

Assessing the Impacts of Potential Land Value Capture Mechanisms on Affordable Housing and Affordability

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Regional Transportation and TransLink

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PART ONE: Background, Objectives, and Scope

1.1 Introduction and Background

The housing affordability crisis in the Metro Vancouver region is garnering international attention. And with good reason: access to safe, stable and affordable housing is at the core of societal stability. Without it, the dream of settling down, holding a stable job, and contributing to society as a whole vanishes. And yet unlocking the breadth and depth of the issue has evaded policy makers for many decades.

The issue is complex. Low income growth and low interest rates, international demand for real estate, rising land and construction costs, government fees, policies that impact demand and supply, as well as zoning that restricts access to land all play a role. But government policies recently introduced at both the Federal and Provincial levels to broadly manage the housing market are also contributing factors — and some carry unintended consequences. In the ownership market for example, federal policy on mortgage lending has raised the qualifying income requirement for purchasing housing, creating a combined impact of pushing some first time buyers to stretch for mortgages that now means they spend a disproportionate amount of their income on housing, and also placing new pressures on the rental market as a greater portion of people seek rental homes, as they no longer qualify to purchase a home. Clearly, almost no segment of society is untouched by a lack of access to sufficient housing.

There are many definitions of 'affordable housing' that speak to the unaffordability of housing options across the spectrum. Given the scale of this crisis, there is a pressing need for housing that is affordable to a broad range of income levels, including that which is affordable for middle income earners, social housing, and everything in between. The unfortunate reality is that many working people cannot afford to live in the city in which they work or study.

Affordable housing is defined in different ways by various organizations and levels of government. At the most general, “affordable housing” refers to housing that is secured at a range of below-market rates. Ideally, this housing stays affordable in perpetuity given that as the region continues to grow, the pressure on the price of housing will continue. Affordable housing can be delivered and managed by both the public and private sectors through a variety of partnerships and mechanisms.

As a result, there is a need for housing that is secured at a range of below-market rates. Correspondingly, there is a renewed commitment to delivering affordable housing for a variety of income levels in new ways at all levels of government suggesting that momentum is building to advance change.

There is an interplay between investment in transit infrastructure and housing affordability. Historically, roads and new transit have been foundational to creating real estate value by providing access to new land development opportunities for both residential and mixed-use development. Housing in amenity-rich locations, which are already in high demand, often see further upward pressure on prices as transit investments are delivered in those areas.

Public policy seeks to advance governance that is in the interest of all members of society. At the same time, public policy invariably involves weighing consequences and considering trade-offs. Distributive policies typically aim to serve a broader public interest by utilizing tools — like Land Value Capture (LVC) mechanisms — to reallocate resources that promote equality and social equity. This brings us to the intersection of transit, LVCs, affordable housing, and housing affordability, which must be considered in concert.

There are a range of LVC tools that can be used to provide affordable housing; it is precisely due to this value lift that naturally occurring affordable housing¹ is potentially compromised, in the absence of public policy that seeks to protect it, when new taxation measures are considered. If housing near rapid transit is unaffordable due in part to investments that have been made in transit, the goal of a sustainable region will evade policy makers - those most

¹ Defined as existing housing that is affordable (without subsidy or other supportive programs) at a rate that is no more than 30% of the regional median income.

dependent on transit infrastructure will increasingly be unable to access it. Said another way, if government policies designed to capture land value that is generated through transit investments in turn create a new burden on housing affordability, the livability of the region will continue to move beyond reach as transit infrastructure is expanded.

Where should uplift in land value generated from new transit infrastructure be dedicated? There is a risk that land value uplift and redevelopment alongside major capital transit investments will reduce affordable housing supply and housing affordability if capturing the value of the new investment places a new cost burden on housing near transit.

In considering deployment of new LVC mechanisms, critical questions emerge: Should some of the uplift in land value generated from new transit be collected to assist in raising capital funds for infrastructure expansion. Should this uplift in value, captured through a tax or some other financial tool, be directed to the delivery of affordable housing near rapid transit? Or is it possible to do a combination? Or, as is commonly the case in Metro Vancouver municipalities, should this uplift be used to provide amenities such as child care space, community space, public art, or recreation facilities?

It could be argued that a transit agency should solely focus on the delivery of transit infrastructure and service. But even if that more narrow mandate was assumed by TransLink, there is a risk that land value uplift and redevelopment alongside major capital transit investments will reduce affordable housing supply and housing affordability. In an ironic twist, access to transit for those who need it most, including essential workers, is not necessarily enhanced, but rather can be diminished by public investments in infrastructure that are intended precisely for them. Unintended consequences could result from a Land Value Capture mechanism that makes access to transit more difficult for middle income households. For this reason, the question of access to housing that is affordable should be of paramount concern to TransLink and its partners; a multiple-objective policy framework is required.

An LVC mechanism that is poorly calibrated to market conditions could have the effect of stifling the development of new housing, limiting supply, thereby negatively impacting access to new housing near transit and housing affordability. In the absence of regulation and tools that preserve affordable housing, particularly affordable rental housing, market uplift could also

upend naturally occurring housing affordability.

Any Land Value Capture mechanism employed or promoted by TransLink or on behalf of TransLink would need to be carefully calibrated to ensure it does not negatively impact housing affordability. If a tool to generate revenue for transit compromises access to transit for those who are most burdened by the high cost of housing and transportation in the region, it would fail to align with broader, shared public policy objectives established at the regional scale.

In addition, other externalities that put operating pressures on TransLink may emerge if residents are not able to live near the transit infrastructure that they need to access — for example, if residents require additional bus service to connect to higher order transit, this produces additional operating costs that would be borne by TransLink.

In this context, TransLink is embarking on transformative capital investments in new SkyTrain and other high quality rapid transit expansions that hold the potential to significantly change the urban fabric of areas near transit stations and major transit exchanges. On the face of it, it appears prudent for governments to capture some of the resultant uplift in land value, and redirect some of it into new capital projects for the transit system supporting the regional share for expansion, and possibly even, over the long-term, operations. Or to use this revenue to pay down the debt of existing rapid transit investments. But immediately a tension emerges between the opportunity to generate revenue and the burden that doing so could place on both existing and new housing costs.

TransLink's transformative capital investments in new SkyTrain and other high quality transit expansions hold the potential to significantly change the urban fabric of areas

near transit stations and major transit exchanges. Ensuring access to affordable housing that is tied to these investments is critical to expanding transit ridership and fostering complete communities.

While ten-year Investment Plans are TransLink's primary policy and planning tool used to identify future capital and operating expansion priorities, paired with the revenue tools required to fund specific system expansion projects and programs, the Mayor's Council Vision is also being updated and will consider funding tools at a higher level. TransLink's founding legislation, the SCBCTA Act, dictates that investment plans must be updated at least every 3 years. In addition to describing planned transit services and capital investments, these plans must balance costs for each year against projected revenues, funding, and borrowing limits.

It is critical to evaluate and consider the implication of revenue tools on access to housing, housing affordability, and the need to deliver more affordable housing within close proximity to transit infrastructure, and further, to consider TransLink's interest and role in ensuring access to affordable housing.

1.2 Study Objective

The purpose of this study is to explore the competing objectives, trade-offs, and other considerations associated with implementing potential LVC mechanisms in the context of new development on privately owned land to help pay for the capital and/or operating cost of new investment in rapid transit, while fostering affordable housing supply and housing affordability in transit-oriented locations. The focus is the interplay between LVC as a potential funding mechanism, the inter-related impacts with affordable housing supply and housing affordability, and the resulting impact on transit ridership and fare revenue.

This work will provide preliminary analysis for the Mayors' Council, TransLink, the Province, and local municipalities related to the broad impacts of potential increased use of LVCs in relation to the delivery of rapid transit infrastructure and housing affordability in the region. It will inform decision makers of the implications of LVC tools on private property, to better understand which funding mechanisms under consideration for future Investment Plans align most clearly with the broader regional priority of ensuring that affordable housing delivery and housing affordability is not compromised, but rather, is supported and advanced.

Out of scope for this study is consideration of:

- Real estate that is owned by TransLink;
- Financial modeling related to the assessment of tradeoffs between the use of various LVC mechanisms;
- Assessment of the development potential — and associated quantum of affordable housing that could be delivered — on any particular site;
- Analysis or recommendations concerning the LVC mechanisms that could be used for transit capital or operations funding;
- Recommendations specific to any particular municipality.

This report will also outline the understanding of the existing priorities of partner agencies, including Metro Vancouver and municipalities, and how their visions and plans align with the need to direct land-value capture proceeds towards affordable housing development. The region's affordability crisis is felt across multiple sectors and agencies which necessitates a coordinated effort to interface Land Value Capture with affordable housing.

Given that there is a risk that LVC could lead to less housing creation and less transit access if it acts as a deterrent to the creation of more housing supply, any implementation must give full and careful consideration to the negative impacts that might be generated with respect to transit access, regional affordability, and shaping ongoing development in the region. Any new mechanism must be advanced with the goal of working towards a more livable, affordable, and sustainable region for both current Metro Vancouver residents, and the many more who will become residents in the future.

This report considers the following questions:

1. In support of informing a decision by the Mayors' Council on potential use of particular LVC mechanisms, which of the mechanisms are most compatible with supporting affordable housing and housing affordability around rapid transit?
2. Is the priority to provide access to the most transit riders near rapid transit locations (ridership), or is it to maximize revenue for the building of new capital projects (LVC revenue)?
3. Would the implementation of a LVC mechanism negatively affect access to affordable housing as well as housing affordability in proximity to transit in general?
4. What is the relationship between fare revenue, access to affordable housing at station locations, and "last mile" operating costs?

Decisions that are not considered in this report include:

1. The breakdown through which LVC revenues should be directed (i.e. towards transit investment or the creation of affordable housing or community amenities);
2. Details on rate setting, waivers, exemptions, and timing for these mechanisms;
3. If and when the LVC mechanism(s) should be integrated into an Investment Plan.

1.3 Study Approach and Structure of this Report

The approach of this study expands on the findings of the February 2020 Coriolis *Evaluation of Land Value Capture and Urban Development as Sources of Revenue for TransLink* report, and aggregates a series of additional relevant reports on LVC, affordability, and alternative funding options for TransLink.

The funding mechanisms that are in-scope for this study are:

- TransLink's Benefitting Area Tax (BAT)
- Community Amenity Contributions (CACs) revenue sharing with regional municipalities
- Density bonusing, as:
 - a revenue stream; and/or
 - a mechanism to deliver affordable housing in proximity to rapid transit
- Tiered DCCs², where rates would be higher than others in certain portions of the region
- Property Transfer Tax (PTT) revenue sharing with the Province

Each of these mechanisms has been assessed to gauge their potential impacts on revenue, housing affordability, ridership, housing creation, the enabling regulatory context, stakeholder support/sentiment, and region-shaping. The results of this assessment are presented in a Multiple Account Evaluation (MAE) and form the basis of the recommendations for advancing an LVC approach that is most compatible with supporting housing affordability. The report then delves into the nuances and complexities of advancing affordable housing in concert with transit infrastructure delivery, and concludes with a look into a relevant case study and a proposed policy approach.

² A tiered DCC was not recommended for exploration by Coriolis Consulting in its 2020 report. However, TransLink received direction from the Mayors' Council that this should be explored and hence is being discussed in this report.

1.4 Interfaces with Partner Agencies/Organizations and their Roles in LVC and Affordable Housing

1.4.1 TransLink

As the transit provider for Metro Vancouver and an owner of significant land assets, TransLink's activities affect the housing market. *The Metro Vancouver Housing and Transportation Cost Burden Study* introduced a new way of looking at housing affordability for working households by making explicit the link between housing and transportation costs, which represent the two largest expenditures for many working households. As households move toward more suburban locations to achieve more affordable housing, both their environmental footprints and transportation costs increase — this “drive ‘til you qualify” dynamic has significant negative effects on both affordability and regional sustainability. For this reason, it is important not only to consider TransLink as a holder of land assets when it comes to affordability, but also the manner in which LVC mechanisms facilitate a stronger link between — or upend — the relationship between housing and access to transit.

TransLink's powers and responsibilities are defined in the South Coast British Columbia Transportation Authority Act (SCBCTAA). This legislation does not empower TransLink to operate as a housing agency, although TransLink can work with partners to provide affordable housing on its properties. As a regional agency, TransLink has established relationships with partners across Metro Vancouver, such as local municipalities and First Nations, the Province, and other regional agencies. These relationships will be critical to any LVC strategy undertaken in pursuit of affordable housing, in part because of the degree of cooperation required when lands in close proximity to transit stations are owned by a diverse set of stakeholders, but also due to regulatory authorities of local municipalities.

TransLink's Real Estate Division is currently tasked with the acquisition, management, and disposition of land. Its approach to these responsibilities is expected to uphold the agency's goals by optimizing revenue, reducing capital and operating costs, and contributing to transit infrastructure, a healthy environment, and sustainability. The Real Estate Division oversees several factors that are integral to LVC and affordable housing, including developments that are integrated with or adjacent to transit stations, acquisition of land and strategic real estate assets, disposal of surplus properties, and commercial lease and tenant management, among others. This report considers implications of LVC on private land holdings, not on lands held as assets by TransLink directly.

The SCBCTAA currently allows for two primary types of Land Value Capture mechanisms, in addition to the basic property tax. The Act enables TransLink to levy a Development Cost Charge. TransLink's DCC has been in effect since 2019 and has been collected since 2020. The DCC is levied uniformly across the region and is collected and remitted by local municipalities

and other collection entities on TransLink's behalf. The SCBCTAA also provides enabling legislation for TransLink to levy a Benefitting Area Tax.

1.4.2 Metro Vancouver

Given that over one third of households in the Vancouver region spend more than 30% of their income on housing, housing affordability is a major regional issue. As such, affordable housing is a major thrust of Metro Vancouver's Regional Growth Strategy and other planning activities. Metro Vancouver provides regional analysis of housing markets and development trends, and offers definitions and standards for research and discussion of these issues to support municipalities in developing Housing Action Plans. Metro Vancouver is focused on preserving and enhancing the supply of affordable housing and increasing the diversity of housing choices in the region, emphasizing that it is particularly desired around areas of the Frequent Transit Network in the Regional Growth Strategy and Housing Strategy. This is achieved through advocacy with federal and provincial governments and by supporting the Metro Vancouver Housing Corporation to increase the number of affordable housing units in the region.

1.4.3 Metro Vancouver Housing Corporation

The Metro Vancouver Housing Corporation, which is wholly owned by Metro Vancouver, has been a housing provider in the region since 1974. Today the organization houses 9,400 people in 3,400 units across 49 sites. About 35% of the units are offered as rent-geared-to-income, with the remainder offered between 5% and 30% below average market rents. In 2019 the corporation released a 10-year plan that committed \$190 million to maintaining and expanding its assets.

Whether LVC programs deliver affordable housing through private or non-profit developers, they may require an entity to manage the affordable units and ensure they remain affordable and well-maintained over the long term. The Metro Vancouver Housing Corporation is especially well equipped for this task given its regional scope and the many successful partnerships it has fostered with local and senior governments, BC Housing, Canada Mortgage and Housing Corporation (CMHC), Vancouver Native Housing Society, Vancouver Coastal Health, and many other community organizations that provide key services and help create supportive and inclusive communities.

1.4.4 Ministry of Municipal Affairs

The Ministry of Municipal Affairs provides local municipalities with a range of conditional and unconditional grants, some of which explicitly address affordable housing. These grants could be directed towards supporting housing developments that aim to deliver affordable housing through LVC in proximity to transit infrastructure.

1.4.5 BC Housing

BC Housing is a provincial body responsible for fulfilling the directives of the Attorney General and Minister Responsible for Housing. It develops, manages, and administers numerous subsidized housing options that address needs across the housing continuum, from addressing homelessness to assisting first-time home buyers. It currently manages 7,800 units of public housing. The organization also licenses residential builders and carries out research and education that benefits both the residential construction industry and consumers. Expenditures for the 2019/2020 fiscal year totaled over \$1.19 billion. BC Housing also administers the Provincial Rental Housing Corporation, which holds property across the province for low-cost housing.

BC Housing runs the Housing Hub, a one-stop source where community associations, governments, non-profit and private developers, and industry innovators can find information, resources, and opportunities for partnerships that forward the shared goal of delivering affordable rental and homeownership options to middle income British Columbians.

BC Housing will be a key player in any effort to deliver affordable housing, whether by setting construction standards, forging lasting partnerships, providing research and industry insight, or directly investing in affordable housing.

1.4.6 BCNPHA

The BC Non-Profit Housing Association (BCNPHA) has been the provincial umbrella organization for the non-profit housing sector for nearly 30 years. It serves more than 500 members, including non-profit housing societies, businesses, individuals, partners, and stakeholders, with education and professional development opportunities, research and advocacy, and asset management services. BC's non-profit housing societies manage more than 65,000 units of long-term, affordable housing in over 2,500 buildings across the province and are a likely partner in instances where a non-profit partner is required for affordable housing delivery along transit corridors.

1.4.7 Ministry of Transportation and Infrastructure

BC's Ministry of Transportation and Infrastructure (MoTI) plans transportation networks and infrastructure, and implements and administers many transportation policies, acts, regulations, and federal-provincial funding programs. Affordable housing is not strictly within the Ministry's typical responsibilities. Provincial-federal funding is also critical for the continued success of public transit in the region.

MoTI generally acts on behalf of TransLink and the Province as the delivery authority responsible for the construction of new SkyTrain expansion projects including the Broadway

Subway and Surrey-Langley SkyTrain extension. In close collaboration with municipalities, MoTI secures construction and system-required lands for new SkyTrain projects including alignment rights-of-way, station locations, system infrastructure including traction power substations and maintenance accesses. MoTI has an influential role in the selection of real estate parcels for SkyTrain expansion projects which could be utilized for future development opportunities upon system operations. Lands required during infrastructure construction periods that are not needed for operations go through a disposition process once the SkyTrain extension goes into service. Depending on the appropriateness of the parcel, these sites could be considered as priority sites for the delivery of affordable housing once the build-out of the infrastructure is complete.

1.4.8 Local Municipalities

Local municipalities have a significant role to play in providing affordable housing through a variety of mechanisms, including LVC. The Local Government Act and the Community Charter empower local municipalities to fund, own, and operate housing, provide land for housing, or work with partners to develop or operate housing. Primarily, municipalities have a profound impact on the development of new housing through regulatory tools that both control the use of land and impact land values, like their Official Community Plans and zoning bylaws. These regulatory frameworks interface with LVC in a variety of ways to deliver both community amenities and affordable housing through the development process. During a rezoning process, some local municipalities negotiate with developers to agree on site-specific Community Amenity Contributions (CACs) that are meant to mitigate the impacts of increased density on the neighbourhood and to provide community amenities for the area, and/or to provide affordable housing, either directly in new projects or indirectly through contributing to an affordable housing fund.

