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Edmonton

Access Management Guidelines

COE-IM-GUIDE-0023

Version 03

December 21, 2023



DISCLAIMER

This document was developed to establish guidelines for the City of Edmonton's expectations regarding the location of access to their roadway assets.

Care has been taken to confirm the accuracy of the information contained herein. The views expressed herein do not necessarily represent those of any individual contributor. As the design of the assets and systems described herein continually evolves, and practices change and improve over time, so is it necessary to regularly consult relevant technical standards, codes, and other publications rather than relying on this publication exclusively. The City of Edmonton, authors, and members of the review committee, want to convey that this document does not constitute a project specific design. As such, no part of this document alleviates the responsibility of the professionals retained to design and/or construct specific projects from taking full responsibility and authenticating their designs in accordance with APEGA, AALA, AAA, Alberta Building Code, and any other statutory or safety requirements.

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CHANGE LOG

VERSION	DATE	REVISION SUMMARY
02	22-Feb-07	Authentication and validation added
03	23-12-21	Updated references to Acts, bylaws, City documents, City departments, and technical resources.
		Added Figure and Table numbers
		Reorganized flow of document
		Updated Review and Approval Process
		Updated submission requirements
		Added a variance process
		Added an Area Context Section
		Added Active Transportation Guidelines
		New Vehicle Access Guidelines Sections/Guidelines:
		<ul style="list-style-type: none"> ● General Guidelines and Considerations <ul style="list-style-type: none"> ○ Transit Considerations ○ Access Spacing from Midblock Pedestrian Crossings ○ Residential Front Drive Access ○ Access Spacing from Street Furniture ○ Access Spacing from Heavy Rail/LRT ● Access Staging ● Right In/Right Out/Left In Access Spacing ● Right In Only Access Spacing ● Right Out Only Access Spacing ● Vehicle Access Crossing Active Transportation Facilities ● Channelizing Islands

		<p>Revised Vehicle Access Guidelines Sections/Guidelines::</p> <ul style="list-style-type: none"> ● Added in Principal Roadways ● Added in Spacing from Roundabouts ● Removed Section on Left Turn Overlap ● Right In/Right Out Accesses <ul style="list-style-type: none"> ○ Flow Chart added for consideration of upstream channelization, requirements for right turn bays, proximity to transit stops ○ Spacing to transit stops added to reflect current transit stop location requirements as per the current version of the Complete Streets Design and Construction Standards ○ Spacing in relation to downstream left turn bays revised ● Provision of an auxiliary lane added for spacing between right in/right out accesses ● Guidelines for right and left turn bays updated ● Access type added for Collector and Local Roadways ● Expanded to include guidelines for different sizes of multi-family sites ● Access width for single family lots refers to current Zoning Bylaw ● Gas Bars added to Access Throat Length table ● Appendix A - Access Review Process - updated process ● Appendix B - Maps - consolidated to include all updated reference maps ● Appendix C - removed <p>Glossary Removed. Definitions included in text where required.</p>
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1. INTRODUCTION

1.1 Purpose and Scope

This guideline document is intended to assist in the planning of multi-modal access for development or redevelopment of land parcels within the City of Edmonton. Access is defined as the junction of a private driveway or pathway and a public road or pathway as compared to an intersection, which is defined as the junction of public roadways.

Guidance is provided on the location, type, and configuration of vehicle accesses in context with a variety of factors such as safety, convenience, adjoining land use, traffic/transit operation, adjoining roadway classification, and roadway character. The guidelines also consider active transportation facilities and pedestrian access from public road rights-of-way to be reviewed in conjunction with on-site active transportation requirements identified in the Zoning Bylaw.

These access guidelines provide direction for the planning and approval of most access situations. Adherence to these guidelines should expedite and facilitate approval of most access applications, but may not guarantee approval in some circumstances where context or condition require a unique site specific approach.

The Access Management Guidelines are intended for use by the City of Edmonton, the land development industry, and any party that wishes to create or modify access to a parcel of land.

