



# Technical Memorandum

To: Daniel Rokin – Caivan Date: 2024-04-04

Cc: Hugo Lalonde – Caivan

From: John Kingsley, Andrew Harte – CGH Project Number: 2022-008

## Re: Conservancy East Redline Changes – Transportation Impacts

### Introduction

The approved development Draft Plan for Conservancy East, for which CGH submitted a TIA dated July 2021, is generally located east of Borrisokane Road with the Jock River to the south and the Fraser-Clarke Municipal Drain along the north and east boundaries. The Stage 2 lands have been approved for draft plan of subdivision and construction is underway, constituting a majority of the area to the east of Mineral Street within the Draft Plan. To respond to market demands for affordability given increased housing costs in the province, Caivan is proposing changes in lotting and unit typology in the area west of Mineral Street. The redline changes to the draft plan consist of:

- Elimination of 133 single detached dwellings from the area,
- The addition of 367 townhome dwellings to the area, including
- The conversion of one public road and block to a condo block between Les Emmerson Drive and Mineral Street

The following memo will document the transportation context of the changes. The proposed April 2024 concept is provided in Attachment 1.

### Transportation Network Changes

No impacts to the internal subdivision traffic operations are anticipated from the conversion to a condo block within Phase 3 between the north-south alignment of Les Emmerson Drive and Mineral Street. It is recommended that these accesses achieve an 8.0-metre throat length at the intersections with the adjacent local roads.

The overall GRDD will be updated for the new unit typology and these changes can be addressed during the detailed design submission. No other changes to the road, transit, or active transportation networks are noted as a result of the proposed redline changes.

### Trip Generation

The July 2021 plan of subdivision considered 133 detached single dwellings and 220 townhome units within the redline area. The proposed changes include the elimination of detached dwellings and a total of 587 townhome units within the redline area.

To assess the expected trip generation of the July 2021 plan and the April 2024 redline revisions, the trip generation was updated to the TRANS 2020 methodology. This methodology, included modal splits, was based on the Conservancy West TIA (3288 and 3300 Borrisokane Road, 4205, 4345 and 4375 McKenna Casey Drive

Transportation Impact Assessment, CGH, 2021) of which an excerpt has been provided in Attachment 2 for reference.

The results of the updated trip generation have been summarized in Table 1.

*Table 1: Trip Generation by Peak Hour*

| Version               | Land Use            | Units | Peak Hour | Peak Hour Person Trips | Peak Hour Trips by Mode |                |            |            |           |            |
|-----------------------|---------------------|-------|-----------|------------------------|-------------------------|----------------|------------|------------|-----------|------------|
|                       |                     |       |           |                        | Auto                    | Auto Passenger | Transit    | Cycling    | Walking   |            |
| 2021 Plan             | Single Detached     | 133   | AM        | 142                    | 54                      | 18             | 53         | 2          | 15        |            |
|                       |                     |       | PM        | 151                    | 62                      | 28             | 43         | 1          | 17        |            |
|                       | Multi-Unit Low Rise | 220   | AM        | 153                    | 56                      | 19             | 59         | 3          | 16        |            |
|                       |                     |       | PM        | 160                    | 60                      | 20             | 55         | 3          | 22        |            |
|                       | Total               | 378   | AM        | 295                    | 110                     | 37             | 112        | 5          | 31        |            |
|                       |                     |       | PM        | 311                    | 122                     | 48             | 98         | 4          | 39        |            |
| 2024 Redline          | Multi-Unit Low Rise | 587   | AM        | 404                    | 148                     | 49             | 157        | 9          | 41        |            |
|                       |                     |       | PM        | 427                    | 159                     | 53             | 148        | 9          | 58        |            |
| <b>Net Difference</b> |                     |       |           | <b>AM</b>              | <b>+109</b>             | <b>+38</b>     | <b>+12</b> | <b>+45</b> | <b>+4</b> | <b>+10</b> |
|                       |                     |       |           | <b>PM</b>              | <b>+116</b>             | <b>+37</b>     | <b>+5</b>  | <b>+50</b> | <b>+5</b> | <b>+19</b> |

The above table illustrates that the redline revisions will represent an increase in forecasted trips, based on the TRANS 2020 methodology. The July 2021 TIA was prepared using the old TRANS 2009 methodology and assessed the traffic operations using those forecasted volumes. Table 2 summarizes the trip generation from the July 2021 TIA using the TRANS 2009 methodology, and for the November 2022 redline concept using the TRANS 2020 methodology.

