



A Tale of Three Cities: Downtown Cycle Tracks



IBI GROUP
Regina 2015 CITE Conference
June 2015

Compare and contrast:

1. Project initiation
2. Consultation and approvals
3. Impact assessment
4. Before and after conditions
5. Detail design process
6. Cycle track separators
7. Other detail design elements
8. Specific local treatments
9. Winter maintenance
10. Evaluation
11. Last word: unique perspectives

Note to presentation reviewer: Three screen will be set up so each presenter can respond to the above elements one after each other to allow for comparison and contrasting. The following presentations are draft and will be further developed and co-ordinated for this format of presentation.

Richmond, Adelaide, Simcoe Cycle Tracks



Presented by Lukasz Pawlowski, P.Eng

Presentation Outline

- Project background
- Separated bikeway projects
- What we have learned so far

Richmond Adelaide Cycle Track Planning and Design Study

Summer of 2013, Commenced a Municipal Class EA to study physically separated bikeways in the Richmond St, Adelaide St, Simcoe St and Peter St corridors.



Why Separated Bicycle Lanes

- Cycling in Toronto is growing – 2001 to 2006 Census has documented a 30% increase in Torontonians commuting to work by bike
- Downtown is Changing – study area has experienced 300% increase in population since 1996
- 36% of downtown Toronto residents (15 yrs or older) cycle for utilitarian purposes (2009 Ipsos Survey)

Why Separated Bicycle Lanes

- Cyclists increasingly want and demand greater separation from motor vehicle traffic, for safety and comfort
- Have seen examples of separated bike lanes in other jurisdictions



Richmond Adelaide Cycle Track Planning and Design Study

June 2014, Toronto City Council adopted a staff report to authorize the installation of a pilot project to test the preliminary preferred alignments coming out of the EA



Approved Pilot Project Installations

- Richmond Street cycle track from York to Bathurst
- Adelaide Street cycle track cycle track Bathurst to Simcoe
- Simcoe Street, cycle tracks from Queen to Front
- Peter Street, bicycle lanes from Queen to King



Approved Permanent Installations

- Richmond Street westbound contra-flow bike lane
- Phoebe Street westbound contra-flow bike lane
- Stephanie Street westbound contra-flow bike lane
- Bathurst Street Southbound bicycle lane



Simcoe Street - Before



Simcoe Street - After



Adelaide Street - Before



Adelaide Street - After

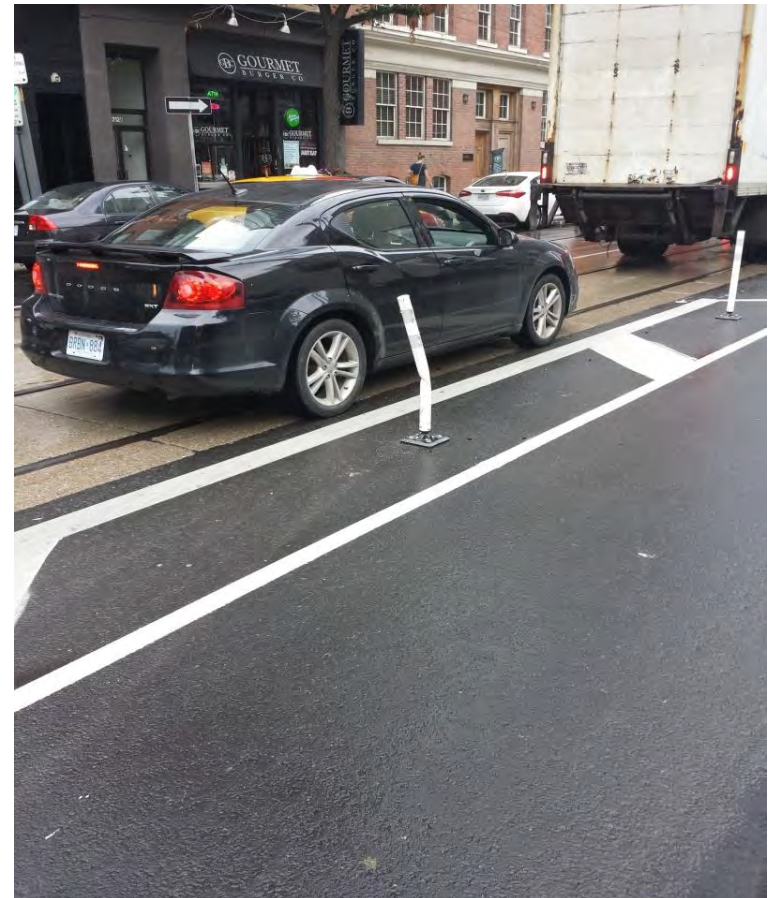


Lessons Learned Construction



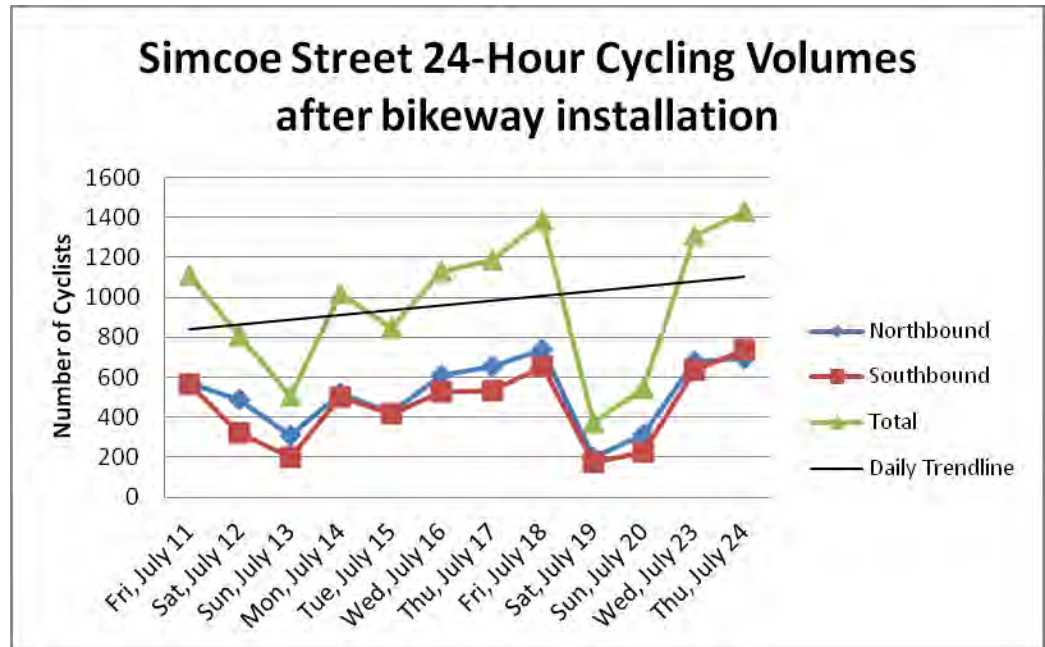
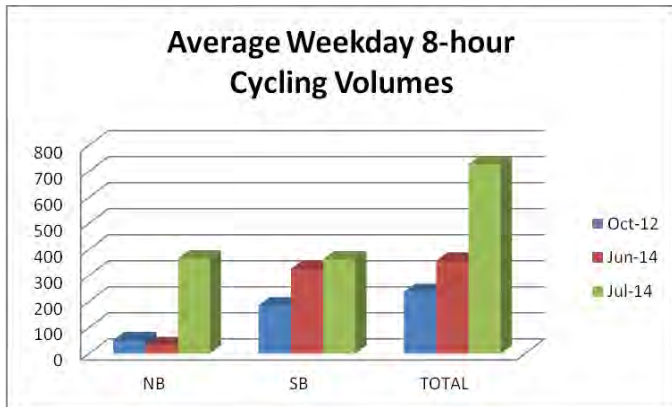
Lessons Learned

Bollards are not perfect



Lessons Learned Simcoe Street

Cycling volumes increased after cycle track installation, and continued to grow



Lessons Learned

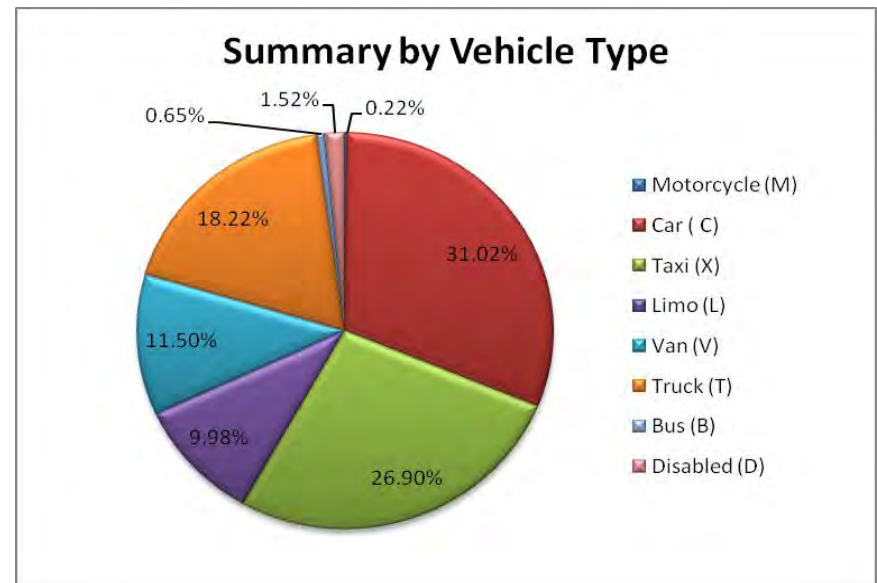
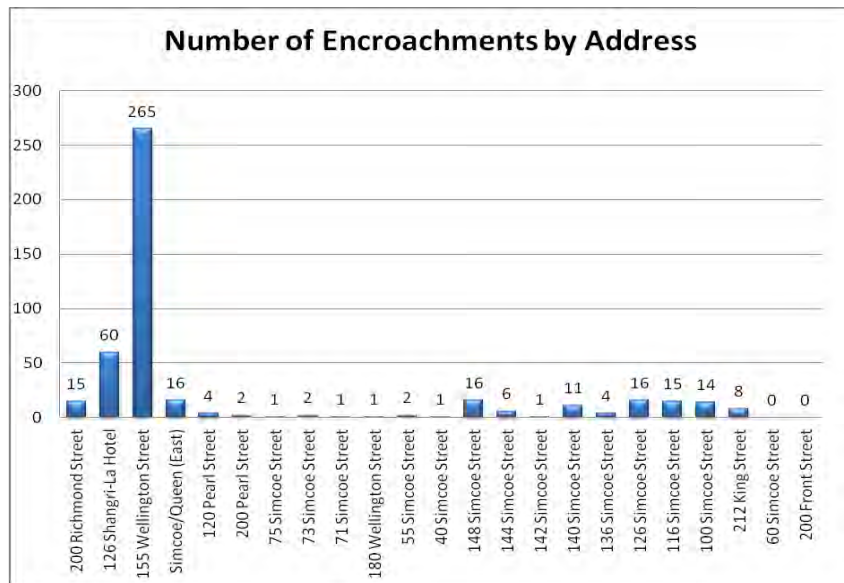
Simcoe Street