1.2 Legislative Authority Regarding Access Control

Through the Municipal Government Act and the Highways Development and Protection Act, the City has the authority to permit and regulate access including its location, configuration, type, and related construction details. While the City may treat applications for development permits and accesses as one and the same as part of a comprehensive development review, it must be understood that the two applications are separate processes.

1.2.1 Highways Development and Protections Act

The Highways Development and Protection Act (HDP Act) provides the authority for the City of Edmonton to make decisions related to access. A provision within the Act allows for a Council of a Municipality to classify controlled streets as well as to regulate and control physical means of access to or from a controlled street. Within the Act, there are two roadway types identified; Controlled Highways and Controlled Streets. All Provincial Highways are deemed to be Controlled Highways.

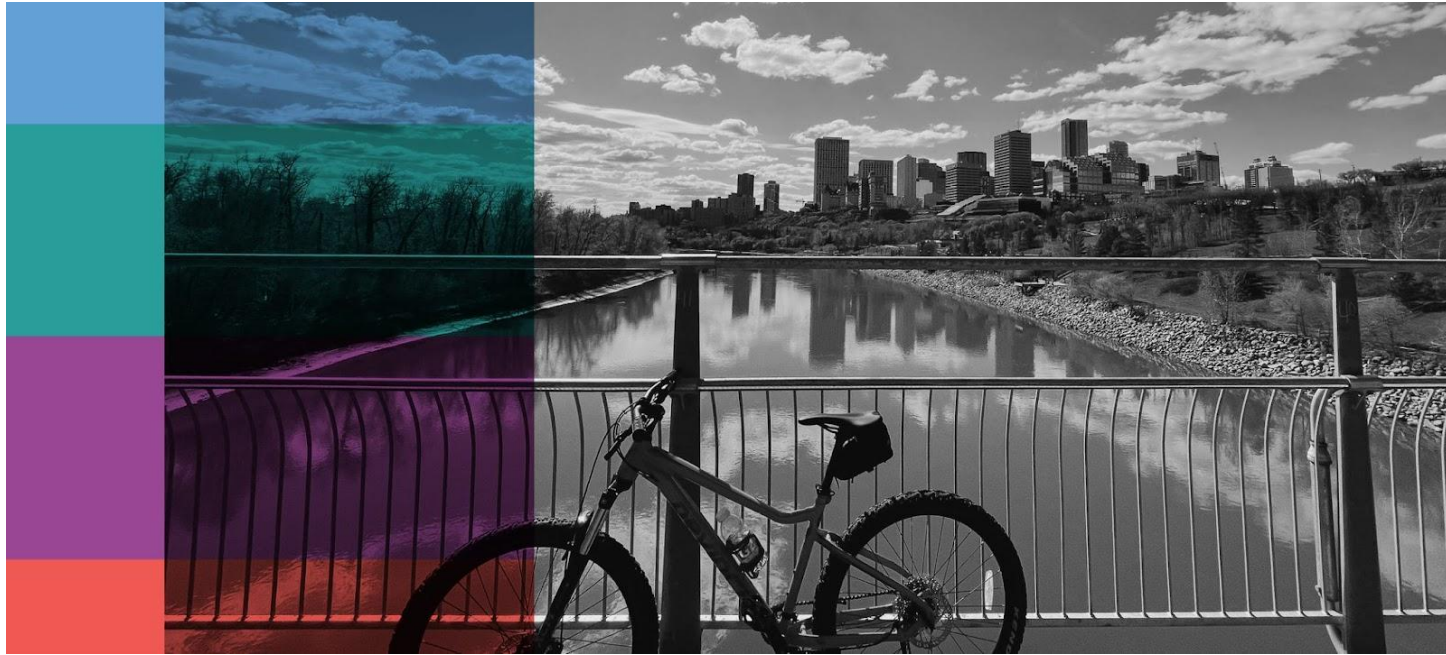
1.2.2 Controlled Streets – City Streets Access Bylaw 13521

Under the Highways Development and Protections Act, a municipality may by Bylaw identify any street as a controlled street. The City of Edmonton's City Streets Access Bylaw 13521 defines a Controlled Street as a registered road right-of-way that is actively used as a public road. The City Streets Access Bylaw 13521 provides the foundation by which the Access Management Guidelines have been established. While the Bylaw grants high level approval for the City Manager, or others through delegated authority, to review and approve access, the Guidelines are intended to provide clarity and consistency for how decisions will be made in relation to access type, size, and location along with other considerations that are not identified within the Bylaw.

