

Ensuring Complete Streets rather than Compete Streets

Lessons Learned: Kitchener's Journey with Continuous Sidewalks

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Success of Complete Street Design

Public Health & Safety

Environmental Stewardship

Critical Service Delivery





Kitchener's journey to Continuous Sidewalks

1. Setting the vision
2. Developing technical details
3. Real-world application

COMPLETE STREETS KITCHENER

STREETS FOR ALL

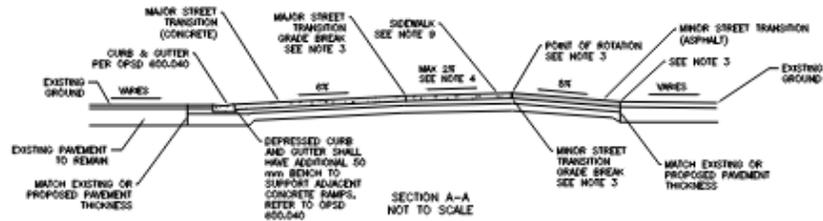
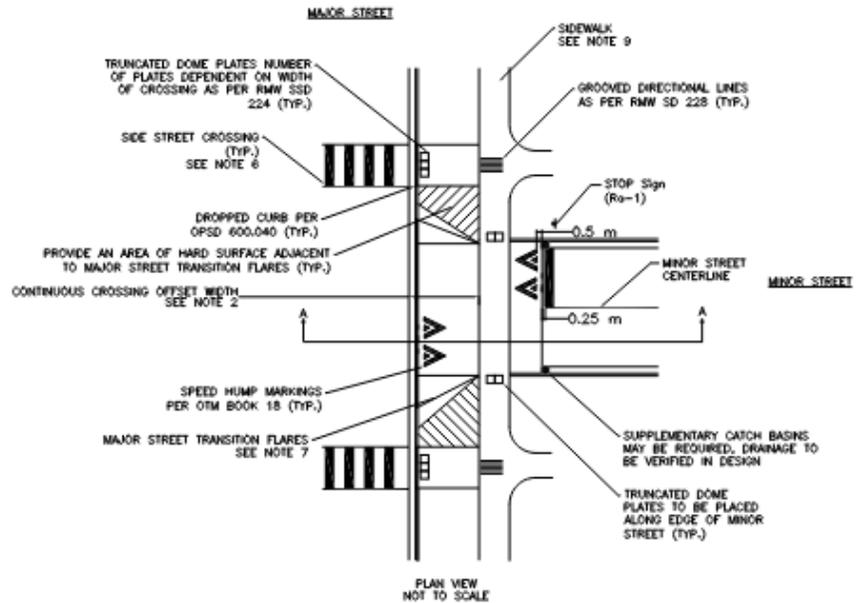


1. Setting the vision

“Every street in Kitchener is safe, comfortable and convenient for all.”

“Assign priority to pedestrians and cyclists, through design cues.”

2. Developing technical details



NOTES:

1. SIDEWALK TO REMAIN RAISED THROUGH INTERSECTION WITHOUT RAMPING DOWN AT THE MINOR STREET.
2. CONTINUOUS CROSSING OFFSET WIDTH FROM THE PAVEMENT OF THE MAJOR STREET TO THE SIDEWALK SHOULD TARGET 4-6 m WHERE POSSIBLE TO ALLOW FOR A VEHICLE TO GUIDE WITHOUT BLOCKING PEOPLE CYCLING OR WALKING BEFORE TURNING ONTO THE MAJOR STREET. CONSTRAINED LOCATIONS MAY RESULT IN OFFSET WIDTHS BELOW 4 m. THE MAJOR STREET TRANSITION WIDTH DOES NOT NEED TO MATCH THE OFFSET WIDTH, AS THE TRANSITION MAY BE SHORTER TO ACHIEVE A STEEPER MAJOR STREET TRANSITION GRADE AND REDUCE VEHICLE SPEEDS TURNING FROM THE MAJOR STREET TO THE MINOR STREET.
3. GRADE BREAKS (ALIBERATING DIFFERENCE BETWEEN GRADES) SHOULD BE REVIEWED BY THE DESIGN ENGINEER TO ENSURE ANTICIPATED DESIGN AND CONTROL VEHICLES CAN VERTICALLY CLEAR THE CONTINUOUS CROSSING. SUSTAINABILITY OF STANDARD AS SHOWN WILL DEPEND ON THE EXISTING GRADING OF MAJOR AND MINOR STREET, MAJOR STREET AND MINOR STREET TRANSITION GRADES, AND SIDEWALK GRADES. MAY BE ADJUSTED ACCORDINGLY.
4. SIDEWALK CROSS SLOPE TO MATCH HIGHWAY FACILITY. REFER TO HIGHWAY DEVELOPMENT MANUAL FOR TARGET AND MINIMUM CROSS SLOPE FOR SIDEWALK.
5. REFER TO OTM BOOK 18 AND OTHER GUIDANCE FOR MARKING AND REGULATORY SIGNAGE AT SIDE STREETS WITH PEDESTRIAN CROSSINGS.
6. PROVISIONS OF MAJOR STREET PEDESTRIAN CROSSINGS ON OTHER SIDE OF THE MINOR STREET INCLUDING PEDESTRIAN RAMP TO BE DETERMINED BY HIGHWAY COMPLETE STREET (GUELPH), ONTARIO TRAFFIC MANUAL, GUIDANCE, AND SITE CONTEXT.
7. SIDE STREET WIDTH AND FLARES SHOULD BE DESIGNED TO ACCOMMODATE THE APPROPRIATE VEHICLE TURNING PATH (AS PER THE HIGHWAY COMPLETE STREETS GUIDELINES) THAT CLEARS THE MINOR STREET TRUNCATED DOME PLATES AND TRANSITION FLARES WHILE MINIMIZING THE SIDE STREET WIDTH.
8. SAW CUTS SHALL BE PLACED AS DETERMINED BY THE DESIGN ENGINEER. SAW CUTS MUST BE PLACED AT THE CENTERLINE OF THE TRANSITION RAMP. SAW CUTS IN THE SIDEWALK SHALL BE SPACED EQUALLY TO MATCH THE TYPICAL JOINTING OF SIDEWALK AS CLOSE AS POSSIBLE. ADDITIONAL CONCRETE JOINTS AND SCORING TO BE DETERMINED BY THE DESIGN ENGINEER.
9. CONFIRM FACILITY WIDTHS WITH KITCHENER COMPLETE STREETS GUIDELINES.

MEMORANDUM



To: Darren Kropf, City of Kitchener

From: Nataliya Pekar, P.Eng., Alta Planning + Design

CC: Kate Whitfield, P.Eng., MCIP, RPP, RSP1, Alta Planning + Design
 Kristie Di Cocco, PE, Alta Planning + Design
 Roy Symons, P.Eng., ISL Engineering and Land Services Ltd.

Date: October 27th, 2022

Re: City of Kitchener, ON - Continuous Sidewalk and Cycle Track Standard Applicability Memo

Alta Planning + Design Canada, Inc., in partnership with ISL Engineering Inc., have developed standard drawings for the City of Kitchener for the following design approaches:

- Continuous cycle track and sidewalk standard
- Continuous sidewalk standard

This memorandum provides a commentary on the applicability of these two standards which are attached at the end.

What is a continuous sidewalk and/or cycle track?

A continuous sidewalk, or continuous sidewalk and cycle track, is a design approach that visually and geometrically shifts priority to pedestrians and people on bikes at crossings of minor streets. While pedestrians and people on bikes have the right-of-way at unsignalized and stop- or yield-controlled crossings, the continuous treatment reinforces this condition, increasing comfort for pedestrians and people on bikes and encouraging motor vehicles to slow down and comply with stop or yield control. Continuous sidewalks and cycle tracks share features with raised crossings and closely resemble

CONTINUOUS SIDEWALK DETAIL

LAST REVISION: October 18, 2022

PLLOT DATE: October 18, 2022

DWG#.: 90-2022-007_01



This briefing does not represent technical guidance. Rather, it describes an emerging practice that is not used widely across Canada and is not addressed in TAC's technical publications, but that has been applied sufficiently in Canadian contexts to assess its general applicability and effectiveness.