Cycling Intercept Survey

- Simcoe rated 8.7/10 from a safety and comfort perspective with the cycle tracks. Prior to cycle tracks rated 5.3/10
- 95% of cyclists rated northbound contra-flow cycle track as 'same' (27%) or 'better' (68%), than a typical bike lane in Toronto, from a safety and comfort perspective.
- Additional comments – desired more separation, concerns re motor vehicle encroachment

Lessons Learned Simcoe Street

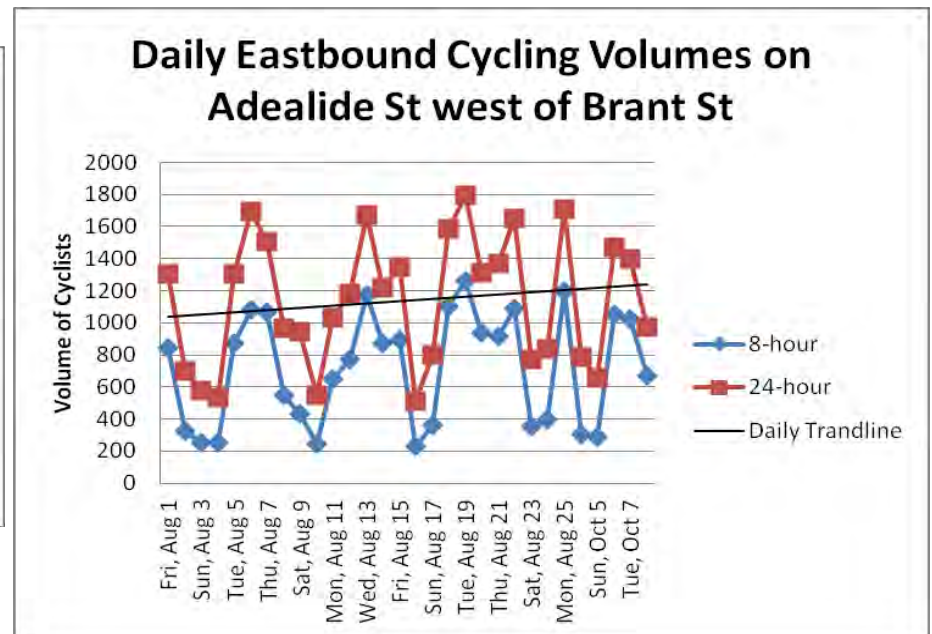
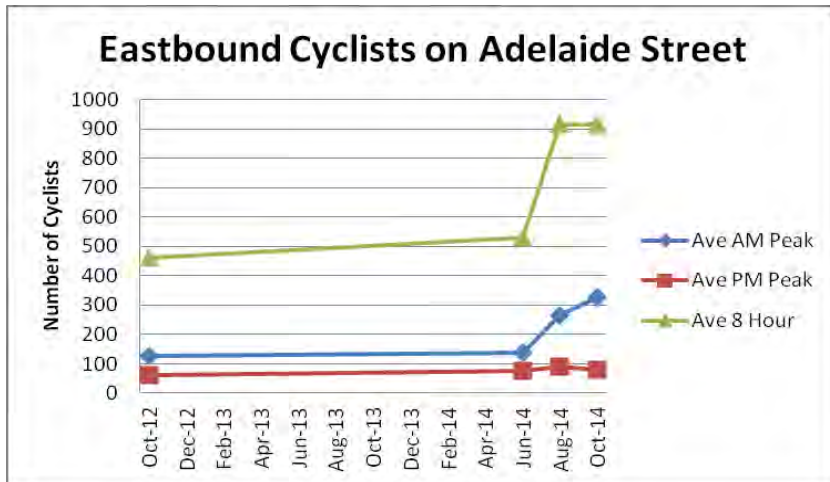
Motor Vehicle encroachments were concentrated at several hot spot locations. Commercial vehicles, taxi, truck, limo, and vans accounted for bulk of encroachments



Lessons Learned

Adelaide Street

Cycling volumes increased after cycle track installation, and continued to grow



Lessons Learned

Adelaide Street

Cycling Intercept Survey (prior to bollard installation)

- Adelaide rated 7.9/10 from a safety and comfort perspective with a buffered bike lane. Adelaide without cycling facility was rated 4.4/10.
- From a safety and comfort perspective 75% of cyclists rated the buffered bike lane a 'better' (66%) or 'much better' (9%) than a typical bike lane in Toronto
- 25% had requested more separation.

Lessons Learned

Adelaide Street

Cycling Intercept Survey (after bollard installation)

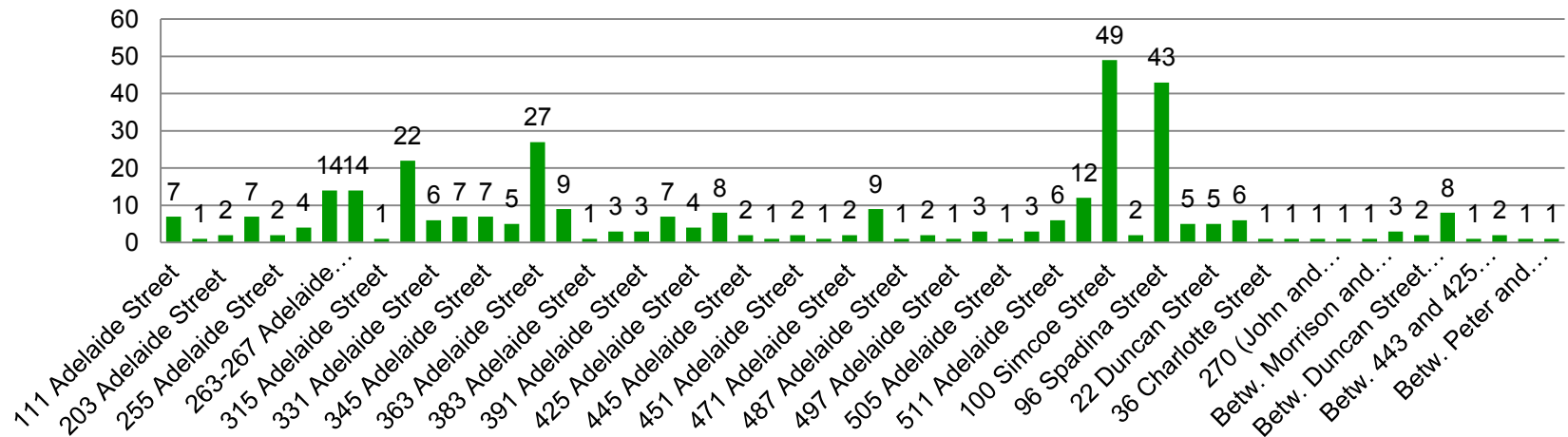
- Adelaide rated 8.2/10 from a safety and comfort perspective with the cycle tracks. **The rating of Adelaide without cycling facility dropped to 3.9/10.**
- From a safety and comfort perspective 82% of cyclists rated the buffered bike lane a 'better' (58%) or 'much better' (24%) than a typical bike lane in Toronto
- 19% had requested more separation.

Lessons Learned

Adelaide Street

Motor Vehicle encroachments on Adelaide Street were more evenly distributed than on Simcoe Street.

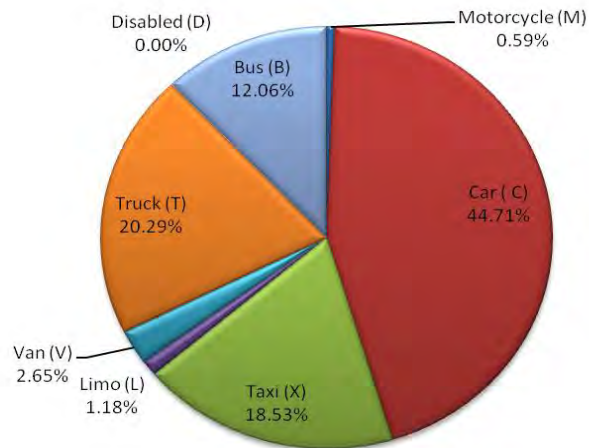
Number of Encroachments by Address



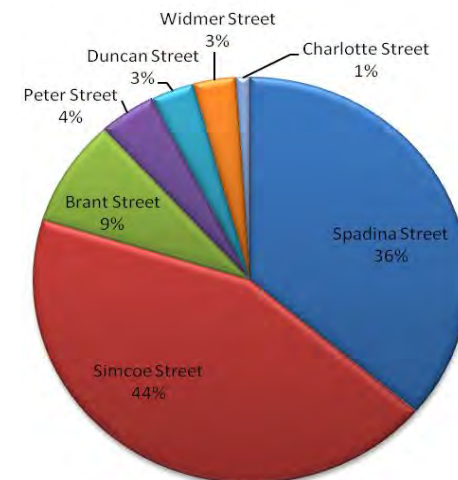
Lessons Learned Adelaide Street

Private passenger cars accounted for a greater share of encroachments noted. 28% of all encroachments were right-turning vehicles at bus stop locations, mainly at Spadina (36%) and Simcoe (44%).

Summary - By Vehicle Type



Location of Right Turning Vehicle Encroachment



Observations and Evaluation Continue

Will add additional evaluation data prior to CITE conference.

Thank You

Lukasz Pawlowski, P.Eng.
Senior Engineer
Cycling Infrastructure & Programs
Transportation Services
City of Toronto

416-338-6583
lpawlow@toronto.ca





Hamilton
Public Works

Public Works
Corporate Assets & Strategic Planning

Cannon Cycle Track

CITE Regina June 2015

Providing services that bring our City to life !

- Community
- People
- Processes
- Finance



Hamilton
Public Works

YES WE CANNON

Petition Statements News Resources Walkable Hamilton

Bike Lanes for Cannon Street by 2015? Yes We Cannon!

Yes We Cannon 2235 Supporters

Sign the Petition!