These are well established LVC tools levied by local governments; more recently, municipalities have been experimenting with new methods of addressing the regional housing affordability crisis. For example, zoning specifically for rental tenure is an approach that has recently been introduced in Vancouver. Local municipalities can also encourage affordable housing by reducing project costs for developments that will benefit the public, such as offering municipally-owned land for the construction of affordable housing via non-profit and private sector developers. Local governments can lower development costs by waiving or reducing fees, reducing vehicular parking requirements, or waiving or reducing fees for certain types of not-for-profit rental housing from Development Cost Charges, or Development Cost Levies (DCLs) as they are called in the City of Vancouver. In some cases, even minor cost reductions can tip a project from unfeasible to financially viable.

1.4.9 First Nations

Indigenous Nations who are non-treaty Indigenous Nations are governed by the Indian Act. The Indian Act governs all aspects of Indigenous lives. In order to move towards Indigenous self-government, the First Nations Housing and Infrastructure Council is working to develop an Indigenous Nation's controlled Housing & Infrastructure Authority which will assume authority over Indigenous Nations housing services and infrastructure program delivery. There are also a number of not-for-profit organizations (e.g., Lu'ma Housing Society and Urban Native Youth Association) working in the region to provide a broad range of housing and associated social support services. BC Housing has an Indigenous Director and team working on housing projects on and off reserve land including projects within the Metro Vancouver area.

Tsawwassen First Nation (TFN) have entered into a treaty through a "tripartite agreement between Canada, British Columbia, and Tsawwassen First Nation. It is a comprehensive agreement that provides for the transfer of land and self-government jurisdiction to Tsawwassen First Nation.²" TFN's Land Use Plan states that, "there are about 65 residential housing units for TFN members on the Pre-Treaty Reserve, with a TFN population of around 210 people." Additionally, the Land Use Plan advises that TFN will explore more dense and compact forms of housing that provide affordable housing options for a range of lifestyles and income levels.

Due to the lack of affordable housing for Indigenous peoples, this topic is a priority for all Indigenous Nations and urban Indigenous peoples. A review should be conducted to inform future discussions with Indigenous Nations, the First Nation Housing and Infrastructure Council and not-for-profit agencies and support engagement on how their visions and plans align with the need to direct land-value capture proceeds towards affordable housing development.

PART TWO: Why Affordable Housing Matters to Transit Delivery

2.1. The Housing Affordability Crisis

Housing is a pillar of advanced societies that upholds stability and quality of life, and is foundational to health and thriving. Yet housing remains unaffordable for low- and moderate-income earners across the region, and rising costs are pushing ownership and rental housing out of reach for many demographics. In recent decades, rapidly rising housing costs have outpaced wage growth and, at the same time, new housing supply has not kept pace with population growth and immigration. This has created a perfect storm of unaffordability. Unless this mismatch is adequately addressed, future generations of Metro Vancouverites will face increasingly unreasonable housing burdens; for many, adequate housing in the region is already out of reach. Vancouver regularly ranks in the top three least affordable housing markets worldwide (in terms of the ratio of median property price to median household income).

Access to housing that is affordable is a complex public policy issue that sits at the nexus of land use planning, zoning, finance, and the development process. A comprehensive discussion of this interplay is beyond the scope of this paper, however, given that access to housing is tied to land value while the scope of this study includes assessing how to *use* land value to deliver on two key public interests — transit and affordable housing. There is merit in an initial exploration of this frame, however, to the extent that doing so will mitigate embracing policy choices that unwittingly contribute to the overall affordability conundrum.

When housing is treated as a commodity instead of as a right and a social good, and where housing demand is high, either for occupancy or for investment, policy and market outcomes converge to create high housing costs. This is the expected outcome of these systems, because high housing costs mean housing has acted as a good investment for earlier entrants — it has played its role exactly as intended. Homeownership represents the only significant source of wealth most households ever achieve, and for many Canadian residents this wealth takes the place of a pension. Beyond that, housing that is solely an investment and not owner-occupied has seen increased scrutiny in recent years. Measures such as the provincial speculation and vacancy tax and City of Vancouver's regulations for short-term rentals have been enacted in an effort to discourage the treatment of housing as a commodity and to ensure that every home is occupied. While these are welcome demand-side interventions, they do not address deeper structural reliance on housing as an investment. Adequately addressing the housing affordability crisis in Metro Vancouver will require cooperation between all stakeholders, and approaches that tackle affordability from multiple angles.

When housing is treated as a commodity and where housing demand is high, either for occupancy or for investment, policy and market outcomes converge to create high housing costs. This is the expected outcome of these systems. Higher housing cost burdens on households mean less share of household income to direct to productive areas of the economy — spending at local businesses, tourism and recreation, and investment in productive companies

Second, desirable areas with rising populations by definition experience increasing demand for housing, and as such development must keep pace with this demand. Metro Vancouver is hamstrung by predominantly low-rise urban forms that underutilize land. The single-family home continues to be a de facto residential configuration despite declining household sizes which may mean that even more housing may be necessary than population growth alone indicates.

Many municipalities in the region have restrictive zoning policies that make densifying legacy residential areas prohibitively difficult and prevent the addition of a variety of housing types that could serve a broader range of residents; some 60% of land in the region is locked into land use zoning that allows only single-detached housing. Changing these restrictive zoning by-laws is politically difficult partly due to the widespread — and false — belief that housing forms other than the single-family home negatively impact surrounding property values, and as a result of resistance to changes in so-called “neighbourhood character.” This topic is particularly charged because, as alluded to above, many residents have their life savings and retirement funds tied up in their homes. The stakes are high in the tension between current homeowners and future residents, between housing as a commodity and housing as a right and social good. Significantly increasing housing supply through the loosening of zoning restrictions is ardently opposed by those who risk seeing home prices, and therefore their investment, stabilize in value.

A third aspect of Metro Vancouver’s housing affordability crisis is a shortage of rental housing supply, which represents stable housing and is a financially sound housing option in high-cost housing markets. Due to a shortage of supply, even rental prices have risen rapidly in the region due to a market and policy context that, since the 1970s and especially the 1990s, has made strata residential a more attractive development option than purpose-built rental. Over 80% of

the dedicated rental housing stock in Vancouver was constructed before 1980, and this type of housing has rents that are 30% lower than newly built rental housing.

Affordability is further strained by a dwindling stock of mature rental housing and new purpose-built rental struggling to make up for decades of underinvestment. Higher orders of government that had disengaged from affordable housing in the 1990s are now beginning to re-invest and signal support for purpose-built rental and affordable housing. In the spirit of adding more rental housing stock to the market, and where the affordability crisis is most pronounced, the City of Vancouver recently published a Rental Housing Stock Official Development Plan.

Metro Vancouver will need 64,900 new housing units by 2025. Of this amount, 21,400 units are needed for low income households and 25,400 units for low-to-moderate income households (who generally require below market prices to access affordable housing). The remaining demand for 18,100 rental units is at market rents. This housing need is more than one-third of the number of new homes that the Federal Government's National Housing Strategy (NHS) intends to build by 2027 (year 10 of the NHS 10-year plan) in the region.

Metro 2040

Housing affordability impacts the future viability of a region. Should young people and those with low to moderate incomes not be able to find housing that is within their means, they will be driven to seek careers and lives in other areas that meet their needs. While the “mobile elite” may be in a position to relocate their careers and lives to more affordable housing markets, this does not account for the fact that essential workers that the region depends on (and who may not be as mobile) will continue to bear disproportionate housing and long-commute burdens. Housing affordability affects all of us, and in the long-term poses an existential threat to the diversity and economic vitality of Metro Vancouver.

The livability of a region is partly based on housing and transportation costs combined, making access to transit infrastructure critical to defining the level of overall affordability in the region.

But the livability of a region is impacted by factors other than just housing costs. After housing, transportation represents the second largest expense for most households, making TransLink a

key player in influencing the level of overall affordability in the region. If Metro Vancouver can counter the common trend of increased housing costs near transit, it will mean a more equitable and resilient region, will lead to increased ridership and fare revenue for TransLink, and will facilitate progress towards meeting sustainability and GHG emissions goals.

2.1.1 Defining Affordable Housing

As a starting point, it is helpful to distinguish between **affordable housing** and **housing affordability**. Affordable housing refers to specific homes that meet a given definition of affordability, such as not exceeding 30% of a household's income by some definitions. On the other hand, housing affordability represents a relative concept, a sliding scale of housing costs. For example, in a high-cost market such as Metro Vancouver, if prices were to fall the region would enjoy increased housing affordability, but unless prices fall significantly enough to meet the threshold of affordable housing, housing in the area would remain unaffordable. Likewise, in an area where housing is affordable, a minor increase in costs (i.e. a slight decrease in housing affordability) will leave affordable housing intact as long as costs do not surpass the threshold for affordable housing. In this study, we observe the definitions and metrics provided in *Opening Doors*, the final report of the Canada-British Columbia Expert Panel on the Future of Housing Supply and Affordability:

- **30% of household income:** housing can be considered affordable if its costs are not greater than 30% of a household's before-tax income. This metric is relative to household income which means that the same home can be considered affordable for a higher income household and unaffordable for a lower-income household.
- **Housing income limits (HILs):** BC Housing applies a maximum gross household income for eligibility in their affordable housing programs. HILs are intended to reflect the minimum income needed to afford appropriate accommodation in the private market and can differ from one city to the next.
- **Rent-geared-to-income:** Low-income households under rent-geared-to-income schemes normally have rents set relative to their income threshold, typically 30% of total income.
- **Shelter rate housing:** Homes that have rents which are set according to the shelter allowance maximum for households receiving income assistance in British Columbia.
- **Combined housing and transportation costs:** Combining costs for housing and transportation is a different approach that factors other costs into affordability equations, notably the transportation costs associated with homes located in different neighbourhoods. This is discussed in more detail as it pertains to Metro Vancouver's 2015 Housing and Transportation Cost Burden Study below.
- **Basic needs threshold/residual income:** A measure of housing affordability which calculates how much money a household has left to spend on housing after paying for all non-shelter necessities.

In addition to the aforementioned metrics and definitions, we consider a number of additional metrics and definitions in other statutory documents:

Metro Vancouver's 2050 Regional Growth Strategy (currently proposed and not yet adopted) defines affordable housing as housing that is affordable to households earning up to 120% of the regional Median Household Income. In Canada, a general measure of housing affordability is the shelter-cost-to-income ratio, where no more than 30% of a household's income is spent on housing (including all housing-related costs such as utilities).

The Canada Mortgage and Housing Corporation (CMHC) defines affordability as 30% of before-tax household income. Additionally, CMHC uses a metric known as core housing need: A household is in core housing need if its housing falls below affordability, adequacy (repair), and suitability (crowding) standards, and alternative local housing would cost 30% or more of its before-tax income.

In addition to metrics and definitions that focus solely on housing costs, Metro Vancouver's 2015 Housing and Transportation Cost Burden Study articulates the need to combine housing and transportation costs to gain a clearer picture of the cost of living in the region. Housing and transportation choices are closely linked and represent the two largest expenditures for many working households. Conversations about affordability in this region must include both housing and transportation costs. Region-wide, homeowners with mortgages paid 40% of their pre-tax income for housing and transportation; renters paid 49%. Lower income renter households earning less than \$50,000 can spend up to 67% of their pre-tax income on housing and transportation costs. Such high-cost burdens for housing and transportation leave little room for other essentials such as food and clothing. Measures such as these provide a more holistic picture of how dire the situation is for the future of livability in Metro Vancouver.

In Metro Vancouver, lower income renter households earning less than \$50,000 per year are spending as much as 67% of their pre-tax income on housing and transportation costs, leaving \$16,500 for childcare, food, and other expenses.

Those who are in a position to own their dwellings are increasingly looking to the region's more affordable housing markets in municipalities farther from the region's economic centres. While the lower cost to enable home ownership may be a useful approach to allow first-time buyers a way onto the property ladder, a lower home mortgage is exchanged for what is increasingly

being referred to as a “transportation mortgage”. This means that lower housing costs are offset by the high transportation cost of commuting to and from housing that is located farther from the metro core and other employment nodes. Even in the parts of the region where housing appears to be more affordable, the overall cost of living may be the same or worse than staying in similarly unaffordable housing in more expensive areas. This puts the stability and vibrancy of Metro Vancouver at risk over the long term.

There are two strategies that can be employed to address this problem:

1. Expansion of rapid transit networks to help reduce transportation costs for households.
2. Recognition of the opportunity inherent in strategically located rapid transit stops and surrounding areas to accommodate more affordable housing.

The second approach is paramount to maximizing the potential utility of LVC, through the integration of new affordable housing into new regional transit capital projects and, in some cases, corridors served by existing rapid transit.

2.2 Cross governmental Priority for Addressing Affordable Housing

Providing affordable housing is a significant challenge that falls across multiple jurisdictions. All orders of government are engaged in the effort to alleviate the region’s housing crisis; national, provincial, and local governments have each articulated their own commitments to housing affordability. The following sections outline these commitments.

2.2.1 National Housing Strategy (NHS)

In late 2017 the federal government announced the creation of Canada’s first National Housing Strategy (NHS). The 2019 Federal Budget added further support, turning the NHS into a 10-year plan including over \$70 billion in funding. The plan seeks to promote diverse communities by building housing that is sustainable, accessible, mixed-income, and mixed-use. Among the strategy’s many goals are commitments to cut homelessness rates in half, remove 530,000 households from core housing need, and construct up to 100,000 new affordable housing units. The efforts to implement the NHS fall into four initiative streams:

- 1) Create new housing supply
- 2) Modernize existing housing
- 3) Provide resources for community housing providers
- 4) Promote innovation & research

Further, the NHS takes a “whole-of-government” approach, meaning it seeks to align housing goals with other government objectives such as creating jobs and improving access to healthcare. One such objective is improved access to transit. Since the NHS ultimately seeks to

create inclusive communities, it specifically aims to create and preserve housing near transit. This is expected to improve equity and outcomes for groups who tend to rely on transit, such as women and people with disabilities.

The National Housing Co-Investment Fund is one of the flagship programs that make up the NHS. It consists of \$15.9 billion in financial contributions and low-interest loans, as well as contributions of federal land. The Co-Investment Fund stipulates that resources will only be provided to projects where another order of government is also invested, including municipal governments. Through partnerships, TransLink could integrate transit capital projects with affordable housing, which may open doors to additional funding streams such as the National Housing Co-Investment Fund. Other programs under the NHS include a new Canada Housing Benefit, increased transfers to the provinces and territories, support for housing data and research, and the Canada Community Housing Initiative.

2.2.2 BC Government and BC Housing Initiatives

BC Housing partners with private and non-profit developers, provincial health authorities and ministries, government stakeholders, and community groups to provide a variety of housing options. Its programs aim to address homelessness, provide transitional supportive and assisted living arrangements, create and maintain independent social housing, offer rent assistance in the private market, build affordable housing, and support first-time home buyers. Clearly there are many ways that BC Housing is directly involved with the provision of affordable housing. Though BC Housing does not explicitly address *transit-oriented* affordable housing in its service plans or investment plans, partnership with TransLink is still certainly an option—BC Housing has partnered with the federal government to carry out the province's 30-point housing action plan (see below), which recognizes that complete communities require access to both transit and affordable housing.

In 2018 the province released *Homes for BC*, its 30-point plan to address housing affordability. The plan aims to stabilize the market, crack down on tax fraud and close loopholes, build the homes people need, provide security for renters, and support partners to build and preserve affordable housing. The plan includes a \$6.6 billion investment in affordable housing and a commitment to support middle-income earners' housing needs and goals. In delivering its plan, the province also aims to expand transit-oriented affordable housing. *Homes for BC* signals strong support for affordable housing near transit by stating that the province “will work with TransLink and local government in Metro Vancouver to increase density and improve the availability of affordable housing around transit stations”. The mandate for BC Housing to focus on the delivery of transit-oriented affordable housing is clear.

The Province's engagement with affordable housing in Metro Vancouver is critical, not only for social equity, but for the long-term economic vitality of the region. According to the BC Chamber

of Commerce, housing costs are a major issue for businesses across the province. Ninety percent of business owners report that housing costs are discouraging workers from living in BC communities.

2.2.3 Roles, Responsibilities, and Partnerships

Given the need to ensure a close link between access to affordable housing and the delivery of new rapid transit infrastructure, TransLink may find itself, as an organization, weighing into matters previously beyond the scope of an agency focused on transit service delivery. The intersection of interests with other levels of government, and therefore other government agencies, means that alignment of interests and clarity about roles is paramount to advancing and delivering on critical shared objectives. While an interdisciplinary lens is increasingly, and rightly, being used to assess policy matters, clarity about who does what matters too. A critical question about roles must be answered to ensure that the broader public interest is best served by the agency best positioned to deliver based on its existing regulatory authority, funding capacity, organizational mandate, and subject matter expertise. The Supportive Policy Agreements are a mechanism to achieve clarity on these kinds of partnership issues and define commitments around affordable housing.

2.3 The Implications of Affordable Housing and Housing Affordability in Close Proximity to Rapid Transit for TransLink

2.3.1 Creating an Equitable and Inclusive Region

As discussed previously, as housing prices rise in dense urban centres and areas with frequent transit service, many residents choose to move to outlying communities where housing is cheaper. Metro Vancouver's Housing and Transportation Cost Burden Study (H+T Study) demonstrates that evaluating housing costs to the exclusion of other household costs can provide a misleading picture of affordability. Still, even if some residents are able to make the trade-off of paying more for transportation in order to save on housing, high housing costs near transit force residents into difficult decisions—more affordable housing near transit means more freedom of choice for the people of Metro Vancouver.

2.3.2 Impacts on Operating Costs

The impacts of high housing costs near rapid transit extend beyond just residents — they affect TransLink too. The pattern of household migration away from the region's centre in search of more affordable housing creates distant populations that are not efficiently served by transit.

This creates an operating cost burden, increasing the cost of service delivery across the transit network. A cursory analysis of bus route 555 provides insight on this dynamic.

Route 555 runs along Highway 1 between Lougheed Station and Carvolth Exchange. This service connects the residents of Walnut Grove with the broader rapid transit network. A household looking for an affordable place to live might consider Walnut Grove where housing costs are lower than in more central parts of the region, like Vancouver. This residential hub in Langley Township has seen increasing bus ridership in recent years, prompting a corresponding increase in service hours to meet the rising demand. More service hours means higher operating costs. Between 2015 and 2019 the cost of operating Route 555 grew from \$2.65 million to \$3.71 million; this was precipitated by the desire of individual households to access slightly more affordable housing. While the cost for a household to access housing in Walnut Grove is lower, the impact on operating costs for TransLink is higher.

Walnut Grove is an area of concentrated demand for transit, but it is separated from the nearest rapid transit by low-demand areas as well as the Agricultural Land Reserve (ALR). The result is a bus route that connects to only a small number of points of interest. As of 2019, Route 555 ranked 1st among 216 bus routes for highest average speed, which helps lower operating costs.

	2015	2016	2017	2018	2019	% Change, 2015-2019
Annual Service Hours	20,700	22,100	26,000	27,900	29,000	40%
Operating Cost (millions)*	\$2.65	\$2.83	\$3.33	\$3.57	\$3.71	40%
Average Weekday Boardings	2,970	3,690	4,000	4,110	5,020	69%

**assuming a cost of \$128/service hour*

If current trends continue, housing will become increasingly unaffordable in Metro Vancouver's denser communities with better transit access. Residents will choose to live farther and farther from city centres and employment hubs. This will increase auto dependence and worsen traffic congestion, working against TransLink's and the region's sustainability and emissions targets. Further, the resulting population growth in distant residential communities will increase transit demand in these hard to reach areas. The cost burden of operating these routes is only

growing, as shown by Route 555, but TransLink and its partners can counter this trend by encouraging and supporting affordable housing near new or existing rapid transit.