This briefing is intended both to acknowledge the emerging practice and to help qualified practitioners conduct further testing and evaluation. It may be updated or withdrawn as more information becomes available.

Continuous Sidewalks and Bike Paths

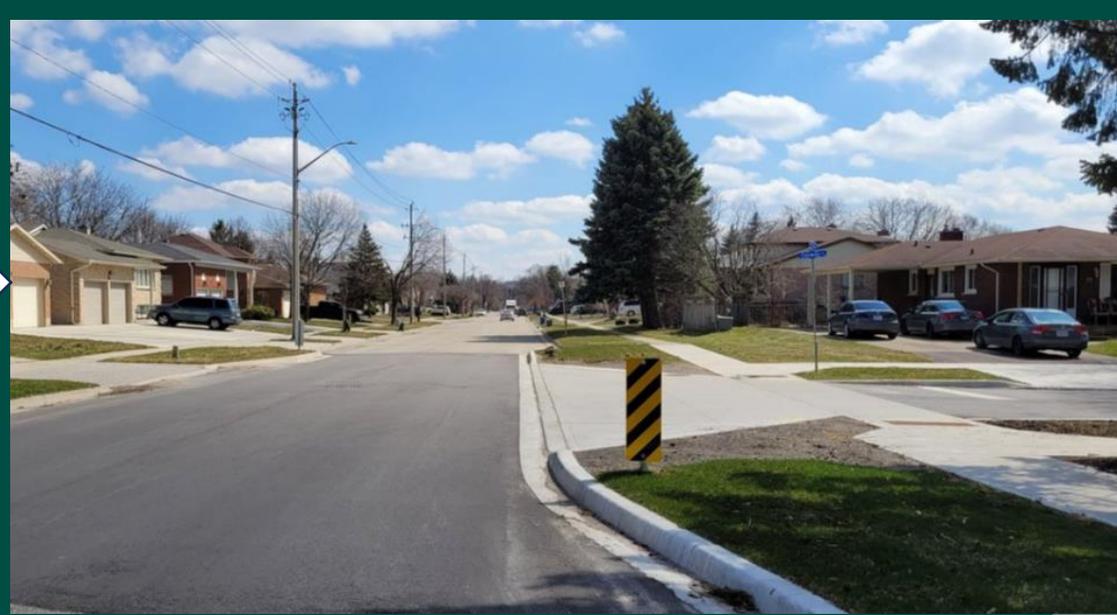
Drainage. Stormwater on the major roadway is conveyed along the straight curb and gutter, but the minor roadway may require catch basins on each side of the ramps leading up to the sidewalk.

Winter maintenance. Jurisdictions where snow is a typical design condition should consider snow clearing equipment and maintenance procedures. One benefit of continuous sidewalk and bike path treatments is that they eliminate the potential for icy curb ramps and roadway ponding at pedestrian crossing points.

Legislation. Provincial or territorial legislation may not align with continuous sidewalk and bike path treatments. Practitioners should review relevant laws to confirm that continuous sidewalks and bike paths are legal in their jurisdiction; if not, enabling local bylaws may be required.