1.2.3 Access Removal and/or Restrictions

Within the Highways and Development Protection Act and the City Streets Access Bylaw 13521, there are provisions that allow the City to remove or restrict access by Bylaw to or from a controlled street. The City may remove an access by Bylaw as long as an alternate means of access exists or is provided. This could include provision of access via a service or frontage road, a cross-lot access easement, or a joint access easement (a legal agreement registered on the land title of a land parcel, which allows vehicles to cross a portion of the land parcel in order to access an adjoining land parcel).

The City may restrict an access from an all-turns access to something less than an all-turns access (for example, right-in/right-out) at any time. The only provision is that at least one means of access must exist for each property however indirect or circuitous.



1.3 How the Guidelines Should Be Used

Land development proponents should use the guidelines at the earliest stage of site planning. These guidelines provide the minimum criteria for access. For sites where the guidelines may not be readily applicable, a pre-submission meeting should be held with the City department responsible for transportation planning.

The City department responsible for transportation planning will refer to the guidelines when reviewing and evaluating access proposals. Again, it is expected that the minimums within will be exceeded or at least met. Access proposals that do not meet these guidelines will require a variance and must follow the variance process described within this document. Accesses that do not meet these guidelines should be rejected, unless extenuating conditions were identified at a pre-submission meeting.

The information in the guide does not absolve private and public sector planners, architects, or engineers from their duty to carry out due diligence when planning a site. This includes checking relevant technical and planning documents, which can include the latest versions of Transportation Association of Canada’s “Geometric Design Guide for Canadian Roads”, the Transportation Research Board’s “Access Management Manual”, and City guiding plans and documents (eg. Relevant Area Structure Plans (ASP), Neighbourhood Structure Plans (NSP), District Plans, zoning overlays, development permits and approvals from the Subdivision Authority and the Subdivision and Development Appeal Board).

1.4 Organization of the Guide

This document is divided into five parts:

1. Introduction

The Introduction outlines the purpose and scope of the document, how the document should be used, and outlines the legislative authority that permits the City of Edmonton to permit and regulate access.

2. Review and Approval Process

The Review and Approval Process describes how accesses are reviewed by the City department responsible for transportation planning, the submission requirements for a proposed site access, a process for the review of redevelopment sites, and a variance process.

3. Area Context

The Area Context outlines the City's roadway classification system and provides an overview of land use context and mode priorities that may influence decisions regarding access.

4. Active Transportation Access Guidelines

The Active Transportation Access Guidelines provides direction on the provision of active transportation links between public road right of ways and private sites.

5. Vehicle Access Guidelines outline general considerations, the requirement to consider roadway network staging, and guidelines for access spacing, type of access, access width, and access throat length.



2. REVIEW AND APPROVAL PROCESS

2.1 Informal Pre-Submission Consultation

A pre-submission consultation between the proponent and the City department responsible for transportation planning is recommended, particularly for more complex sites and cases where access to an arterial road is being requested. This is a proactive opportunity to discuss freely and frankly the developer's or owner's needs, including the business case for the land parcel and buildings and the consequent need for access, as well as to discuss the City's perspective on constraints for site access in order to advance the application. Both the proponent and the City need to clearly share their perspectives and make reasonable efforts to find common ground and a solution that will work for both parties. Given its responsibility for the safe operation of public roads, the City department responsible for transportation planning may reject a proposed access if deemed necessary.

The pre-submission consultation could take the form of a meeting. A preliminary site plan is required to focus discussion. City staff should bring forward contextual information about the existing (or planned) road, particularly the classification and mode priorities of the road(s) in question. Other City departments should be invited to the meeting if issues under their jurisdiction are likely to be impacted. The meeting should be documented, including details of any decisions, common ground (areas of agreement) as well as areas of disagreement. After the meeting, if additional information is needed by one party, it should be gathered and transmitted promptly.

