



## MEMO

DATE: May 14, 2025  
PROJECT NO: 04-21-0091  
PROJECT: **Anmore South**  
SUBJECT: **Response to Evolve Opinion Letter**

TO: Laurie Schmidt  
Icona Properties

PREPARED BY: Peter Joyce, MSc, P.Eng.  
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### 1. INTRODUCTION

Evolve, a Transportation Engineering Consulting Firm, has provided Bunt & Associates Engineering Ltd. (Bunt) with a copy of Evolve's "Anmore South Transportation Impact Assessment Review – Opinion Letter" dated April 17, 2025. This Opinion Letter identifies several items of note from Bunt's Transportation Assessment Report for Anmore South, dated March 5, 2023.

The following discussion provides additional Bunt commentary to items noted in the Evolve Opinion Letter.

### 2. DATA COLLECTION TIMING

After reviewing Evolve's letter memo, it is not yet clear how the traffic volumes were collected as presented in the referenced *Bedwell Bay Road Transportation Study*. Specifically, were the volumes averaged over multiple days (i.e., multiple Sundays over a month or from a select Sunday within that month). With the significant differences in volume, possibly survey data was collected on long summer/fall weekends. Road design considerations are typically based on 30<sup>th</sup> highest hour volumes as observed over an entire year which would exclude summer long weekend Sunday midday periods if indeed this is the most peaked traffic condition associated with Provincial and Regional Parks in this area. Another question we would have is whether on-street parking activity along this section of Bedwell Bay Road may have influenced observed traffic volumes further exacerbated by the approximately 50% increase in recreational traffic visits to the area parks in this early part of the Covid-19 pandemic. The 2023 traffic counts collected by Bunt arguably represent a considerably more stable transportation condition than the early Covid summer of 2020.

As for Saturday summer versus Saturday fall volumes, our afternoon peak hour traffic count for a sunny July Saturday (July 29, 2023) had 522 vehicles per hour travelling through the Bedwell Bay Road / Sunnyside Road intersection which is about 9% lower than the 572 vehicles per hour we observed for the sunny September 16, 2023 afternoon peak hour. Accordingly, we chose to use the higher volume September Saturday afternoon condition for our analysis.

### 3. ROADWAY CAPACITY & TRIP DISTRIBUTION

Both sections were responded to with anecdotal information only from Evolve.

Bunt diligently responded to a likely reduction of roadway capacity based on the understanding of the surrounding environment. The estimate in capacity reductions is based on assumptions of the area along with current volumes / conditions taken into account. This is well documented as Table 2.7 of the Bunt Report.

From a trip distribution standpoint, Bunt had assumed 50/50 split between East Road and loco Road based on our traffic count information and along with acknowledgement of different areas of the development utilizing different distributions. While the information from Evolve's report based on personal experience and does have merit, it somewhat oversimplifies the report proposal.

### 4. TRIP GENERATION

As a general comment, being too conservative with traffic forecast analysis potentially can result in over builds of transportation infrastructure. Wider roads can lead to higher traffic speeds, longer pedestrian crossing distances, and increased rainwater runoff from impervious surfaces all of which are counter to the context envisioned for Anmore South. The more prudent approach would be to "right-size" information such as trip generation. Based on the densification sought, the proposed trip generation rates are reasonable based on a dense multi-urban area in the future (while it may be difficult to see at this point in time). Section 3.2 of the report fully describes the methodology used and anticipates that the land uses would complement one another with short trips anticipated.

In our opinion, the approach used by Evolve with residential trip rates based on the ITE General Urban/Suburban land use code, while perhaps representative of the very low density and nearly homogeneous residential land use of Anmore Village presently, is not all representative of what can be reasonably anticipated for Anmore South. As characterized in the ITE Trip Generation Manual (11<sup>th</sup> Edition), the General Urban/Suburban land use code, the travel patterns for this context of development are such that "nearly all person trips that enter or exit a development site are by personal vehicle or commercial vehicle", and "...a lack of pedestrian, bicycling, and transit facilities or services limit non-vehicle travel". Much of the ITE data for residential land use is based on data collected 20+ years ago, with typically higher parking supply ratios for multifamily housing nearly double that planned for Anmore South, and without the benefit of more recent innovations such as community car share and bike share programs.