3. Real-world application





Curb extensions 6

Continuous curb 3

2

No curb radii

1

Raised, through sidewalk

4

Catch basins

5

TWSI



Lessons Learned So Far

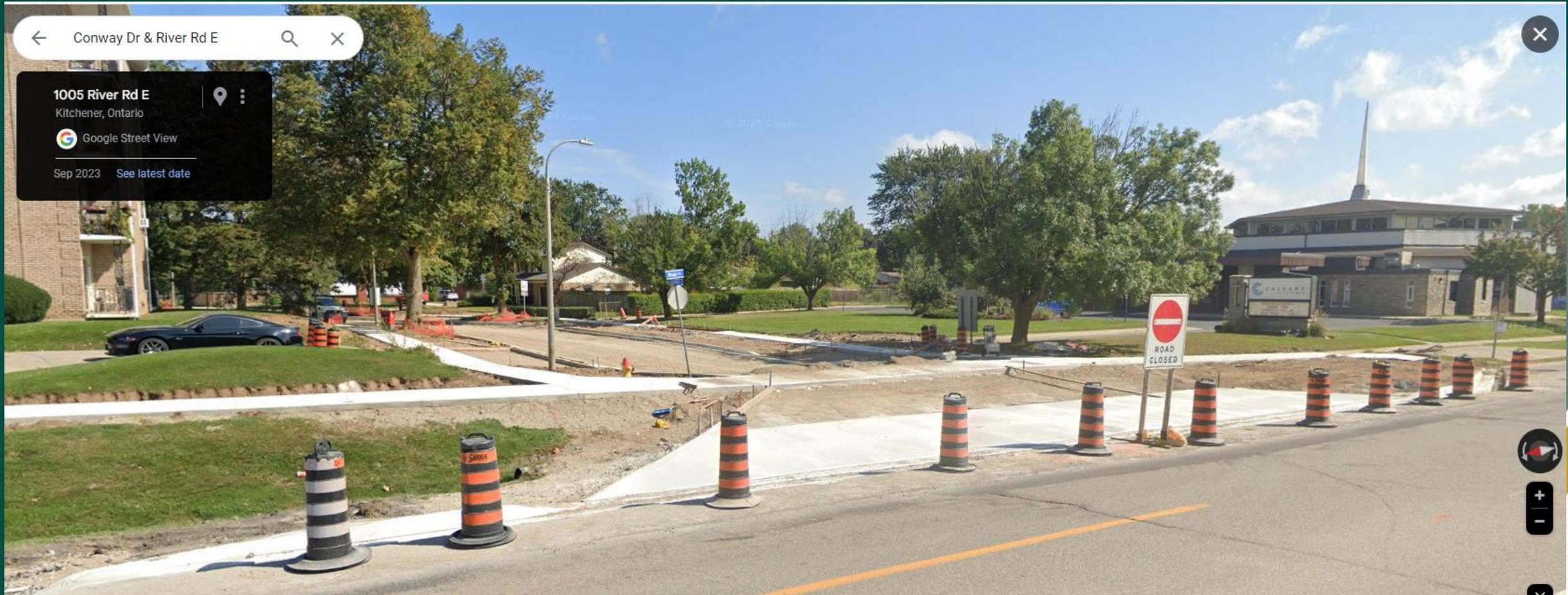
Existing Conditions

- Standard designs are an ideal installation
- Existing conditions must dictate elements of the design
 - Major street boulevard width - unusually wide or narrow boulevards?
 - Slopes on roadway or boulevards?
- Constraints might limit your ability to meet standards but you can still have a successful continuous sidewalk.

