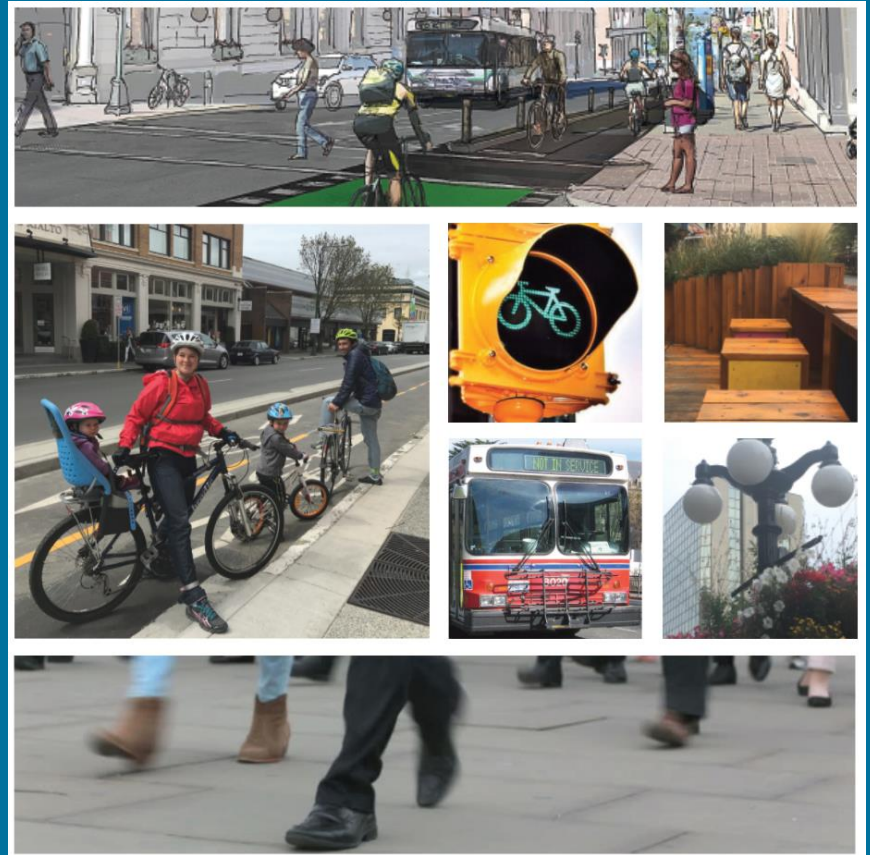


Safer Cycling

Working
Collaboratively on
Road Safety
through Design,
Construction &
Operations of
Cycling
Infrastructure



The Big Picture – 21st Century Cities

SAFETY



Protected bike lanes and enhanced pedestrian amenities reduce road user conflicts and transportation incidents.

HEALTH



Walking or biking daily is an easy way to get exercise, fresh air and reduces risk of health problems.

URBAN GROWTH



20,000 people are expected to move to Victoria by 2038 with 90% of growth planned for downtown and urban villages.

AFFORDABILITY



Not using a car for all trips can save money on gas, parking and maintenance so people can spend more elsewhere.

21ST CENTURY CITIES



Cities all over the world are renewing streets to create vibrant public places that enhance quality of life.

ENVIRONMENT



Providing low carbon travel options helps to address climate change.

WHY - Safety

Types of cyclists

2% strong and fearless

8% enthused and confident

60% interested
but concerned

30% not interested

PROTECTED LANES' APPEAL

Protected bike lanes make riding feel safer and get more people moving. ¹⁰

UP TO 99%

Of riders in new protected bike lanes in San Francisco and DC said the facilities made biking safer.

UP TO 30%

Said they had already increased their biking as a result.

Who would want to bike downtown?