*Table 2: Peak Hour Trip Comparison*

| Concept Plan          | Methodology | Peak Hour | Peak Hour Person Trips by Mode |                |            |           |            |
|-----------------------|-------------|-----------|--------------------------------|----------------|------------|-----------|------------|
|                       |             |           | Auto                           | Auto Passenger | Transit    | Cycling   | Walking    |
| 2021 Plan             | TRANS 2009  | AM        | 173                            | 57             | 116        | 4         | 34         |
|                       |             | PM        | 200                            | 66             | 133        | 5         | 40         |
| 2024 Redline          | TRANS 2020  | AM        | 148                            | 49             | 157        | 9         | 41         |
|                       |             | PM        | 159                            | 53             | 148        | 9         | 58         |
| <b>Net Difference</b> |             | <b>AM</b> | <b>-25</b>                     | <b>-8</b>      | <b>+41</b> | <b>+5</b> | <b>+7</b>  |
|                       |             | <b>PM</b> | <b>-41</b>                     | <b>-13</b>     | <b>+15</b> | <b>+4</b> | <b>+18</b> |

Comparing the volumes assessed in the July 2021 TIA versus the redline changes considering updates to the TRANS 2020 methodology, a reduction of 25 auto trips during the AM peak hour and 41 auto trips during the PM peak hour is anticipated. Therefore, the original TIA represents a conservative assessment of traffic conditions and proposed redline updates is expected to result in an improvement over the previous analysis. Given the foregoing and that no changes to the remaining Screening Triggers are present, no updates to the TIA are recommended for the April 2024 redline revisions. The updated Screening Form is provided in Attachment 3.

### Conclusions

Overall, the proposed changes result in minimal transportation impacts and no changes to the previous transportation review and recommendations. It is recommended that these changes be approved from a transportation perspective.

Prepared By:

Reviewed By:



John Kingsley  
Transportation Engineering-Intern



Andrew Harte, P.Eng.  
Senior Transportation Engineer

# Attachment 1

April 2024 Proposed Redline Plan

# CAIVAN

## LEGEND:

- RLTH (18.9m DEPTH)
  - 19.6' STANDARD TOWNHOUSE
  - 35' DETACHED HOME
  - 41' DETACHED HOME (REGULAR)
  - 41' DETACHED HOME (OVERSIZED)
  - 42' DETACHED HOME
  - 50' DETACHED HOME
  - STACKED CONDO BLOCK
  - PARKS
  - WALKWAY/SERVICING BLOCK
  - PHASE BOUNDARY
  - BCDC DRAFT PLAN DEVISING LINE
- 
- 24m ROW
  - 18m ROW
  - 16.5m ROW
  - 14/14.75m ROW
  - 8.5m ROW

### BCDC LOT COUNT

| UNIT TYPE     | # UNITS     |
|---------------|-------------|
| STACKED       | 204         |
| 18.9m RLTH    | 87          |
| 19.6' TH      | 454         |
| 35' SINGLE    | 189         |
| 41' REGULAR   | 52          |
| 41' OVERSIZED | 33          |
| 42' SINGLE    | 118         |
| 50' SINGLE    | 135         |
| <b>Total</b>  | <b>1272</b> |

|    |  |          |
|----|--|----------|
| 15 | Unit count recount, tables updated to reflect      | 24-03-07 |
| 14 | revisions made on sk-8.2 now sk-8.3                | 24-02-21 |
| 13 | SK8.2 NEW UNIT COUNT REOPTIMIZED BANKS             | 24/02/21 |
| 12 | Revised Les Emmerson, removed TH block for singles | 24/02/13 |
| 11 | Updated STND TH to new 19.6' TH                    | 24/01/18 |
| 10 | Updated Plan and Phasing and unit counts           | 24/01/11 |
| 09 | Revised BCDC from Stacks to 19' THs                | 23/12/15 |

| REV#  | DESCRIPTION | DATE            |
|-------|-------------|-----------------|
| DATE: | 2024-03-07  | DRAWN BY:<br>LV |

|              |          |
|--------------|----------|
| PROJECT NO.: | OTL400.2 |
|--------------|----------|

|               |                  |
|---------------|------------------|
| PROJECT NAME: | CONSERVANCY EAST |
|---------------|------------------|