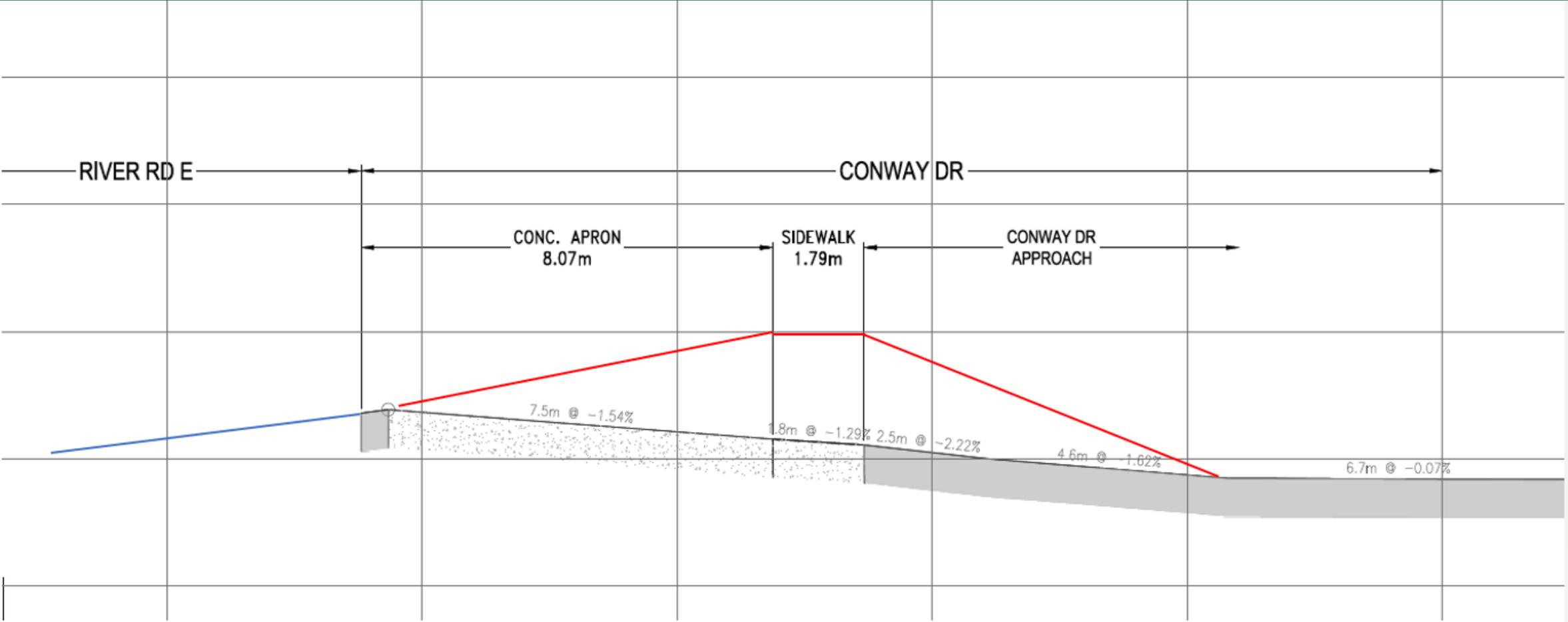
River Road / Conway Drive



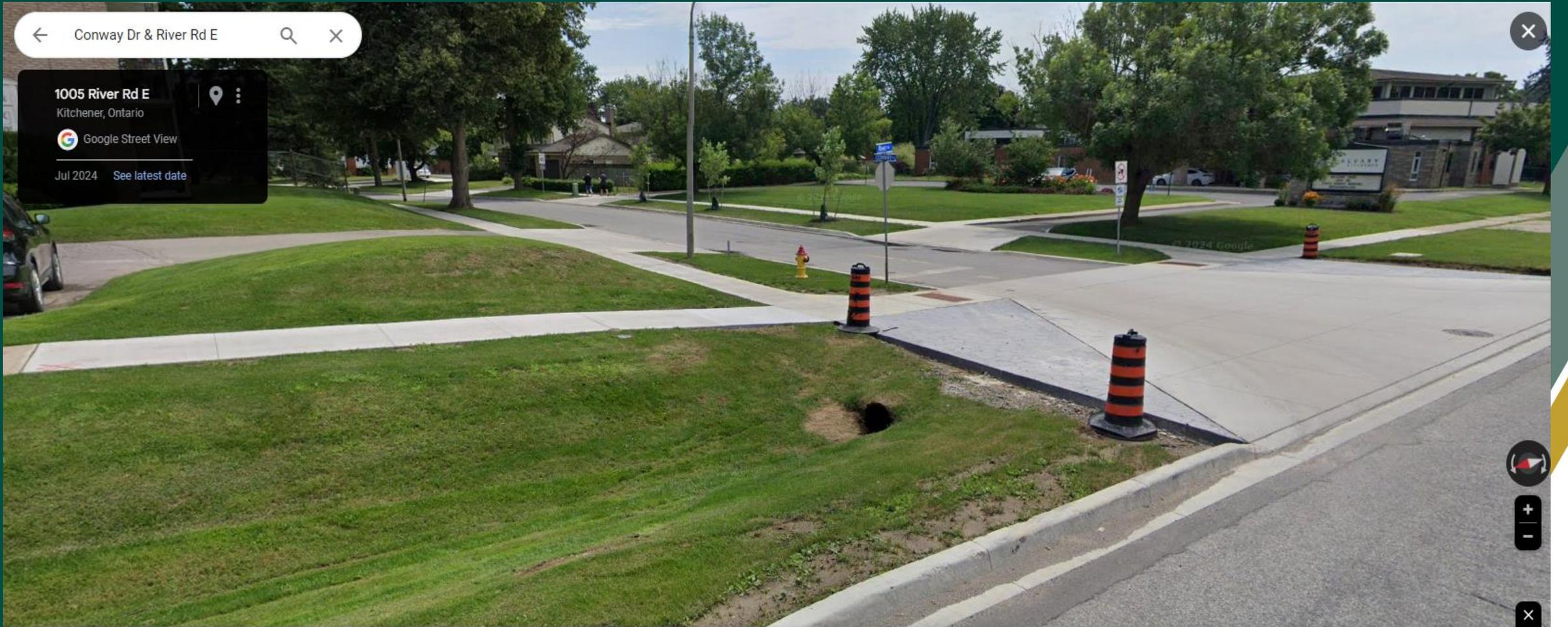
River Road / Conway Drive



When Paper Design meets Existing Conditions



River Road / Conway Drive



Maintenance Considerations

What Minimum Maintenance Standards govern these designs?



Before



After

Minimum Maintenance Standards – The MMS

Roadway

Class of Highway	Depth	Time
1	2.5 cm	4 hours
2	5 cm	6 hours
3	8 cm	12 hours
4	8 cm	16 hours
5	10 cm	24 hours

Bicycle Lanes

Class of Highway	Depth	Time
1	2.5 cm	8 hours
2	5 cm	12 hours
3	8 cm	24 hours
4	8 cm	24 hours
5	10 cm	24 hours

