BICYCLE MASTER PLAN:

Implementation Strategy Update

February 21, 2019

Committee of the Whole

Engineering & Public Works Department

PURPOSE

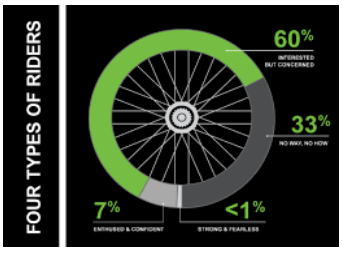
- Provide an overview of the Bicycle Master Plan Program and the All Ages and Abilities (AAA) network
- Present options and considerations that would result in de-risking program schedule, in order to increase the probability of completing the remaining AAA network by the end of 2022

AAA NETWORK – INSIGHTS / LESSONS

- **Investments are delivering** more cycling and attracting new cyclists.
- AAA investments are creating **public realm improvements**
- Stakeholders have important insights and **ideas that must be learned early**
- Many **people today will choose not to use** this infrastructure, but…
- Cycling and pedestrian investments are critical for delivering on **climate change and affordability** needs
- **Parking** is the biggest contention in AAA planning
- **Clear and timely information** is key to reduce stakeholder concerns
- Strong **construction coordination** will minimize impacts/disruption
- Many community **members want village AA A connections** immediately
- Unavoidable **trade-offs** are commonplace. Compromise is always required
- Consensus is not the goal.
- **To meet everyone's needs, no one can get everything they want.**

Why All Ages & Abilities Infrastructure?

- Most people do not cycle because they are concerned about **safety**.
- A purpose-built safer cycling network that is attractive and comfortable for the whole community can support:
  - **reduce collisions** with vulnerable road users
  - **reduce congestion**
  - reduce **greenhouse gas** emissions
  - improved **system resiliency**
  - increase household **affordability**, community **health** and **well-being**
  - provide residents with **access** to opportunities and **equitable transportation options**
- In 2015 the City initiated AAA cycling network portion of the Bicycle Master Plan



Types of AAA Bike Infrastructure

Protected Facilities (busy streets)

Shared Facilities (quieter streets)

Off-street Facilities (car free routes)

Progress To Date

Completed Projects:
- Pandora Avenue
- JSB Multi-Use Deck
- Fort Street
- Beacon Hill Connector

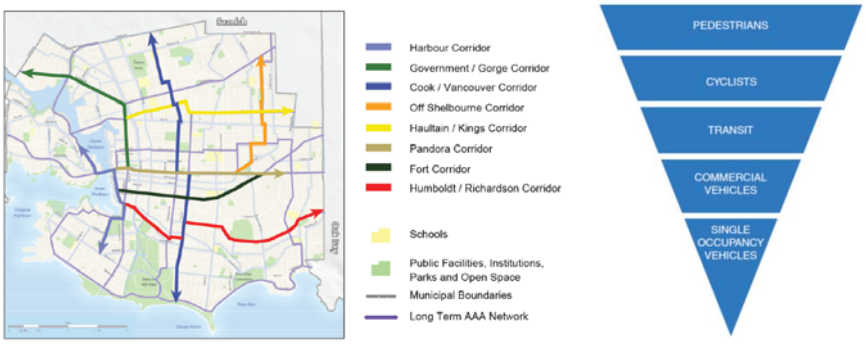
Projects underway:
- Wharf Street and Humboldt Street
  - Construction starts Feb 2019
- Vancouver Street
  - Final engagement March 2019

Project Planning:
- Harbour Road
- Graham / 5th

Support Initiatives:
- Grants, awards, and academic research projects

Data sources include: National Household Journey to Work Data (Census 2016); Origin & Destination Survey Data (CRD 2017); Manual counts (local and regional); Automated data collection on AAA corridors (graphic above)

Priority AAA Network Development



More than Bike Lanes: A "complete streets" design approach ensures the function of cycling infrastructure also addresses the needs of pedestrians, motorists, and transit riders.

These design principles encourage **integration of modes**, **infrastructure renewal**, and **public realm improvements**, such as landscaping, street furniture and/or public art.

Network Planning Decisions

Decision Point: May 2016
- 24km AAA network adopted with continued design and engagement for corridors in Burnside Gorge, James Bay and Oak Bay

Decision Point: December 2016
- Approval of Wharf Street in Phase 1 implementation

Decision Point: February 2017
- Added new routes for a total of 32km AAA network with direction to implement by 2022
- Improved engagement process to connect with key stakeholder / influencers earlier

Decision Point: May 2018
- Prioritized investments on Vancouver Street (between Bay Street and Park Boulevard) in Phase 1

Decision Point: December 2018:
- Directed staff report back on the resources required and/or de-scoping required to complete phases 2 to 4 of the Bike Network by 2022 or earlier