There has never been a better time than *right now* to develop an active transportation infrastructure in lower Hamilton.

Our city has done so much and come so far already, but there's still much more to do. A cycling trip is only as safe as the least safe part of the journey - and currently all trips taken across the lower city are extremely dangerous for both cyclists and the drivers who share the road with them. Adding bike lanes to Cannon Street provides us an opportunity to make our roads safer, our communities better connected, and our citizens healthier and happier!

Between Bike Share, the proposed James St North GO Station, and the 2015 Pan Am games, now is the ideal time to take a bold step towards safe downtown transportation.

Please lend your support! Sign the campaign, share, like, and tweet away, and let's get this pedal-powered movement started.

Why Bike Lanes?

- Bike lanes reduce cyclist/motorist accidents by up to 90%.

Featured Statement

I have recently started to take up cycling again and as someone who lives in the East end but frequents James street north it is vital to me that we have safe convenient routes to get from east to west using active transportation. As a city we need to support this, we need bike lanes. Yes we Cannon!

- Matt Willard

[View all statements](#)

About Yes We Cannon

Yes We Cannon is a citizen's group focused on creating a safe transportation route for cyclists along Cannon Street.

Contact us at yeswecannon.hamilton@gmail.com if you would like to volunteer or donate to support our cause! If you donate \$20 or more, you will get a beautiful Yes We Cannon t-shirt!

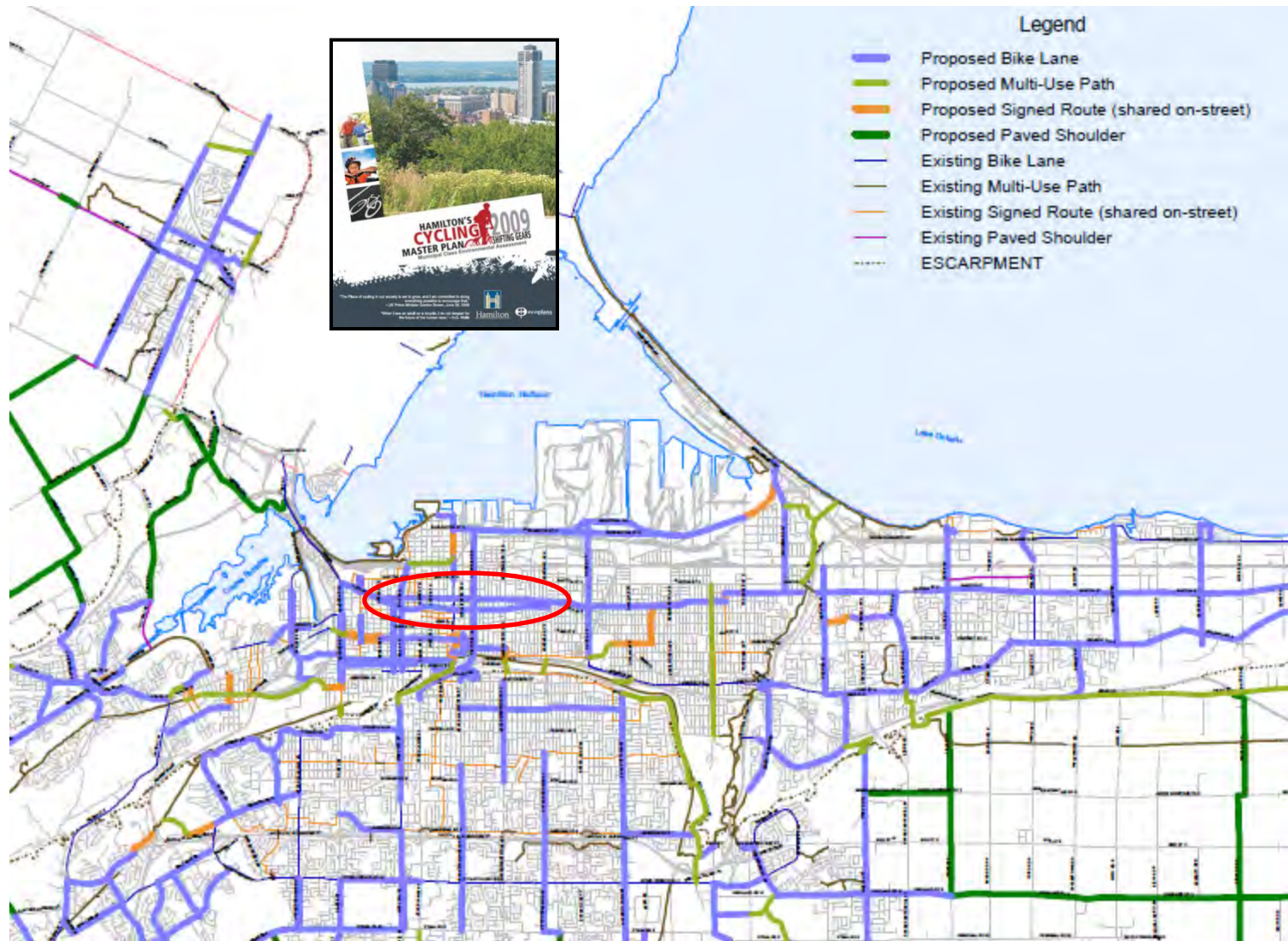
[LIKE YES WE CANNON ON FACEBOOK](#)

Cycling Master Plan

- Community
- People
- Processes
- Finance



Hamilton
Public Works



Cannon Cycle Track

Feasibility Study

- roadway capacity
- parking/loading
- transit
- pedestrians
- design concept
 - arterial
 - planters
- safety/collisions
- emergency services
- waste collection, etc.
- maintenance

= \$850,000 capital cost

+ \$240,000 annual ops

- Community
- People
- Processes
- Finance



Hamilton
Public Works



Final Report

Cannon Street Bi-directional Cycle Track Pilot Project: Feasibility Assessment and Functional Design

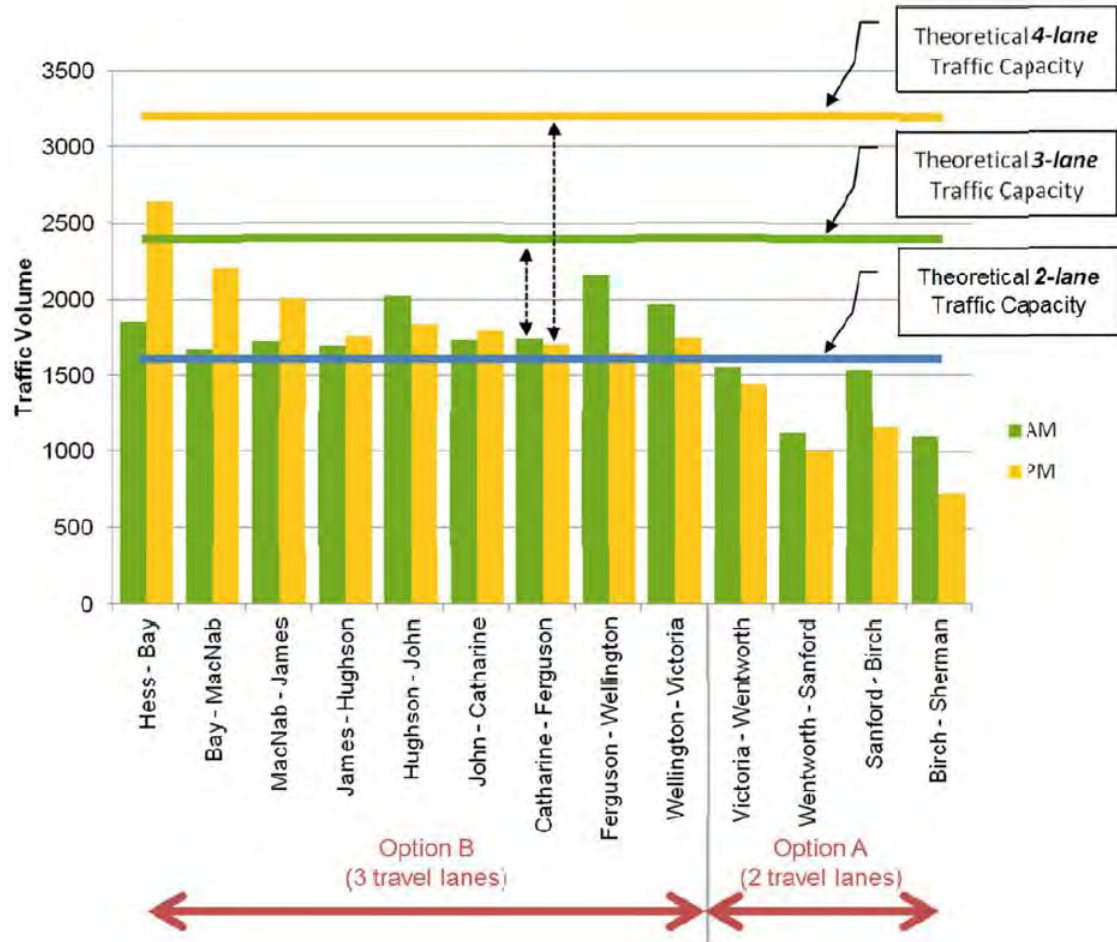


Prepared for City of Hamilton
by IBI Group

February 19, 2014

Cannon Before the Cycle Track

- Victoria Ave defines a critical change in auto volumes
- intimidating for cyclists and pedestrians