2.3.3 Impacts on Fare Revenue

TransLink also risks missing out on increased fare revenue if housing affordability cannot be secured in close proximity to rapid transit station areas. This will materialize for two reasons.

Zone-based fares	Population density
<p>Less dense population centres are better suited to bus service than rail service, but under TransLink’s zone-based fare system, the fares collected from buses are only ever a single-zone fare. This results in lower revenue per rider for TransLink, making it difficult to recoup the high operating costs associated with serving outlying communities. The more riders using long-distance bus service rather than rapid rail transit (such as in the 555 example above), the more fare revenue TransLink fails to capture.</p>	<p>Higher population density along transit corridors is a fail-safe way to increase transit ridership. Whether riders are paying single- or multi-zone fares, more riders means more fare revenue, and increasing population density near transit stations (in tandem with the rest of the 6 Ds of Transit-Oriented Communities) increases the ridership base for TransLink. LVC mechanisms that might serve to maximize revenue through the LVC tool but inadvertently suppress the amount of density along the corridor are not in the long-term interest of TransLink from a ridership perspective.</p>

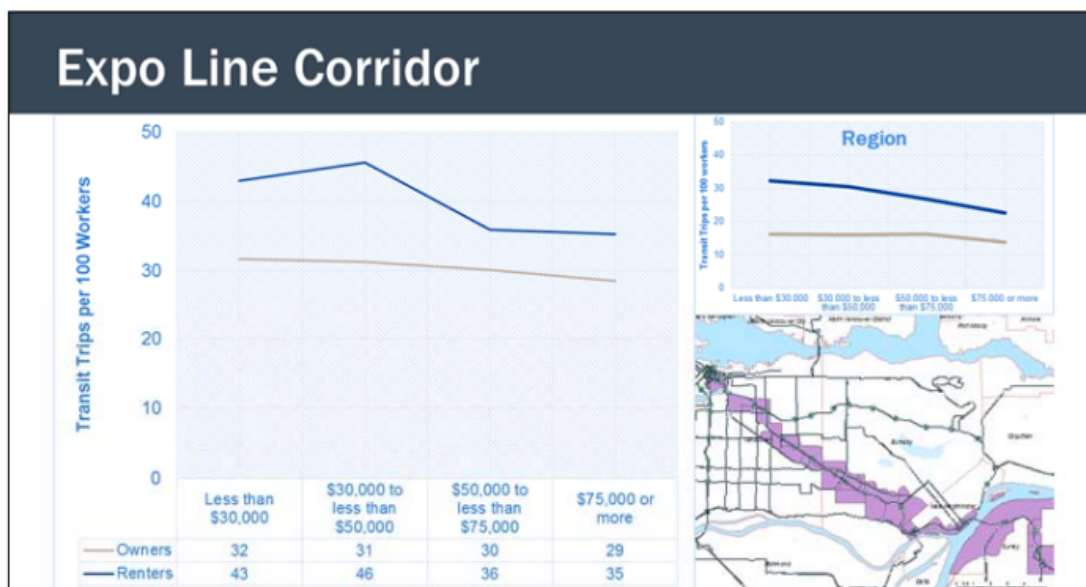
The monetary value of fare revenue is only part of the equation. The *reliability* of that fare revenue is also of importance to TransLink, and transit-dependent riders more reliably use transit than riders who opt to take transit less often. The COVID-19 pandemic has revealed how precarious ridership can be. At the same time, those who rode transit right through multiple waves of the pandemic showed that riding transit is not a choice for many people. According to the Canadian Urban Transit Association’s COVID-19 [Recovery Strategy](#), during the height of the pandemic’s first wave, public transit still carried about a million people per day. More than half of the passengers earned under \$30,000 a year, many of them were women, and 80% of them did not have access to a car.

These essential workers, cornerstones of our communities and economy, are the same residents who will be pushed out of Metro Vancouver by prohibitively high housing costs.

Transit-oriented affordable housing serves residents who rely on transit consistently. This means predictable ridership for TransLink, which in turn leads to greater certainty for transit service planning, capital expansion, and investment planning.

To illustrate, the Metro Vancouver Mixed Income Transit-oriented Development Study demonstrates that transit ridership is higher among renters than owners around rapid transit and that holds across income levels. More rental housing around rapid transit supports both those households and Translink revenue.

Transit Use for the Journey to Work by Income in Select Transit Corridors (2011)



Metro Vancouver, Progress Update on the Metro Vancouver Mixed Income Transit-Oriented Rental Housing Study - Transit Ridership Effects, 2016

2.3.4 The Impact of Parking on Affordability

According to The Metro Vancouver Apartment Parking Study, the cost of constructing on-site structured parking can reach upwards of \$50,000 per stall, plus added maintenance costs. Where minimum parking requirements are in force, this adds a sizable cost burden to development projects, which can be passed along to households. Whether housing is being provided by private or non-profit developers, this cost impacts housing affordability in turn. Integrating affordable housing with transit capital projects can alleviate or, in some cases, eliminate the need for on-site parking, thereby creating a built environment that drastically

reduces housing costs, particularly for purpose-built rental housing, which tends to have fewer parking stalls per unit than strata residential.

2.3.5 Economic Growth and Job Creation

Increased investment in transit can lead to significant economic growth as a result of both the short-term stimulus impact of public transportation outlays and a longer-term, cumulative impact on economic productivity. Access to transit increases productivity, a key metric used by businesses assessing where to locate.

Governments spend a tremendous amount of time and resources seeking to attract new jobs to the region; access to transit is foundational to doing so. But furthermore, access to housing is also critical to employment growth. Linking access to transit with access to housing that is affordable is essential to delivering on broader regional and provincial economic growth targets.

PART THREE: The Opportunity of Land Value Capture

3.1 Land Value Capture: What it is and How it Relates to Transit Investment and Housing Affordability

3.1.1 What is Land Value Capture?

Land value capture (LVC) is an economic concept and practice that is used as a public sector revenue generating tool in jurisdictions around the world to varying degrees. It is founded on the idea that the factors that drive land value arise primarily from public—not private—activity. Public investments in infrastructure such as utilities, rapid transit, and roads are common examples of public activities that affect land value, as are patterns of migration and population growth.

Owning land provides two kinds of benefits. The first kind arises from productive activities carried out on the land, for example agricultural revenue or income from commercial rents. It is generally accepted that profit derived from such activities justifiably flows to the owner of the land where the activity takes place. The second kind arises when land values increase, and through sale or lease, owners can capitalize on these heightened land values.

It is commonly argued, however, that increases in land value are largely outside of the control or contribution of landowners. The real sources of land value are more typically public investment, natural features inherent to the land, trends in population, and economic context. Landowners enjoy rising land values simply by virtue of their owning the land. As such, it can be argued that some of this *unearned increment*, as it is known, ought to be redistributed from private landowners to society more broadly.

The fundamental premise of Land Value Capture is that increases in land value, often generated by public investment, can be captured to further deliver on other public goods.

The specific ways in which increases in land value can be redirected for public benefit are numerous and highly varied (and are detailed in the 2020 Coriolis report). Some of these tools are widely familiar, such as property taxes, while others are less well known. In general it is helpful to categorize LVC mechanisms based on the type: one-time and recurring. One-time tools are collected at a specific event or milestone, such as the sale or rezoning of a property. They are not technically collected only once per property, but once per major event. Recurring LVC, such as a property tax that is collected annually, is more predictable and forms a steady cash flow.

3.1.2 The Drivers of Land Value

There are many factors that contribute to the value of land. Coriolis Consulting Corp and Wollenberg Munro Consulting provide a helpful typology that divides these factors into three categories.[1]

Geography and Context	Local Zoning and Infrastructure	Individual Site Characteristics
<ul style="list-style-type: none"> • Features such as topography, natural environment, and climate all inform an area’s desirability, and demand for land. Some features determine the quantity of developable land, or the supply in other words. • Contextual factors such as population and job growth, banking systems, real estate activity, health care and other government resources all contribute to the value of land. 	<ul style="list-style-type: none"> • Physical geography creates certain opportunities or limits for development, but planning permissions and regulations also impact the amount of developable land, the uses to which land can be put, and how intense development can be. • Public infrastructure such as water and sewer systems; roads, trails, and transit; and community facilities. 	<ul style="list-style-type: none"> • Land value also depends on the immediate surroundings and unique characteristics of a site: accessibility, views, soil conditions, noise and odours, site size, and topography, for example.

Of note, the degree to which a landowner maintains or improves their property is not identified as a contributing factor, and to clarify this it is helpful to make a distinction between land value and property value: property value being a composite of land value and the value of any buildings or other improvements. LVC refers strictly to the land component of a property’s overall value, meaning the value of improvements has no bearing. Therefore, while land owners

are responsible for some portion of their *property* value, increases to the value of the land component are determined by public activity and investment. This is the basis of the public claim to the unearned increment of land value.

3.1.3 The Role of Transit Investment Contributions in Shaping Land Value

Transit is a prime example of public investment with a positive spillover effect that benefits surrounding landowners, in areas where transit infrastructure increases accessibility to popular destinations. (It is imperative to note that some properties along the elevated SkyTrain guideway, not near stations, experience negative impacts such as noise, on views and due to shading, and therefore they are not beneficiaries of the positive spillover). Urban density and rapid transit go hand in hand. In Metro Vancouver, research shows that “as of 2019 over 80% of new office growth and almost two-thirds of new strata residential growth are in rapid transit station areas.”[1] This demonstrates the twofold opportunity presented by transit investment:

Market Value of Proximity to Transit	Density Permissions
<p>Proximity to transit is a desirable, marketable housing attribute that developers seek out when pursuing development opportunities.</p> <p>The market value of access to transit ensures an uplift in land value. In Metro Vancouver, efforts to quantify the price premium on good access to transit have placed it at around 5% for residential space and 10% for commercial space.[2]</p>	<p>Local governments generally permit higher density around transit stations, but developers typically apply for even greater density above those permissions. The more that can be built on a site, the higher the value of that land. Currently, municipalities capture some of this uplift in value because they are responsible for rezoning and the development approvals process and the provision of municipal infrastructure and community amenities. However, a significant share of the land value uplift near transit comes directly from transit investment itself.</p>

3.1.4 Is TransLink Obligated to Support the Creation of Affordable Housing?

Affordable housing in proximity to rapid transit should be pursued through a myriad of policy tools, and LVC is one mechanism among many that ought to be considered (separate from the consideration of who collects the LVC revenues and by whom new housing is delivered). Given the magnitude of the housing affordability challenge, multiple policy responses are required; there is no golden goose. But the success of a LVC mechanism to align and deliver on affordable housing objectives will be determined by the specific LVC mechanism used. If the tool(s) selected disrupts ongoing development and reduces naturally occurring housing affordability near transit through the imposition of new costs on property owners, the net effect of LVC on housing affordability may be neutral or even negative.

It is well documented that Canada has an on-going housing supply shortage, having significantly underbuilt new housing in relation to immigration and population growth. LVCs that act as a direct or indirect deterrent to the building of new housing adjacent to transit infrastructure are deeply problematic in this context.

With respect to LVCs and rapid transit corridors specifically, there is a great deal of discussion around transit investment causing displacement of lower-income individuals. Some argue that as transit investment increases the desirability of an area, it raises prices for housing and other essential goods and services, thereby forcing lower-income residents to move away to areas where they can more easily afford housing, goods and services. The economic evidence indicates that transit investment increases the desirability of an area, as reflected in measurable increases in land value. However, transit investment also lowers transportation costs for families, providing the option to reduce or avoid the cost of commuting by private vehicle by virtue of having improved access to transit and may also allow some households to reduce the number of vehicles they need to own. Housing affordability measures that incorporate transportation costs paint a more accurate picture of the impacts of transit investment on the overall household cost burden.

A second issue pertains to the impact of transit investments on land use planning more broadly. If transit is introduced into a low density area that is a good candidate for densification/redevelopment, then existing (older) housing will likely be rezoned, and therefore eliminated, and replaced with new - often more expensive - housing. To mitigate against displacement, the optimal solution is to allow redevelopment, thereby increasing the total stock of housing, but requiring redevelopment to include replacement of affordable units for existing residents.

There is mixed evidence as to whether or not transit investment causes displacement. As is common in discussions of gentrification, local understanding and community groups point to

gentrification taking place, while academics sometimes fail to detect such dynamics empirically. This discrepancy can often be explained due to a lack of clarity in terms. For example, a [recent research paper](#) concluded that there was little evidence that transit expansion causes displacement. The researchers used eviction data, a metric that captures only one of the many ways displacement can take place.

Although the researchers pointed out this limitation of the study, media treatment of the paper did not cover this subtlety (headlines such as “[New Research Finds Transit Development Has Limited Effect on Displacement](#)”), and this perpetuates the confusion around this topic. While transit-induced displacement remains difficult to pin down in research and public discourse, [public officials](#) have begun to take seriously the possibility that it exists, further entrenching the importance of transit agencies considering access to housing near transit as a key consideration in their strategic planning. There exists a range of policies that are intended to mitigate the effects of potential displacement, such as those that involve tenant relocation, renter protection, rights of refusal, and the like.

If public investment in transit infrastructure does cause displacement of lower-income households, or more evidently limits access to moving near transit for lower-income households due to the upward pressure it imposes on land values, then it is clear that a policy intervention is necessary to maintain access to housing near transit. Lower-income households are more dependent on transit, and have more to gain from access to transit and access to employment and educational opportunities, as recently studied by Metro Vancouver.

If, on the other hand, the overall impact of transit investment does not cause displacement of lower-income households, then affordable housing provided near transit will increase the overall affordability of transit served areas, rather than merely offsetting the potential negative impacts of transit investment. When presented with these two scenarios, it becomes clear that promoting the creation of affordable housing near transit is in the broader public interest. At worst, such investments are necessary to ensure that transit expansion does not harm those it is meant to serve. In this case TransLink and its partners would be meeting a minimum of its obligation to minimize harm on low-income households. At best, such investments allow more people to live near transit, creating targeted economic uplift for those who need it, increasing transit ridership and revenue, reducing traffic and carbon emissions, and fostering responsible urban growth patterns. In this case TransLink meets its core objectives, supports the Regional Growth Strategy, reaps reciprocal benefits, and contributes to the vibrancy of the region.

Given the state of the housing affordability crisis, housing that can be built today is more

desirable than housing that might be built at some point in the future.

Collecting monies to build affordable housing is far less desirable than for the public sector to partner with developers or non-profit providers to facilitate the delivery of affordable housing in proximity to transit infrastructure as a part of developments that are already in the pipeline, or those that are soon to come online. Having developers build a component of a development as affordable, and fully integrated with market housing, is the most straightforward approach to adding housing supply given that the land, planning work, and delivery entity are already in-hand and established.

In evaluating LVC tools and housing affordability, it is critical to consider this element of deliverability since getting new housing built is a significant barrier to housing access in the region. A tool that results in the collection of revenues to build affordable housing at a later date is less desirable than a tool that results in the building of new affordable housing as a component of a larger development project, and does not negatively impact housing affordability today.

3.1.5 Land Value Capture Tools Already in Use in B.C.

LVC is commonly used by public agencies and all orders of government. Becoming familiar with the forms of LVC that are currently used in British Columbia can help to understand possible futures for TransLink's use of these tools or others, some of which may require revenue sharing with local government or the Province.

1. Federal (one-time)

- The federal government has just one significant form of LVC: capital gains tax. Increases to the value of real property are seen as a form of income, and taxed accordingly, with differences depending on who is paying the tax and what their land is used for.

2. Provincial (one-time or irregularly occurring)

- BC levies a tax on the sale of real property, similar to the federal capital gains tax. Both provincial and federal taxes of this kind exempt personal principal residences.
- The province also collects a Property Transfer Tax applied to the sale or transfer of real property. This tax uses a sliding scale so that higher value properties are taxed at a higher rate.

- Foreign buyers of real property are subject to a 20% surtax on the Property Transfer Tax.
3. Provincial (recurring)
 - A portion of property taxes collected in BC are paid to the province. This property tax is applied to the full value of land and improvements, though historically there have been periods where improvements were taxed at a lower rate or not at all.[1]
 - In 2019 a Speculation and Vacancy Tax was introduced to specified areas. This tax is levied on properties that are not a principal residence nor on the rental market. It is intended to lower foreign demand for property and to increase the supply of active rental units — a two-pronged approach to improving housing affordability (this too has the benefit of increasing ridership and fare revenue for TransLink).
 - High value residential properties (over \$3 million in value) are subject to a surtax on their assessed value. This is known as a School Tax, but the revenues are not set aside for investments in education; it serves instead as a means of wealth distribution.
 4. Metro Vancouver Regional District (one-time)
 - The region charges a development cost charge (DCC) that is paid by new residential, commercial, and industrial developments. This tool is called the Greater Vancouver Sewerage and Drainage District Development Cost Charge, and it funds regional sewers. Metro Vancouver is also in the process of establishing a proposed regional water DCC. The GVS&DD DCC rates are proposed by Metro Vancouver to substantially increase in 2022, in some cases by more than 80% over existing rates.
 5. Metro Vancouver (recurring)
 - When local governments collect property taxes, a portion of the total is remitted to the region and used to fund the regional services provided by regional government.
 6. Municipalities (one-time)
 - Municipalities in BC employ their own DCCs (or DCLs as they are called in the City of Vancouver) through a highly structured regulatory framework set out by the province. The revenue from these charges is directed towards specific community infrastructure such as roads, water, and parks. DCCs are intended to offset the cost of the new construction on which they are levied, as part of the growth-pays-for-growth principle.

- Density bonusing is a municipal practice based on the rezoning process. Essentially municipalities set basic densities that developers can build to “as-of-right” (without triggering a rezoning process). In designated areas, developers can provide community benefits according to a formula if they wish to build beyond the base permissions. The benefits may include community facilities, affordable housing, or cash in lieu of other benefits. A notable feature of density bonusing is that it simultaneously creates land value and captures it, in that increasing maximum allowable density on a site heightens the site’s land value and then a portion of that increased value is immediately collected for public benefit.
- Community amenity contributions (CACs) are similar to density bonusing in that they exchange new density for public amenities. CACs are negotiated through the rezoning process. The unpredictable nature of CAC negotiations is a common criticism of this method of LVC because it can delay development, increase risk, and potentially lead to inequitable outcomes between developments. Poor procedure for executing CACs is not inherent to this approach, but in most cases a lack of timeliness is a key characteristic.

