prior/Venables St.

PRIOR/VENABLES TODAY

NO₂ DENSITY WITHIN THE CITY OF VANCOUVER



Air Quality

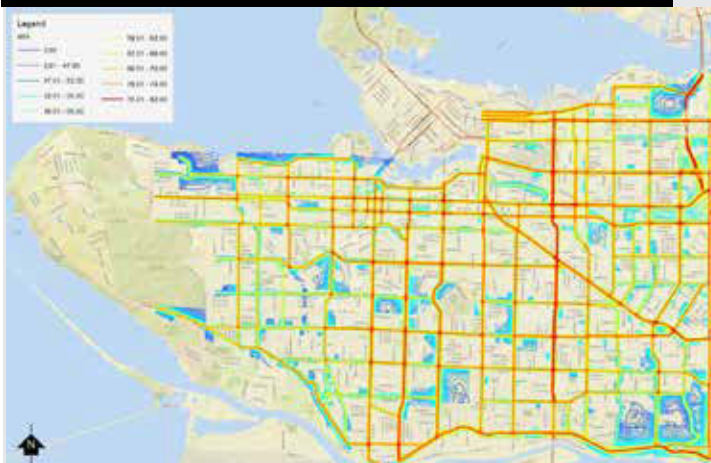
Air quality studies from 2003 and 2010 assessed the different types of air pollution that are generated by motor vehicle traffic, the impact of distance on exposure and the concentrations of some pollutants across the city (nitrogen oxides NO_x and nitrogen dioxide NO₂). People living and

NO_x DENSITY WITHIN THE CITY OF VANCOUVER



walking in close proximity to Prior/Venables St are exposed to higher levels of pollutants than those living on local or collector streets. Similar levels of exposure are also occurring at major streets throughout the City of Vancouver and the Metro Vancouver region, with even higher concentrations of both pollutants in the downtown core.

CITY OF VANCOUVER ARTERIAL STREETS NOISE LEVELS



Noise Levels

Traffic noise levels are rarely constant and vary throughout the day, hour, and even by the minute. A citywide noise study was conducted in 2003 and found that noise levels on Prior/Venables St ranged between 52 and 73 dBA. The highest noise levels along the corridor were at the Clark Dr intersection. The noise levels along Prior/Venables St are higher than expected for the type of arterial (for urban residential environments, noise levels are typically 60-65 dBA on arterials, and 65-75 dBA on major arterials). However, the noise levels are similar, if not lower, than other arterial corridors within the city including those with adjacent residential uses. Although this study is from 2003 and does not represent conditions today, vehicle volumes have been decreasing, suggesting that noise levels from arterial traffic today may be lower than in 2003. However, noise from trains was not captured in this study.

PRIOR/VENABLES ST NOISE LEVELS