Road Safety Through the 5 Es



Engineering: Creating safe and convenient places to walk, ride and park

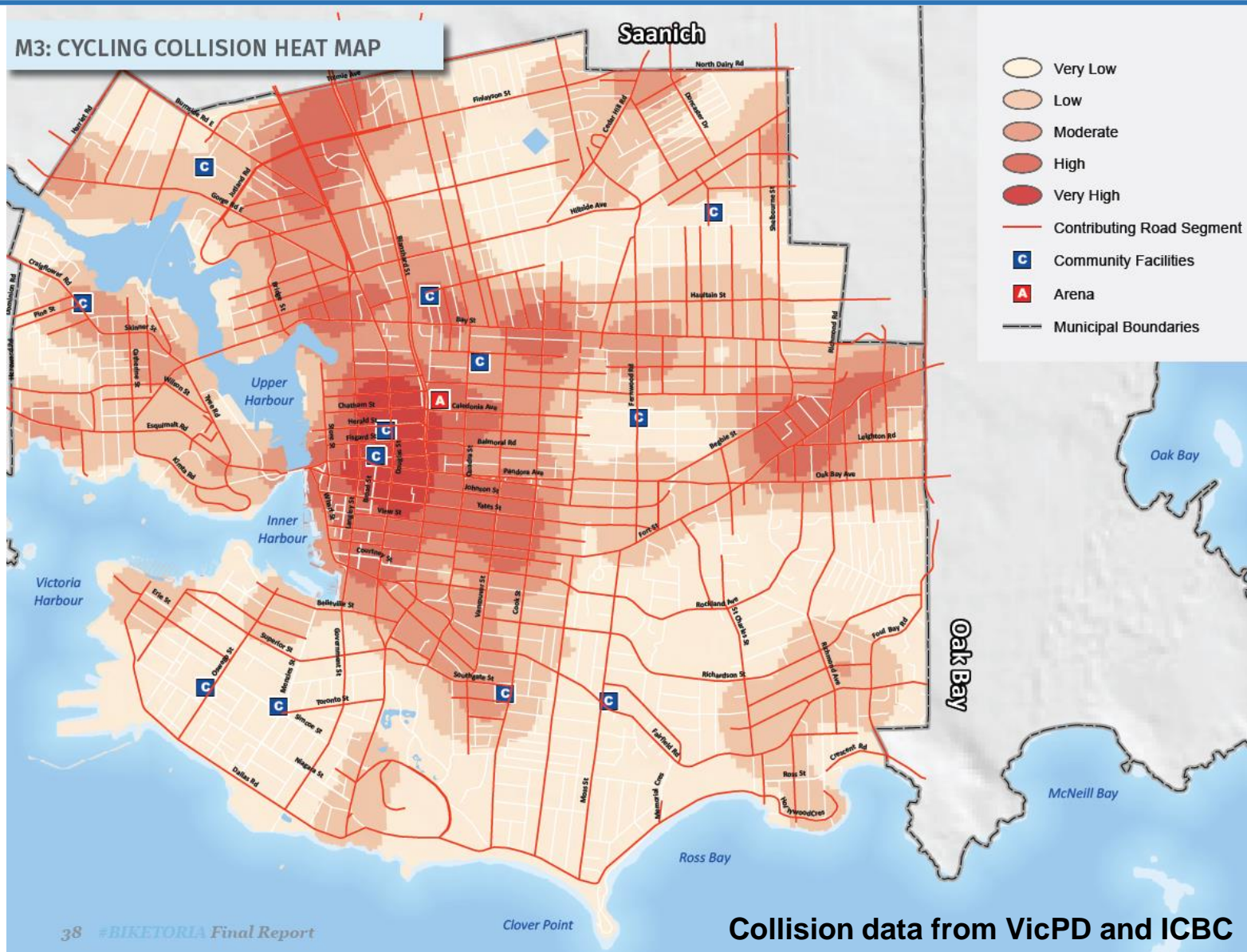
Encouragement: Creating a strong culture that welcomes and celebrates walking and cycling as safe and effective modes

Education: Giving people of all ages and abilities the skills and confidence to ride and walk in urban environments

Enforcement: Working collaboratively on safe roads for all users

Evaluation: Planning for bicycling and walking as a safe and viable transportation option and measuring uptake

Network Analysis – Safety





Protected Bike Lanes

Protected Corridors



Physical separation with median (\$\$\$)



Physical separation with barrier (\$\$)

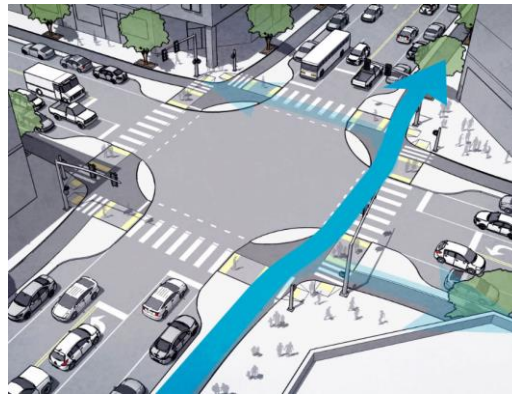


Separation with bollards and paint (\$)