2.2 Submission Requirements

The submission requirements shall consist of a scaled site plan showing:

- Legal description of property
- North arrow
- Ultimate and staged road details including alignments for curb and gutter (urban) or pavement edge (rural) on both sides of the road, left and right turn bays, paint markings, and medians
- Other nearby intersections, midblock crossings, and accesses from the site on both sides of the roads (for divided roads: the nearest intersection, nearest all-turns access, and right-in/right-out accesses; for undivided roads: all intersections, midblock crossings, and accesses within 100m)
- Sidewalks and other active transportation facilities (eg. cycling facilities, shared pathways)
- Transit stops and associated transit infrastructure on the roads abutting and in the vicinity of the site
- Boulevard features including trees
- Surface utility information (including offset dimensions where applicable)
- Existing encroachments on road right-of-way
- Requested turning movements and traffic control at access(es) (e.g., signalized all-turns, unsignalized all-turns, right in/right out)
- Access location(s) relative to the site and its connecting road, including dimensions from adjacent intersections/accesses as per the figures in this guide and dimensions from corner pins to an access edge for each access
- Access type (commercial crossing, private crossing, curb return, or culvert crossing)
- Turn bay configurations and dimensions for access infrastructure (where proposed)
- Access width measured at the property line
- Access throat length
- On-site buildings, loading bays and stalls, parking stalls, and drive aisles
- Truck turning movement templates (when requested)
- Turning movement volumes at the site access (when requested)

An electronic version is preferable, but paper versions are also acceptable. Metric dimensions are preferred.

2.2.1 Sightlines

The submission may need to include supporting analysis to address sightlines at the proposed access location at the request of the City department responsible for transportation planning. Sightlines for any access are to meet Transportation Association of Canada (TAC) requirements outlined in the latest version of the Geometric Design Guide for Canadian Roads. Sightline evaluations will be required if an access is proposed along a horizontal or vertical curve, along shared pathways or dedicated bike facilities, or where existing/future surface features such as trees, bus shelters, advertising boards, retaining walls, fences, or buildings may restrict clear sightlines at the proposed access location.

2.2.2 Swept Path Analysis

Swept path analyses (vehicle turning movements) may be required to confirm access configuration, access width, and appropriate integration with site elements. The following should be considered when completing a swept path analysis:

- The design vehicle should be the largest vehicle anticipated to access the site. For example, design vehicles for multi-family residential sites typically include fire rescue and waste collection vehicles, while design vehicles for gas station or commercial sites may include fuel trucks, fire rescue, and delivery vehicles.
- Swept paths must show design vehicles accessing/egressing the site from/to all available directions of travel and circulating on-site.



2.3 Redevelopment Sites

A development should be treated as a redevelopment site for access approval purposes if 1) the existing site is being replaced by a new development or is being renovated to accommodate a different intensity use, and 2) it is clear that access spacing for the site cannot meet these access spacing requirements due to off-site constraints (such as insufficient distance to accesses on adjacent properties).

Consultation between the proponent and the City department responsible for transportation planning is required for redevelopment sites. In addition to the submission requirements noted in Section 2.2, the following should be provided to the City two weeks prior to the consultation meeting:

- Existing site access locations and access types; and
- Existing constraints that restrict the ability to meet access spacing guidelines.

An air photo will be adequate, with each feature labelled (identify distances to the nearest metre). The proposed access strategy should optimize access spacing as per these guidelines. Proposed access locations should meet the access spacing requirements where possible.

Both the City department responsible for transportation planning and the site proponent should list the strengths and weaknesses of the access strategy in terms of impacts on the adjoining roads, impacts to active transportation users and facilities, and impacts on the site. Both parties should then work together to arrive at a mutually agreeable access and site plan. Given its responsibility for the safe operation of public roads, the City department responsible for transportation planning may reject a proposed access if deemed necessary.