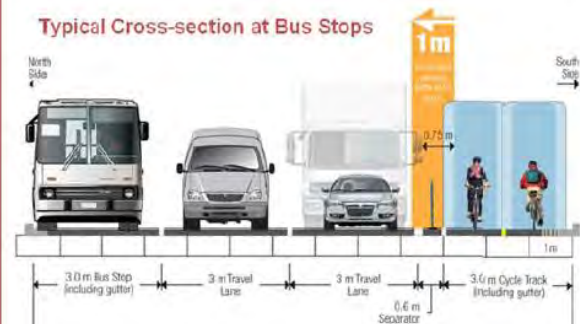
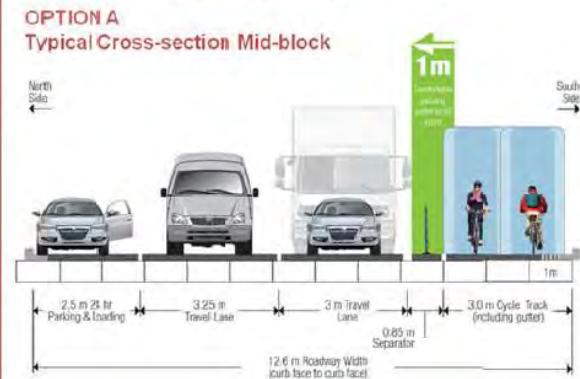
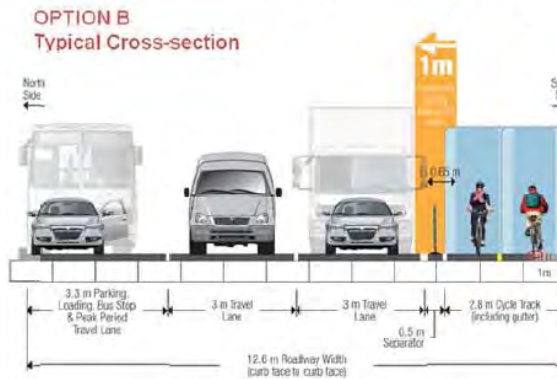
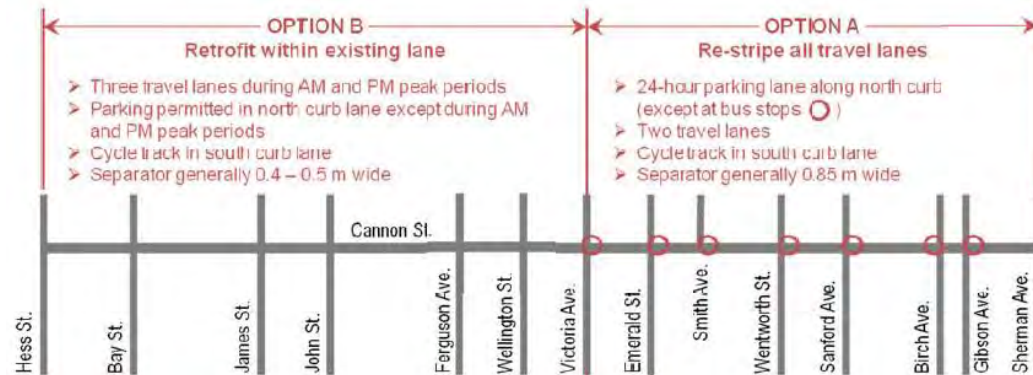


- Community
- People
- Processes
- Finance



Hamilton
Public Works

Cannon: The Cycle Track Concept



- ➔ Community
- ➔ People
- ➔ Processes
- ➔ Finance



Hamilton
Public Works

Traffic Impacts with Cannon Cycle Track

- travel times along the 3km:
 - in the AM pk hr: 4% increase (~20s) to ~8 min
 - in the PM pk hr: 9% increase (~35s) to ~7 min
- pedestrian buffer

- Community
- People
- Processes
- Finance



Hamilton
Public Works



Timeline

- Summer 2013 - Yes We Cannon
- Fall 2013 - Council direction to investigate
- Winter 2014 - complete Feasibility Study
- March 2014 - Council direction to implement
- Spring 2014 - Detailed Design
 - review of recent Hamilton install (Hunter St)
 - field surveys (consultant)
 - preliminary design
 - City comments
- June 2014 - preliminary signals and signage works
 - refine a few details
 - review critical elements with City Services
 - \$100,000 of select asphalt/roadway repairs
- August 2014 - pavement markings, planters, etc.
- September 12, 2014 – official opening
 - Communication strategy throughout summer/fall 2014
 - Continued review of installation details

- Community
- People
- Processes
- Finance



Hamilton
Public Works

- Community
- People
- Processes
- Finance



Hamilton
Public Works



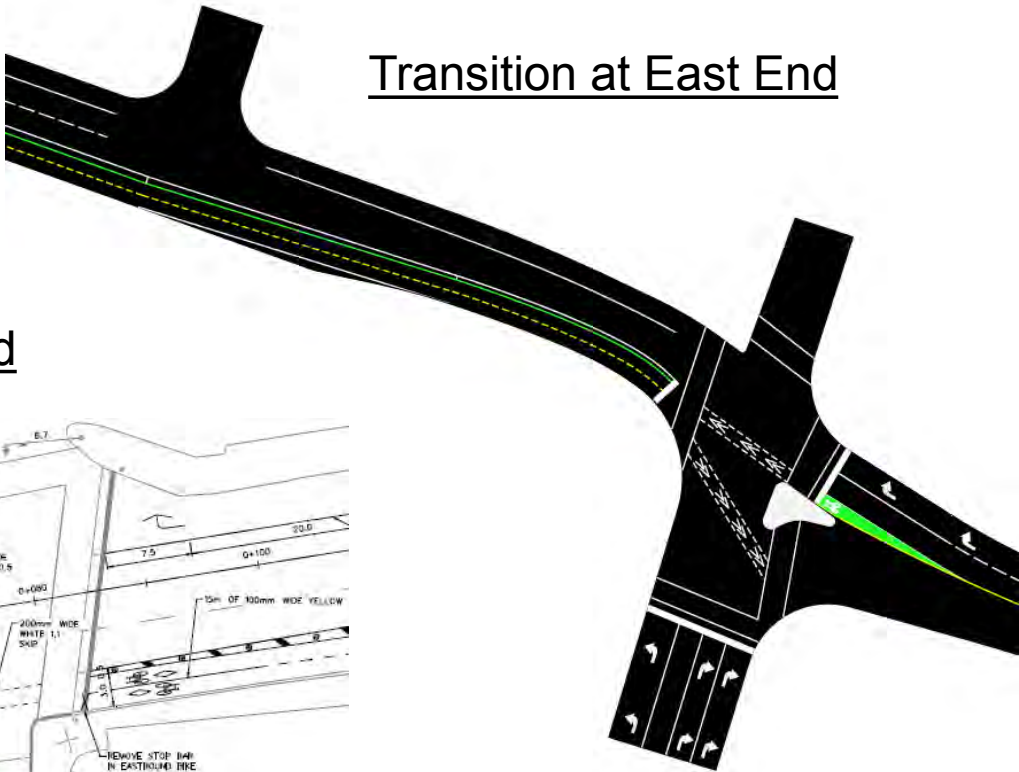
- Community
- People
- Processes
- Finance