7. Municipalities (recurring)

- In BC, property taxes apply to land and improvements, and property tax rates vary according to property type (ex. residential, commercial, etc.). The appropriate rate is applied to the current market value of a property. A number of provincial agencies also collect property tax.
- The City of Vancouver Empty Homes Tax applies to residential properties that are not a principal residence and not rented for more than six months of the year. For the 2021 reference year, this tax is set to increase to 3% of assessed taxable value.[2] The revenue raised by this tax decreased from \$39.4 million in 2018 to \$36.0 million in 2018, in part because the number of vacant units went down, suggesting that the tax is carrying out its intended effect. The revenue raised is intended to fund the city’s affordable housing initiatives. This would also result in increased transit ridership and fare revenue for TransLink.
- Local governments in BC have the ability to levy Benefitting Area Taxes (BATs) that apply only to designated service areas where a municipal project provides benefits to a distinct, often small, local area. Properties in the service area are taxed in addition to their basic property tax.

8. TransLink (one-time)

- In 2018 TransLink was granted the authority to collect DCCs on new development and use the revenues to fund regional transportation infrastructure. In BC, TransLink is the first entity other than a local government (municipality or

regional district) to have this power. Currently, the DCC uses different rates for single family residential, duplex/townhouse residential, apartment residential, retail/service, office, institutional, and industrial. The revenues generated are used to help pay for the capital costs of certain types of transit infrastructure. These rates are applied uniformly across the region, although leading up to the introduction of this new DCC there was a great deal of debate as to whether or not the rates should vary with geography (e.g. properties with more transit service might attract a higher DCC rate). Eventually a region-wide rate was agreed to and applied, but the enabling legislation leaves the door open to a tiered DCC that could vary across the region.[4]

9. TransLink (recurring)

- TransLink is empowered to collect property tax. The structure of this tax was refined in 2017. Under the new system, revenue from the previous year's tax base can increase by a maximum of 3% each year, protecting existing taxpayers from more substantial increases in property tax. Since 2017, TransLink has included an adjustment to its property tax that accounts for new development and construction. This refined tax structure keeps pace with land value increases while also mitigating the impacts of new taxation on existing taxpayers, making it an effective and sensitive LVC mechanism.
- Like municipalities, TransLink can levy a Benefitting Area Tax on established zones. In TransLink's case, the geographic area is that which is deemed to receive greater transit and regional transportation benefits than other parts of the region. Despite having access to this revenue tool since TransLink was created, TransLink has yet to impose such a tax. The agency's reticence around the use of BATs is due to the fact that properties near transit already pay higher property tax due to the relatively higher assessed value of property with good access to transit. However, the cost savings households can realize when transit access lowers or eliminates automobile costs may justify the collection of a Benefitting Area Tax.

3.2 Land Value Capture Mechanisms Reviewed in this Analysis: Merits and Considerations

Revenue from LVC can be spent in a variety of ways, but some mechanisms offer more flexibility than others. Some restrictions on how revenue can be allocated come from enabling legislation while others stem from public sentiment and perceptions of fairness. Another consideration is whether the LVC mechanism yields recurring or one-off revenue. The analysis in this paper has been limited to the potential impacts of Translink's Benefitting Area Tax, DCCs

and Tiered DCC, CACs and Density Bonusing, and the Property Transfer Tax, and the possible impacts of these LVCs on housing affordability. Recurring revenue tends to create a steady, reliable cash flow that is well suited to investment planning, budgeting, and operating expenses. One-off revenue is less predictable and comes in larger deposits, making it better suited to capital expenses and contributions to reserve funds or paying down debt.

3.2.1 TransLink's Benefitting Area Tax

TransLink's Benefitting Area Tax can generate new revenue for the agency (either for operating or capital purposes), and the regulatory framework already permits the use of this power. The revenue generated from the BAT would depend on how the tax is applied. For example, how the benefitting areas are defined, which properties the tax is applied to, and if a single rate or variable rates are used. Coriolis Consulting and Wollenberg Munro Consulting establish that, to achieve a benchmark revenue increase between \$25 million and \$50 million, a 32% increase in TransLink property tax revenue would be necessary inside benefitting areas depending on how those areas are geographically defined. This amounts to about a 2% increase in overall property tax burden for most households — a sizable increase given current mill rates across Metro Vancouver.

This 2% surtax could be reduced by increasing the size of the benefitting areas, and thereby spreading the tax burden across a wider assessment base. The above example assumes a benefitting area of 400 metres around rapid transit stations. Since riders are typically willing to walk farther to higher order transit, a larger catchment area of, say, 800 metres could also reasonably be assumed, and this would greatly distribute the burden of the BAT, or, in other words, greatly increase the revenue stream (or reduce the additional property tax per property to generate the same amount of revenue). The attractive climate of TransLink's service area is a boon here, as it increases riders' willingness to walk to rapid transit stations.

As more rapid transit comes online and the areas around transit infrastructure densify, the revenue from TransLink's Benefitting Area Tax will increase and remain sustainable into the future. The revenue from the tax will have a certain amount of inherent volatility if the tax is applied at a predetermined rate. An alternative that would mitigate this uncertainty is to set the tax rate based on a predetermined budgetary target, as municipalities do with their property tax rates.

Regardless of the rate at which the tax would be set, many taxpayers in the benefitting area would be impacted. Of course they would also benefit directly or indirectly from their proximity to transit, presumably, that is the quid pro quo. Groups impacted by the BAT and receiving benefits from transit will include:

- Residential tenants paying below market rent: tenants benefitting from provincial rent regulations may face higher rents if tenant protections allow rent increases to compensate for the increased tax burden on landlords.
- Landlords collecting market rents: on the other hand, landlords who have already reached the market ceiling for their units will be forced to absorb increased operating costs themselves, rather than pass them onto their tenants.
- Homeowners: those who own their homes are responsible for all taxes on their property and will therefore be required to absorb the BAT.
- Business owners that own the property where they operate: similarly to homeowners, business owners who own their own property will also pay the BAT.
- Commercial tenants: due to the nature of commercial leases, most tenants are committed for a multi-year period and must cover the costs of any taxes levied on the property they lease.

There are a series of complex policy issues associated with the collection of a BAT that demand consideration in the context of an affordable housing analysis. There is an interplay between transit infrastructure and broader public policy goals that are not geographically based, and a BAT ignores this non-geographic based benefit which is arguably greater than the benefit to the area adjacent to the transit infrastructure: A region benefits from the reduction of GHG emissions, drivers benefit from reductions in traffic congestion, multiple jurisdictions benefit from the spurring of economic development due to increased access to an employee base and the location of new business proximate to transit.

This broad-based benefit of transit infrastructure for a region raises the issue of setting boundaries for a BAT. If the boundaries of the BAT are set too narrowly, over time, existing property owners across the region could resist the alignment of new transit infrastructure adjacent to their properties in response to the expectation that new, area-specific taxes would be associated with it. A perception that the burden of the tax outweighs the benefits of the transit infrastructure to the immediate area could be reinforced by too narrow of a boundary area. But if the line must not be drawn too narrowly for this reason, it quickly becomes difficult to develop criteria to inform where it should be drawn and how far the BAT should extend.

Sometimes natural boundaries — mountains, waterways or ravines — impose an external logic on a boundary for a financial policy that is politically palatable. More often, existing zoning which limits intensification is also politically palatable; problematically this does not represent the responsible use of land over the long-term in close proximity to transit. There is a risk that a BAT compromises regional growth and the opportunity for transit to shape the region by reinforcing existing urban growth patterns that too narrowly define transit-oriented intensification areas. While ideally a BAT would be established hand-in-glove with regional growth and intensification

policies, it is more likely that a BAT — since it is considered financial policy — will reinforce policy frameworks put in place at the municipal level that are far too conservative, underutilizing land proximate to transit corridors.

While a BAT has implications for the shape of a region and is potentially misaligned with the benefits that transit provides at a regional scale, it also has personal implications for households. In Metro Vancouver, it is already well established that market housing carries a cost premium in proximity to transit. Adding a BAT for these households is akin to adding a government premium alongside a market premium, further reducing the affordability of housing. Given the broader regional benefits of transit infrastructure, should households that choose to pay a premium to access transit and minimize car ownership be saddled with an additional cost burden — arguably to the benefit of other residents in the region who choose to live in less expensive areas without transit access and with more car-dependency? In direct opposition to the logic of a BAT, a policy argument could easily be made for *incentivizing* more residents to live in proximity to transit, given the broader regional benefits of less commuting by car.

In addition, we have already established the critical link between access to affordable housing and housing affordability in proximity to transit. BATs, unwittingly, hold the potential to shift the burden of capital or operating costs of transit to those who live nearest to it. It is a risk that developers may choose to build outside of the defined benefitting area to avoid the BAT, while homeowners within the area cannot avoid paying a BAT. Although a home represents significant wealth, many residents do not have income levels that have risen alongside the value of the equity in their homes. Residents in this position may face displacement if they cannot absorb the cost of the BAT. LVC policy should accommodate homeowners where possible, but the housing needs of low- and moderate-income tenants should be a top priority.

3.2.2 TransLink DCC and Tiered DCCs

DCCs stem from the idea that growth should pay for growth, as they are used to fund the infrastructure required to service new development. The restrictions on how revenue from a tiered DCC can be allocated are primarily legislative. According to the South Coast British Columbia Transportation Authority Amendment Act – 2018 (Bill 33 – 2018), DCCs may only be imposed “for the purpose of providing funds to assist the authority to pay the *capital costs* of an eligible project” (emphasis added). This means that operating expenses are beyond the scope of either a uniform or a tiered DCC. Revenue acquired through a tiered DCC can contribute to capital costs directly or by servicing debt incurred on capital costs. However, the debt must have been incurred after the DCC was established by by-law. In other words, DCC revenue cannot be applied to “old” debt. These restrictions are the same for the existing uniform DCC as for a possible tiered DCC.

A tiered DCC is unlikely to have any major negative impact on housing affordability or supply if designed and set according to market-supportable rates. It is assumed that the same waivers and exemptions for certain types of not-for-profit rental housing that currently apply to TransLink's DCC (which are similar to the waivers and exemptions to the GVS&DD DCC). TransLink has experience successfully implementing a uniform DCC, and the same principles would apply to a tiered DCC. The only real risk is if the DCC is set too high in the areas that have a higher DCC rate. There would need to be a clear policy rationale behind the establishment of the boundaries between tiering zones. If the rate is set too high in any given area, it would discourage development where presumably the transit benefit is highest, and additional housing supply is most desired. The cumulative impacts of all DCCs (including municipal and regional DCCs) must also be considered.

If an economic analysis revealed that DCCs could be increased to a rate where housing supply or affordability would not be adversely affected, DCCs could hold the potential to raise revenues that could be dedicated to transit expansion, as is currently established practice. However, an economic analysis could also reveal the opposite — that is, that the current DCC rates are at the maximum end of their calibration, such that there is no additional “room” to increase the rates in some or all areas; tiering is only helpful from a revenue generation perspective if the areas that are identified as candidates for higher rates have both rapid transit and the financial room to absorb a higher DCC.

That process is made even more difficult given that land values are in a near-constant state of flux; this makes calibration difficult, except at a ‘frozen’ point in time. To mitigate potentially negative impacts on housing supply, tiered rates must be maintained at or near equilibrium, and thus assessed on an ongoing basis. A miscalibration would negatively impact housing supply, and therefore access to housing, near transit.

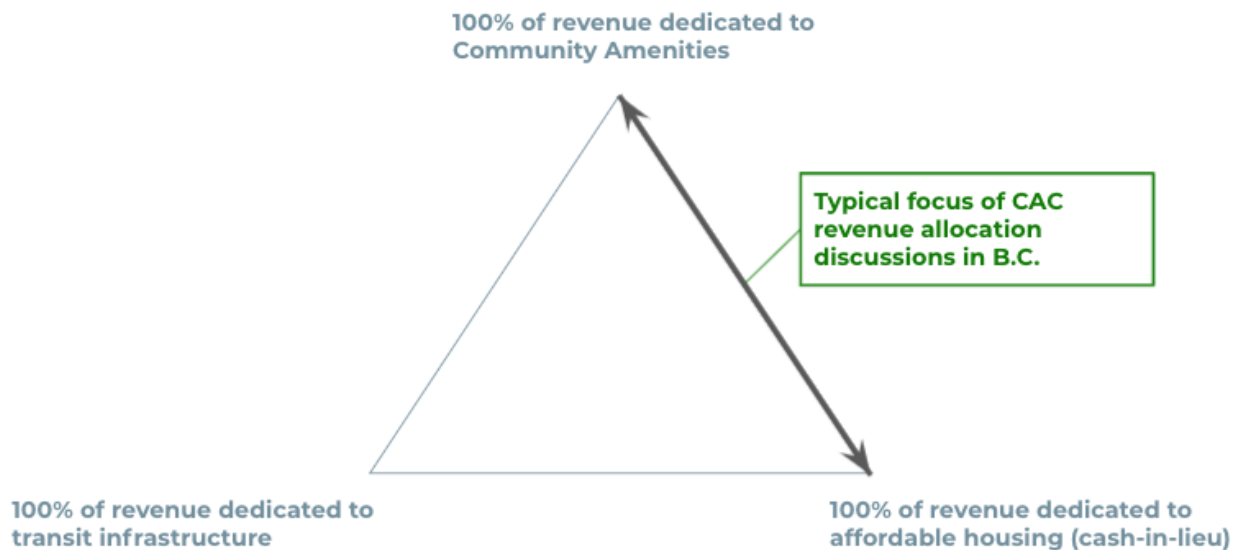
3.2.3 Community Amenity Contributions (CACs) and Density Bonusing

CACs are often characterized as a form of density bonusing given that they involve a zoning-based negotiated outcome that exchanges increased density permissions for the delivery of a range of public benefits, provided via cash-in-lieu of delivery of a piece of physical infrastructure. Revenues can be directed to funding a portion or all of community amenities (e.g. a new community centre or public library), transit infrastructure (e.g. a new station), or affordable housing.

Methods of allocation of CAC revenues to different uses in Metro Vancouver

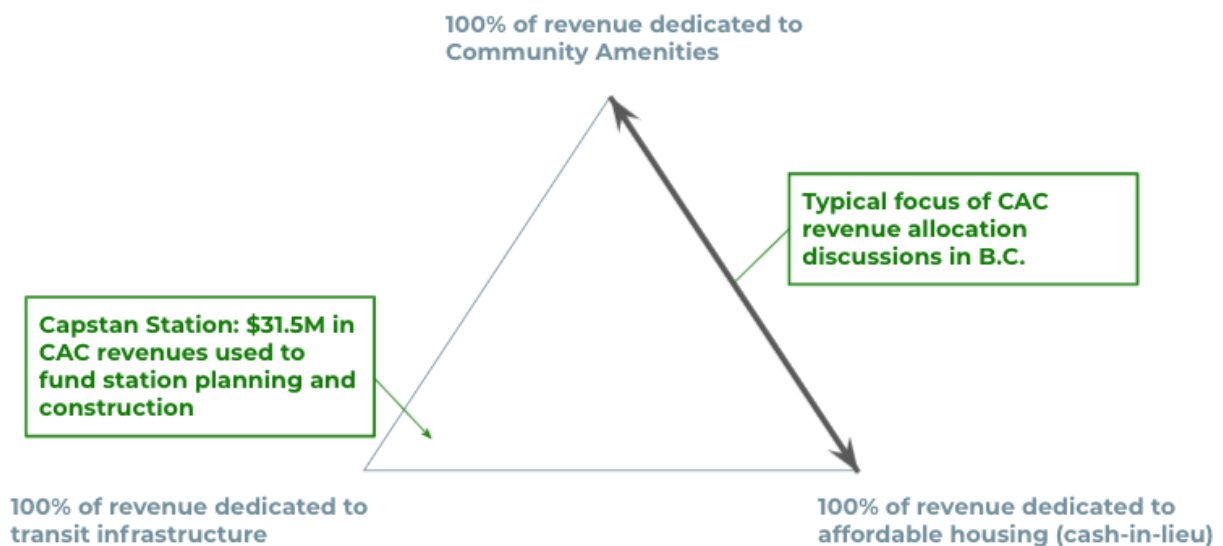


Historically, CAC allocations in B.C. have been directed to the funding of various community amenities or affordable housing on a cash-in-lieu basis. However, some municipalities are more recently moving towards a policy preference of securing in-kind contributions.

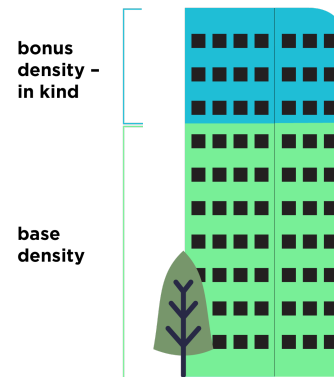


More recently, CAC revenues have been used to directly fund transit infrastructure capital projects, a notable example being Capstan Station on the Canada Line, where the majority of the planning and construction costs were funded by the City of Richmond through the use of CAC revenues to help serve the growing transportation pressures resulting from new high density developments in the area.

A different approach: The case of Capstan Station, Richmond



In contrast, this study considers density bonusing as a tool that facilitates a circumstance in which, in return for increased density permissions, a developer agrees to build a certain percentage of additional units as affordable housing. This approach is differentiated from cash-in-lieu contributions that could be dedicated to the delivery of affordable housing (or community amenities), which is often how CACs are used to secure public benefits, in that density bonusing in the form considered in this study requires the integration of new affordable units into a proposed development.



Additional density can be granted to deliver affordable housing as part of an existing development project.

Density bonusing creates value through an expansion of regulatory mechanisms that allow more density to be built on a given parcel of land. It allows for the extraction of a benefit and capitalization of the value of adjacent transit infrastructure to achieve a public good, without placing a new burden on existing, adjacent property owners or new homeowners.

Historically, collecting monies for a public benefit such as affordable housing has been considered a good approach to securing funding over time. However, in a housing crisis, the priority must be on delivering housing as soon as possible, and density bonusing is a mechanism that scores well on deliverability.

In this study, it has been deemed necessary to distinguish between CACs and density bonusing, given that density bonusing has exceptional deliverability characteristics for affordable housing: The creation of new housing is a years-long process that is land- and capital-intensive. Given the pressing nature of the housing affordability crisis, the timeliness of delivery of new affordable housing must be a paramount consideration — and ideally is closely tied to the delivery of new transit infrastructure in order to maximize access to transit service along the corridor. The availability of financial resources to build affordable housing isn't the primary issue underpinning

the lack of new housing supply in the region; creating the conditions to deliver the right type of housing in the right locations on expedited timelines should be the primary goal. Density bonusing, as defined above, is separate from CACs as a mechanism to achieve this. Density bonusing exists in legislation, while CACs do not.

Community Amenity Contributions

It is difficult to assess the potential of revenue sharing agreements with municipalities related to CACs. Zoning-based LVC mechanisms such as Community Amenity Contributions can yield in-kind contributions, including affordable housing, and it is not always easy to determine the precise value of, say, a park. To complicate matters further, not all municipalities report their CAC revenue, and between municipalities there is a wide range of value derived from zoning-based mechanisms. Coriolis Consulting and Wollenberg Munro Consulting provide a conservative estimate of \$500 million per year in average revenue from these sources in the Metro Vancouver region (i.e. developer contributions less DCCs), meaning TransLink would only need access to a 5% share of revenue to reach the \$25 million benchmark. Given that transit's uplift of land value in proximity to transit is greater than 5%, and given that most development involving rezoning is transit adjacent, on the face of it, it would seem that a reasonable process of negotiation could secure 5% of CAC revenue for TransLink while the municipalities retain the remainder.