The higher density development planned for Anmore South with the majority of residential development in multiple family format, is entirely different than the largely rural and large lot single family format residential format of the existing community. Other key factors that will influence future travel patterns for Anmore South include:

- Anmore South will be well served by regular public transit, but with anticipated improvement in service frequency over existing levels;
- Anmore South will be developed with community serving commercial shops and services including a grocery store will enable certainly a good portion of shopping trips to stay within the neighbourhood rather than travel longer distances on arterial routes;
- Multifamily parking supply rates that reflect current trends of reducing private vehicle ownership in mixed-use areas with transit service and efficient and safe pedestrian and cycling connections, and the availability of public car share programs.
- Acknowledging the hillside terrain of portions of Anmore South, the increasing popularity of e-bikes helps remove impediments to cycling due to uphill grades. This is very evident in similar hillside areas of North and West Vancouver, and the Heritage Mountain and Burke Mountain areas of Port Moody / Coquitlam.

As an aside, residential trip rate data we collected for the Archer Green townhouse development (161 units) in the eastern Silverdale area of Mission with absolutely no public transit, no commercial shops/services, and no community centre anywhere nearby found that the weekday AM trip rate was about 23% lower than the ITE General Urban / Suburban attached housing land use category, and about 14% lower than the ITE reported PM trip rate.

In our opinion, a direct application of the ITE General Urban / Suburban attach housing land use category for residential trip rates for use in forecasting future traffic at Anmore South as recommended in the Evolve report will result in a significant overestimate of future vehicle trip generation. Bunt is very confident with our approach to the trip generation forecasts we've developed and note that Anmore Village's transportation engineering consultant, ISL Engineering, was supportive of our approach.

## 5. EMERGENCY EVACUATION & SCHOOL TRAFFIC CONSIDERATIONS

The Evolve Report identifies concerns that the Bunt TIA did not specifically (i) address school-related traffic, and (ii) emergency evacuation requirements in the event of a natural disaster such as wildfires. While this was not part of the requirement for the study, the Bunt study responds to the comments:

For school traffic, the residential trip generation analysis includes all trip purposes including school traffic, so this is accounted for, particularly in the AM peak period which more directly overlaps with the morning commuter traffic peak. As the afternoon school traffic period typically ends prior to the onset of the afternoon commuter traffic period, this has not been a specific focus of the Bunt TIA.

For evacuation / emergency conditions, this area is served by two regional connections (Loco Road and East Road) which provides some measure of redundancy if one of the routes becomes unavailable. Emergency evacuation using marine services is also a potential option using existing marina and industrial dock facilities on the nearby Burrard Inlet waterfront.

It is further noted that development of the Anmore South neighbourhood will result in a vastly improved source of water from the Metro Vancouver truck service which will greatly aid the ability to combat fires in the community. The importance of this cannot be overstated.

Date: April 17, 2025  
Project No.: 10295.01

## **RE: Anmore South Transportation Impact Assessment Review – Opinion Letter**

To: Greg Malpass, Anmore Neighbours Community Association  
From: Alon Weinberger, Principal, Evolve

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Dear Greg,

As requested by the Anmore Neighbours Community Association (“ANCA”), I am pleased to provide you with this opinion letter outlining my review of the Anmore South Transportation Impact Assessment (“TIA”) prepared by Bunt & associates (“Bunt”) for Icona Properties on March 5, 2025.

### **1. Qualifications**

My name is Alon Weinberger. I reside on 1820 Galer Way, Port Coquitlam, BC. My area of expertise is Transportation Engineering. I hold a Bachelor of Applied Science in Civil Engineering degree from the University of British Columbia (2007). I am a registered Professional Engineer (P.Eng.) in British Columbia and Alberta. I am a certified Professional Traffic Operations Engineer (PTOE) and a Road Safety Professional (RSP1). I am a member of the Transportation Association of Canada (TAC) and the Institute of Transportation Engineers (ITE).