Protected Intersections



Protect by time (exclusive turn movement)



Protect by space (increase visibility)

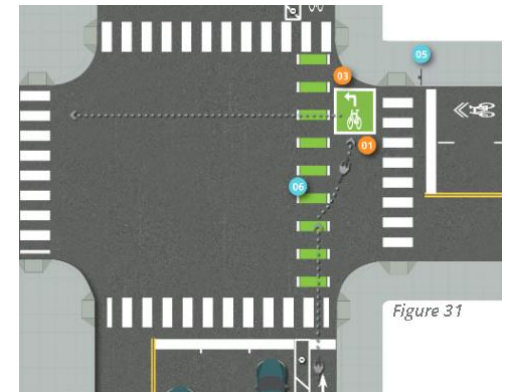


Figure 31

Identify conflict (lower volume treatment)

Shared AAA Routes

To achieve AAA status, shared facilities need **low traffic speeds & low traffic volumes**

Traffic Diversions
(reduce volume)



Traffic Calming
(reduce speeds)



Paint markings
(sharrows)



Paint markings
(advisory lanes)



Applying Engineering Guidelines in the Local Context

And...

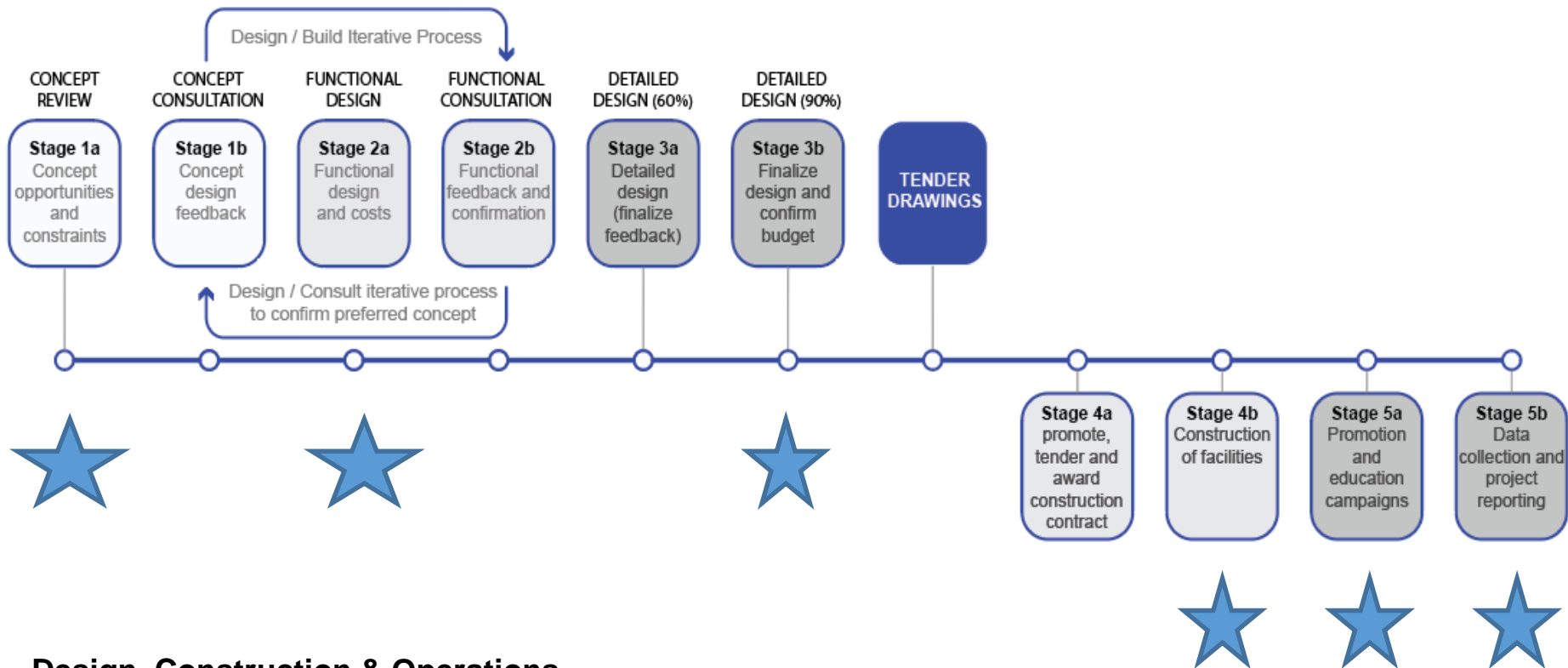
- **Data Collection**
- **Site Visits**
- **Routing Designations**
- **Experience and Observations**
- **Adjacent Land Uses**
- **Behaviour!**

