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# Traffic Study King George VI Public School (Sarnia, ON)

**DRAFT FOR DISCUSSION – REVISION #2**

Lambton-Kent District School Board (LKDSB)  
Retainer Assignment

Traffic Consulting Services Agreement #2022-11-  
000021

Findings and Recommendations

November 3, 2023



# Study Area

# Study Area and Surrounding Transportation Network

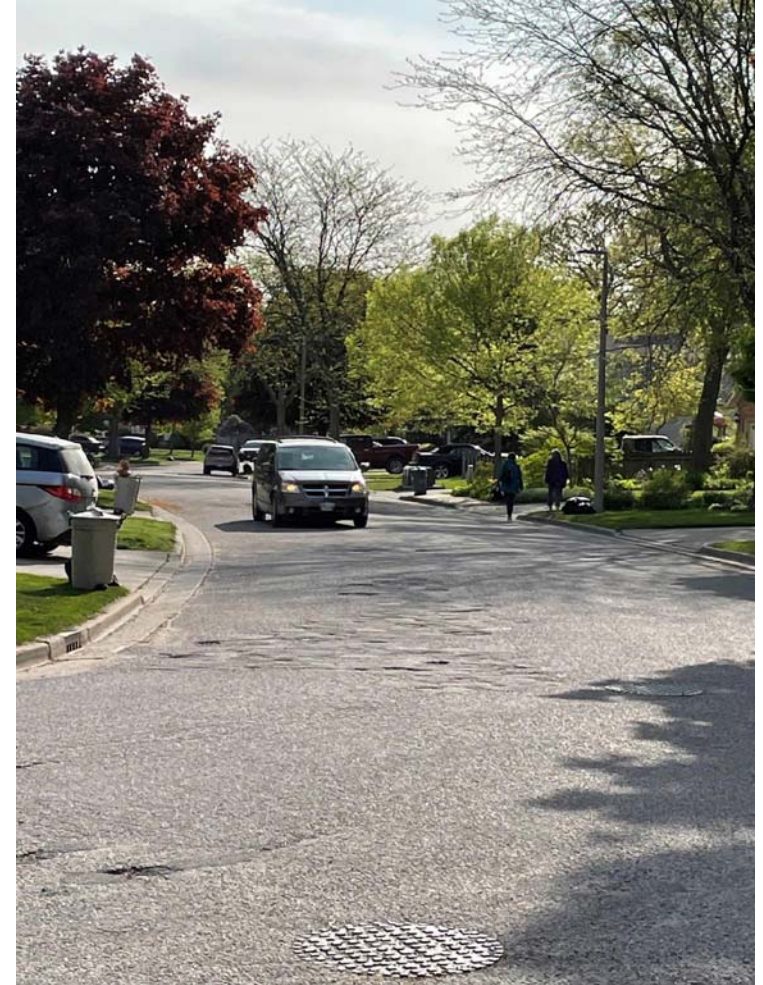


# Study Objective

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## Study Objective

- To conduct a thorough and comprehensive traffic safety study of the stretch of O'Dell Street between and inclusive of the intersections of Cathcart Boulevard and Colborne Road and recommend effective and context-specific traffic operational and road safety engineering improvements.



# Study Findings

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## Study Findings

- Both the intersection of O'Dell Street and Cathcart Boulevard and the intersection of O'Dell Street and Colborne Road operate at good level of service (LOS) during both the AM and PM peak hours (i.e., no. excessive delay, queuing issue, etc.).
- No current “short-cutting” issue has been identified. However, there is a potential for traffic infiltration should the intersection of Cathcart Boulevard and Colborne Road becomes congested in the future.



## Study Findings (Cont'd)

- The width of O'Dell Street right-of-way (ROW) is measured at approximately 20 m and the existing pavement width is measured at approximately 9.5 m. The pink lines in the following figure shows the property lines along O'Dell Street.