Current Implementation Process

Design Process	Review alignments, develop design options and complete technical analysis. Once a design is confirmed and approved by Council, detailed engineering design is completed.
Engagement	Iterative consultation and enagement with community associations, agency partners, property owners, businesses, commuters, and other stakeholders.
Procurement	Public tendering to secure construction contractor.
Construction	Construction length is representative of project scope, requirements and work restrictions.
Road User Education	Educational efforts are targeted at cyclists, motorists and pedestrians in advance of and after the opening of each corridor.
Project Evaluation & Enforcement	Specialized data collection, evaluation and enforcement continue after each project is completed (on-going)

Note: Stages overlap and include iterative design and engagement

Scheduling Considerations

- **In February 2017, staff estimated network completion by 2023.**
  - Council provided direction to complete by 2022 and return with an implementation strategy.
- **Current forecast/estimates suggest 2023 / 2024 completion** due to project constraints and pace.
- **Current pace is set by:**
  - Construction schedules to accommodate commerce, traffic operations and seasonal requirements
  - Market availability of contractors / labour
  - Engagement timings to support complexity of downtown projects
  - Added scope – for example regional capital programs (CRD)
  - Coordination with underground utility replacements and surface infrastructure renewal to avoid future re-works
  - Competing resources with other capital projects

Levers for Accelerating Pace

- **Faster design process**
  - Reduced timelines to develop / analyze and model different treatments
  - Increased ability to progress simultaneous corridors
  - Sequencing to coordinate with underground / surface infrastructure replacement
- **Intensified, bundled engagement**
  - Connect with key stakeholders and agencies early
  - Streamline processes to align with project complexity
  - Use smart, inclusive and robust strategies to gain early insights
  - Bundle engagement activities for multiple corridors
  - Shorten time in between design stages
- **Bundled procurement and construction**
  - Immediately explore aggressive / innovative construction and tender bundling
  - Retain in-house construction administration & inspection
  - Add program administrative support
- **Reduced administrative time**
  - Introduce multi-year cost estimates as a part of the 2020 financial plan to complete the network
  - Accelerate analysis and recommendations for complex alignment uncertainties and concepts for Burnside Gorge, James Bay, Oak Bay and Government Street
- ***Revised process and staff horsepower are required to achieve 2022 timeline**

Note: We are not recommending achieving time-savings through reducing: AAA safety standards, complete streets or in-house design capacity.

Tailored / Accelerated Approach

Current Approach: Every corridor includes in-depth, multiple engagement sessions for each phase, common to all stakeholders, including agencies, key stakeholders, affected stakeholders and broader public.

Modified Approach: Tighter timelines, overlapping engagement between corridors, more targeted engagement and increased use of digital communications tools and feedback mechanisms for less complex corridors.

***Rationale**: Tailoring engagement activities where appropriate, to match the complexity of the corridor, will provide time-savings while still ensuring meaningful early engagement is part of the process. (ie. engagement $\propto$ complexity).*

Options

Option 1: Streamline project processes and add the required temporary positions under the Bicycle Master Plan Capital Program Budget

Option 2: Maintain status quo and complete network by 2023 / 2024

Option 3: Engage a third-party consulting firm to support network delivery for all remaining projects

Option 4: Reduce the AAA priority network size

Option 5: Defer other priority transportation projects and use existing resources to complete the program

Recommendation

Option 1:

- Streamline project processes and activities via a condensed engagement process, bundled procurement, and reduced design timelines as per the detail of this report, and add the required temporary positions under the Bicycle Master Plan Capital Program Budget within the 2019-2023 Financial Plan with funding from Gas Tax
- Temporary positions:
  - Transportation Design Technologists (X2)
  - Program Communications/Engagement Support (X1)
  - Construction Management / Administrator (X1)
  - Administrative Support (X1)
- One-time consultant support in 2019 for analysis of outstanding corridor uncertainties

CURRENT CORRIDOR RISKS

Project Corridor	Earliest Completion Date	Complexity of Project	Type of AAA	Key Corridor Risks
Wharf Street	2019	High	Protected	Construction disruption
Humboldt Street	2019	High	Shared	Construction disruption
Vancouver Street[1]	2020	Moderate	Protected and Shared	Design complexity (general trade-offs)
Graham / 5th	2020	Moderate	Shared	Design complexity (portion adjacent to Quadra school)
Harbour Road	2020	Low	Protected	Design complexity (commercial and industrial vehicle accommodation)
Haultain Street	2020	Moderate	Shared	Transit accommodation and design complexity (achieving required traffic volume reductions)
Richardson Street	2020	Moderate	Shared	Design complexity (achieving required traffic volume reductions)
Government Street North	2020	Moderate	Protected	Vehicle level of service accommodation
Dallas Road and BH Connection	2020	High	Off-street	Construction disruption
Kings Road	2021	High	Shared	Legal / Land Use agreements
Kimta Road / E&N Rail Trail	2021	High	Protected	Legal / Land Use agreements
Oaklands NS connector	2021	Low	Shared	Design complexity (achieving required traffic volume reductions)
Fernwood NS connector	2021	Low	Shared	Design complexity (achieving required traffic volume reductions)
Pandora East	2022	High	Protected	Design complexity (general trade-offs); Transit stop design accommodation
Fort Street East	2022	High	Protected	Design complexity (on-street parking)
Oak Bay Connection	2022	High	Shared	Alignment / Design (constrained right of way, on-street parking)
Burnside / Gorge Connection	2023	High	Protected	Alignment / Design (constrained right of way, transit level of service and stop accommodation)
James Bay Connection	2023	High	Protected and Shared	Alignment / Design (on-street parking and loading, vehicle level of service)