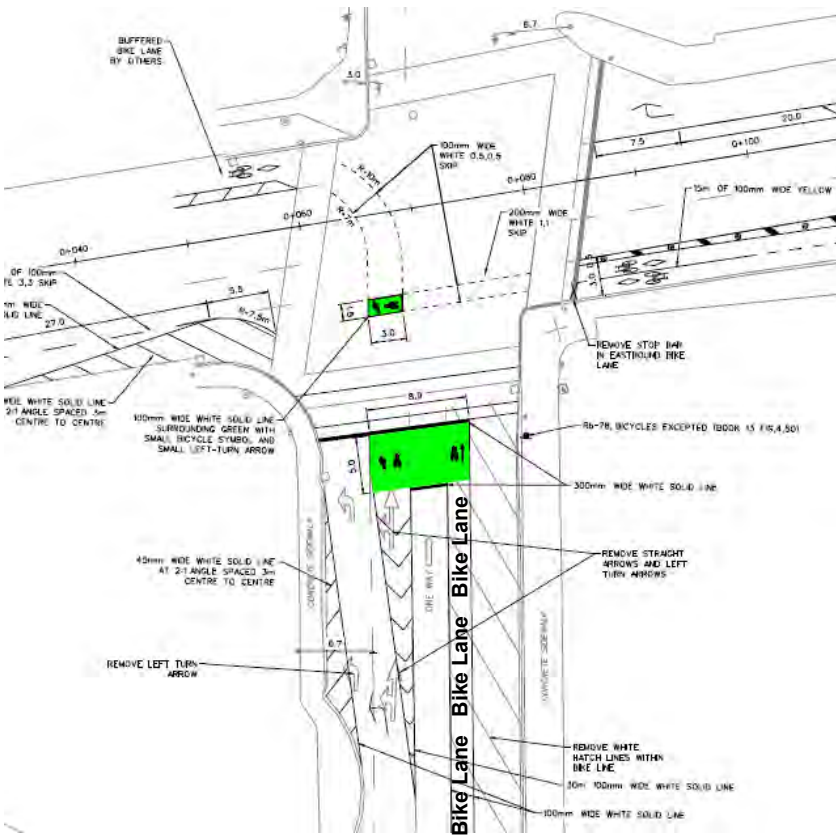
Hamilton
Public Works



Transition at East End



Transition at West End



- Community
- People
- Processes
- Finance

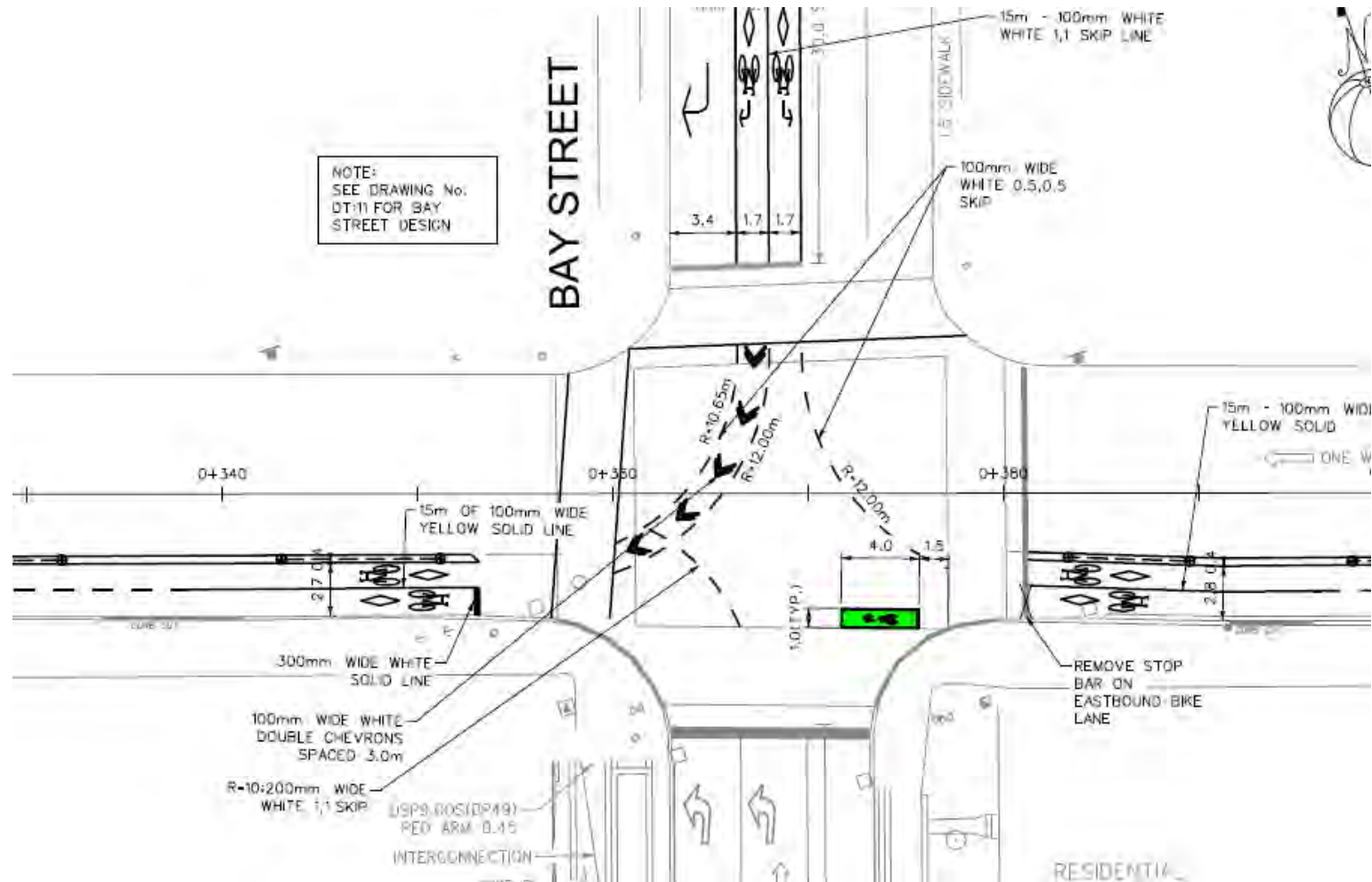


Cannon St @ Bay St

- Community
- People
- Processes
- Finance



Hamilton
Public Works



- Community
- People
- Processes
- Finance

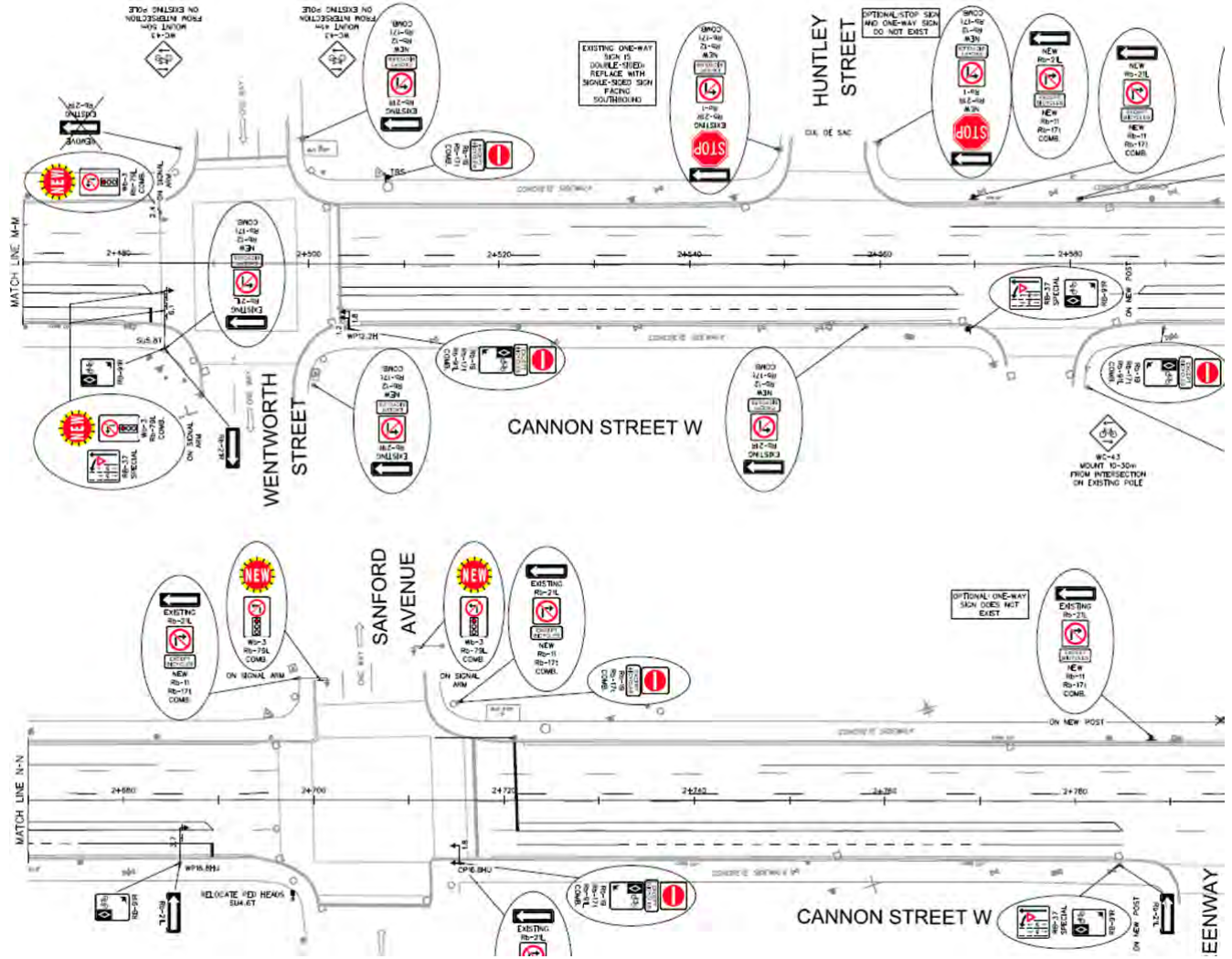


Hamilton
Public Works



Signage – on a Pseudo-one-way Street

- Community
- People
- Processes
- Finance



Hamilton
Public Works

Winter Maintenance

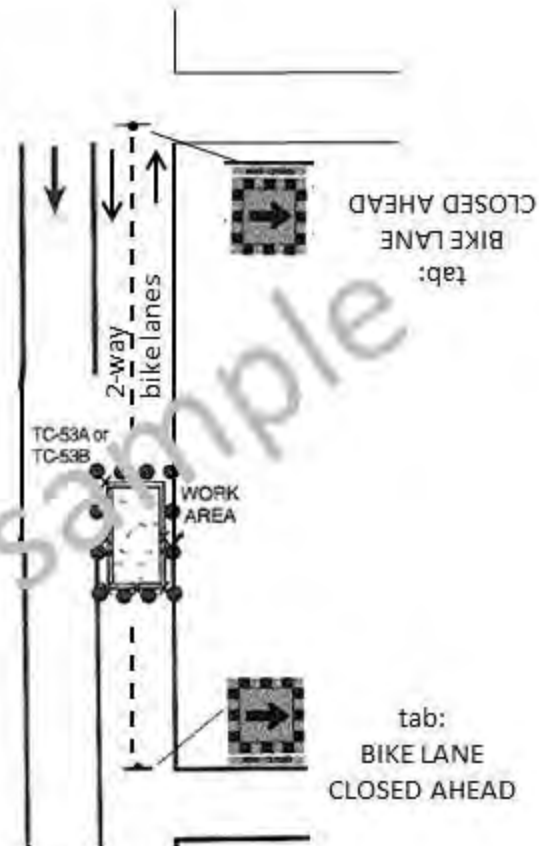
- Community
- People
- Processes
- Finance



Hamilton
Public Works

Temporary Road Closures

Sample layout for works in two-way bike lanes:



- Community
- People
- Processes
- Finance



Hamilton
Public Works

Three Year Pilot Project

Initial Challenges:

- waste collection
- cargo deliveries at private homes
- e-bikes? medical scooters? walkers?
- some people hate it...

but some people love it.

Monitoring Metrics:

cycling ridership, BikeShare data, collisions, costs, Pan Am Games experience, business & resident & school feedback, auto travel times, intersection LOS, transit schedule adherence, illegal usage: sidewalk riding, medical scooters, cycle track blockages

- Community
- People
- Processes
- Finance



Hamilton
Public Works

Thanks!

I sure feel comfortable riding here... wonder what to eat for dinner...