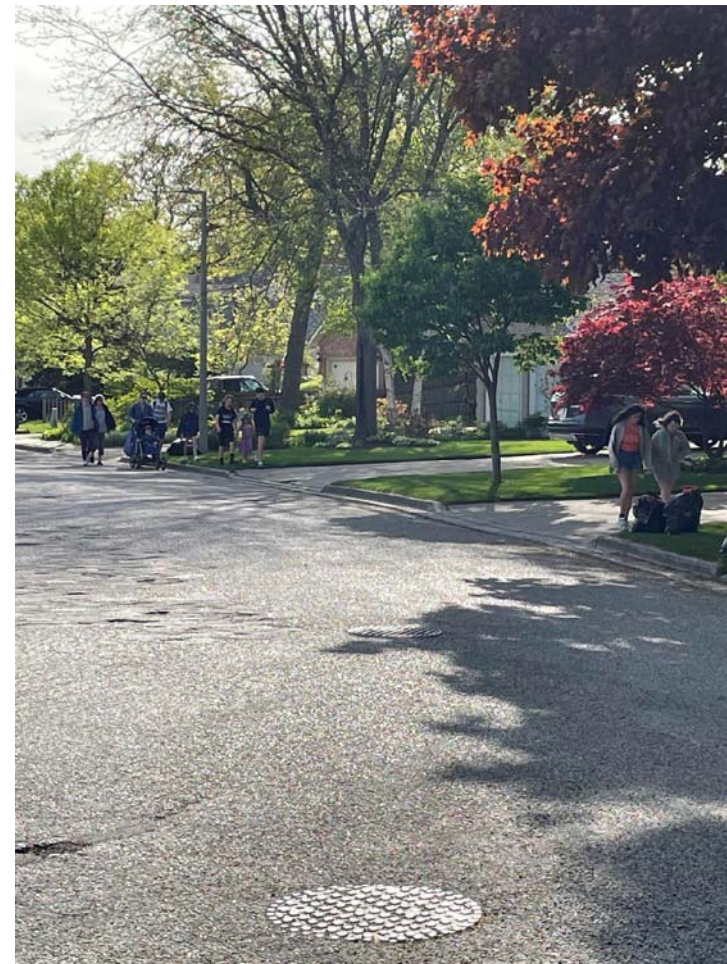


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## Section of O'Dell Street, between Colborne Road and the School

### Issue #1:

Although O'Dell Street functions as the main access route to the school, it does not have any designated pedestrian facilities / sidewalks, except for the short section between Cathcart Boulevard and the school. In the absence of any sidewalks / designated pedestrian facilities on this section of O'Dell Street, pedestrians including school students and people with mobility aids, as well as people with strollers were reported and observed walking on the pavement, mixed with vehicular traffic. Thus, there is an increased potential for conflicts between pedestrians and motor vehicles.