I have 18 years of direct experience in the field of transportation engineering and planning. I am the founder and principal of Evolve, a transportation engineering company based in Port Coquitlam. Evolve has been providing transportation-related consulting services since 2015. Throughout my career, I have been involved in numerous TIAs. I currently provide on-going TIA review services for the Cities of Maple Ridge and Langley.

I certify that I am aware of my duty under the rules and regulations of Engineering and Geoscientists British Columbia (“EGBC”). The opinions presented in this report are based on factual public data collected, industry best practices, and professional engineering judgment in my field of expertise.

### **2. Scope**

This review does not constitute a peer review, as outlined by EGBC. The scope of this review is merely to provide a second opinion on the assumptions and conclusions made by Bunt & Associates.

It should be noted that the TIA’s terms of reference were not made public; therefore, this review cannot compare whether the TIA follows any terms of reference provided by the Village of Anmore or Bunt, nor can it comment on whether the terms of reference were adequate for this study. Therefore, the opinions

presented in this letter are based on what I believe the TIA should have included, whether or not the items were included in the TIA Terms of Reference or not.

The scope of this review follows the Code of Ethics as set by EGBC. The Code of Ethics includes 13 principles that every professional engineer in BC must adhere to. This includes both Bunt & Associates staff who completed the TIA for Anmore South and any professional engineers working in behalf of the Village of Anmore that set the terms of reference and reviewed the TIA. This also includes Alon Weinberger, P.Eng., the author of this opinion letter.

This review particularly focuses on two Code of Ethics principles:

- Principle 1: “*Hold paramount the safety, health, and welfare of the public, including the protection of the environment and the promotion of health and safety in the workplace;*”. This principle overrides all other principles in the Code of Ethics.
- Principle 7: “*Provide professional opinions that distinguish between facts, assumptions, and opinions;*”. This principle is very typical in TIAs, as these types of studies include many assumptions and opinions, and it is quite common to have different engineers making different assumptions and having different opinions on the same subject.

### 3. Discussion

Overall, Bunt’s study is very well written and addresses all key components to be expected from a typical TIA. Every assumption made is further explained in detail. I do not have any issues with the TIA’s methodology or general content.

However, There are three areas where I do not agree with Bunt’s assumptions or TIA components. The next sections will discuss these items in detail.

#### 3.1 Existing Conditions

##### 3.1.1 Determination of Peak Periods

In section 2.4 in the TIA, Bunt described the scope and extent of the traffic data collection conducted for the study. Table 2.3 in the TIA summarizes the study area intersections, count dates, and count times. Every intersection was counted once in the fall and once in the summer during the weekday AM and PM peak periods, and the Saturday PM peak period. There were no Saturday AM nor Sunday traffic counts. The traffic counts were included for reference in Appendix A of the TIA.

Based on the collected data, Bunt made the assumptions that weekday traffic volumes peak in the summer while Saturday traffic volumes peak in the fall. I completely disagree with the latter assumption. It is a known fact to any person who frequents Sasamat Lake and Belcarra that parking fills up in the early morning hours on sunny weekends. It is a common occurrence in the summers to have vehicles lined up along Bedwell Bay Road as early as 7:00AM, and the Sasamat Lake parking getting full around 9:00AM. Belcarra also has limited parking available for visitors, which also promotes higher AM traffic volumes. The same condition also applied to traffic heading to Buntzen Lake, but was mitigated after BC Hydro introduced the parking reservation system which prohibits any unplanned trips to Buntzen Lake. Since Bunt

did not collect any data on Saturday AM period or on Sundays, Bunt’s assumption is based on incomplete data.