- Community
- People
- Processes
- Finance



Hamilton
Public Works

Cannon Cycle Track

Centre City Cycle Tracks - Calgary



**Presented by: Canace Bain, P.Eng.
Senior Leader Traffic Construction
City of Calgary**

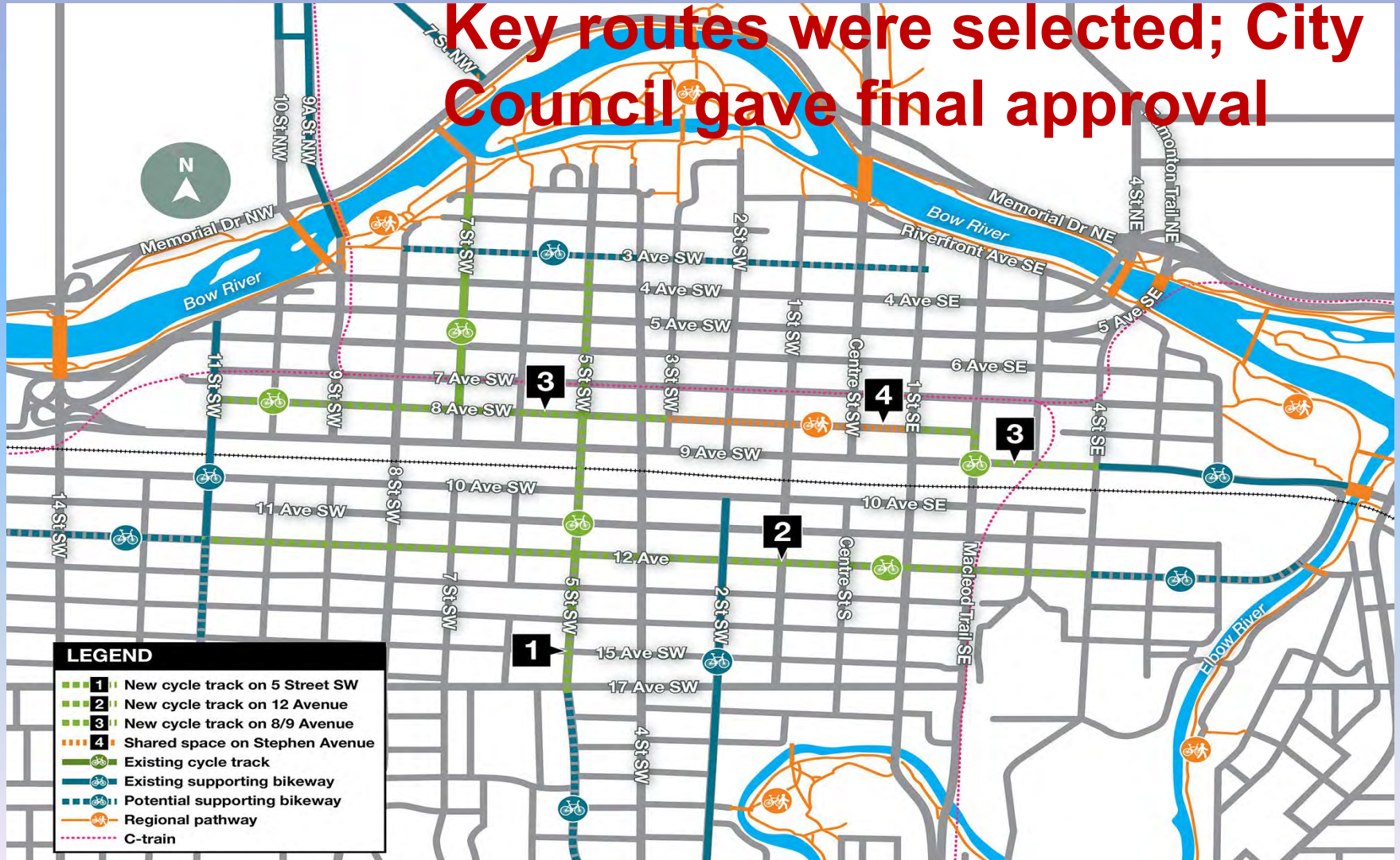
Council Decision



City Council approved the cycling strategy in July 2011

Cycling Strategy and Council

Key routes were selected; City Council gave final approval



Parking Impacts



Traffic Impacts

- **Will more congestion occur?
Is this acceptable?**



Business Impacts



**Potential loss
of loading
zones**

Transit Impacts



**Bus zones
posed some
challenging
issues**

Construction Impacts



Existing and future lane closures need to be addressed

Construction impacts

Were we successful?

Show pic of
after traffic

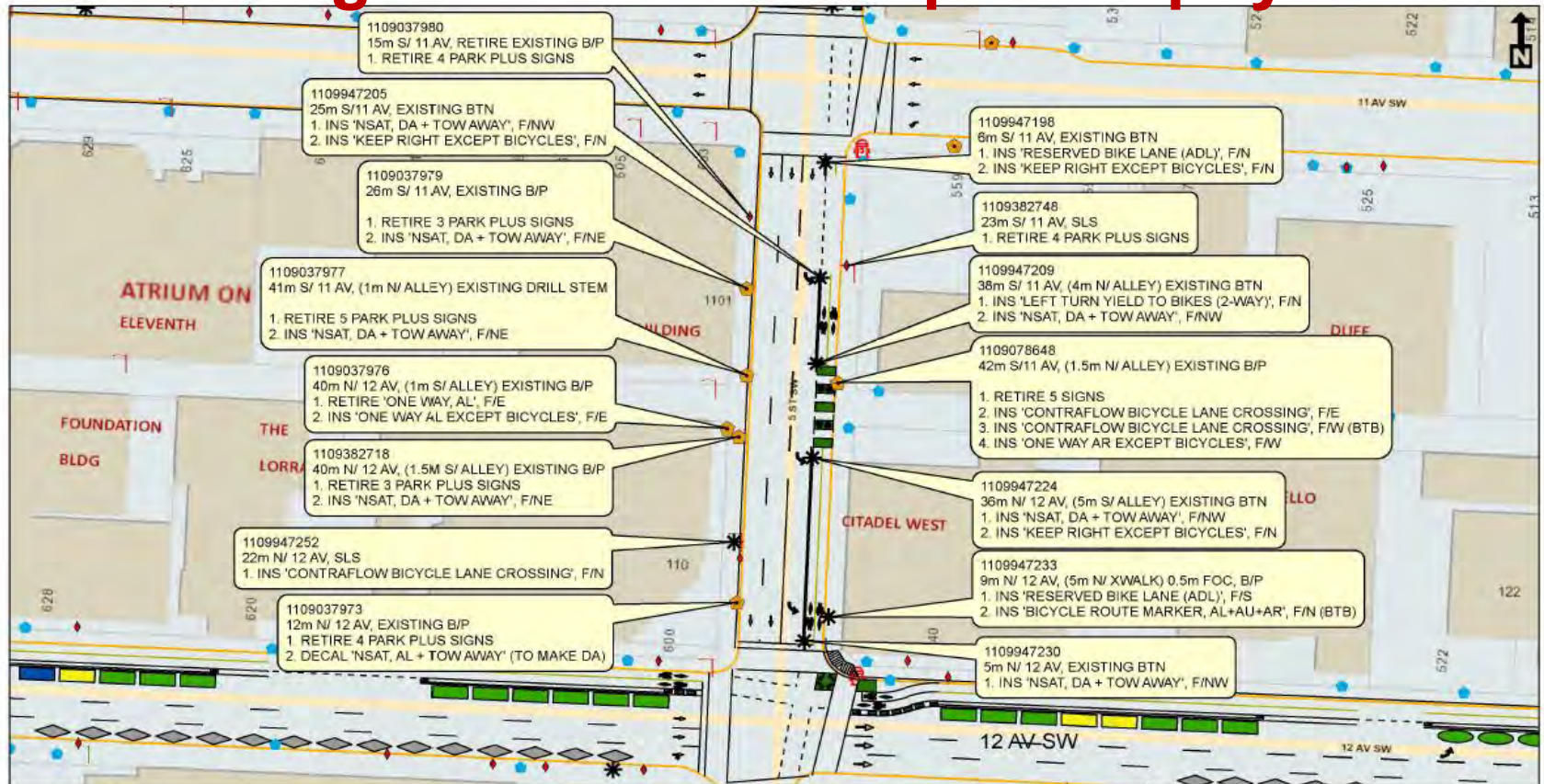
Construction Impacts



The temporary sidewalk here can't be maintained.

Design Process

Design standards and philosophy



Chad Chudyk
268-1592
Cell 899-3073
FEB 26, 2015

5 ST CYCLETRACK BTW 6 AV & 9 AV SW

0 4.75 9.5 19 28.5 38 Meters

Page 3 of 3

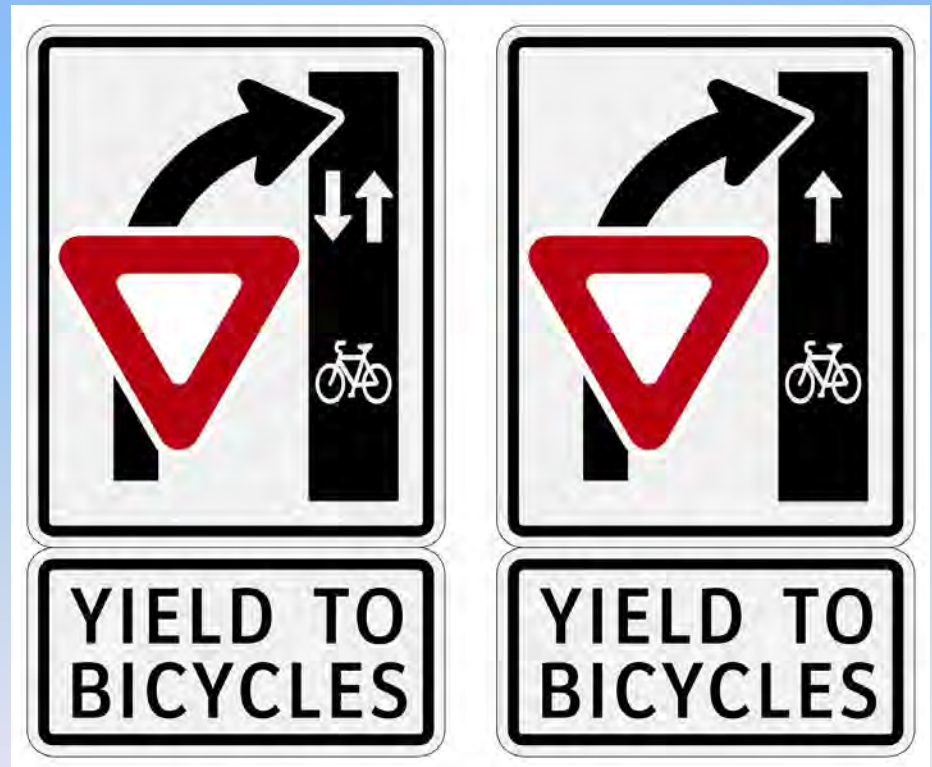
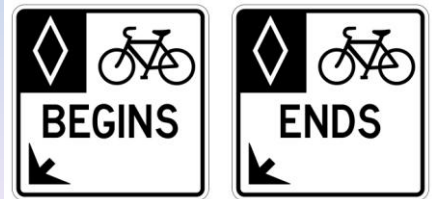
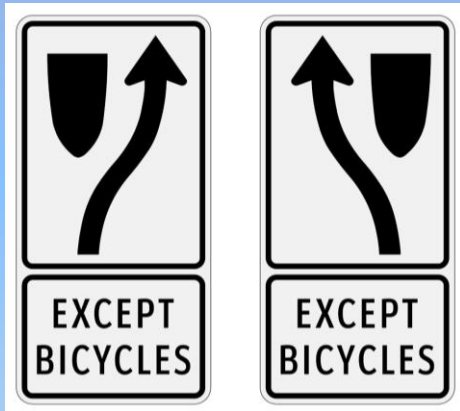
Design Process

Add copy of
design plan

Which step are we at now?