But there are municipal needs, and political and implementation considerations that need to be taken into account. Most municipalities rely heavily on CACs to fund affordable housing and community amenities and as it stands today these funds are carefully considered and allocated; cities have access to comparatively fewer potential revenue sources than do senior levels of government. Further, there is currently no framework or precedent for such a revenue sharing arrangement; negotiations would need to be carried out with each municipality in the region given that approaches to CACs and the extent to which they are used varies widely, or a regional framework would need to be established to provide consistency in application across the region. Even modest revenue sharing of CACs will be perceived by municipalities as reducing an existing revenue source. Revenue collected through CACs to be directed to TransLink would be a reallocation of existing revenue, rather than a net new revenue stream.

CACs fund affordable housing and community amenities as it stands today. These funds are carefully considered and allocated; cities have access to comparatively fewer potential revenue sources than do senior levels of government and for this

reason revenue sharing is challenging for them.

The extent to which CACs impact overall housing affordability in the region is currently a matter of debate. The final report of the Canada-British Columbia Expert Panel on the Future of Housing Supply and Affordability, released earlier this year, recommends that the Province phase out CACs altogether and increase the role of DCCs in collecting developer contributions to establish more consistency and clarity for the development industry. While the quantum of increased DCCs would need to be carefully calibrated, this approach would address the key reason as to why CACs are generally unpopular in the development community: their reliance on negotiation can lead to uncertainty, risk and questions of fairness in the development process.

DCCs in comparison, in their implementation present the opportunity to offer greater consistency. It is argued that the way that CACs are currently implemented delays development, adds to costs, and worsens the already strained state of the housing market in Metro Vancouver. Processes that rely on negotiation in general are well documented to be resource intensive. Each time a property is rezoned, municipalities must contribute staff hours to the negotiation itself and the necessary background research. The same goes for the party seeking rezoning. That said, legislation could be written to address some of those issues by reducing the uncertainty surrounding the negotiation process; Coriolis Consulting is in the process of preparing a discussion paper for TransLink titled *“Refining CACs and Density Bonusing: Improving the System and Tapping the Potential for Funding Transit Infrastructure”* that will explore options to this end.

Density Bonusing

Density bonusing can be structured to proceed according to a prescribed framework. As such, it can be inherently more predictable and efficient to administer once regulations have been established. If developers wish to exceed the base density set by local governments, they can instead build to specified higher densities if a portion of the additional units are to be offered at below-market rates. In this way, municipalities capture the value of the added density and redirect it to a public good in the form of affordable housing. The delivery of affordable housing becomes a true partnership between the private sector and government regulators.

For example, a corridor could be pre-zoned to allow for an overall FSR of 3.0 if a developer were to deliver zero affordable housing (or below a specified threshold), or an FSR of 5.0 (or greater) if it were to deliver a specific amount of affordable housing above and beyond a threshold. Such a framework would provide developers with additional certainty about achievable densities, which is an important aspect of the approach. A similar outcome can be

achieved even without an established prescriptive framework, through a negotiated outcome (although this of course offers less certainty of the type that is attractive to developers).

Density bonusing scores well on policy “fit or nexus.” There is a demonstrable link between the value of the new asset (transit), the benefit to the community (affordable housing, increased accessibility if located around high quality rapid transit), and the means through which the benefit is extracted (enabling additional planning permissions). In addition, given the relationship between lower income households and transit ridership, we know that this mechanism contributes to a greater active transportation mode share and grows the revenue stream through an increase in fares, by adding ridership.

3.2.4 Property Transfer Tax Revenue Sharing with the Province

Property Transfer Tax is already in place as a provincial revenue source. As it is applied now, PTT does not have a spatial component by construct (though Metro Vancouver is estimated to produce 75% of the revenue from this tax presently); it applies equally to property near or far from transit, although higher land values around rapid transit will mean that relatively higher PTT is collected on the properties. This is positive for the tool because it does not risk reversing the natural tendency to build more near transit. The tax's impacts on housing affordability and supply are not changed by the Province sharing the existing PTT revenue with TransLink or not. However, if TransLink collaborates with Metro Vancouver and local municipalities to lobby the Province to share existing PTT revenues, the Province may react by increasing the PTT, increasing the tax burden on households due to the pressure to fund transit infrastructure and or new affordable housing in proximity to transit.

Gaining access to a portion of Provincial Property Transfer Tax (PTT) revenue (existing or incremental revenue) would mean a new source of funding for TransLink. If secured, this revenue could go towards new capital investments, transit operating expenses, and/or infrastructure that supports walking, cycling, and transit use. Property Transfer Tax revenue sharing could also support goals not traditionally associated with transit, like affordable housing (directly or indirectly through redesigning the PTT or its exemptions), but as TransLink has no precedent for directly delivering affordable housing, it would likely require any funds for affordable housing to go to a partner with experience and capabilities in delivering affordable housing.

The potential revenue TransLink could advocate for from Provincial PTT revenue sharing depends primarily on negotiations with the Province. Metro Vancouver is estimated to produce three quarters of the Province's PTT, and given that TransLink serves the Metro Vancouver area contributes to the vitality and livability of the region, and that the land value increases around

rapid transit stations which translates into higher PTT revenues for the Province, it could be argued that TransLink has a valid claim to a share of the PTT. Problematically for TransLink, it could also be argued that the regional water system, regional sewer system, regional park system, public health, and public education also are deserving of a PTT share.

Nonetheless, using the same benchmark target of \$25 million in revenue, TransLink would only need 1.7% of the portion of PTT revenue that is generated within its service area; the tax generates around \$2 billion per year, three quarters or \$1.5 billion of which comes from regional real estate activity, and 1.7% of \$1.5 billion amounts to \$25 million.

Aspects of the implementation of this mechanism would depend largely on the structure of the mechanism and how negotiations with the Province play out. In terms of the structure, the mechanism could involve sharing the existing PTT revenue, which is a passive form of Land Value Capture, or establishing a higher PTT rate such as in proximity to rapid transit which would require legislative change, which is a more active form of LVC. It is assumed that incremental revenue would be more desired by the Province to not materially impact the Province's own revenue stream from this funding source. The sustainability of the revenue stream will depend on the length of the Province's commitment to PTT revenue sharing. Additionally, the impact on TransLink's total funding could be positive if other funding is not altered, or PTT revenue sharing may be offset by reductions in other funds that currently flow directly to TransLink from the Province, resulting in no net change.

Provincial Property Transfer Tax revenue sharing will also depend on the total amount of PTT collected. If property values or sales volumes decrease, this will lower the total revenue generated by this tax, and this could have knock-on effects on the share received by TransLink and Metro Vancouver. In fact, BC's Budget 2021 predicts a drop in PTT revenue in 2022 when the property market is expected to moderate.

In terms of the burden to the homeowner, if the assumption of revenue sharing of the PTT is to create additional pressures on the Province to increase the rate, this would be a negative overall outcome. While some might argue that house prices will recalibrate and lower by the amount of the new PTT burden, in practice this doesn't often materialize. If the assumption is that revenue sharing would be derived from a reallocation of a PTT that remains theoretically stable, revenue sharing of the PTT would represent reallocation of tax dollars already collected, rather than an increased tax burden. In reality, all levels of government are under constant pressure to fund more and more services and infrastructure from the same taxation tools. Given that this is an existing taxation mechanism, it is difficult to assess the public appetite for its reallocation.

There is a strong rationale for the reallocation of part of the PTT to play a role in funding the advancement of new transit infrastructure or to fund ongoing operating costs given that the transit infrastructure results in incremental PTT revenue. In relation to affordable housing specifically, a portion of the PTT is already allocated through other, existing entities such as BC Housing — no clear logic exists to reallocate funding directly to TransLink for the building of affordable housing. If some additional PTT revenue were to be distributed to the region for affordable housing, it would most logically flow to those entities with existing affordable housing mandates.

Furthermore, given that PTT is directly related to homeownership, making the case for a share of revenue that is linked to the escalating cost of housing presents a quandary for governments. Raising revenue from homeowners to build and operate transit has a stronger rationale than raising revenue from homeowners that is linked to providing access to affordable housing near transit, given that homeowners benefit directly from the utility of new transit infrastructure.

3.3 Evaluating LVC Mechanisms against Key TransLink, Metro Vancouver, Provincial, Municipal, and Urban Development Objectives with a Particular Focus on Impacts on Affordable Housing and Affordability

The Multiple Account Evaluation (MAE) framework, which appears in full in Appendix A, provides a comprehensive illustration of the competing objectives, trade-offs, and other considerations of the selected LVC tools across a number of categories, including:

- TransLink revenue;
- Housing affordability and supply;
- Ridership;
- Regulatory framework;
- Support/sentiment; and
- Shaping the Region

The MAE captures the inherent push-pull between the regional need for continued investment in transit infrastructure and the region's substantial and sustained housing affordability crisis. A dollar of revenue generated from an uplift in land value dedicated to transit expansion is a dollar that is not being used by local government to advance the creation of new affordable housing or other community amenities (and vice versa).

The table below — which is a distillation of the key criteria in the MAE — illustrates an assessment that is contingent on a variety of implementation variables (i.e. is the PTT additive atop an existing PTT, or does it involve a reallocation of existing PTT revenues, or are CAC revenues being dedicated to TransLink or towards other uses?). In this comparison, the push

and pull between tools that generate revenue for TransLink while also having a negative financial impact on existing households and new future households, as well as impacting the deliverability of affordable housing supply that is transit-proximate becomes transparent.

It is a given that all of the revenue tools appear to be positive for revenue generation for TransLink; they were selected for study precisely for that reason. The more important consideration in the context of the evaluation in this study is their impact on housing affordability.

All of the LVC tools assessed in the context of this study are compatible with existing enabling legislation. It is also clear that of the tools that could potentially place a burden on existing property owners, they could be structured in a way that allows them to be progressively applied (e.g. geared towards income). Importantly, DCCs, PTT, CACs, and a BAT all carry a potential negative impact with respect to housing affordability on new area households, and each of DCCs, PTT, and CACs potentially hinder the deliverability of new affordable housing supply. The impact of the PTT on new area households would be neutral if it was a reallocation of existing revenues, which can be considered a less likely outcome given that this would entail the Province relinquishing a share of an existing revenue stream. A net increase in the PTT would place a new financial burden on new area households.

While density bonusing is neutral in terms of generating new revenue for TransLink, it is also neutral in terms of its financial impact on existing and new households while at the same time it is strongly positive in delivering new affordable housing supply.

	Tiered DCCs for Transit	Revenue Sharing of PTT	Revenue Sharing of CACs	TransLink BAT	Density Bonusing (in-kind)
Impact on TransLink Fare Revenues	N/A	N/A	N/A or +	N/A	+
Impact on TransLink Non-Fare Revenue Generation	+	+	+	+	N/A
Financial Impact on Existing Area Households	N/A	N/A	N/A	—	N/A
Financial Impact on New Area Households (i.e. future residents of a station-adjacent multi-family residential building)	N/A/—**	N/A/—* **	N/A/—	—	N/A
Impact on Deliverability of Affordable Housing Supply that is Transit Proximate	N/A	N/A	N/A or +	N/A	+

+ = Positive Impact; — = Negative Impact; N/A = No Impact

*Note: the impact would be neutral if the PTT was a reallocation of existing revenues, rather than an increase.

**It would have an impact if the rates set affect the pace of development which in turn reduces affordability

TransLink's BAT and a Tiered DCC could introduce a new affordability burden on existing homeowners and/or renters. Given that this is a matter of degree, the choice has been made, with respect to the introduction of a DCC. Conversely, density bonusing is differentiated from the other tools in that it has a strong, positive impact on supporting the creation of dedicated affordable rental housing, and carries a strong positive impact on boosting transit-dependent ridership (and thus fare revenue) directly. In addition, density bonusing stands out as the lone tool that is supported by the development industry as a clearly positive method to significantly

enhance the construction of affordable rental housing proximate to rapid transit. It also has exceptional deliverability characteristics for affordable housing.

Density bonusing facilitates the delivery of sustainable and complete communities, in the sense that it ensures that new affordable housing is delivered in transit-oriented communities assuming that density bonusing would only be allowed in locations with good transit access. In the absence of building affordable housing as a part of market developments that are being advanced by the private sector, the risk is that transit-oriented communities increasingly become more and more exclusive as a result of the significant public investment that has been made by multiple levels of government.

Density Bonusing			
Supports the creation of dedicated affordable rental housing	✓	Is supported by housing providers and the development community	✓
Boosts transit-dependent ridership and fare revenue in locations that can be efficiently served by transit	✓	Encourages the creation of sustainable, complete communities	✓
Has exceptional deliverability characteristics for affordable housing	✓	Is, in various forms, already being implemented by regulatory authorities (and therefore can be easily adapted to the form envisioned in this study)	✓

There are three drawbacks of density bonusing that could arise in implementation. First, since municipalities would be the party ultimately responsible for implementation of a density bonusing framework, they may view it as an impingement on their purview over planning matters. Whereas today density bonusing is at times used by municipalities to secure in-kind amenity contributions, this approach is differentiated from how density bonusing is used today; it proposes *prioritizing* density bonusing to secure new affordable rental housing to be delivered in concert with a development proposal underway. Second, depending on the form that a density bonusing framework might take, it could place a workload burden on municipalities insofar as the work that would be required to establish corridor- or station-specific zoning frameworks. Finally, it could divert funds away from the delivery of other community amenities — including funding for TransLink expansion projects that could be negotiated through CACs.

3.4 The Limits of Land Value Capture to Fund Transit and Affordable Housing

3.4.1 Designing LVC Mechanisms to Mitigate Adverse Impacts on Housing Affordability

In the worst case scenario, LVC mechanisms that are intended to generate revenue for transit infrastructure could limit housing supply, and inhibit access to rapid transit. In a region facing a prolonged supply shortage, maximizing new housing supply in proximity to rapid transit is a foundational priority. Just as critical is the design of policy tools that promote the building of housing that is affordable, specifically. Developers, in both the market and not-for-profit sectors, are critical partners in building out new housing supply in response to government policy and incentives; LVC mechanisms that broaden partnerships with the development industry, instead of creating a greater burden on the delivery of supply, are in the interest of TransLink.

Given that LVC mechanisms involve value extraction, it is important to consider the corollary impacts of each tool, considering who might bear any resultant cost and whether they have a potential to impact overall housing supply. If a key goal is to mitigate impacts on housing affordability, careful attention must be paid to the impact of LVC tools on both housing costs and housing supply growth.

To avoid pushing development away from transit station areas, spatialized LVC mechanisms (such as BATs, tiered DCCs, or potentially certain formulations of revenue sharing agreements) must be carefully calibrated so as not to impinge on the viability of development, or the unintended consequence will be to constrain housing growth near rapid transit. Additionally, if zoning permissions near transit are higher than other areas by a large enough margin to offset the cost of the LVC mechanism, transit station areas will still be desirable relative to other parts of the region. This demonstrates the importance of taking a regional view.

Economic analysis must be carried out not only around existing and proposed rapid transit stations, but in other areas where development could occur if LVC tools overburden developments near transit. This is familiar territory for TransLink; when the regional DCC for transit infrastructure was introduced, careful analysis was carried out, the DCC was set at an appropriate rate, with the intention being that it not negatively impact the pace of development. Given that LVC tools carry the potential to limit housing supply if improperly calibrated, their impacts must be fully considered prior to implementation.

Regarding which parties end up paying for or bearing the cost of the LVC mechanism, it is clear that strategic exemptions are essential; non-profit developers, and perhaps to a lesser extent market rental developers, should not have to pay full LVC costs.

3.4.2 Expectations Management for New Tools in Public Finance

There is often great excitement around innovations in public finance, and a tendency to overestimate the effectiveness of unfamiliar techniques as representing a golden goose. There are numerous examples of public and political discourse becoming somewhat overblown with regard to new funding sources such as public private partnerships or tax increment financing. LVC is subject to the same risk and the same hopeful naivety. Productive discussion and effective policy both depend on a realistic understanding of what LVC mechanisms can and cannot offer. Furthermore, in many instances new policy tools simply move money around. Revenue sharing is an example of this dilemma - what may appear as a resource for TransLink could create a new gap for municipal partners. As a result, carefully assessing where there is accessible yet untapped value that does not deepen the tax burden or compromise housing affordability is paramount.

3.4.3 Local Differences in Land Economics

Any region-wide LVC program is burdened by differences in land value and the capacity of industry to tolerate or support new mechanisms. This is even an issue within single municipalities, not to mention across a region as large as Metro Vancouver, with 21 municipalities, one Electoral Area, and a Treaty First Nation that all have different approaches and tolerances for density, fees and growth more generally. Where one area may be experiencing skyrocketing land values and a highly active real estate sector, another could be stagnant or even contracting. Policies that intend to use LVC to fund transit or affordable housing must be sensitive to the local differences in land markets, which can vary significantly along a given transit corridor. The challenge is to avoid negative impacts on areas with little growth without also missing out on the gains occurring in high-growth areas.

3.4.4 Consequences of Miscalibrated LVC Tools

For LVC revenues to materialize, in certain markets, overtaxing development through the introduction of new LVC mechanisms could hinder development, thereby limiting the supply of new housing and doing more harm than good. Density bonusing is a helpful example for understanding the impacts of LVC on development. The additional density that is granted through rezoning during the density bonusing process has a certain value to the developer because it represents the option to build more sellable/leasable units. This value can be predicted with a fairly high degree of accuracy.

LVC techniques must be carefully calibrated, and different government bodies must work together to ensure that the development environment remains attractive. This is especially true when the community amenities and infrastructure that make the region livable rely on an

ongoing pattern of development. A density bonusing framework must be designed in such a way so as to ensure that the value of the additional density is sufficient to entice the developer to deliver the additional affordable units that accompany the increased permissions.

3.4.5 Sudden Market Changes and LVC

A clear risk of LVC is its fundamental assumption: that there *will* be value to capture in land that can be used to deliver on public goods. There are multiple variables well beyond the control of local governments that impact land values and the pace of development. As seen during the Covid pandemic, access to labour and materials can constrain housing delivery. While we currently enjoy an environment of low interest rates, a change in government policy either domestically or abroad could significantly impact access to capital, which drives the viability of the development industry.

For homeowners, if interest rates begin to creep upwards, tolerance for government taxation through LVC mechanisms may decrease. Currently, friendly government incentives - such as the Rental Constructive Financing Program administered by CMHC - are fueling significant new housing supply. With a change in government, and a change in these programs, the entire housing industry could recalibrate thereby having an impact on LVC.

PART FOUR: Competing Objectives - Tensions between LVC and Housing Affordability

4.1 Competing Uses of LVC Revenue by Municipalities, Metro Vancouver and the Province

There is a wide array of potential uses that are in competition for the same LVC revenues, as well as general tax revenues.