|            |         |
|------------|---------|
| DRAWING #: | SK-08.3 |
|------------|---------|

| CUMULATIVE PARKLAND                              |          |  |
|--|----------|--|
| BCDC EAST OF MINERAL<br>1 / 300 (667 UNIT COUNT) | 2.22 Ha. |  |
| BCDC WEST OF MINERAL<br>1 / 600 (605 UNIT COUNT) | 1.01 Ha. |  |
| TOTAL PARKLAND REG.                              | 3.23 Ha. |  |
| PARKLAND OBTAINED<br>BCDC & BCDCW                | 3.61 Ha. |  |
| PARKLAND DEDICATION                              | 0.38 Ha. |  |

| BCDC EAST LOT COUNT |        |        |        |       |       |       |             |
|---------------------|--------|--------|--------|-------|-------|-------|-------------|
| UNIT TYPE           | BCDC 2 | BCDC 3 | BCDC 4 | JR. 1 | JR. 2 | JR. 3 | TYPE TOTAL  |
| STACKED             | 0      | 204    | 0      | 0     | 0     | 0     | 204         |
| 18.9m RLTH          | 0      | 0      | 87     | 0     | 0     | 0     | 87          |
| 19.6' TH            | 99     | 0      | 296    | 0     | 0     | 59    | 454         |
| 35' SINGLE          | 100    | 0      | 0      | 18    | 47    | 24    | 189         |
| 41' REGULAR         | 16     | 0      | 0      | 10    | 15    | 5     | 52          |
| 41' OVERSIZED       | 13     | 0      | 0      | 9     | 6     | 5     | 33          |
| 42' SINGLE          | 46     | 0      | 0      | 19    | 48    | 11    | 118         |
| 50' SINGLE          | 29     | 0      | 0      | 49    | 35    | 22    | 135         |
| Sub-Total           | 303    | 204    | 383    | 105   | 151   | 126   | 1272        |
| <b>Total</b>        |        |        |        |       |       |       | <b>1272</b> |



# Attachment 2

3288 and 3300 Borrisokane Road, 4205, 4345 and 4375 McKenna Casey Drive Transportation Impact Assessment  
Excerpt

## 5 Development-Generated Travel Demand

### 5.1 Mode Shares

Examining the mode shares recommended in the TRANS Trip Generation Manual (2020) for the subject district, derived from the most recent National Capital Region Origin-Destination survey (OD Survey), the existing average district mode shares by land use for South Nepean have been summarized in Table 8.

*Table 8: TRANS Trip Generation Person Trip Rates*

| Travel Mode           | Single Detached |             | Multi-Unit (Low-Rise) |             |
|-----------------------|-----------------|-------------|-----------------------|-------------|
|                       | AM              | PM          | AM                    | PM          |
| <b>Auto Driver</b>    | 51%             | 53%         | 49%                   | 49%         |
| <b>Auto Passenger</b> | 14%             | 19%         | 13%                   | 13%         |
| <b>Transit</b>        | 25%             | 18%         | 26%                   | 24%         |
| <b>Cycling</b>        | 1%              | 1%          | 2%                    | 2%          |
| <b>Walking</b>        | 9%              | 10%         | 9%                    | 12%         |
| <b>Total</b>          | <b>100%</b>     | <b>100%</b> | <b>100%</b>           | <b>100%</b> |

The widening of Strandherd Drive and the construction of Chapman Mills Drive are scheduled to be constructed within the Study Area by the future horizons of this TIA. The BRT lanes within Chapman Mills Drive are not included in the Affordable Network (2031) and no bus facilities are proposed along Strandherd Drive. Beyond the 2031 horizon, the Chapman Mills BRT is assumed to be in place and the terminus station located on the southwest corner of the Strandherd Drive and Borrisokane Road intersection. As transit will be located in proximity to the proposed subdivision, an increase in transit trips is proposed for the development as a whole. The modified mode share targets are proposed for the development and are summarized in Table 9.