Design Standards and Guidelines

Emerging concepts are informed by engineering standards and best practices to ensure safety, functionality and quality.

- Transportation Association of Canada (TAC) Geometric Design Guidelines
- North American Association of City Transportation Officials (NACTO) - Design Guides
- Manual for Uniform Traffic Control Devices (MUTCD) - Design Standards
- US Federal Highway Administration (FHWA)
- Dutch Design Manual for Bicycle Traffic (CROW)
- Various State, Provincial and Municipal Design Guidelines for Active Transportation infrastructure

Safety – Iterative Project Lens





Design, Construction & Operations

Victoria Police, Victoria Fire, BC Emergency Health Services, ICBC, CRD, BC Transit and More!

Upcoming Projects



AAA NETWORK | Phase 1

- Complete 
- Starting Fall 2018 
- 2019 Projects 
- Subsequent Phase 

Pandora Avenue Open May 2017



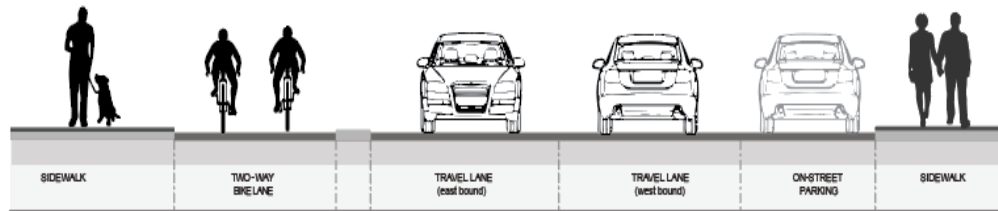
Fort street Open May 2017



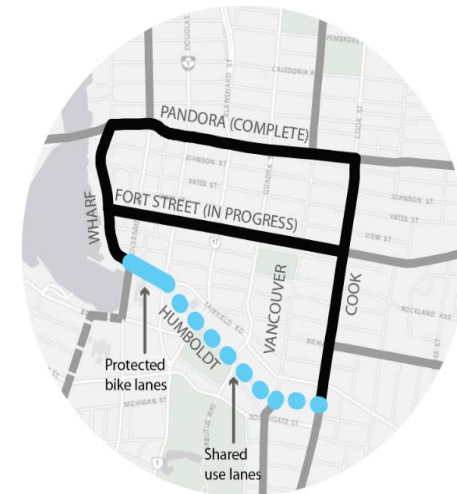
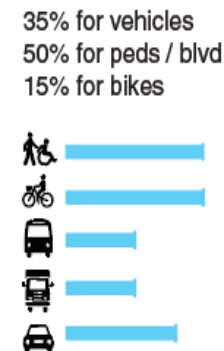
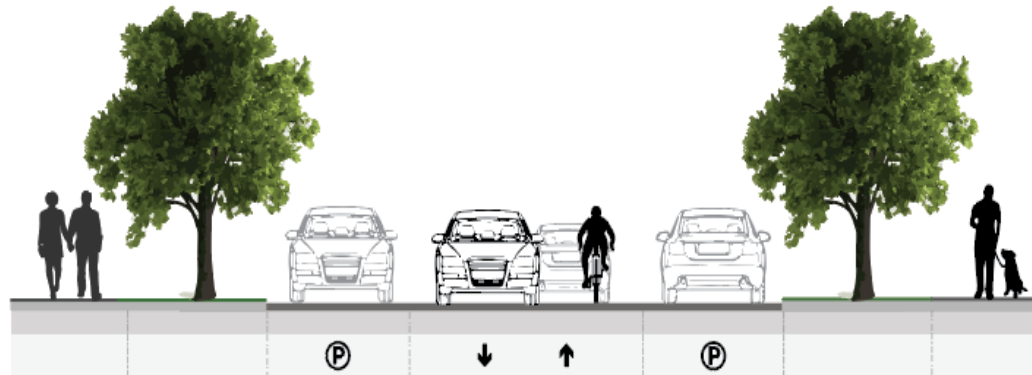
Humboldt Street – 2018/2019