Uses Competing for LVC Revenue		
Arts and culture spaces	Family/youth/seniors' centres	Public safety (i.e. fire halls)
Community centres	Transit operations	Parks and open spaces
Affordable housing	Transit infrastructure	Libraries
Roads and active transportation infrastructure	General revenues (and/or reserve funds to funds to support publicly-owned social facilities)	Childcare facilities
Heritage conservation	Furnishing, fit-out, and equipment associated with in-kind contributions	Other capital projects

There is a tendency to view LVC as “found money”, in the sense that monetary value is being extracted from an activity that does not need to be funded via the broader tax base. While this is true to an extent, the same fiscal pressures that exist in any public sector budget process exist also in any discussion about how LVC revenues should be used. An evaluation of tradeoffs must still occur; there is only so much blood that can be extracted from the LVC stone.

LVC tools that assume a change to the revenue sharing arrangement for existing revenue are particularly problematic in this regard. While they might generate new revenue for TransLink, in the absence of increasing the total amount of revenue, monies are being removed from another use.

4.2 Understanding the Interrelationship between Land Value Uplift, Land Value Capture and Affordable Housing Delivery, Transit Ridership and Fare Revenue

In Metro Vancouver, a host of factors have led to high land values and high housing costs, negatively impacting the livability of the region. Transit expansion projects have contributed to high land values, counterintuitively risking a decrease in the region's vibrancy, stability and access to work force housing. And yet, investing in new transit infrastructure continues to be critical to building a sustainable region; while undoubtedly it lifts the value of land and reinforces the unaffordability of housing, public policy that links the delivery of transit infrastructure to the delivery of affordable housing can mitigate this negative outcome.

LVC impacts on land development economics must be considered carefully to mitigate unintended outcomes. When land values face changes due to public policy, there is an adjustment period as the market recalibrates. Significant changes in land values as a result of the introduction of a new policy could lead to a temporary reduction in development activity, and this could have a negative impact on housing supply. In some instances, new fees could upend pro forma viability. In a housing emergency, there would be little public or political appetite for any mechanism that serves to delay housing delivery. Land markets tend to stabilize over time when new policy is introduced, but a period of adjustment that drags on could signal bigger issues with the policy framework. In the period of adjustment, it is difficult to know if impacts that have served to slow housing delivery are short-term or if they have created structural issues in the market that will persist. In some instances, periods of readjustment allow new players - such as not-for-profits who may be exempt from new LVCs - to emerge, in others, they deepen the problem that they were intended to solve.

Some might argue that if reduced development activity is limited to a short adjustment period, and if the introduction of LVC mechanisms will deliver revenues over the long-term, these new tools should be expected to offset any short-lived impacts on housing affordability (provided they are correctly calibrated). But this reasoning faces a fundamental conundrum: it is often impossible to know the broader, negative impacts of an LVC mechanism until it has already had a detrimental impact on housing supply. For this reason, any tool that imposes a cost burden on new development that might compromise housing deliverability in the marketplace must be carefully considered and scenario-tested.

The public sector may also need to make adjustments through the implementation period. For instance, developers may react to increased costs by seeking to build higher density projects, thereby making more efficient use of expensive land (a similar logic is at work behind density

bonusing). It will be necessary to monitor development activity closely to ensure development remains attractive despite the introduction of an LVC.

What about transit investment? Does it lift land values and housing prices alike? While transit certainly contributes to high land values, increased access to transit reduces overall household costs. Taking public transit is vastly more affordable than owning a car, so when housing and transportation costs are viewed together, areas served by transit can be more affordable overall. For example, the City of Vancouver's average combined housing and transportation cost burden falls below the regional average while that of Langley City and Township falls above the average—the reverse of what is often expected. It would seem that transit makes the region more affordable, but that does not mean it is not contributing to high land values. Transit investment enhances household affordability while also creating an opportunity for LVC. An ideal LVC policy would be one that contributes to transit-oriented affordable housing while avoiding burdening those parties who cannot bear further costs.

Some possible LVC scenarios — such as density bonusing for affordable housing — result in more people living close to transit. This translates to increased ridership and fare revenue, so TransLink's allocation of LVC revenue must not be viewed as a trade-off between affordable housing and transit funding. Investments in affordable housing reciprocally support transit ridership, and therefore fare revenue. Maximizing access to transit, particularly for transit-dependent riders, has an inherent and tangible value for a transit agency over and above revenue capture from land uplift.

4.3 The Role LVC could Play in the Next Investment Plan

The 2014 Mayors' Council Vision identified LVC as a potential revenue source to support transit expansion, laying the groundwork for continued evolution of these discussions. In that context, there is likely an opportunity for consideration of the merits and tradeoffs of select LVC tools examined in this study in both the 2022 Investment Plan and the updated Mayors' Vision as part of discussions related to a broader funding strategy, to be determined by the Mayors' Council.

The role of LVC will in part be determined by funding needs, which will in part be influenced by both shorter-term operating pressures as a result of the fall in ridership as a result of the COVID-19 pandemic, and the ongoing need to continue to make investments in rapid transit expansion.

4.4 Implementation Considerations for LVC Tools

In the event that TransLink is interested in considering supporting or advancing the use of one or more of these tools, there are a number of implications in terms of the potential impact on

revenue for Translink that ought to be considered, in relation to impacts on households and impacts on housing supply. There are a number of questions that should be explored to guide their implementation in relation to impacts on affordable housing. Another fundamental consideration is the type of funding that is needed — capital or operating; with the latter, there is a greater need for a funding stream that is unrestricted and predictable.

Given that many of the LVC tools identified here can take different forms, they could be implemented in a number of ways, and the details of how they take shape are a topic for further discussion and stakeholder engagement. Coriolis Consulting and Wollenberg Munro Consulting have developed a collection of policy questions to be addressed from their 2020 Land Value Capture report. Here we take a second look at those questions through the lens of affordable housing and provide additions and modifications where appropriate. Tiered DCCs will be explored further in an upcoming study by Coriolis Consulting.

There are a number of questions that should be addressed to ensure that a new density bonusing framework delivers on the objective of capturing land value in a manner that is in the broader public interest as it pertains to delivering affordable housing proximate to rapid transit. These questions include:

4.4.1 Benefitting Area Tax

- 1) Should BATs be collected around existing transportation infrastructure or only around new investments?
- 2) Should BATs be collected around all transportation investments or only some (e.g. only rail)?
- 3) Should all benefitting areas pay the same surcharge, or could one differ from the next?
- 4) Should the definition of benefitting areas allow for gradations (e.g. one rate within 400 metres of a station and another rate for 400 metres to 800 metres), to avoid sharp differences that might cause the leapfrogging of development away from station areas to avoid taxation areas?
- 5) How large a surcharge could be levied within benefitting areas?
- 6) Who should receive exemptions or reductions from a BAT?
- 7) How could a BAT be structured and communicated in order to maximize public understanding and acceptance?

4.4.2 Tiered DCC

- 1) Where would the boundaries of the different zones be drawn, and how will these boundaries be justified (ie. by ability to pay or quantity of transit investment)?
- 2) How would tiers evolve over time, as the urban form evolves?
- 3) How many tiers would be used?

- 4) How would tiers avoid placing a greater housing cost burden on the affordability of housing near transit?
- 5) Would a tiered DCC replace the existing uniform DCC or be applied in addition thereto?

4.4.3 CAC Revenue Sharing with Municipalities

- 1) Should CAC revenue sharing be explored with all local governments in Metro Vancouver, only local governments with rapid transit stations, or only those where substantial new transit capital projects are planned?
- 2) Is a region-wide approach suitable or would this be a series of individual arrangements with local governments?
- 3) Where would a CAC for transit-oriented affordable housing be applied?
- 4) Should a CAC for transit infrastructure be based on a percentage of municipal CACs or a target flat rate?
- 5) Should a CAC be used as a revenue stream towards affordable housing or should it require direct creation of affordable housing?
- 6) Should the sharing agreement involve collaboration on affordable housing projects or just transfer of revenue?

4.4.4 Density Bonusing

- 1) What should be TransLink's role in either the establishment of a density bonusing framework?
- 2) Does density bonusing specific to the delivery of affordable housing impinge on municipal CAC allocations and negotiations?
- 3) Should density bonusing be implemented solely through a pre-established framework, or should negotiated outcomes occur in some cases?
- 4) How can density bonusing be structured to ensure affordable housing is planned and delivered on expedited timelines?
- 5) What is the role of density bonusing on sites where development feasibility is challenging and there are concerns about absorption, or where incentives might be necessary to facilitate redevelopment?
- 6) Should density bonusing to support the delivery of affordable housing that is tied to transit infrastructure be integrated into the Regional Growth Strategy?
- 7) Should the acceptance of higher densities on rapid transit corridors be a condition of funding of rapid transit infrastructure?
- 8) Should a density bonusing framework be a component of a Supportive Policies Agreements for new rapid transit infrastructure?
- 9) Should a density bonusing framework be developed and applied to existing rapid transit stations/corridors as well as future planned corridors?

4.4.5 Property Transfer Tax Revenue Sharing with the Province

- 1) Does the pursuit of a PTT revenue share place pressure on the Province to increase the PPT?
- 2) Is this tool likely to be revenue neutral or revenue positive (i.e. will other provincial funding be revoked or is the revenue incremental to the existing PTT)?
- 3) How can TransLink align its activity with Provincial objectives and priorities in order to increase the likelihood of a productive, mutually beneficial partnership?
- 4) Why would a PTT allocation that is intended to support affordable housing be shared with Translink, as opposed to a greater allocation being shared with agencies directly involved in housing delivery to upscale their operations?

Specifics regarding the precise form of implementation of a new regional density bonusing framework are outside the scope of this study.

PART FIVE: Towards a Regional Density Bonusing Policy Framework to Spur the Delivery of Affordable Housing in Close Proximity to Rapid Transit on Expedited Timelines

5.1 The Opportunity of Density Bonusing to Spur the Delivery of Affordable Housing in a Timely Manner on Rapid Transit Corridors

Ideally, an approach to LVC would not have an adverse impact on affordable housing or housing affordability, and would provide new opportunities for the delivery of affordable housing without imposing new costs on existing or future residents or decreasing the amount of revenue available for transit expansion.

Additionally, new LVC mechanisms should not contribute to the general burden of housing affordability by adding costs to homeownership or renting, whether one time or recurring. Of the tools analyzed in this report, the mechanism that most consistently accomplishes these objectives is density bonusing for affordable housing.

5.1.1 Why Focus on Density Bonusing?

Density bonusing capitalizes on the existing regulatory role of government, recognizing that governments determine the value of land through planning permissions, and that the uplift in value associated with granting increased density permissions can be used to accomplish public policy goals — in this case, affordability. Density bonusing offers a unique array of benefits that make it an especially well suited LVC to meet the scale and nature of housing affordability challenges as they exist today, given that it:

- Directly increases the supply of housing;
- Carries the potential to enable new affordable housing with no direct nor ongoing subsidy or capital contribution from any stakeholder;
- Requires only regulatory change to land use planning provisions (and related negotiations between approvals authority and development proponent);
- Imposes no new costs on existing households;

- Adds no new financial barrier into the development process as long as the value of the additional density is greater than the affordable housing contribution that is expected in return
- Has exceptional deliverability characteristics for affordable housing
- Increases ridership and fare revenue for transit.

Similarly, in an environment where there is a sustained need for continued transit capital (and operating) funding, density bonusing allows for the creation of new affordable housing without sacrificing revenue that can be used for transit expansion. Given that transit expansion is inherently inflationary to land values, it is useful and important to ensure that a portion of the value of that uplift is driven into improving regional affordability. Density bonusing achieves exactly this.

There is little political appetite in the region for new taxes, and yet most LVCs are either new taxes or levies or revenue sharing of existing taxes or levies. When we consider, through the MAE, that some LVC tools could place an additional financial burden on existing and/or future property owners (through either direct levies or via costs that housing developers might pass along to future tenants or owners), density bonusing is set apart, insofar as it is rooted in materializing value from regulatory permissions as opposed to extracting money from property owners or purchasers.

The development of affordable housing is constrained across the Metro Vancouver region by access to land, lengthy approvals processes, constituencies that oppose even modest or incremental new affordable housing, and willing development partners with the expertise to build affordable housing at a scale appropriate to and proximate to transit. Density bonusing capitalizes on an existing land asset that is already advancing through the approvals process for development. Land is in place, a development partner (presumably with the capital necessary to develop housing) is in place, and an approvals process is underway or pending.

As such, from a deliverability perspective, unlike approaches that involve banking funding for affordable housing, or land swaps that require a parallel development to proceed, the new affordable housing to be built as an outcome of the density bonusing scheme is delivered concurrent with market housing. Given the scale of the regional housing affordability crisis and the need for new affordable units *today*, density bonusing rates even more highly than other LVC tools that produce cash-in-lieu that could be used to support the delivery of affordable housing sometime in the future on some as-yet unidentified site. The value of time must not be underestimated in analyzing the relative merits of LVC tools.

A further incentive could be tied to density bonusing; developers who proceed to integrate affordable housing in their development around rapid transit as a result of the additional density

granted should be expedited through the approvals process and treated as a priority project with attention and additional resources allocated to get their project built. This would serve two purposes — rapidly scaling housing supply in proximity to transit is in the interest of TransLink and the region as a whole; secondly, it would add purpose built affordable housing as soon as is possible — without delay — in the region. Properly executed, density bonusing could expedite new housing supply and therefore drive transit ridership and transit fare revenue.

5.1.2 Policy and Implementation Considerations of Density Bonusing Based on the MAE Criteria

Revenue - Density bonusing, as defined in this study, is not a mechanism for generating revenue for capital or operating transit costs. In the form we are considering in this study, it is structured to deliver more affordable housing in close proximity to transit in a timely manner. As such, density bonusing is not a method of revenue generating for transit infrastructure, but rather is being proposed as a tool to increase access to affordable housing proximate to transit. Density bonusing does produce additional fare revenue, as it increases the number of transit-dependent riders in close proximity to rapid transit.

Ridership - Density bonusing in proximity to rapid transit stations as proposed would increase ridership for lower income households as part of the development of new market housing, by delivering new affordable housing. While this would drive new ridership and associated fare revenue, further analysis would be required to understand the extent to which lower income households would use transit over and above “riders of choice.” But this may only have a modest impact; more density means more people, which in turn will increase ridership.

Shaping the Region - Currently, Metro Vancouver, with the exception of the Vancouver peninsula, has a spikey and flat built form typology, more pejoratively called ‘tall and sprawl.’ It could be argued that density bonusing would further reinforce this urban form, which some would argue is inherently unsustainable and promotes traffic congestion. However, this issue of the much-needed intensification of low-rise residential areas should be decoupled from the discussion of density bonusing, since it has the potential to upend proceeding with new housing supply at all (and indeed, has led to gridlock in many areas, further precipitating our housing supply challenge). In the worst case scenario, density bonusing could reinforce the built form of often significant intensification near transit stations that is seen today - not a terrible outcome, although not a preferred one. In the best case scenario it should be used to loosen zoning restrictions on low-rise residential neighbourhoods in a much broader radius from station areas and corridors thereby, enhancing access to transit for more people and more broadly attacking the housing affordability and climate change crises by creating a denser, more urban region - not just next to transit, but overall.

Fairness - Density bonusing performs well in the test of fairness. Unlike other LVCs that are additional taxes or are based on arbitrary boundaries that carry the potential to increase the cost burden of housing, density bonusing does not require a capital outlay by any public or private sector entity (aside from the capital costs associated with building the housing itself). It must be carefully structured to ensure it is financially viable for a developer to proceed. In the absence of getting this right, there might be little uptake in capturing additional, permitted density for affordable housing - and none would be built. There is also a strong linkage between density bonusing for affordable housing and the interest of all parties involved, with the caveat that anti-density constituencies are unlikely to be supportive. The proportion of the Density Bonus in relation to the cost of building the affordable housing needs to be calibrated in such a way as to provide a benefit - profit or otherwise (such as a time priority in the approvals process) - to the developer. In the absence of this, there will be no incentive for the developer to deliver the additional density that contains the affordable housing.

Implementation - Given that density bonusing in various forms already exists in all regional municipalities as a form of zoning empowered by the Local Government Act, there are existing frameworks that would assist in the ease of implementation. Further, it is a concept that is well understood in Metro Vancouver and elsewhere, by both administrators and developers alike. The most significant challenge will be establishing baseline densities that are fair, and incentivizing developers sufficiently to build the affordable housing component of a development. The risk, of course, is that if the density bonusing scheme is poorly calibrated, and sites in close proximity to transit will not be developed to their full potential of housing supply, which would both be detrimental to the region from the perspective of the responsible use of land, but also to TransLink in terms of maximizing ridership. Once baseline densities are established, the structure of the density bonusing scheme will likely involve negotiation and discretion. Unlike other tools that can involve a formula, the number of variables impacting development viability make this nearly impossible. An approach too blunt will halt or impede development. Implementation considerations in a negotiated process will need to consider, for example: the cost of the land, the cost of construction (which varies significantly site to site), and the complexity of the context (archaeological, heritage, hydro, water systems, sensitive adjacencies). As such, while density bonusing capitalizes on the capacity of the development industry to deliver a public good, it will also require further up-front expertise at the municipal level to work on a site by site basis to deliver.

Regulatory - Density bonusing is compatible with existing legislation. In the event that the Mayors' Council would like to require density bonusing of municipal partners in proximity to rapid transit stations, this is something that could be easily established in Partnership Agreements or Supportive Policy Agreements. But the latter only are developed for new rapid transit stations. There is an opportunity to develop a framework for existing rapid transit stations as well. It could also be integrated into the Regional Growth Strategy.

Support/Sentiment - Density bonusing is an approach to the delivery of affordable housing that is not cost-additive to the Province, Municipalities, or TransLink. It might be met with some skepticism by developers who would likely be concerned with 1) the viability of baseline densities and 2) the incentives available to activate the bonusing schemes. Close collaboration would be required to generate support for this approach, since the development industry would be a key partner in its implementation. Municipalities with existing density bonusing would likely be more open to supporting an extension of that framework to transit corridors. For municipalities considering density bonusing for the first time, planning frameworks would need to be assessed to understand the extent to which they support the rationale for the baseline densities. Senior levels of government are likely to support density bonusing, since it is a tangible way that affordable housing can be delivered, accessing land, industry participation and implemented through regulation. However, it is likely that they will have a key role to play as a funding partner, and that with Provincial funding the amount of affordable housing - and the depth of affordability - could be expanded in some projects with the right development partner.

Compatibility with other Mechanisms - Density bonusing also carries the benefit of being easily compatible with other LVC tools, which could be used to satisfy other policy goals, such as generating non-fare revenue for transit infrastructure. Density bonusing is an inherently additive tool, as it does not entail a cost burden for existing or future households, nor does it reduce the market viability of the delivery of affordable housing.

PART SIX: Case Studies

6.1 Case Study Objectives

The case study has been designed to consider a policy framework for the delivery of affordable housing via density bonusing in transit-oriented locations, which is an LVC tool that from an affordable housing and affordability perspective has the potential to deliver on a series of positive outcomes, including increasing housing supply in a timely manner, while also driving ridership of (and deriving fare revenue from) transit-dependent riders. The key questions explored in the case study have been adapted from the MAE framework assessment.