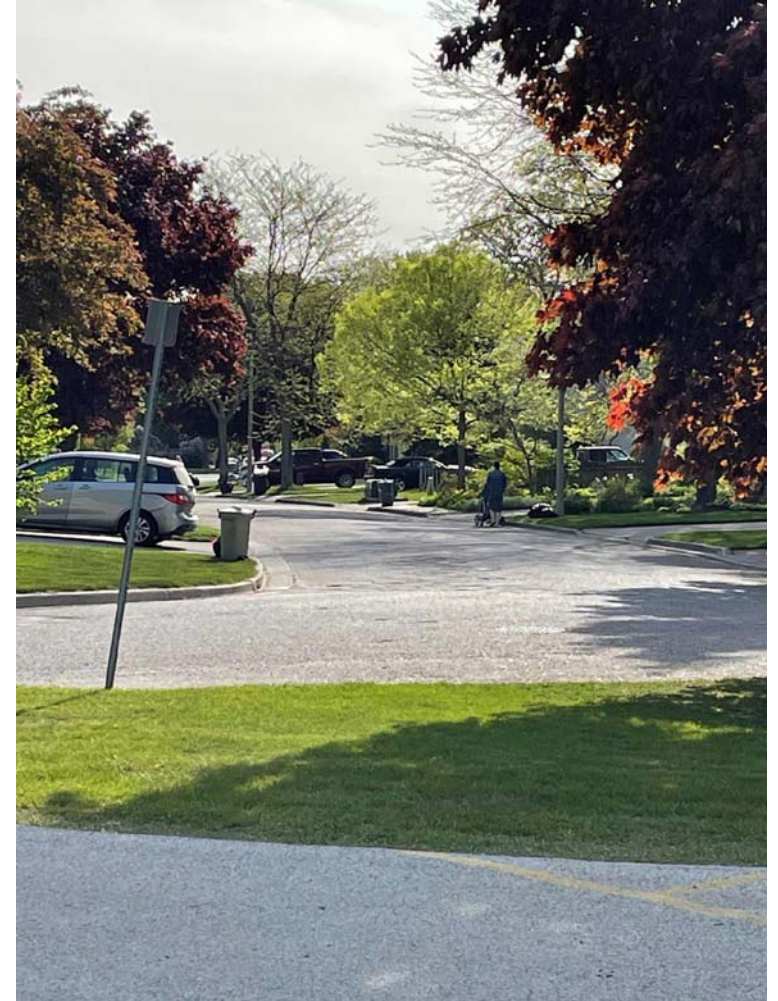


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## Access Driveway of Marcin Park's Parking Lot

### Issue #2:

There are limited turning sight distances for motorists exiting the Marcin Park access driveway onto O'Dell Street. Thus, there is a potential for conflicts and possibly collisions between vehicles traveling along the horizontally-curved section of O'Dell Street.



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## Section of O'Dell Street between Cathcart Boulevard and the School

### Issue #3:

In the morning, school students were observed being dropped off along the curb on the east side of O'Dell Street and crossing O'Dell Street under “uncontrolled” conditions. Thus, there is a potential for conflicts between pedestrians crossing the road and motor vehicles travelling along O'Dell Street.



# Preliminary Recommendations

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## **Section of O’Dell Street, between Colborne Road and the School**

### Recommendation #1:

Provision of a pedestrian facility (sidewalk) on the south side of O’Dell Street, east of Colborne Road. In light of the concerns raised by the residents of the noted section of O’Dell Street against the “sidewalk infill” option, and while it is recognized that the available public right-of-way allows for a provision of a sidewalk plus a boulevard behind the existing curb, along with the City’s commitment to public safety, the following alternatives have been short-listed for further evaluation, and the subsequent selection of a technically-preferred alternative.

See the next slide for the existing cross section (“Do Nothing”) as well as those pertaining to the above-noted alternatives.

# Section of O'Dell Street, between Colborne Road and the School

## Recommendation #1 (Cont'd):

Existing Design: "Do Nothing"