In 2021-2022, Port Moody and Metro Vancouver commissioned a study of Bedwell Bay Road. The study, titled “*Bedwell Bay Road Transportation Study*”, addressed the ongoing road congestion, parking violations, and safety concerns along the road. The report has been in the public domain since May 2022. As part of the project, corridor traffic counts were conducted along Bedwell Bay Road, just east of Sunnyside Road. As can be seen in **Exhibit 1** (Table 2-1 from the report), traffic volumes on weekends peak during the summer months, with Sunday being busier than Saturday. This table further emphasizes that Bunt’s assumption regarding weekend traffic peaking in the fall was incorrect. However, Table 2-1 does in fact confirm Bunt’s assumption that weekday traffic peaks in the summer. Given that Bunt based its weekend traffic base on Saturday traffic in the fall, all subsequent future traffic projections in the TIA for Saturday volumes may be incorrect.

Table 2-1  
Traffic on Bedwell Bay Road Between Crystal Creek Dr. and White Pine Beach Rd, 2020  
Two Way Total Volume by Month and Day of Week (vehicles per day)

Month	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average
Jan	1650	1720	1920	1800	1740	1860	1650	1770
Feb	2640	1890	2070	2060	2340	2570	2360	2290
Mar	2350	2240	3010	2520	2890	3800	3840	2940
Apr	3120	2790	2790	3150	3220	4150	4020	3300
May	5340	4150	4150	4480	6040	5330	5910	5130
Jun	5160	3240	4020	5380	4690	4950	7800	4980
Jul	8340	6300	5700	3920	4160	8050	11700	6660
Aug	4890	4490	4490	3540	3970	5080	6680	4810
Sep	3850	3230	3450	3760	3710	3190	3830	3560
Oct	2800	2560	3090	2770	2710	3500	2770	2900
Nov	2200	1980	2370	2180	2380	3270	3280	2540
Dec	2590	2460	2390	2520	2380	2990	2440	2530
Average	3740	3090	3290	3170	3350	4060	4690	3620

Exhibit 1: Link Traffic Volumes on Bedwell Bay Road

### 3.1.2 Roadway Capacity

In section 2.6.1, Bunt estimated the roadway Capacity for Ioco Road and East Road. A theoretical capacity of 750 vehicles per hour per lane was used as a starting point for these roads. Bunt made a reduction in capacity for each road based on rolling terrain and friction from driveways and intersections, resulting in an estimated capacity of 575 vehicles per hour for East Road and 500 vehicles per hour for Ioco Road.

I do not agree with the assessment. While East Road has fewer driveway conflicts than Ioco Road, it also has traffic calming on it consisting of multiple stop signs, speed humps, and one school zone; therefore, I believe that East Road should have, at most, the same capacity of Ioco Road, if not lower.

## 3.2 Site Trip Generation and Distribution

### 3.2.1 Trip Generation Estimates

In Section 3.2.1 in the TIA, Bunt claimed that the vehicle trip rates (an industry-acceptable rate published by the Institute of Transportation Engineers) should reflect “Dense Multi-Use Urban” rather than the default “General Urban/Suburban” for the Anmore South Development. I completely disagree with this assumption. Anmore is not only a suburban area, but a rural area with large acreage lots, minimal pedestrian facilities, minimal amenities, and full reliance on vehicles as the almost exclusive mode of travel. A mixed-use development built in a rural or suburban area does not transform the surrounding area into a dense urban area. Dense Multi-Use Urban trip rates are limited to developments in areas that are already dense or on their way to become dense (such as Moody Centre TOD), where there is convenient access to multiple modes of travel, multiple amenities and large commercial/retail areas.

In Table 3.2, Bunt compared the “Dense Multi-Use Urban” and “General Urban/Suburban” residential trip rates. In Table 3.3, Bunt summarized their proposed residential vehicle trip rates to be used as a basis for the analysis. Bunt assumed that these trip rates will be achievable if 30% of the potential vehicle trips will switch to other modes of travel such as walking, biking, or transit. In my opinion and familiarity with the village of Anmore and general study area, I do not believe this can be achievable in a rural area. Therefore, I believe that the default residential “General Urban/Suburban” trip rates should have been used here.