2.4 Variance Process

Where a proposed access does not meet the minimum criteria established by these guidelines, justification for a variance should be provided and authenticated by a Professional Engineer registered with APEGA. Justification analysis for a variance that may be requested by the City includes, but is not limited to:

- Intersection and corridor capacity analysis
- Queueing analysis for existing and future conditions
- Corridor progression and travel time analysis
- Sightline analysis
- Weaving analysis
- Intersection functional design
- Swept path analysis
- Safety audit and analysis including potential hazards to pedestrians and cyclists
- Gap analysis for existing access
- Interlocking left turn analysis
- Site and area constraints

2.5 Formal Review and Approval Process

The access approval process is under the authority of the City department responsible for transportation planning. It is separate from the development-related application processes managed by the City department responsible for planning. The development and access approval processes will be completed concurrently to ensure prompt and timely approvals.

Usually, the formal review and approval process starts with a development permit, subdivision, or zoning application to the City department responsible for planning. In a small number of cases, only changes to existing access or a new access to a site are pursued. In all cases, the City department responsible for transportation planning will receive the access application and review it accordingly.

As part of the review process additional input may be sought from agencies/departments with infrastructure in close proximity to the proposed access including the Government of Alberta's Transportation and Economic Corridors. The purpose of this is to evaluate potential conflicts associated with trees, low impact development (LID), utilities, active transportation facilities, crosswalks, transit, and other roadway infrastructure in the vicinity of the proposed access. As part of the conditions of approval, the applicant will be responsible for any costs associated with any relocation or removal required to facilitate construction of the proposed access. The review carried out by the City department responsible for transportation planning may result in one of two basic actions:

1. Approval with Conditions

The City department responsible for transportation planning approves the access subject to a set of conditions, usually describing key access parameters, and an associated agreement that outlines construction and inspection requirements.

2. Objection

The City department responsible for transportation planning has substantive concerns with the proposed accesses that were not resolved through dialogue with the applicant and will not issue approval for the development. In such cases the City department responsible for transportation planning should clearly document the concerns.

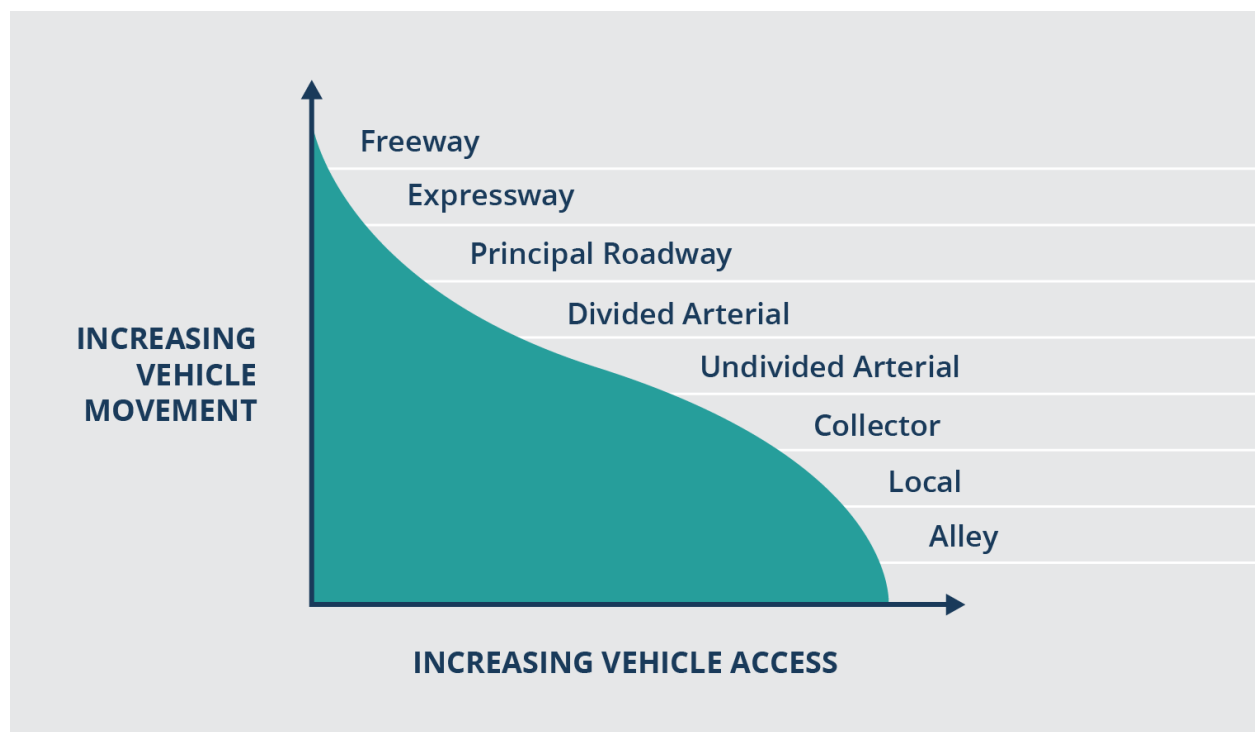
The review process is cyclical in nature where the applicant may modify an access plan to address concerns documented by the City and resubmit for application review. Final approval of an access strategy rests with the City department responsible for transportation planning. A schematic of the access review process is shown in **Appendix A - Review Process**.