Alternative #1-1: Sidewalk at Curb

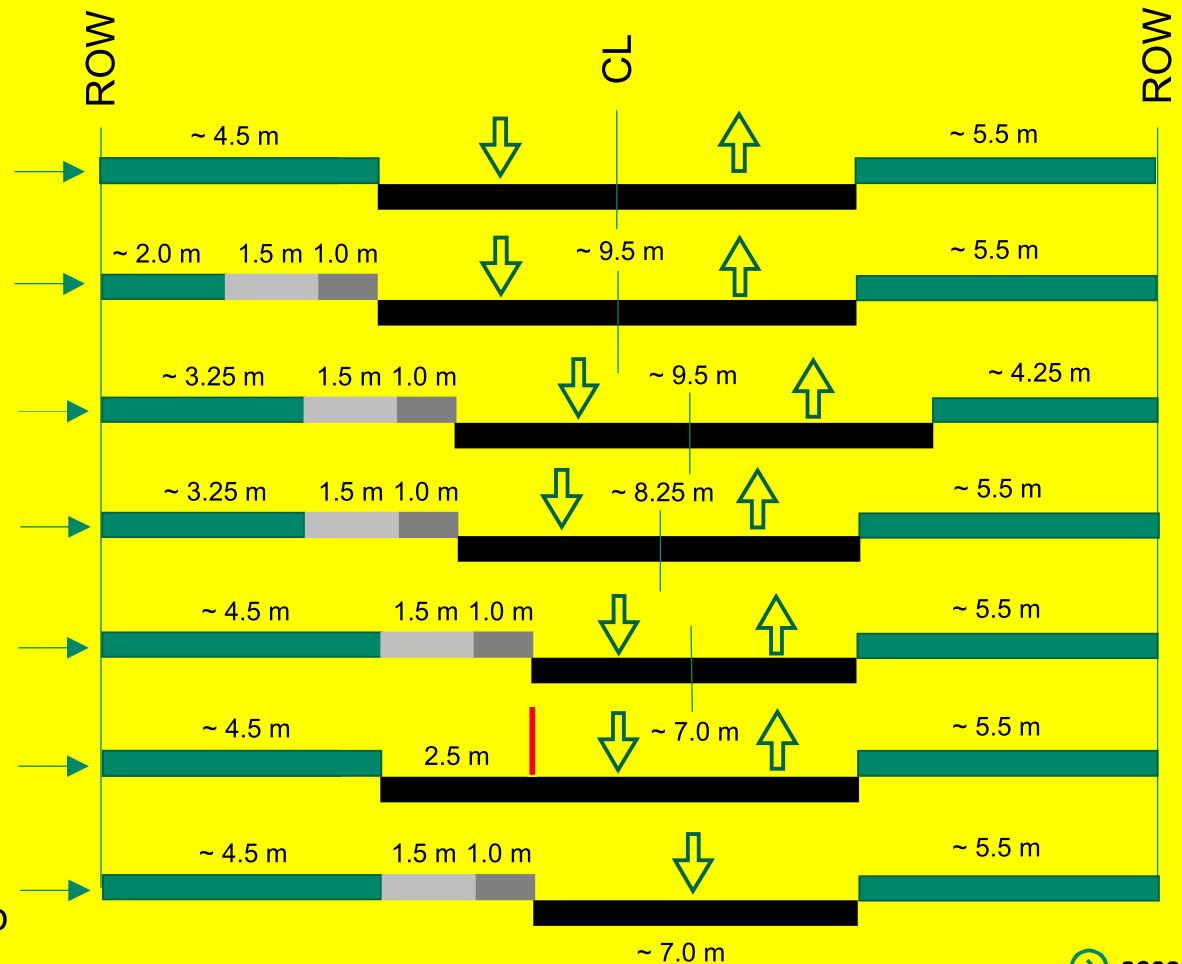
Alternative #1-2(a): Shift Centerline (CL) and shift curbs on both sides

Alternative #1-2(b): Narrow Pavement, Shift CL and shift curb on south side only

Alternative #1-2(c): Narrow Pavement, Shift CL with Sidewalk at Curb

Alternative #1-3: On-Road Pedestrian Facility and Flex Posts

Alternative #1-4: Narrow Pavement, Convert to One-Way with Sidewalk at Curb



## Section of O'Dell Street, between Colborne Road and the School

### Recommendation #1 (Cont'd):

1. Alternative #1-1: Build a 1.5-m wide sidewalk plus a 1-m wide asphalt boulevard tight to the curb on the south side of O'Dell Street.
2. Alternative #1-2: In association with the above-noted sidewalk,
  - a) shift the roadway centreline approximately 1.25 m – i.e., half the full width of the sidewalk and its adjacent asphalt boulevard – to the north so that the new curb on north side and the back of the new sidewalk on south side would be no closer than 1.25 m to the adjacent property lines than the existing curbs are at present,
  - b) shift the roadway centreline slightly (by roughly 0.6 m) to the north and narrow the pavement by approximately 1.25 m so that the north curb remains at where it is at present and the back of the new sidewalk would be no closer than 1.25 m to adjacent property lines than under existing conditions or