6.2 Approach

The case study provides additional nuance to the consideration of policy tradeoffs and illustrates the practical implications on housing affordability. It demonstrates the variability of how a density bonusing framework could unfold on two hypothetical development sites with different characteristics, in terms of relative land value and existing and viable post-development spatial considerations and built forms. Hypothetical scenarios were chosen to lift the discussion out of a planning analysis exercise that would have had to consider the precise form of redevelopment that is appropriate for a real-world site, an analysis that should be conducted to a much greater degree of specificity and with extensive inputs, and which would be subject to debate. The chosen approach is intended to provide a clearer consideration of the merits of density bonusing as an LVC tool that avoids the subjective consideration of the appropriateness of the form of redevelopment envisioned for a particular site on an existing or planned rapid transit corridor.

Base assumptions were generated for each of the two scenarios concerning:

- Current (pre-redevelopment) and future (post-redevelopment) use and form, including number of buildings, residential and non-residential mix and GFA, and residential tenure;
- Acquisition cost of the site;
- Various additional government and consultant costs used for development pro forma inputs;
- Achievable density and residential unit counts;
- Depth of affordability on below-market units;
- Achievable price-per-square foot or rental rates on market residential units; and
- Proportion of residential units to be offered at below-market rates

The case studies are intended to provide a high-level overview of the feasibility of the use of a density bonusing framework to support the creation of affordable housing on an in-kind basis along rapid transit corridors. As such, there are a number of additional considerations that would have to be accounted for if, for example, a detailed master planning exercise were undertaken

for a particular station area or corridor. Assumptions have been made regarding project attributes such as acquisition viability; land cost; developable land area within an assembly; amenity provisioning; density per unit yield; construction costs; construction methods; design guidelines, and unit size and mix requirements — each of these would be subject to closer consideration if an actual masterplanning exercise were undertaken using a non-hypothetical site.

For example, unit size and mix requirements vary in some municipalities in different geographic areas — in Vancouver, the City has policies that require a minimum percentage of new units that must be family-oriented. They also have a policy regarding the mix of rents, and therefore the mix of household incomes, that have to be accommodated in the rental component of new rezonings. For the purposes of the case study, our analysis assumes affordability as being tied to the regional median income, which is \$75,000 a year, and an annual rent of \$22,500 (30% of annual income). In practice, this would likely be variable, and it is possible that municipalities would adjust their standards, guidelines, and requirements based on the specifics of the density bonusing framework that would be applied.

6.3 Case Study Analysis

The two hypothetical sites that were selected for the case study analysis bear many hallmarks of real sites in the Metro Vancouver region. As such, they provide a useful blueprint for how a density bonusing framework might unfold at a number of current and future rapid transit stations that are characterized by the urban form depicted in the case study sites.

Case Study Site #1: Densification of a Low-rise Residential Area

Context

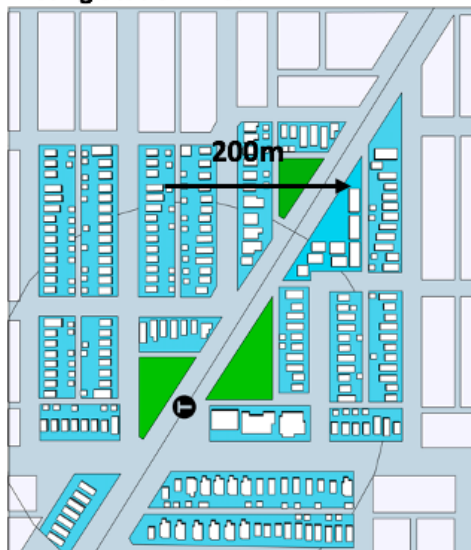
Many rapid transit station areas in Metro Vancouver lack dense urban forms and amenities in close proximity to station locations. Site #1 explores this contemporary urban form to illustrate the community-building potential that could be created through the provisioning for new forms and intensities of development within a few blocks of the station.

Existing Station Area

The rapid transit station in Site #1 opened in the 1980s, though both the immediate and surrounding area remains suburban 40 years after the rapid transit investment was made. Despite excellent transit connectivity, the neighbourhood is governed by restrictive RS-1 zoning that limits development to single-detached forms of housing at 0.60 to 0.75 Floor Space Ratio. RS-1 zoning today allows for the addition of a secondary suite and a laneway house within these density limits, but overall density and units/acre still remain low.

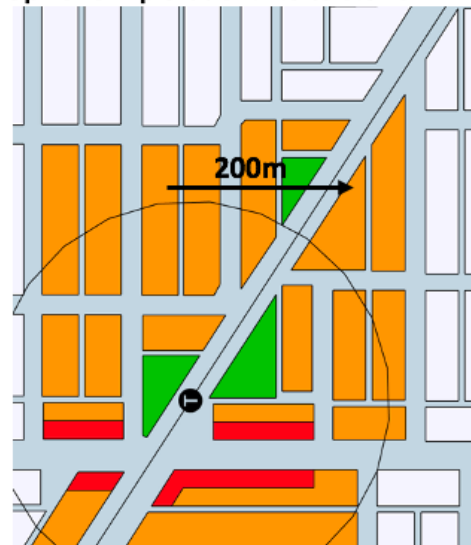
The highlighted blocks shown below comprise 198 properties and accommodate approximately 500 homes (including small apartment blocks). The long blocks are made up of lots that are typically 33 feet to 40 feet wide and 110 feet to 120 feet deep. The total value of these properties was \$302.5M in July 2020 (BC Assessment Authority). Current densities at roughly 11 units / acre (gross) are insufficient to support local convenience retail, but redevelopment at higher densities could provide enough demand for a small local serving retail node, which would both enhance the livability of the area and further decrease the area's car-dependence for local residents.

Existing Station Area



- Predominantly RS-1 Zoning (0.7 FSR)
- c. 199 properties (c. 500 dwellings incl apts)
- Lots total 914,473 sf
- BCAA Value: \$302.5 M
- Value / Lot: \$1.5M

Up Zone Exploration: 2.0 to 3.0 FSR



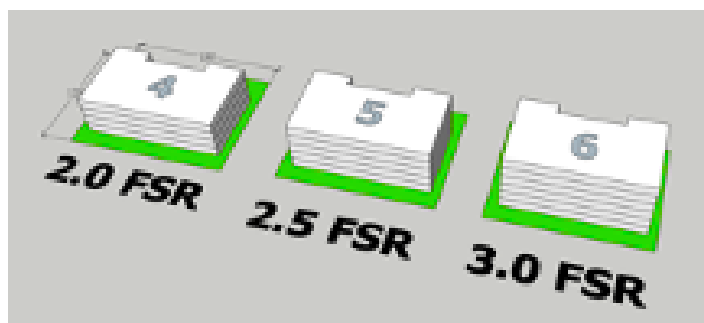
Retail ■ Residential ■

- Explore 2.0 to 3.0 FSR redevelopment options
- Assume 50% rental + 50% condo
- Small commercial node for local serving retail
- 2.0 FSR = 1.8M sf (2,640 homes)
- 2.5 FSR = 2.3M sf (3,300 homes)
- 3.0 FSR = 2.7M sf (3,960 homes)

Upzone Scenarios

The “upzone” exploration in this case study assesses the number of homes and theoretical land value increases that might be achieved by allowing new multi-family development at densities ranging from 2.0 FSR (via a predominantly 4-storey typology) to 3.0 FSR (via a predominantly 6-storey typology). For the purpose of the analysis, it is assumed that half the new units created would be created as rental tenure and the balance as ownership condos, which typically

generate higher values and higher land residuals. These densities are generally achievable with wood frame construction of up to six storeys, serviced by concrete underground parking.



Land Residual Analysis

The chart below presents a very basic land residual analysis that calculates the potential land values that could be created for 150 foot land assemblies at 2.0 FSR, 2.5 FSR, and 3.0 FSR, respectively. Using fairly conservative assumptions on value and development costs, and expected development profit, the analysis suggests that land for rental housing could generate a value of \$96/sf of Gross Floor Area; higher value condominium uses could generate land values in the range of \$240/sf of Gross Floor Area.

	0.7 FSR (Current)	2.0 FSR	2.5 FSR	3.0 FSR
Site Area	914,473	914,473	914,473	914,473
GFA	640,131	1,828,946	2,286,183	2,743,419
New New GFA Added	-	1,188,815	1,646,051	2,103,288
Estimated # Homes	500	2,640	3,300	3,960
Land Value /sf Rental)	NA	\$96	\$97	\$97
Land Value/sf Condo)	NA	\$236	\$240	\$243
Rental Land Value (assume 50% GFA = Rental)	NA	87,753,011	110,449,679	132,696,633
Condo Land Value (assume 50% GFA = Condo)	NA	140,280,158	197,526,168	255,549,480
Total Land Value	256,199,000	228,033,169	307,975,847	388,246,113
Total Improvement Value	46,265,200	Ignore	Ignore	Ignore
Total Property Value	302,464,200	343,841,848	434,374,675	526,736,448
Land Lift Created	-	41,377,648	131,910,475	224,272,248
Land Lift /sf GFA Added	NA	\$35	\$80	\$107

These estimated land values represent what a typical developer could afford to pay in total for the land price to the current land owners, as well as the existing CACs, DCCs, DCLs, property taxes, and application and permitting fees, using conservative estimates of land value and design and building costs based on industry benchmarks. Using these land values, we can see that land lift increases with density, from \$41.4M at 2.0 FSR to \$224.3M at 3.0 FSR; with each additional increase in land value comes additional “room” to deliver units at below-market rates.

The proforma analysis below provides additional insight into cost, revenue, and value assumptions related to a 150 foot by 120 ft assembly, and demonstrates that additional FSR generates significant land lift.

ASSESSING THE IMPACTS OF POTENTIAL LAND VALUE CAPTURE MECHANISMS ON AFFORDABLE HOUSING AND AFFORDABILITY

Prepared for the Mayors' Council on Regional Transportation and TransLink

STATS			MARKET RENTAL			CONDO		
FSR	FSR		2.0	2.5	3.0	2.0	2.5	3.0
Site	sf		18,000	18,000	18,000	18,000	18,000	18,000
GFA	sf		36,000	45,000	54,000	36,000	45,000	54,000
Floorplate	sf		9,150	9,150	9,150	9,150	9,150	9,150
Floors	#		3.93	4.92	5.90	3.93	4.92	5.90
Efficiency	%		0.83	0.83	0.83	0.83	0.83	0.83
NFA	sf		29,880	37,350	44,820	29,880	37,350	44,820
Avg Unit	sf		575	575	575	575	575	575
Units	#		52.0	65.0	77.9	52.0	65.0	77.9
Parking Ratio	Stalls/Unit		0.6	0.6	0.6	0.6	0.6	0.6
Stalls	#		31.18	38.97	46.77	31.18	38.97	46.77
Area / Stall	sf/stall		350	350	350	350	350	350
Parkade	sf		10,913	13,641	16,369	10,913	13,641	16,369
Construction >Grade	\$/sf		\$290	\$290	\$290	\$290	\$290	\$290
Construction <Grade	\$/sf		\$140	\$140	\$140	\$140	\$140	\$140
Construction >Grade	\$		10,440,000	13,050,000	15,660,000	10,440,000	13,050,000	15,660,000
Construction <Grade	\$		1,527,777	1,909,722	2,291,666	1,527,777	1,909,722	2,291,666
Total Construction	\$		11,967,777	14,959,722	17,951,666	11,967,777	14,959,722	17,951,666
Blended \$/sf GFA	\$/sf		\$332	\$332	\$332	\$332	\$332	\$332

Sale	\$1,100	/sf NFA				32,868,000	41,085,000	49,302,000
Less Commission at Close	-1.50%					-493,020	-616,275	-739,530
NET SALES						32,374,980	40,468,725	48,562,470
Rent \$/sf	\$3.50		1,254,960	1,568,700	1,882,440			
OPX	\$500	/unit/mo	-311,791	-389,739	-467,687			
CAPx	2%	Revenue	-25,099	-31,374	-37,649			
Vacancy	2%	Revenue	-25,099	-31,374	-37,649			
Net Operating Income			892,970	1,116,213	1,339,455			
Income Value at (Cap Rate)	3.75%	Value = NOI/Cap Rate	23,812,541	29,765,677	35,718,812			
TOTAL VALUE			23,812,541	29,765,677	35,718,812	32,374,980	40,468,725	48,562,470
Value/sf NFA			\$797	\$797	\$797	\$1,084	\$1,084	\$1,084

Land	residual		3,454,567	4,348,065	5,223,860	8,489,977	10,807,953	13,125,213
Provincial Property Tax	5%	land value	172,728	217,403	261,193	424,499	540,398	656,261
Construction		from above	11,967,777	14,959,722	17,951,666	11,967,777	14,959,722	17,951,666
Construction Contingency	5%	construction estimate	598,389	747,986	897,583	598,389	747,986	897,583
Demo		estimate	60,000	60,000	60,000	60,000	60,000	60,000
Legal		estimate	50,000	50,000	50,000	50,000	50,000	50,000
Design Budget	7%	construction	837,744	1,047,181	1,256,617	837,744	1,047,181	1,256,617
Design Disbursements	5%	design	41,887	52,359	62,831	41,887	52,359	62,831
On/Offsites Holding Budget	5,000	/unit	259,826	324,783	389,739	259,826	324,783	389,739
Rezoning Fee	\$ 1.00	/sf GFA	36,000	45,000	54,000	36,000	45,000	54,000
Development Permit Fee	\$ 2.00	/sf GFA	72,000	90,000	108,000	72,000	90,000	108,000
Building Permit	0.006	x construction	71,807	89,758	107,710	71,807	89,758	107,710
Metro DCC	\$1,998	/unit	103,827	129,783	155,740	103,827	129,783	155,740
Translink DCC (2021 Cost)	\$1,545	/unit	80,286	100,358	120,429	80,286	100,358	120,429
DCL UTILITY	\$10.00	/sf GFA	360,000	450,000	540,000	360,000	450,000	540,000
DCL Development	\$18.00	/sf GFA				648,000	810,000	972,000
Property Tax During Development	0.009	x land value	31,091	39,133	47,015	76,410	97,272	118,127
Insurance	2%	construction	239,356	299,194	359,033	239,356	299,194	359,033
FFE	\$250	/unit	12,991	16,239	19,487	12,991	16,239	19,487
Marketing Centre	700,000	(rent & fitout)				700,000	700,000	700,000
Marketing & Creative	3%	Gross Revenue				986,040	1,232,550	1,479,060
Lease-Up Budget	0.08	Y1 Gross Rent	100,397	125,496	150,595			
Development Management	3%	Costs less land	452,883	565,332	677,749	528,805	655,277	781,748
General Development Contingency	1%	Costs less land	155,490	194,097	232,694	181,556	224,979	268,400
Interest and Finance Cost	5%	all costs above	785,224	980,191	1,175,104	916,860	1,136,142	1,355,422
GST - Self Assessed	3.20%	fair mkt rental value	762,001	952,502	1,143,002			
TOTAL COSTS			20,706,272	25,884,582	31,044,047	28,151,754	35,185,938	42,219,327
Total Cost /sf GFA			\$575.17	\$575.21	\$574.89	\$781.99	\$781.91	\$781.84
Profit			3,106,269	3,881,094	4,674,765	4,223,226	5,282,787	6,343,143
Return on Cost			15%	15%	15%	15%	15%	15%
Land Value/sf GFA			\$96	\$97	\$97	\$236	\$240	\$243

Assessing Feasibility of Density Bonusing Scenarios to Deliver New Affordable Housing Via Density Bonusing

Based on the assumptions regarding development potential, costs, revenues, and having used those data points to compile the sample proforma above, assumptions can also be made about the type and extent of affordable units that could be reasonably be expected to be delivered by the private (or non-profit) sector, in return for higher density permissions. The proforma provided above also provides specific insight into the role that government costs play in a development proforma, and is illustrative of how and why developers typically pass on increased government costs to consumers, if and when the market will bear it. This has resonance with respect to the MAE evaluation of LVC tools discussed previously.

		2.0 FSR	2.5 FSR	3.0 FSR
Avg Unit sf		575		
Cost to Construct/sf		\$575.17		
Cost to Construct/Unit		\$330,725		
Return on Cost		15%		
Profit/Unit		\$49,609		
Total Cost/ Unit		\$380,334		
Rent/sf		\$2.50		
Gross Rent/mo		\$1,437.50		
Gross Rent/ Yr		\$17,250.00		
Less Opx	-500/mo	(\$6,000.00)		
Less Vac	-2%	(\$345.00)		
Less CapX	-2%	(\$345.00)		
Net Operating Cost/Unit		\$10,560.00		
Debt Coverage Ratio		1.1		
Max Mortgage Pmt/Mo/Unit		\$800.00		
Interest Rate	3%			
Amortization	25			
Principal/Unit		\$168,701		
Payment/Unit		(\$800.00)		
Equity/unit		\$211,633	\$211,633	\$211,633
Number of Affordable Units Funded from Land Lift		196	623	1,060

Three density bonusing scenarios are illustrated in the chart above, corresponding to the three different built-out densities, and assuming a purpose-built rental affordable unit with an average unit size of 575 square feet, offered at a “workforce housing” rent of \$2.50 per square foot (in contrast to a comparable market rent of \$3.50 - \$4.00 per square foot). The density required to build these units would be “acquired” at a zero land cost — that is, the “bonus” density — and would allow for the delivery of 196, 623, or 1,060 affordable units at FSRs of 2.0, 2.45, and 3.0, respectively.

FSR	2.0	2.5	3.0
Market Units	2,640	3,300	3,960
Affordable Units	196	623	1,060
Total Units	2,836	3,923	5,020
AH as a % of total units	7%	16%	21%

Though the specific mechanics of a density bonusing framework are out of scope of this study, the analysis provided above serves as an efficient illustration of the potential of density bonusing; in such a case, the planning authority (in this case, the municipality) could secure more than one thousand affordable units at the proverbial stroke of a pen, without providing a direct subsidy, and could also secure those units in an actual pipeline project in the planning process, as opposed to collecting cash-in-lieu to be dedicated to the creation of some affordable units in some project elsewhere on some undefined and unacquired piece of land. In a way, the table above illustrates how the framework could be applied to produce affordable housing on the site in-kind, allow for three different inclusionary zoning manifolds — one corresponding to each FSR — that could be supported by the market.

In terms of implications for transit, this build-out scenario — that leverages density bonusing to create new affordable housing — would see a significantly higher population living within walking distance of the station, half of which have a higher propensity to take transit as shown in the Expo Line chart in Section 2.3.3. The higher transit ridership and associated fare revenue (due to both the higher population within 800m of the station, and the higher share of renter households) is a positive outcome for TransLink. In addition, since this is an existing station with good existing bus transit service, it likely means that there would be no or little incremental costs to transit service provision. The result is that this incremental population can be efficiently and well served by transit. For the area residents, superior accessibility to jobs and services due to living near the station will significantly reduce both their environmental footprint and overall household costs.

In addition, the development also pays the TransLink DCC (regardless of where the development is located), less any waivers or reductions. This results in revenue that TransLink can put towards transit expansion. Therefore there is both revenue that goes to TransLink for capital from the DCC, and density bonusing results in incremental ridership and fare revenue, which is ongoing incremental revenue that can be used for either operating or capital purposes.

The magnitude of the opportunity encapsulated in zoning permissions to create new housing, including affordable housing, even along existing rapid transit corridors is apparent. On this case study site, as with many like it around rapid transit stations in the region, the drawing of even a

modest radius for densification through a fairly modest form can bring thousands of new people (including transit-dependent riders) to a station area.