Bunt made further assumptions on the commercial vehicle trip rates. Bunt used a base ITE trip rate for a strip retail plaza, which I agree with. Bunt made multiple assumptions regarding the percentage of trips that will be generated by the Village of Anmore, the proposed development, and outside of Anmore – all of which have led to vehicle trip reduction. In addition, Bunt also assumed that 20-40% of the external vehicle trips to the commercial area at Anmore South will be pass-by trips (vehicles that were already on the road but stopped on the way, thus not new traffic). The final bunt-proposed commercial trip rates were summarized in Table 3.5 in the TIA. Bunt also made assumption on trip rates generated by the proposed community centre. All assumptions made have resulted in further vehicle trip reduction. The final bunt-proposed community centre trip rates were summarized in Table 3.6 in the TIA. Table 3.7 in the TIA summarized the complete estimated vehicle trips that will be generated by the Anmore South Development.

As with my opinion regarding the residential trip rates proposed by Bunt, I completely disagree with Bunt’s assumptions. First, given the geographic spread of Anmore, its topography, its remoteness with limited street lighting and safe pedestrian facilities, I do not agree that any vehicle trip reduction made for active transportation will be achievable in Anmore. Furthermore, pass-by rates cannot be used without a known commercial land use. Some land uses may generate higher pass-by rates (such as coffee shops or grocery stores), while other may generate lower to no pass-by rates (such as medical facilities). Since we do not know the mix of commercial use at Anmore South, the best approach for any transportation engineer is to be on the conservative side and use the default, unadjusted, vehicle trip rates. I do, however, believe that a modest 10% overall trip rate reduction can be applied to account for some Anmore to Port Moody vehicle trips that will switch to local trips, some pass-by traffic coming out of Bedwell Bay Road, and some internal trips within Anmore South Development.



Using the ITE “General Urban/Suburban” trip rates for residential, commercial, and community centre land uses, I am proposing the trip rates shown in **Table 1**. **Table 2** summarizes the total estimated vehicle volumes for Anmore South Development.

Land Use	ITE Land Use Code	Measurement Factor	Weekday AM Peak Hour Trip Rates			Weekday PM Peak Hour Trip Rates			Saturday Peak Hour Trip Rates		
			% In	% Out	Total	% In	% Out	Total	% In	% Out	Total
Detached Single Family House/Duplex	210	Dwelling Units	25%	75%	0.70	63%	37%	0.94	54%	46%	0.92
Townhome	220	Dwelling Units	25%	75%	0.48	58%	42%	0.57	49%	51%	0.57
Mid-rise Apartment	221	Dwelling Units	23%	77%	0.37	63%	37%	0.39	52%	48%	0.39
Commercial Plaza	822	1,000 sq.ft.	60%	40%	2.36	50%	50%	6.60	51%	49%	6.57
Community Centre	495	1,000 sq.ft.	66%	34%	1.91	47%	53%	2.50	54%	46%	1.07

Table 1: Evolve Proposed Vehicle Trip Rates

Land Use	Units / Floor Area	Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips			Saturday Peak Hour Trips		
		% In	% Out	Total	% In	% Out	Total	% In	% Out	Total
Detached Single Family House/Duplex	130	23	68	91	77	45	122	65	55	120
Townhome	740	89	266	355	245	177	422	207	215	422
Mid-rise Apartment	1,330	113	379	492	327	192	519	270	249	519
Commercial Plaza	55,000 sq.ft.	78	52	130	181	182	363	184	177	361
Community Centre	20,000 sq.ft.	23	15	38	24	26	50	11	10	21
Subtotal Vehicle Trips:		326	780	1,106	854	622	1,476	737	706	1,443
10% Vehicle Reduction		-33	-78	-111	-85	-62	-148	-74	-70	-144
<b>Total Vehicle Trips:</b>		<b>293</b>	<b>702</b>	<b>995</b>	<b>769</b>	<b>560</b>	<b>1,328</b>	<b>663</b>	<b>636</b>	<b>1,299</b>

Table 2: Evolve Estimated Total Vehicle Volumes for Anmore South Development

Based on Table 2, the proposed development is estimated to generate a total of 995 vehicle trips in the weekday AM peak hour, 1,328 vehicle trips in the weekday PM peak hour, and 1,299 vehicle trips in the Saturday peak hour. These numbers correspond to 16-22 vehicles per minute, or one vehicle every 3-4 seconds added to the area road system.