Sidewalks

48 hours

Address Icy
Conditions

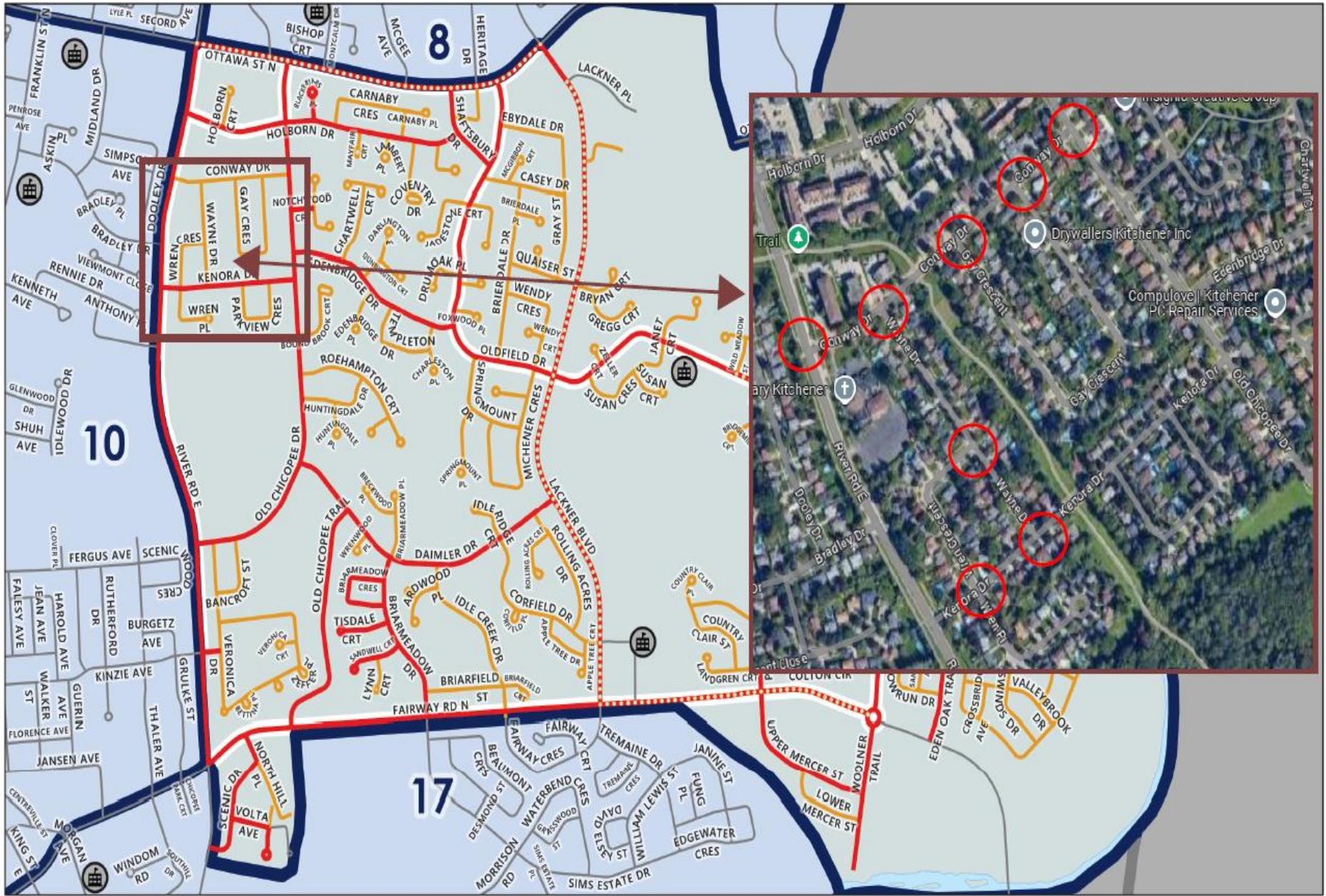
Prevent Icy
Conditions

Plow to under 8cm of
snow

Winter Maintenance



Conway Drive



Maintenance of Continuous Sidewalks- Conway

SALT ROUTE 9 (2023-2024)

- Primary/Secondary Salt Routes - Red Lines
- Residential Salt Routes - Gold Lines
- By Others - Grey Lines
- GRT Routes - White Lines

Note: Homer Watson Blvd is shared between Routes 15 & 16



Winter Maintenance



Highland Avenue

Maintenance of Continuous Sidewalks/ Cycle Track – Highland Road



SALT ROUTE 5 (2024-2025)

- Salt Priority 1 - —
- Salt Priority 2 - —
- Salt Priority 3 - —
- Salt Priority 4 - —
- Salted by others - —
- GRT Routes - White Buffers
- Bike Lanes - Dotted Lines
- Plow Warning
- Raised Crosswalk; Speed Cushion/Hump
- Schools