Design Process

New Sign Designs



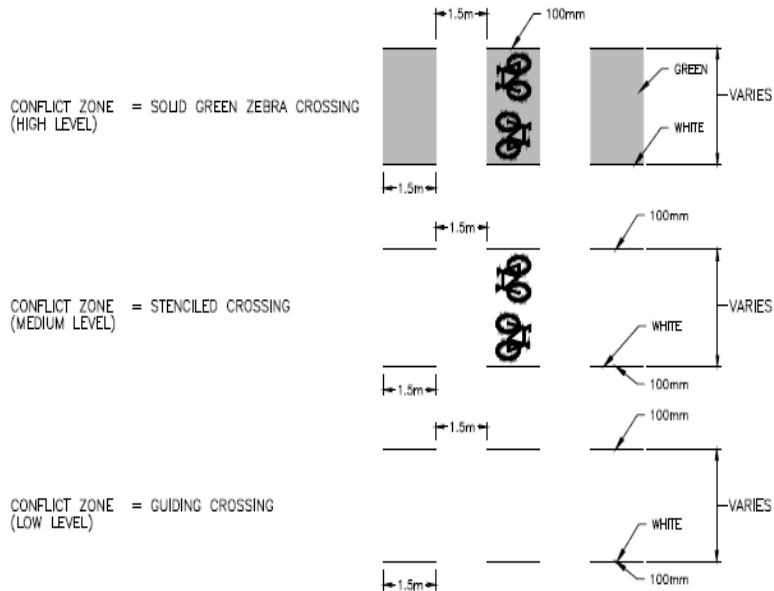
Details

Is it a traffic control device?



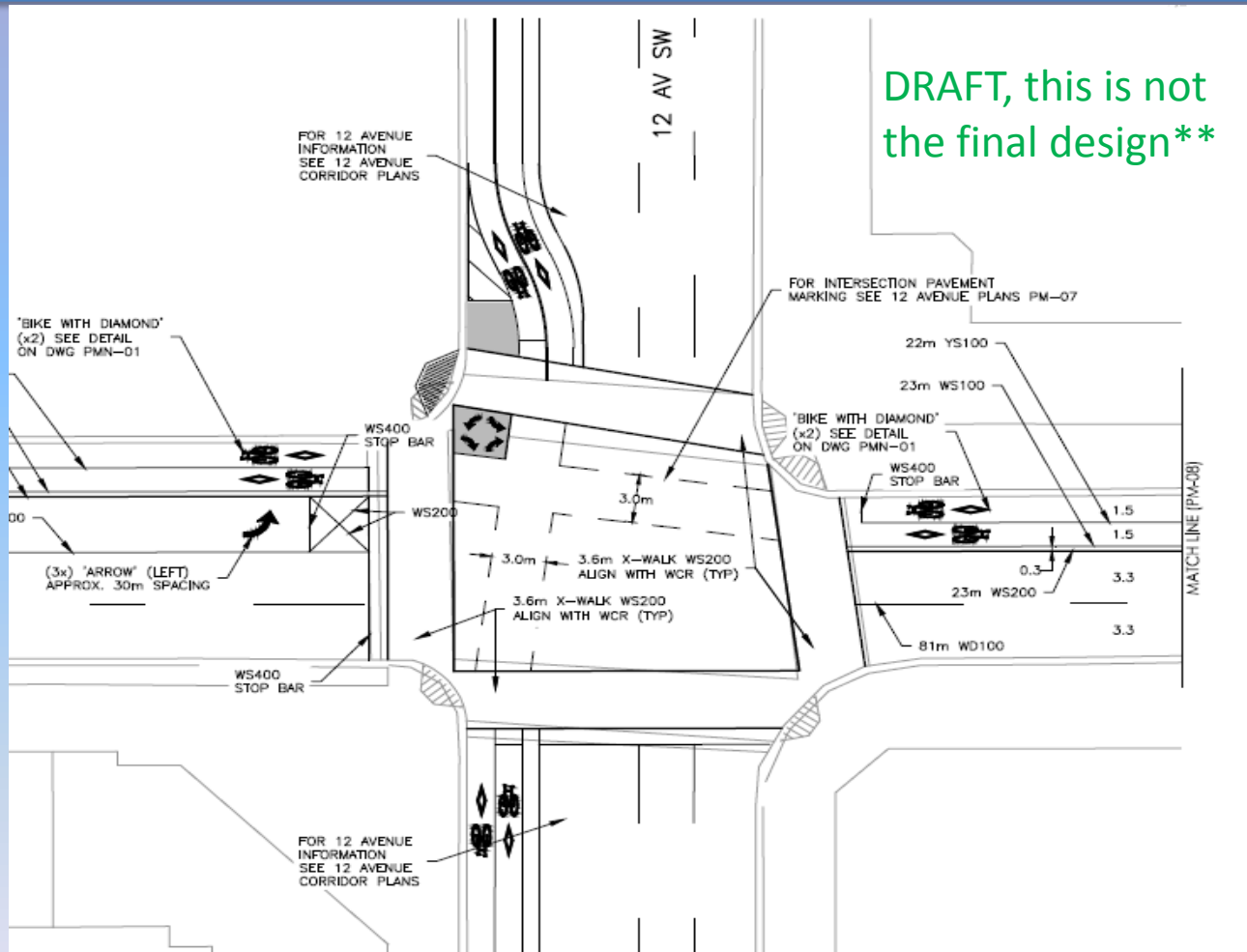
Road marking

CONFLICT_ZONE PAVEMENT MARKINGS:



Conflict zone markings

Key intersections



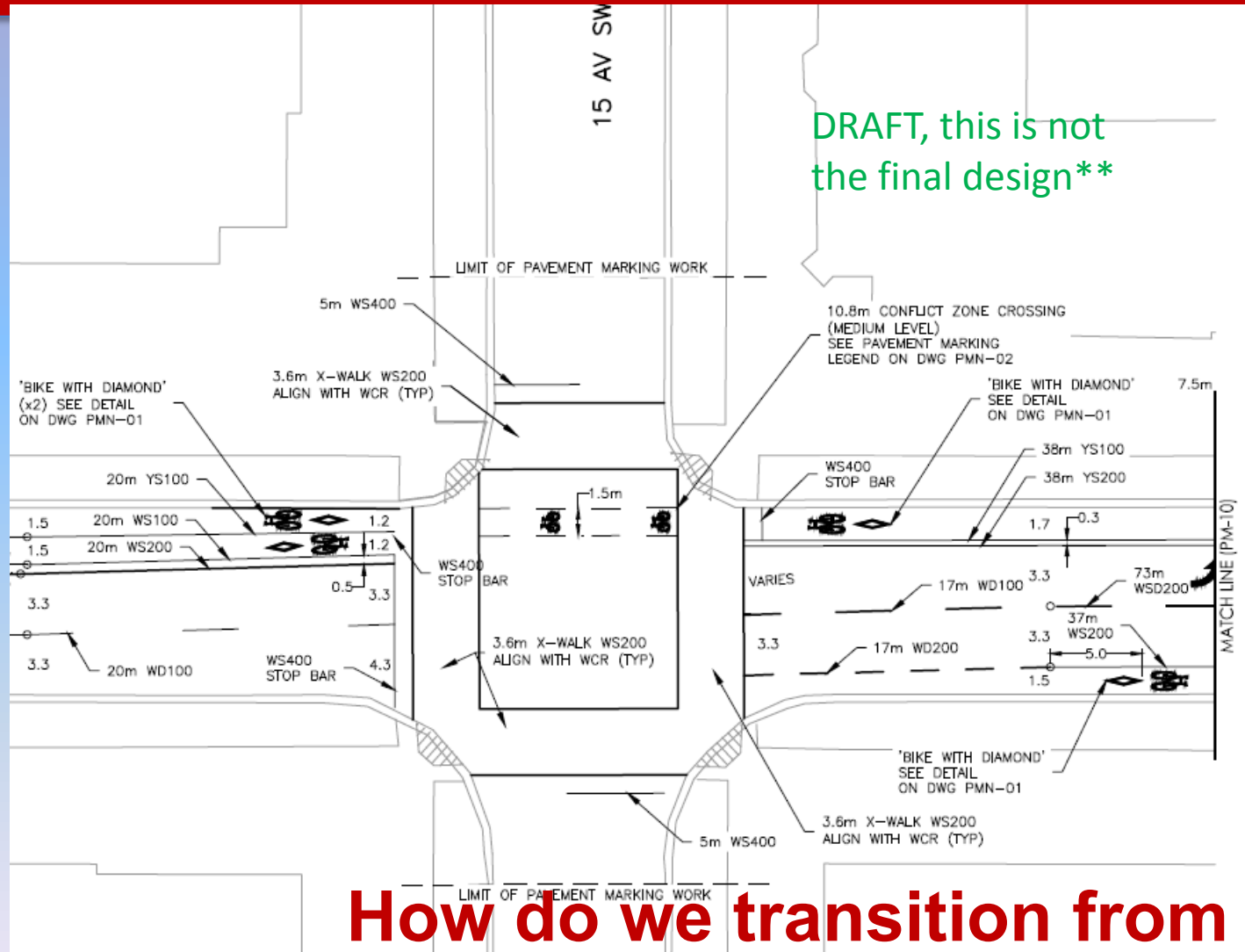
Intersection of cycling facilities

Design Process



**Key
Intersections
provided the
most
challenges**

Key Intersections



DRAFT, this is not the final design**

How do we transition from a one-way road to a two-way road?

Design Process



Should this location be signaled on opening day?