3. AREA CONTEXT

3.1 Road Classification

In Edmonton, as in most jurisdictions, roadways are given functional classifications that arrange different roadways by the degree to which they cater to vehicular movement, such as increased traffic volume and speeds, versus direct land access. As shown in **Figure 3.1**, roads with higher classifications are intended to provide greater vehicle movement while lower classification roads emphasize access. In most circumstances, the user should first confirm the ultimate classification of the road being accessed.

Figure 3.1: Road Classification by Vehicle Mobility and Access



Appendix B - Maps includes the Roadway and Goods Movement Network 2 Million map from The City Plan, which identifies all Provincial Highways, Freeways, Expressways, and Principal Roadways in Edmonton. Arterial and collector roadway designations are identified in City plans in effect (e.g. Neighbourhood Area Structure Plans, Area Structure Plans, Neighbourhood Structure Plans). The City department responsible for transportation planning will confirm roadway classification if not specifically identified in the above noted documents.

Provincial Highway - Anthony Henday Drive together with the portions of Queen Elizabeth II, Manning Drive, and Yellowhead Trail that extend beyond Anthony Henday Drive, are all highways within the city's boundaries that are under the operational and jurisdictional control of the Province. These roadways are outside of the City of Edmonton's jurisdiction; therefore, these guidelines do not apply to these roadways.

Freeway - Whitemud Drive and Yellowhead Trail form the highest order auto and goods movement facilities in Edmonton. These high-speed roadways have or are planned to have free-flow movement providing regional and national connections. Short sections of Sherwood Park Freeway and Stony Plain Road are also designated as freeways extending out of Edmonton connecting to provincial highways.

Expressway - Expressways are high capacity, relatively high-speed roadways with limited access points. These roadways have a different design standard than freeways that allow for increased access and accommodation of transit and active transportation mixed within the corridor. Terwillegar Drive between Whitemud Drive and Anthony Henday Drive and 170 Street SW south of Anthony Henday Drive are or are planned as expressways.

Principal Roadway - Principal Roadways provide cross-town auto and goods movement on a higher standard facility with strategic grade separations within Edmonton city limits. They provide a road link between highways and freeways, connect to Anthony Henday Drive and link to important provincial highways outside Edmonton's boundaries. Examples of Principal Roadways include Calgary Trail between Whitemud Drive and Anthony Henday Drive and 170 Street between Whitemud Drive and Yellowhead Trail. Principal roadways are also identified as arterial roadways within the Transportation System Bylaw; however, the Principal Roadway designation will govern in terms of these Access Management Guidelines.

Arterial - Arterial roadways carry larger volumes of traffic (people driving as well as those riding transit, walking and wheeling, and delivering goods) between areas with relatively few and controlled access points. Examples of arterial roadways in Edmonton include 137 Avenue, 99 Street, Ellerslie Road, and 215 Street. Arterial roadways can be divided or undivided as follows:

- Divided Arterials – Arterial roadways that have, or are planned to have, a raised curb and gutter median or a depressed ditch median. Collector-Distributor roads (C-D roads) are considered divided arterials for the purposes of Access Management.
- Undivided Arterials – Arterial roadways that do not have a median including arterial roads with painted left-turn lanes or centre two-way left-turn lanes.