0 400m

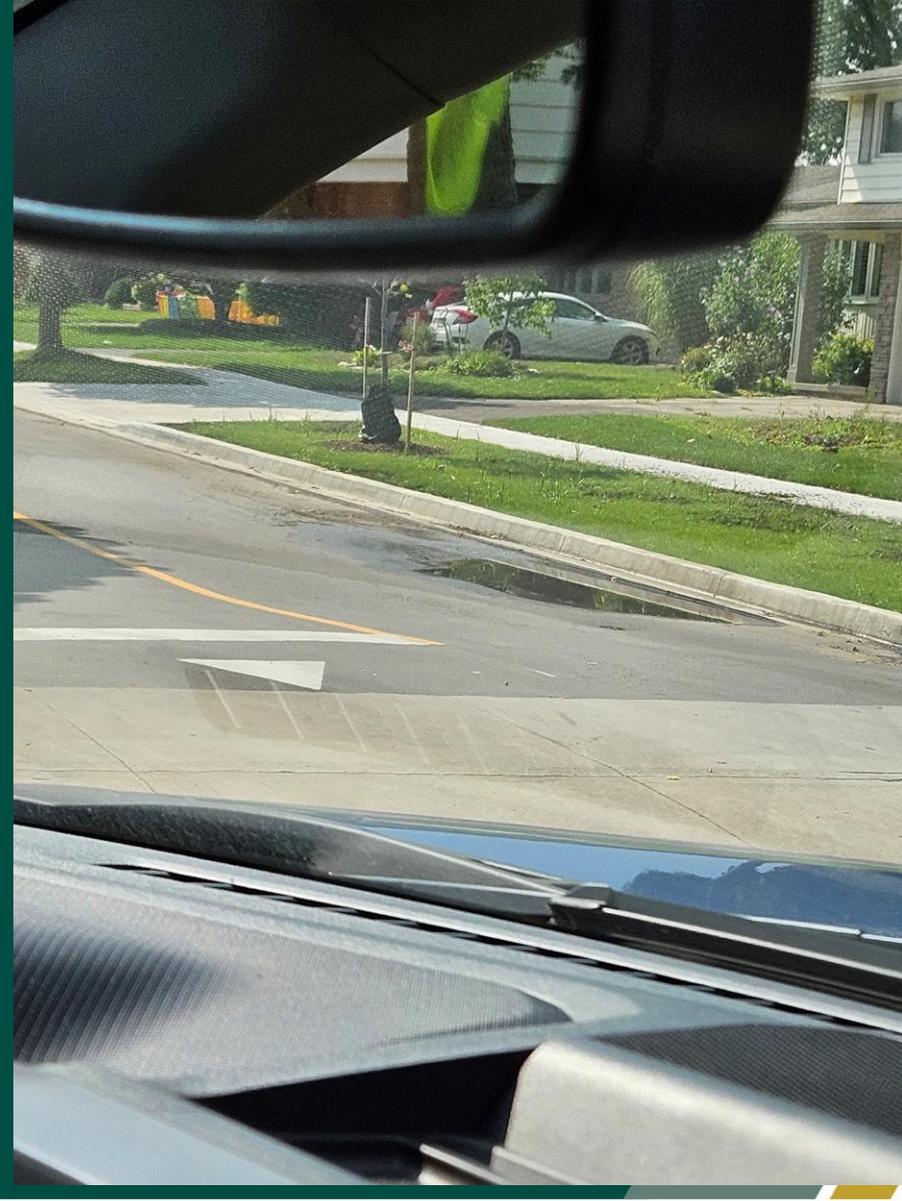
11
IMPERIAL DR
ARDELT PL

12
CHANDLER DR
WOODFERN CR
BONFIELD PL
ELMSDALE DR
PALACE ST
HUNTSWORTH AVE
STRASBURG RD
OTTAWA ST S

To Block Line Rd



Summer Maintenance



Maintenance Considerations

- May need different equipment and new maintenance strategies =
BUDGET/RESOURCES
- Include operations staff early in the planning phases

Positive Feedback

Michael Druker reposted
Jason Thorne @JasonThorne_RPP · Jul 6
A new "continuous sidewalk" in Kitchener. The design differs from traditional sidewalk designs in that it doesn't dip down to road level at intersections. This slows cars turning onto the street + reinforces pedestrian priority thru the intersections



Kitchener introduces new 'continuous sidewalk'



The City of Kitchener unveiled a new 'continuous sidewalk' along Highland Road East on May 15, 2024. (Dave Pettitt/CTV News)

Shelby Knox
Digital Content Producer
Follow Contact

The City of Kitchener is taking a step forward with a new approach to sidewalk design. The city unveiled its new 'continuous sidewalk' at the intersection of Highland Road and Winslow Drive on Wednesday afternoon. This continuous sidewalk design is the first in Kitchener and one of the

Kitchener's most 'complete street' yet has cycle tracks, continuous sidewalks

The design is intended to make city streets safer for all users.
Updated May 17, 2024 at 2:27 p.m. | May 17, 2024 | 1 min read



City officials gather to celebrate the completion of reconstruction work on a stretch of Highland Road in Kitchener.

By Brent Davis Reporter

Kitchener officials say it's the city's most "complete street" yet, with safety-enhancing features for pedestrians, cyclists, transit users and drivers. The reconstruction of a stretch of Highland Road, near Queen Street, includes continuous sidewalks, which are designed to let pedestrians know they have

Final Thoughts