Winter Maintenance

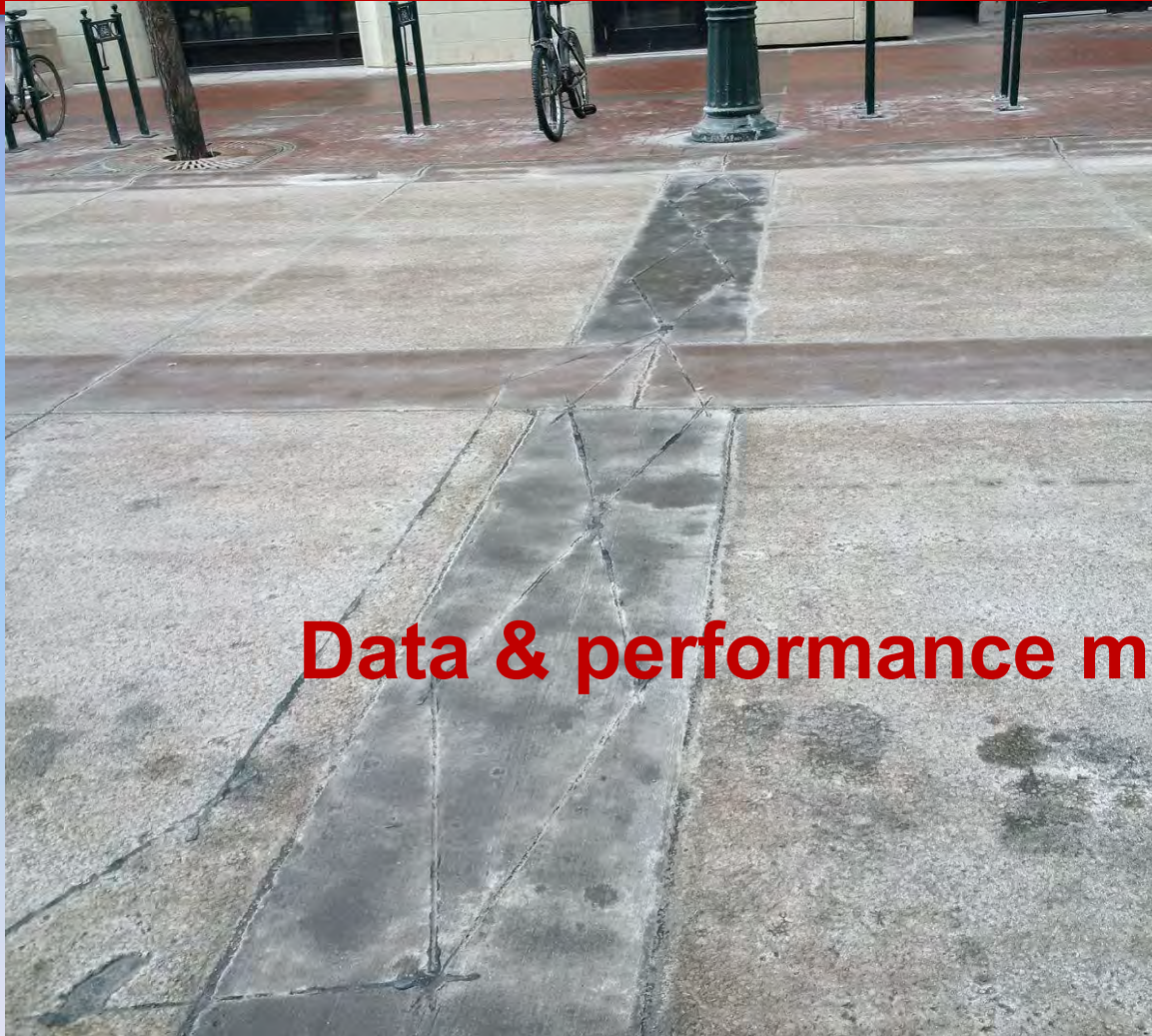


after snow



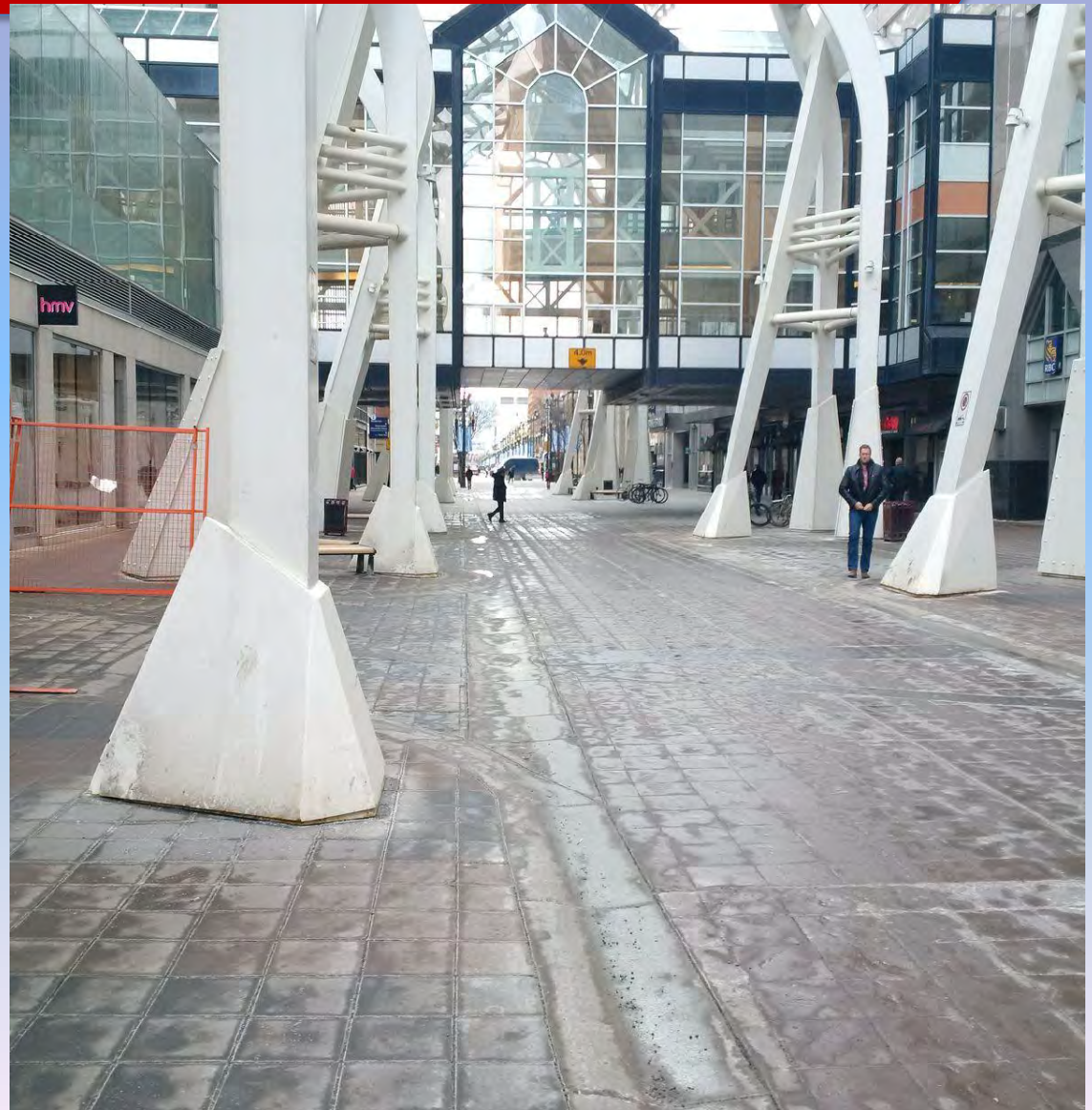
How should we handle the snow?

Evaluation



Data & performance measures

Unexpected Challenges



Public Art

Expected Challenges



Adding bikes to a pedestrian only facility

Legal Challenges



Since we can't change the provincial law is this something that we can change in a bylaw?

Other Legal Issues

How do we allow for cyclists to ride in a crosswalk?

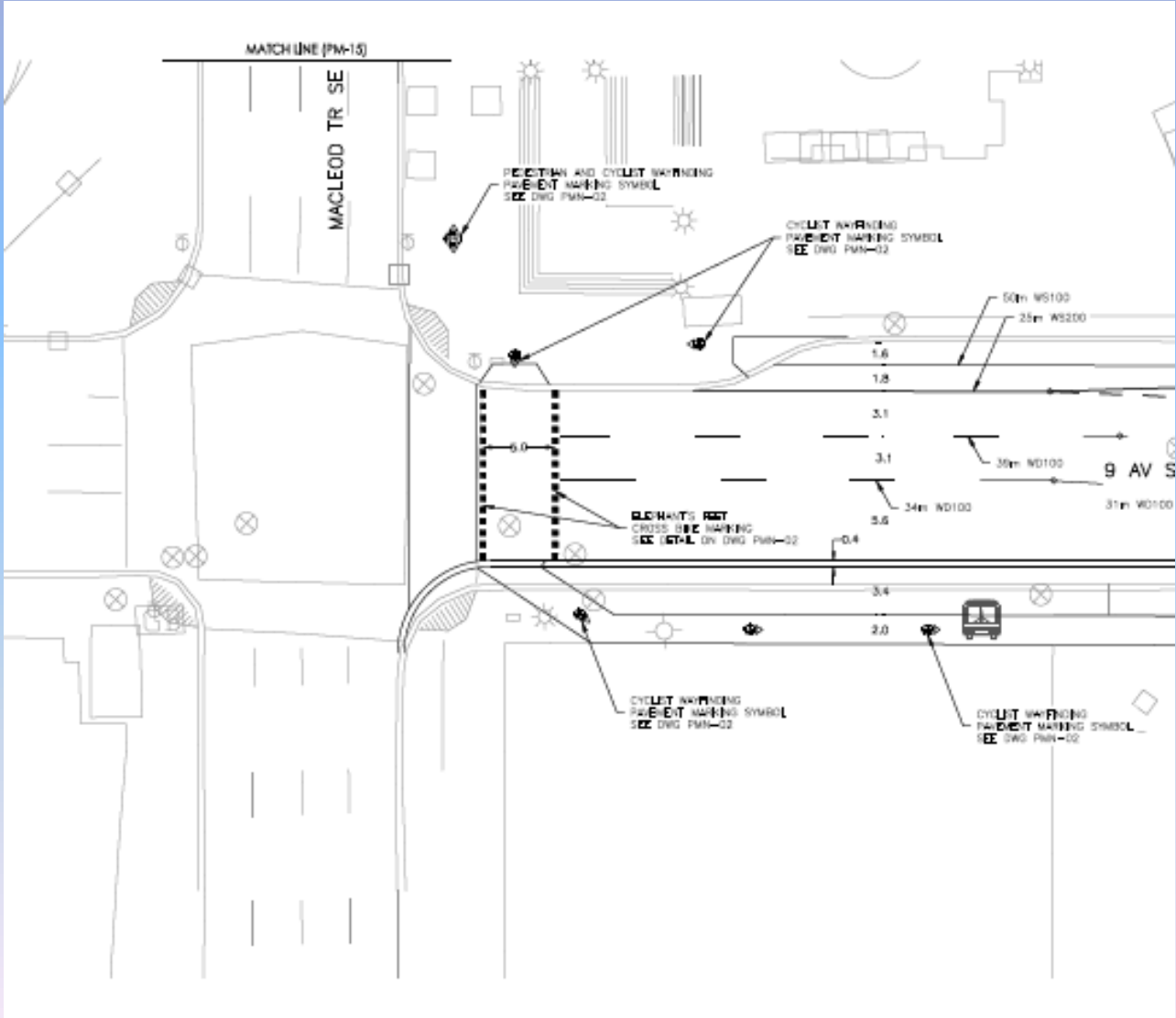


Existing crossing in Vancouver, BC.

Source:

<http://bikecalgary.org/node/4364>

Cross-Ride



DRAFT, these designs are not the final**

Angle Parking



Laws don't currently allow The City of Calgary to implement back-in angle parking

Current Traffic conditions



Add pic of am peak

A key commuter corridor.

Final words



**How do we
decide that the
pilot was
successful?
When do we
tweak the
current design?**