Risks:

- Design Complexity
- Social Licence
- Legal / Land Use issues
- Construction Disruption

Reliefs:

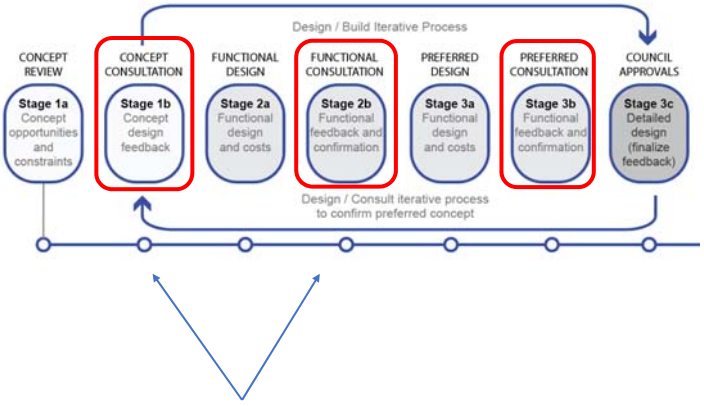
- Fewer engineering challenges
- Fewer seasonal constraints
- Synergies with neighbourhood traffic calming / speed management objectives

Unsupported strategies to Achieve by 2022

- Reduced AAA safety standards:
  - Any corridor must largely meet and retain AAA objectives. Interim treatments may be considered as a part of individual projects where overall safety objectives can be met.
- Reduced “complete street” design requirements
  - All projects have a potential to incorporate complete street objectives to support OCP objectives. Some streets can incorporate higher levels of “complete street” design elements, while others may be limited
- Shifting away from in-house design
  - A significant portion of the designs must be done in-house, due to the coordination of designs across disciplines and infrastructure groups.

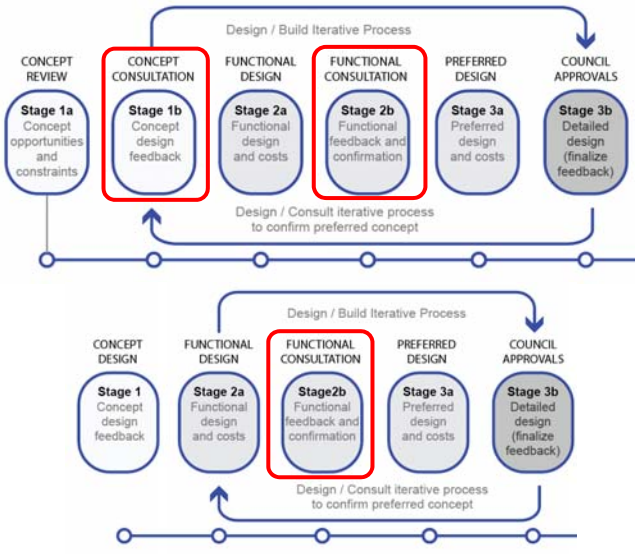
Project Name	Year	Complexity	Type of AAA	Complete Street Design Level	Community Engagement Approach
Hillside/Quadra NS connector	2019	Moderate	Shared	Medium	1 phase
Harbour Road	2019	Low	Protected	Medium	1 phase
Haultain Street	2020	Moderate	Shared	Low	1 phase
Kimta Road / E&N Rail Trail	2020	High	Protected	Medium	2 phase
Richardson Street	2020	Moderate	Shared	Low	1 phase
Government Street North	2020	Moderate	Protected	Low	1 phase
Kings Road	2020	High	Shared	Low	2 phase
Dallas Road and BH connection	2020	High	Off-street	High	Complete
Oaklands NS connector	2021	Low	Shared	Low	1 phase
Fernwood NS connector	2021	Low	Shared	Low	1 phase
Pandora East	2021	High	Protected	High	2 phase
Fort Street East	2021	High	Protected	High	2 phase
Oak Bay Connection	2021	High	Shared	Medium	1 phase
Gorge Road	2022	High	Protected	High	2 phase
James Bay Connection	2022	High	Protected and Shared	High	2 phase

Three-Phased Approach



Highest Value of Input

Streamlined Options – Based on Complexity



2 Phase Approach

Single Phase Approach

Accelerated Approach

	THREE PHASE ENGAGEMENT (Current Approach)	TWO PHASE ENGAGEMENT (tailored)	SINGLE PHASE ENGAGEMENT (tailored)
Concept design	Agencies Key Stakeholders Broader Public	Agencies Key Stakeholders Broader Public	
Preliminary Design	Agencies Key Stakeholders Broader Public	Agencies Key Stakeholders Broader Public	Agencies Key Stakeholders Broader Public
Final Design	Agencies Key Stakeholders Broader Public		
Approval	Council	Council	Council