Case Study Site #2: Densification of a large industrial or big box retail district

Context

Site #2 envisions a large, block-scale TOD community on land currently occupied by surface parking lots that service large-format big box retail stores and light industrial uses. A large commercial land owner would compile a block plan that includes new public parkland, a variety of community uses interspersed amongst new mixed-use and residential towers. It presents opportunities to create value by adding intensity and amenity in areas that today have little if any existing development.

Existing Station Area

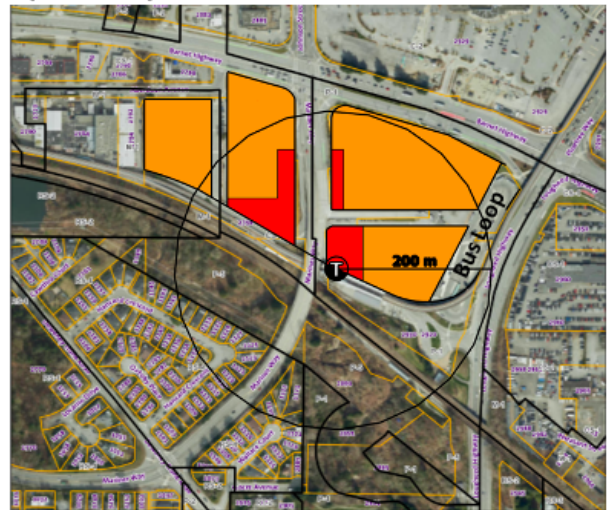
The station opened in the 2000s; today, most of the area to the north of the station is comprised of surface parking. To the west is a big box store and a Park & Ride; the east portion of the site accommodates a bus loop. BC Assessment Values for the subject sites totalled \$187.7M in July 2020, clearly anticipating future development value.

Existing Station Area



- Predominantly Surface Parking
- No existing housing (no displacement)
- BCAA Value: \$187.8M

Up Zone Exploration: 4.0 to 5.0 FSR



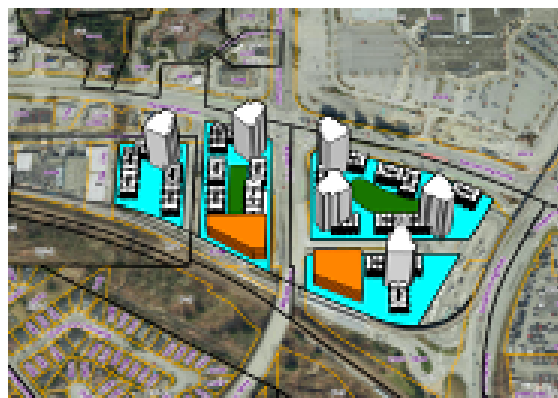
Retail ■ Residential ■

- Lots total 620,000 sf Net of Roads
- Explore 4.0 to 5.0 FSR redevelopment options
- Commercial node: office & retail
- 4.0 FSR = 2.5 M sf (c. 3,200 homes + Commercial)
- 5.0 FSR = 3.1 M sf (c. 4,100 homes, + Commercial)

Upzone Scenarios

The “Upzone” exploration in this case study contemplates a transit-oriented centre generally within a 200m radius of the station. The highlighted blocks shown above illustrate a potential subdivision pattern within which a finer network of pedestrian and cycling connectivity could be overlaid. These blocks total 620,000 square feet. At 4.0 FSR, the existing BC Assessment value equals \$76 per buildable square feet; at 5.0 FSR, existing assessment value equals \$61 per buildable square feet.

The form of development in this case would be predominantly concrete high rise at roughly 30 storeys with the opportunity for six-storey buildings in wood frame construction. The image below illustrates a 4.0 FSR buildout with approximately 3.6 FSR (2.2M square feet) in residential use and 0.4 FSR (260,000 square feet) in commercial use.



Land Residual Analysis

For the purpose of this analysis, it is assumed that a third of the units would be delivered in rental tenure in cost-effective wood frame rental buildings. 20% of the new units created would be let out at 80% of market rates for new rental housing (roughly \$3.00 per square foot per month vs. \$3.50 for new market rental). The resulting below-market rents would be affordable to households earning between \$42,000 to \$90,000 (roughly the median income for Metro Vancouver). The more expensive concrete high-rise development is modelled in condominium tenure at market condo prices.

Below-Market Housing - Moderate Income Rents

Unit Type	Monthly Rent	Income at 30%
Studio	\$1,050	\$42,000
One-bedroom	\$1,575	\$63,000
Two-bedroom	\$2,100	\$84,000
Three-bedroom	\$2,250	\$90,000

The land residual analysis below considers the resulting land value of the residential development outlined above and concludes that this mix would generate land values generally in line with current BC Assessment Valuations for the properties in question. The 260,000 square feet of commercial space would deliver additional land value depending on the nature and value of those uses.

4.0 FSR Development at Coquitlam Station (20% affordable market rental)

STATS			Concrete Condo	Wood Market Rent	Wood <Mkt Rent	Total
GFA			1,520,000	256,000	444,000	2,220,000
% GFA			68%	12%	20%	100%
FSR	FSR		2.5	0.4	0.7	3.6
Efficiency	%		0.83	0.83	0.83	
NFA	sf		1,261,600	212,480	368,520	1,842,600
Avg Unit	sf		565	565	565	
Units	#		2,233	376	652	3,261
Parking Ratio	Stalls/Unit		0.6	0.6	0.6	2
Stalls	#		1,340	226	391	1,957
Area / Stall	sf/stall		325	325	325	975
Parkade	sf		435,419	73,334	127,188	635,942
Construction >Grade	\$/sf		\$350	\$290	\$290	930
Construction <Grade	\$/sf		\$140	\$140	\$140	420
Construction >Grade	\$		532,000,000	74,240,000	128,760,000	735,000,000
Construction <Grade	\$		60,958,726	10,266,733	17,806,365	89,031,823
Total Construction	\$		592,958,726	84,506,733	146,566,365	824,031,823
Blended Construction \$/sf GFA	\$/sf		\$390	\$330	\$330	1,050

Sale /sf	\$1,100	/sf NFA	975			
Gross Sales			1,230,060,000			1,230,060,000
Less Commission at Close	-1.50%		(18,450,900)			-18,450,900
NET SALES			1,211,609,100			1,211,609,100
Rent \$/sf				\$ 3.80	\$ 3.00	
Gross Rent				9,689,088	13,266,720	
OPX	\$500	/unit/mo		(2,256,425)	(3,913,487)	
CAPx	2%	Revenue		(193,782)	(265,334)	
Vacancy	2%	Revenue		(193,782)	(265,334)	
Net Operating Income	"NOI"			7,045,100	8,822,564	
Income Value at (Cap Rate)	4.00%	Value = NOI/Cap Rate		176,127,493	220,564,112	396,691,604
TOTAL VALUE			1,211,609,100	176,127,493	220,564,112	1,608,300,704
Value/sf NFA			5960	\$829	5599	\$873

ASSESSING THE IMPACTS OF POTENTIAL LAND VALUE CAPTURE MECHANISMS ON AFFORDABLE HOUSING AND AFFORDABILITY

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Land	residual		184,276,534	28,069,403	-19,002,034	193,343,903
Provincial Property Tax	5%	land value	9,213,827	1,403,470	0	10,617,297
Construction		from above	592,958,726	84,506,733	146,566,365	824,031,823
Construction Contingency	5%	construction	29,647,936	4,225,337	7,328,318	41,201,591
Site Mobilization	1	/sf GFA	1,520,000	256,000	444,000	2,220,000
Legal	1	/sf GFA	1,520,000	256,000	444,000	2,220,000
Design Budget	7%	construction	41,507,111	5,915,471	10,259,646	57,682,228
Design Disbursements	5%	design	2,075,356	295,774	512,982	2,884,111
On/OffSites Budget	5,000	/unit	11,164,602	1,880,354	3,261,239	16,306,195
Rezoning Fee	\$ 1.00	/sf GFA	1,520,000	256,000	444,000	2,220,000
Development Permit Fee	\$ 2.00	/sf GFA	3,040,000	512,000	888,000	4,440,000
Building Permit	0.011	x construction	6,522,546	929,574	1,612,230	9,064,350
Metro DCC	\$4,269	/unit	9,532,337	1,605,446	2,784,446	13,922,229
Translink DCC (2020 Cost)	\$1,545	/unit	3,449,862	581,029	1,007,723	5,038,614
DCC	\$17.00	/sf GFA	25,841,695	4,352,285	7,548,495	37,742,475
Property Tax During Development	0.009	x land value	1,658,489	252,625	0	1,911,113
Insurance	1.5%	construction	8,894,381	1,267,601	2,198,495	12,360,477
FFE	\$250	/unit	558,230	94,018	163,062	815,310
Marketing & Creative	3%	Gross Revenue	36,901,800		-	36,901,800
Lease-Up Budget	0.08	Y1Gross Rent	0	775,127	1,061,338	1,836,465
Development Management	3%	Costs less land	23,349,392	3,280,945	5,595,730	32,226,068
General Development Contingency	1%	Costs less land	8,108,763	1,126,458	1,921,201	11,156,421
Interest and Finance Cost	5%	all costs above	50,163,079	5,688,612	9,702,063	65,553,755
GST - Self Assessed	3.20%	fair mkt rental value		5,636,080	7,058,052	12,694,131
TOTAL COSTS			1,053,424,664	153,166,342	191,799,350	1,398,390,356
Total Cost /sf GFA			\$693	\$598	\$432	\$630
Profit			158,184,436	22,961,150	28,764,762	209,910,348
Return on Cost			15%	15%	15%	15%
Land Value/sf GFA			\$121	\$110	(\$43)	\$87

Assessing Feasibility of Density Bonusing Scenarios to Deliver New Affordable Housing Via Density Bonusing

Market developers would be motivated to deliver this housing under a density bonusing scheme that secured – as a public benefit in return for the new density of other land uses – 20% of units in rental tenure at 80% of current market rates for new rental buildings.

As with the first case study suite, there is substantial opportunity encapsulated on sites such as this to create new housing, including affordable housing, as part of brand new complete communities on land that today operates near or at its lowest and worst use. As is illustrated in the proforma above, development plans at this scale present the opportunity not only to procure a substantial amount of new housing supply, but also include the financial room to secure additional community benefits that could be located in the very same redevelopment scheme.

PART SEVEN: Conclusion

It is undeniable that the Metro Vancouver region faces a prolonged housing affordability crisis that the delivery of new rapid transit infrastructure could further accentuate. In considering the potential implementation of new LVC tools, ensuring that mechanisms designed to pay for new capital infrastructure do not worsen this ongoing crisis must be a fundamental priority.

This analysis has considered several critical region-shaping objectives that ought to inform any assessment of LVC mechanisms advanced or supported by TransLink:

- Maximize the delivery of affordable housing in transit-oriented communities;
- Expedite the delivery of affordable housing in transit-oriented communities;
- Ensure housing affordability is not negatively impacted by investment in transit or Land Value Capture tools;
- Support expansion of transit ridership and fare revenue generation;
- Expand access to rapid transit for transit-dependent riders;
- Continue to support the expansion of transit infrastructure and service.

While it is tempting to view the uplift in land value around transit infrastructure as a boon to meet a broader governmental need related to funding transit expansion, the objective of ensuring a liveable, inclusive region where transit-dependant riders — who are more likely to struggle with the high cost of housing — are prioritized for access to housing proximate to transit is a significant priority, too.

Once the lens of housing affordability is applied to LVC mechanisms, it becomes clear that there are inherent risks: it is precisely for the reason that there is an uplift in land value that access to affordable housing is potentially compromised. TransLink has a direct interest in ensuring that affordable housing is delivered along rapid transit corridors it plans and operates — both as a regional partner with other levels of government that share this objective, and from a fare revenue generation perspective. Fare revenue is both protected and enhanced by ensuring the supply of affordable housing along rapid transit corridors is continually increased; as the pandemic illustrated, in a crisis, transit-dependent riders are the *raison d'être* of transit service, and fundamental to predictable revenue generation. Even more importantly, ensuring that transit-dependent riders have good access to excellent rapid transit is fundamental to the long-term success of the region.

Of the revenue-generating tools assessed in this study, density bonusing is the tool that scores high in relation to the most significant constraints associated with delivering affordable housing amid the affordability crisis: access to land in proximity to transit, and getting housing built today. Although it is not a perfect tool, there is a shared interest in areas across the region in

prioritizing density bonusing as a tool specifically to deliver new affordable rental housing in transit-rich areas. Other tools that involve revenue-sharing with either the Province or municipalities are either a new tax, or simply move the revenues of a tax that is already collected from one entity to another. LVC mechanisms that do not adversely impact housing affordability are the most compatible with the objective of creating an inclusive region that prioritizes access to transit for low and moderate income households.

There are regional pressures that call for new and more significant interventions to mitigate the housing affordability crisis, and for an ongoing investment in new transit infrastructure (and operating and service). Given this reality, at the highest level, there is a pressing need for a national strategy to fund capital transit infrastructure on a significant and continued basis. There is no free money, and someone always pays. Ensuring access to rapid transit for those who face the greatest pressures given escalating housing costs sits in opposition to capturing the value from land adjacent to the proposed transit infrastructure - unless we prioritize capturing that value to deliver affordable housing as a part of new developments.

APPENDICES

APPENDIX A: Multiple Account Evaluation (MAE) Framework

Category	Criteria	TransLink's BAT	CAC Revenue Sharing with Municipalities	Density Bonusing	PTT Revenue Sharing with Province	Tiered DCC for Transit Infrastructure
TL Revenue	Capital Investment <i>Will the revenue tool contribute to transit capital investment in a substantive way?</i>	yes	It is unlikely that municipalities would be willing to give up a substantial amount of this revenue; dependent upon negotiations	neutral	dependent upon negotiations	yes
	Fare Revenue <i>To what extent will revenue from the tool contribute to operating costs?</i>	neutral	neutral	high positive impact (from incremental fare revenue)	neutral	neutral
	Revenue Predictability <i>Will this tool yield predictable or unpredictable funding?</i>	yes; once the benefiting area is established the revenue would be ongoing	unpredictable; negotiated outcome contingent on growth (revenue will vary from year to year)	predictable if implemented via prescribed framework (assuming regional growth continues)	predictable if the province agrees (but revenue will vary from year to year)	yes (but revenue will vary from year to year)
Housing	Renter cost-burden <i>To what extent does the tool impact renters (i.e. vacancy rates/rent prices?)</i>	negatively; landlord may pass on cost	unpredictable; dependent upon negotiations	neutral	unpredictable; dependent upon negotiations	neutral; it would impact if the rates set impact the pace of development which in turn impact affordability
	Affordable Housing Creation <i>Does the tool incentivize or deter creation of affordable housing in transit-oriented locations?</i>	deter	neutral, if properly calibrated	neutral	neutral	neutral; it would impact if the rates set impact the pace of development which in turn impact affordability
	Owner cost-burden (existing area residents) <i>To what extent does the tool burden existing property owners?</i>	a new tax burden	neutral	neutral	only if the PPT increases as a condition of the sharing	neutral
	Owner cost-burden (future area residents) <i>To what extent does the tool burden future property owners?</i>	a new tax burden	unpredictable; dependent upon negotiations	neutral	only if the PPT increases as a condition of the sharing	neutral; it would impact if the rates set impact the pace of development which in turn impact affordability
	Progressive/Ability to pay <i>To what extent is the tool progressively applied (i.e. geared towards income?)</i>	it is a possibility	neutral	neutral	it is a possibility	it is a possibility (DCC rates cannot be based on ability to pay; they must be based on a cost driver)
	Supports creation of dedicated rental	negative	not more than it does today	strong positive impact	negative if the PPT increases as a	neutral; reductions and waivers in

ASSESSING THE IMPACTS OF POTENTIAL LAND VALUE CAPTURE MECHANISMS ON AFFORDABLE HOUSING AND AFFORDABILITY

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	housing <i>To what extent does the tool contribute to dedicated affordable rental housing (both directly and indirectly) in proximity to rapid transit?</i>				condition of the sharing	place for supporting certain types of not-for-profit rental housing throughout region for existing DCC
Ridership	Transit-dependent riders <i>To what extent will the tool boost transit-dependent ridership (both directly and indirectly)?</i>	neutral	neutral	strong positive impact	neutral	neutral
Regulatory Framework	Compatible with existing enabling legislation <i>Does legislation exist at the provincial level to allow the enactment of this tool (or at least not to prevent it)?</i>	yes	N/A; CACs do not exist in legislation	yes	yes	yes
Support/ Sentiment	Public <i>What is the level of public support for the tool?</i>	negative; an additional tax	strong; no impact on residents/ratepayers	mixed; existing residents may resist additional density	negative, to the extent that the PTT would need to increase in order to share	negative if there is a perception that costs are passed on to the housing consumer for new product (see above for assessment on impacts)
	Senior levels of government <i>What is the level of support for the tool at the provincial/federal level?</i>	likely high	unclear; may be waning, as a result of a growing awareness of the impact of development approvals	likely neutral or positive	likely negative or reluctant	likely high
	Local government <i>How supportive are municipal partners of the tool? Based on 2020 consultation on Land Value Capture</i>	mixed	oppose it for transit infrastructure	mixed	support	mixed
	Developer Community <i>How supportive are the for-profit and nonprofit developer community?</i>	mixed	not supportive	strong positive support (formula-based density bonusing)	support	not supportive
Shaping the Region	Supporting Community Amenities <i>Will value capture replace existing amenity contributions? Is this a net negative? Will new mechanisms affect other amenity contributions?</i>	neutral	neutral	neutral	yes; monies must be reallocated from elsewhere if the PPT is not increased	neutral
	Supports complete communities <i>To what extent does the</i>	negative; could reinforce NIMBYism and	strong positive impact	strong positive impact	neutral	possibly negative (it would impact if the rates set impact the

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	<i>tool increase/encourage the creation of sustainable complete communities?</i>	undermines the extent to which transit infrastructure supports the entire region				pace of development which in turn impact affordability)
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APPENDIX B: Background Sources

- Coriolis Consulting Inc. and Wollenberg Munro Consulting Inc. 2020. Evaluation of Land Value Capture and Urban Development as Sources of Revenue for TransLink.
- Coriolis Consulting Inc. 2017. Rental Housing Strategies, Metro Vancouver.
- TransLink with Coriolis Consulting Inc. 2014. Land Value Capture Summary Report: Discussion of Potential Mechanisms to Fund Regional Transportation in Metro Vancouver
- Arup and Coriolis Consulting Inc. 2012. Land Value Capture for Funding Regional Transportation Working Papers
- Wollenberg Munro Consulting. 2019. Land Value Capture as a Source of Revenue for Local Government: Discussion Paper. Prepared for City of Vancouver.
- Coriolis Consulting Corp. 2018. Regional DCC for Transit Infrastructure: Structure, Rates, and Revenue Forecasts. Prepared for TransLink.
- Metro Vancouver’s Transit Oriented Affordable Housing and Housing and Transportation Cost Burden Study
- Metro Vancouver Transit Oriented Affordable Housing Study