*Table 9: Proposed Development Mode Shares*

| Travel Mode           | Single-Detached |             | Multi-Unit (Low-Rise) |             |
|-----------------------|-----------------|-------------|-----------------------|-------------|
|                       | AM              | PM          | AM                    | PM          |
| <b>Auto Driver</b>    | 41%             | 43%         | 39%                   | 39%         |
| <b>Auto Passenger</b> | 14%             | 19%         | 13%                   | 13%         |
| <b>Transit</b>        | 35%             | 28%         | 36%                   | 34%         |
| <b>Cycling</b>        | 1%              | 1%          | 2%                    | 2%          |
| <b>Walking</b>        | 9%              | 10%         | 9%                    | 12%         |
| <b>Total</b>          | <b>100%</b>     | <b>100%</b> | <b>100%</b>           | <b>100%</b> |

## 5.2 Trip Generation

This TIA has been prepared using the vehicle and person trip rates for the residential dwellings using the TRANS Trip Generation Manual (2020). Table 10 summarizes the person trip rates for the proposed residential land uses for each peak period.

Table 10: Generation Person Trip Rates by Peak Period

| Land Use            | Land Use Code  | Peak Period | Person Trip Rates |
|---------------------|----------------|-------------|-------------------|
| Single-Detached     | 210<br>(TRANS) | AM          | 2.05              |
|                     |                | PM          | 2.48              |
| Multi-Unit Low-Rise | 220<br>(TRANS) | AM          | 1.35              |
|                     |                | PM          | 1.58              |

Using the above person trip rates, the total person trip generation has been estimated. Table 11 summarizes the total person trip generation for the residential land uses.

Table 11: Total Residential Person Trip Generation by Peak Period

| Land Use            | Units | AM Peak Period |     |       | PM Peak Period |     |       |
|---------------------|-------|----------------|-----|-------|----------------|-----|-------|
|                     |       | In             | Out | Total | In             | Out | Total |
| Single-Detached     | 334   | 206            | 480 | 685   | 513            | 315 | 828   |
| Multi-Unit Low-Rise | 702   | 284            | 664 | 948   | 621            | 488 | 1109  |

Using the above mode share targets for a BRT area, the person trip rates, the person trips by mode have been projected. Table 12 summarizes the trip generation by mode and peak hour using the residential peak hour adjustment factor.

Table 12: Trip Generation by Mode

| Travel Mode           | Mode Share     | AM Peak Hour |            |            | PM Peak Hour |             |            |            |            |
|-----------------------|----------------|--------------|------------|------------|--------------|-------------|------------|------------|------------|
|                       |                | In           | Out        | Total      | Mode Share   | In          | Out        | Total      |            |
| Single-Detached       | Auto Driver    | 46%          | 40         | 95         | 135          | 41%         | 97         | 59         | 157        |
|                       | Auto Passenger | 14%          | 14         | 32         | 46           | 19%         | 43         | 26         | 69         |
|                       | Transit        | 30%          | 40         | 92         | 132          | 30%         | 68         | 41         | 109        |
|                       | Cycling        | 1%           | 1          | 3          | 4            | 1%          | 2          | 1          | 4          |
|                       | Walking        | 9%           | 11         | 25         | 36           | 10%         | 27         | 17         | 43         |
|                       | <b>Total</b>   | <b>100%</b>  | <b>103</b> | <b>240</b> | <b>343</b>   | <b>100%</b> | <b>226</b> | <b>139</b> | <b>364</b> |
| Multi-Unit (Low-Rise) | Auto Driver    | 45%          | 53         | 124        | 178          | 43%         | 106        | 84         | 191        |
|                       | Auto Passenger | 13%          | 18         | 41         | 59           | 13%         | 36         | 28         | 63         |
|                       | Transit        | 30%          | 56         | 131        | 188          | 30%         | 99         | 78         | 177        |
|                       | Cycling        | 2%           | 3          | 8          | 11           | 2%          | 6          | 5          | 11         |
|                       | Walking        | 9%           | 15         | 35         | 49           | 12%         | 39         | 31         | 69         |
|                       | <b>Total</b>   | <b>100%</b>  | <b>142</b> | <b>332</b> | <b>474</b>   | <b>100%</b> | <b>273</b> | <b>215</b> | <b>488</b> |
| Total                 | Auto Driver    | -            | 93         | 219        | 313          | -           | 203        | 143        | 348        |
|                       | Auto Passenger | -            | 32         | 73         | 105          | -           | 79         | 54         | 132        |
|                       | Transit        | -            | 96         | 223        | 320          | -           | 167        | 119        | 286        |
|                       | Cycling        | -            | 4          | 11         | 15           | -           | 8          | 6          | 15         |
|                       | Walking        | -            | 26         | 60         | 85           | -           | 66         | 48         | 112        |
|                       | <b>Total</b>   | -            | <b>245</b> | <b>572</b> | <b>817</b>   | -           | <b>499</b> | <b>354</b> | <b>852</b> |

As shown above, a total of 313 AM and 348 PM new peak hour two-way vehicle trips are projected as a result of the proposed development.