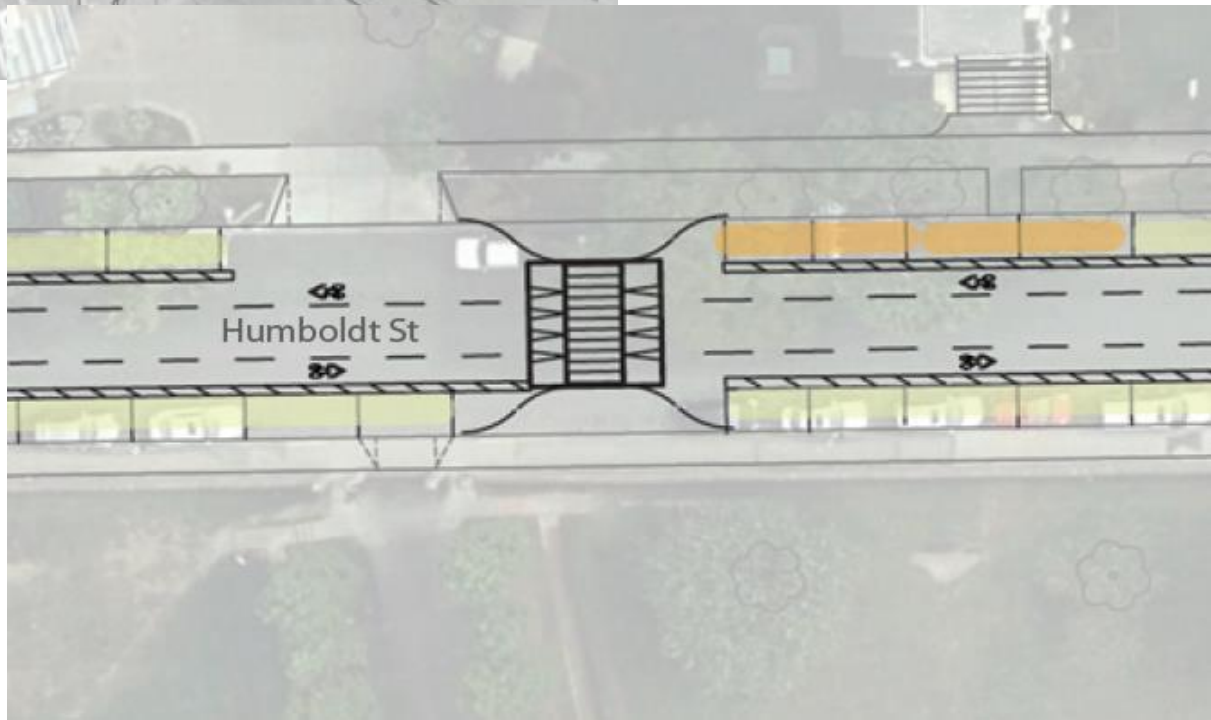
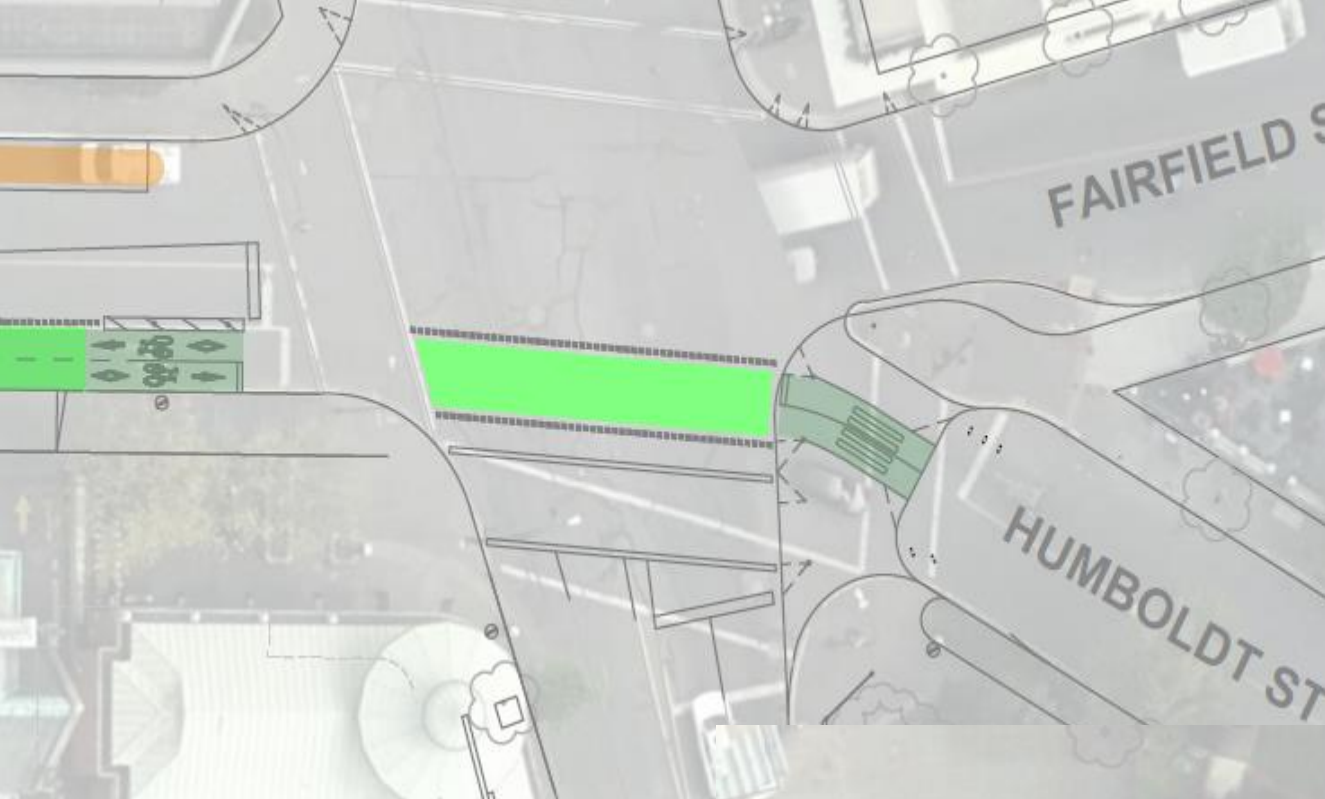
Proposed Conditions:

2 way protected bike lanes on south side of street



Proposed Conditions: Shared travel lane and on-street parking both sides of street

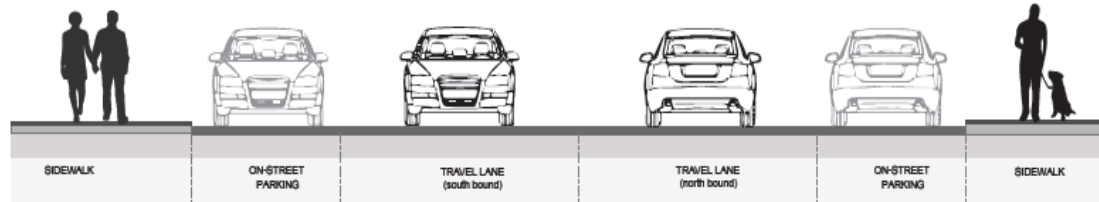




Wharf Street – 2018/2019

Existing Conditions:

2 travel lanes and on-street parking both sides of street

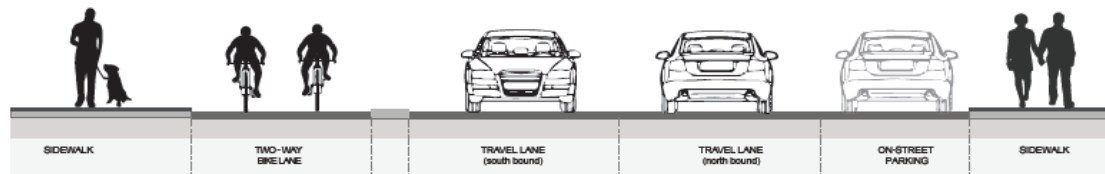


70% for vehicles
30% for peds
0% for bikes



Proposed Conditions:

2 way protected bike lanes on west side of street



50% for vehicles
30% for peds
20% for bikes





Getting the Job Done - Collaboration