Based on the developer's final commercial area mix, potential funding agreements with TransLink, and/or potential car-share agreements with one of the area's car-share companies, the above traffic volumes will likely be reduced. As noted above, given the limited information at this point, the proposed trip rates by Evolve represent a conservative and safer approach for trip generation estimates.

### 3.2.2 Trip Distribution Assumptions

Bunt made the assumption that traffic generated by the Anmore South Development will spread evenly between East Road and Ioco Road. This assumption was made after a spot count was done at the intersection of Sunnyside Road and Alder Way.

Ioco Road is the most direct and fastest route from the development's centroid to Port Moody's SkyTrain and West Coast Express rail services, multiple amenities and services in Newport Village, Suter Brook, and St. Johns Street, and regional highways. Ioco Road, unlike East Road, is a continuous road without stop signs or speed humps, as East Road has. East Road provides the best access to the middle and high schools, as well as destinations in the northeast area of Coquitlam, but is a slower route from the development to Port Moody and the majority of amenities. Therefore, I estimate that peak hour traffic will distribute 75% to Ioco Road and 25% to East Road.

With the trip rates estimated in section 3.2.1, Ioco Road will see about 12-16 vehicle trips per minute, or one vehicle every 4-5 seconds, generated by the Anmore South Development.

## 3.3 Missing TIA Components

As noted in Section 2, I did not have access to the TIA Terms of Reference document (if exists), and therefore I cannot determine whether Bunt was instructed or chose to omit any components. This section addresses two components which I believe should have been included in the TIA based on the proposed development's location and the scale of traffic that will be generated by this development compared to the area roads capacity.

### 3.3.1 School Traffic

There is currently one elementary school in Anmore west of Sunnyside Road. Anmore students belong to Eagle Mountain Middle School and Heritage Woods High school catchments, both located north of David Avenue and southwest of East Road. The remote suburban location of all these schools leads to higher rate of students being driven to school. School AM drop-offs are typically included within the weekday AM peak period, but PM school pick-ups occur outside of the weekday PM peak hour. The shortest access to the middle and high schools is through East Road. It should be expected that East Road will experience added congestion as the Anmore South Development is built during the school pick up period (2:00PM-3:00PM). In my opinion, a component of existing and future school PM traffic analysis should be included with the TIA to quantify this traffic with and without Anmore South Development.

### 3.3.2 Emergency Evacuation

With growing concerns of climate change and increase in wildfire activities, as recently experienced in West Kelowna, Fort McMurray, and Pacific Palisades, there is an increased focus on emergency evacuation routes and wildfire evacuation plans, especially in fire-prone communities with limited vehicular access. As documented in recent large wildfires, major routes were often covered in smoke and restricted an efficient evacuation. The forested area of Anmore, Belcarra, Sasamat and Buntzen Lakes is such area prone to wildfires with very limited access.

The Anmore South Development will bring thousands of new residents to a wildfire-prone area. It is my professional opinion that the TIA, or a separate traffic study, should assess the ability to evacuate all residents and visitors to the area with and without the Anmore South Development, and recommend mitigation measures to ensure that should an emergency occur, no residents or visitors will be harmed.

## 4. Closing

The concerns noted in this letter were based on my professional engineering opinion in my field of expertise, The industry best practices, and my knowledge of the Anmore area as a frequent visitor to the area recreation destination in the past 18 years. Please contact the me if you have any questions or comments regarding this letter.

Yours Sincerely,

Alon Weinberger, P.Eng., PTOE, RSP1  
Principal, Evolve



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