## Section of O'Dell Street, between Colborne Road and the School

### Recommendation #1 (Cont'd):

- c) shift the roadway centreline to the north and narrow the pavement by 2.5 m so that the new curb on north side and the back of the new sidewalk on south side would be no closer to the adjacent property line than the existing curbs are at present.
3. Alternative #1-3: Delineate an on-road pedestrian facility on the south side of O'Dell Street with flex posts and / or concrete blocks. See the next slide for an implemented example of this alternative.
4. Alternative #1-4: Convert the section of O'Dell Street between Colborne Road and the school to a one-way eastbound street (i.e., towards Colborne Road), narrow the pavement, and install a sidewalk on the south side of O'Dell Street in the leftover space.



Example of a delineated pedestrian facility on the section of Mildenhall Road, north of Blythwood Road in Toronto, ON.



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## Access Driveway of Marcin Park's Parking Lot

### Recommendation #2:

Alternative #1-4 would also address the noted sightline issue (i.e., Issue #2). Alternatives #1-2(b) and #1-3 would also mitigate the noted sightline issue to some extent as the reduced pavement width would result in some level of speed reduction.



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## Section of O'Dell Street between Cathcart Boulevard and the School

### Recommendation #3:

Provision of a designated “Kiss N’ Ride” zone also known as student pick-up / drop-off zone. Refer to the next slides for sketches of a few potential student pick-up / drop-off zone alternatives. Note that an alternative to provision of a designated student pick-up / drop-off zone is to convert O’Dell Street to a one-way street from Cathcart Boulevard to Colborne Road.





Alternative #3-1



Alternative #3-2



Alternative #3-3

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## Intersection of O'Dell Street and Cathcart Boulevard

### Recommendation #4:

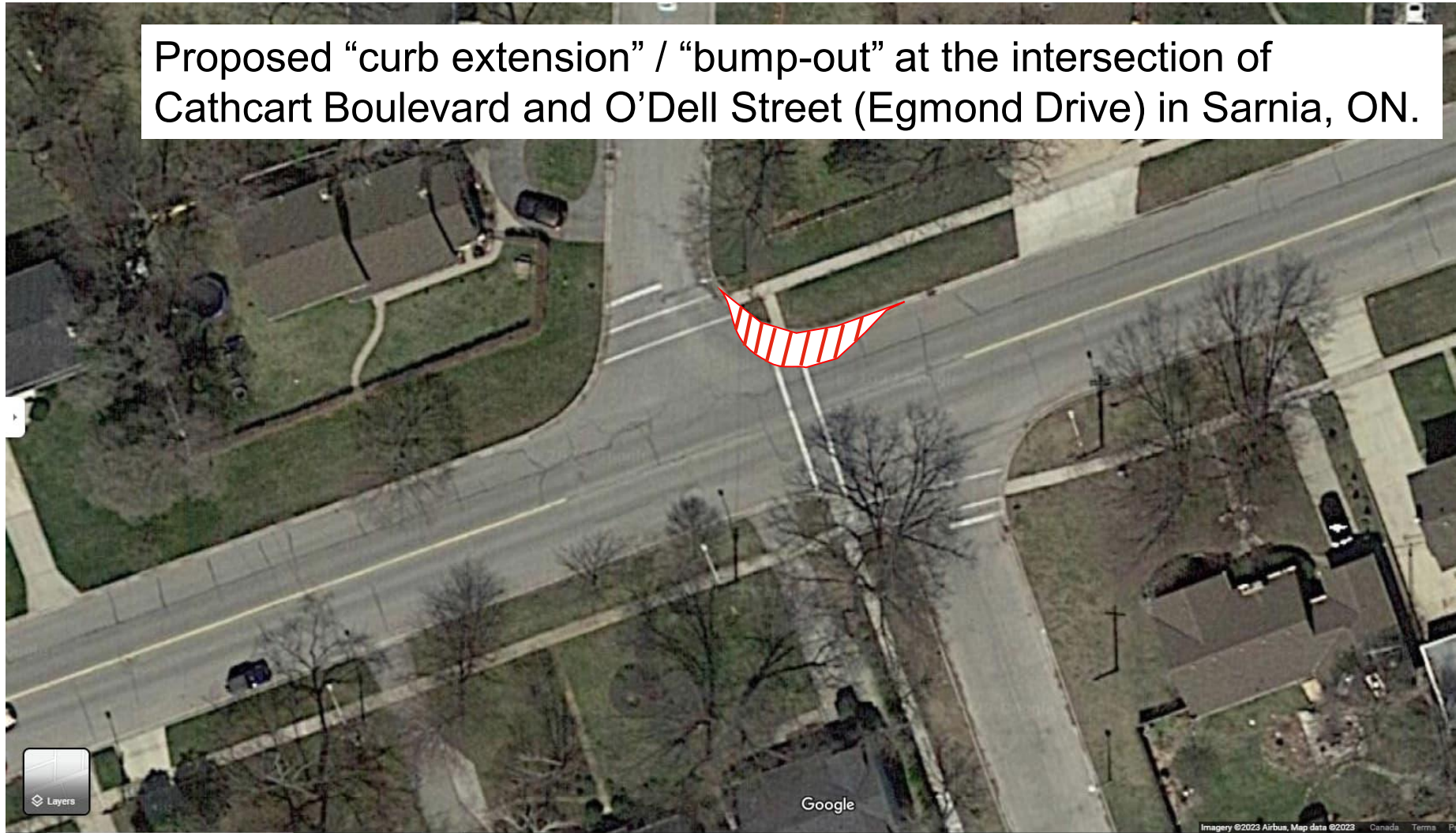
Provision of a “curb extension” / “bump-out” on the north end of the PXO. The “bump-out” would reduce the pedestrian crossing distance across Cathcart Boulevard. See the next slides for an implemented example of “bump-out” at the intersection of Errol Road and Indian Road in the vicinity of Errol Road Public School, as well as a sketch showing the proposed measure.