# Attachment 3

TIA Screening Form

City of Ottawa 2023 Revisions to 2017 TIA Guidelines  
Step 1 - Screening Form

Date: 02-Apr-24  
Project Number: 2022-008  
Project Reference: Conservancy East Stage 2

| 1.1 Description of Proposed Development |  |
|---|--|
| Municipal Address                       | 3285 & 3305 Borrisokane Road   |
| Description of Location                 | Conservancy Subdivision Draft Plan Area  |
| Land Use Classification                 | Residential Zone (R3YY[2766]), Parks and Open Space  |
| Development Size                        | A change in units from the approved 2021 TIA from 133 detached houses and 220 townhomes to 587 townhomes |
| Accesses                                | One on Borrisokane Road, one connection to Canoe Street  |
| Phase of Development                    | New Redline Area   |
| Buildout Year                           | 2028   |
| TIA Requirement                         | <b>No updates to previous TIA required</b>   |

| 1.2 Trip Generation Trigger |                         |                              |
|-----------------------------|-------------------------|------------------------------|
| Land Use Type               | Multi-Family (Low-Rise) |                              |
| Development Size            | 587                     | Units                        |
| Trip Generation Trigger     | No                      | See attached Trip Generation |

| 1.3 Location Triggers  |     |                     |
|--|-----|---------------------|
| Does the development propose a new driveway to a boundary street that is designated as part of the Transit Priority Network, Rapid Transit network or Cross-Town Bikeways? | Yes | As per the 2021 TIA |
| Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)?  | No  |                     |
| Location Trigger   | Yes |                     |

| 1.4. Safety Triggers  |     |                     |
|---|-----|---------------------|
| Are posted speed limits on a boundary street 80 km/hr or greater?   | Yes | As per the 2021 TIA |
| Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?  | No  |                     |
| Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)? | No  |                     |
| Is the proposed driveway within auxiliary lanes of an intersection?   | No  |                     |
| Does the proposed driveway make use of an existing median break that serves an existing site?   | No  |                     |
| Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?  | No  |                     |
| Does the development include a drive-thru facility?   | No  |                     |
| Safety Trigger  | Yes |                     |

Table 1: Peak Hour Trip Comparison

| Concept Plan   | Methodology | Peak Hour | Peak Hour Trips by Mode |            |         |         |         | Total Person Trips |
|----------------|-------------|-----------|-------------------------|------------|---------|---------|---------|--------------------|
|                |             |           | Auto                    | Auto Pass. | Transit | Cycling | Walking |                    |
| 2021 Plan      | TRANS 2009  | AM        | 173                     | 57         | 116     | 4       | 34      | 385                |
|                |             | PM        | 200                     | 66         | 133     | 5       | 40      | 443                |
| 2024 Redline   | TRANS 2020  | AM        | 148                     | 49         | 157     | 9       | 41      | 404                |
|                |             | PM        | 159                     | 53         | 148     | 9       | 58      | 427                |
| Net Difference |             | AM        | -25                     | -8         | +41     | +5      | +7      | +19                |
|                |             | PM        | -41                     | -13        | +15     | +4      | +18     | -16                |



## Certification Form for TIA Study PM

### TIA Plan Reports

On April 14, 2022, the Province's Bill 109 received Royal Assent providing legislative direction to implement the More Homes for Everyone Act, 2022 aiming to increase the supply of a range of housing options to make housing more affordable. Revisions have been made to the TIA guidelines to comply with Bill 109 and streamline the process for applicants and staff.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that they meet the four criteria listed below.

### CERTIFICATION

I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines; (Update effective July 2023)

I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;

I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and

I am either a licensed or registered<sup>1</sup> professional in good standing, whose field of expertise

is either transportation engineering

or transportation planning.

<sup>1</sup> License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.

Dated at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.  
(City)

Name :

Professional title:



Signature of individual certifier that s/he/they meet the above criteria

**Office Contact Information (Please Print)**

Address:

City / Postal Code:

Telephone / Extension:

Email Address:

**Stamp**



Revision Date: June 2023