Example of a “curb extension” / “bump-out” at the intersection of Errol Road and Indian Road in the vicinity of Errol Road Public School in Sarnia, ON.

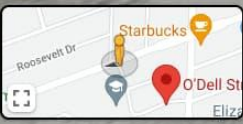
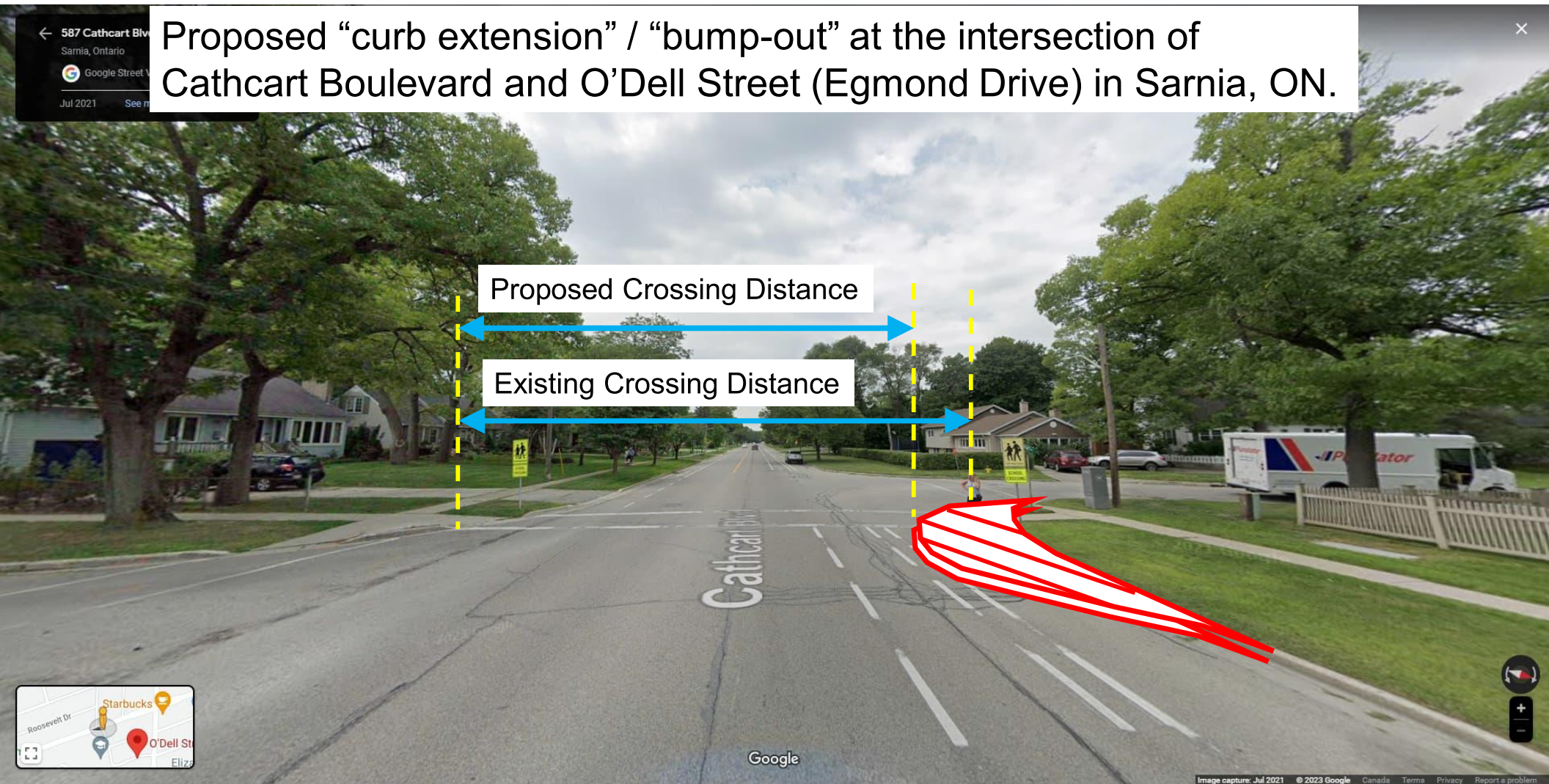




Proposed “curb extension” / “bump-out” at the intersection of Cathcart Boulevard and O’Dell Street (Egmond Drive) in Sarnia, ON.



Proposed "curb extension" / "bump-out" at the intersection of Cathcart Boulevard and O'Dell Street (Egmond Drive) in Sarnia, ON.



# Evaluation of Alternatives

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## Evaluation of Alternatives

- Evaluation of Alternatives was undertaken using the following criteria, among others:
  - Safety of all road users
  - On-street parking
  - Emergency vehicle services access and response time
  - Vehicular access to the school, the park and homes
  - Driver comprehension and compliance
  - Road maintenance and waste collection services
  - Impacts on properties
  - High-level cost of implementation and maintenance

## Evaluation of Alternatives (Cont'd)

- As per the findings of Alternatives Evaluation the following alternatives have been identified as technically-preferred alternatives:
  - Alternative #1-2(b): Shift the roadway centreline slightly to the north and narrow the pavement by approximately 1.25 m so that the north curb remains at where it is at present and the back of the new sidewalk would be no closer than 1.25 m to adjacent property lines than under existing conditions. See the blue line in the next slide that shows the nearest edge of the new sidewalk to the property lines on south side of O'Dell Street under the preferred alternative.
  - Alternative #3-1: Lay-by parking area as a designated "Kiss N' Ride" zone (student pick-up / drop-off area) along west side of O'Dell Street, south of Cathcart Boulevard.
  - Alternative #4: Curb extension on the north-east corner of the intersection of O'Dell Street and Cathcart Boulevard.

## Evaluation of Alternatives (Cont'd)



# Next Steps

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## Next Steps

- Public Open House
- Final documentation



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