Collector - Collectors provide neighbourhood travel between locals and arterials, direct access to adjacent lands, and increased mobility for active transportation and transit users and include commercial and industrial service roads. While City plans in effect identify collector roadways within approved planning documents, there is not one single reference identifying the collector roadways within Edmonton; therefore, for the purposes of applying these Access Management Guidelines, all roads not included in the above classifications that have at least two travel lanes (one in each direction) such that vehicles coming from opposite directions can pass without pulling over toward the side are considered collector roadways.

Local - Local roads provide direct access to adjacent lands, serve neighbourhood travel, and include residential service roads. There is not one single reference identifying all local roadways within Edmonton; therefore, for the purposes of applying these Access Management Guidelines, all other roads not included in the above classifications and are not alleys will be considered local roadways.

Alley - Alleys provide direct access to adjacent lands and are typically used for access, deliveries, and waste collection. In some cases, alleys are evolving into shared streets, with alley-oriented development. Similar to local roadways, there is not one single reference identifying the alleys within Edmonton; therefore, for the purposes of applying these Access Management Guidelines, all roadways not included in the above classifications, are located at the rear of properties, and do not include parking in the right-of-way will be considered alleys.

3.2 Land Use Context

Land use context and roadway classification go hand in hand when determining site access. The Edmonton City Plan identifies nodes and corridors within the City where existing arterial roadways may evolve over time to balance moving private automobiles and goods through an area with providing safe facilities for active transportation, transit, and activating streetscapes.

The City's District General Policy and District Plans build upon the City Plan and provide more specific guidance to the evolution and growth of communities within the City. Within the District Plans, special areas including Major and District Nodes, Primary and Secondary Corridors, and Pedestrian Priority Areas are identified. These District Plans continue to evolve and should be reviewed in conjunction with relevant City guiding plans and documents to assist with considering land use context, mode priorities, and roadway function in the development of site access strategies.

3.3 Mode Priority

In addition to the District Plans and relevant City guiding plans and documents, the following resources should be reviewed to identify corridors where active transportation, transit, and goods movement are considered high priority when developing site access strategies.

3.3.1 The Bike Plan

The Bike Plan identifies District Connector Bike Routes that are intended to serve as cycling arterial connections across City Districts along roadways where cycling will be prioritized higher than other roadways. The District Connector Bike Routes are identified in **Appendix B - Maps**.

3.3.2 Mass Transit Network

The City of Edmonton currently operates a network of light rail transit (LRT) routes throughout the City. The City's Mass Transit: Planning for 1.25 Million People identifies the expansion of the LRT network and the addition of Semi-Exclusive Routes as identified in **Appendix B - Maps**. As transit planning continues for 1.5 Million, 1.75 Million, and 2.0 Million People, additional Semi-Exclusive routes may be identified. Transit planning on specific corridors should be confirmed with the City of Edmonton.

3.3.3 Goods Movement Network

The City's Goods Movement Network identifies roadway corridors where vehicle and truck flow may be prioritized over other modes. As noted previously, the Roadway and Goods Movement Network 2 Million map from The City Plan is included in **Appendix B - Maps**.



4. ACTIVE TRANSPORTATION ACCESS GUIDELINES

4.1 Site Access

The City of Edmonton is striving to improve active transportation connections between on-site buildings, public amenities and/or public rights-of-way. In addition to requirements outlined in the Zoning Bylaw, the minimum active transportation access guidelines include:

- Non-residential, mixed-use, and multi-family residential sites must provide direct sidewalks (min 1.8m) or shared pathways (min 3.0m) to enable safe and convenient access for pedestrians and active transportation users from main building entrances to abutting public sidewalks, shared pathways, roads, and transit stops.
- Additional sidewalk or shared pathway connections to public right-of-way may be requested, especially for sites within Pedestrian Priority Areas.

4.2 Staging of Active Transportation Access

In situations where a site may be constructed in phases, interim active transportation connections from public road right-of-way to preliminary on-site buildings are required.

5. VEHICLE ACCESS GUIDELINES

5.1 General Guidelines and Considerations

The following general guidelines are to be considered when determining vehicle access locations to a site:

- Vehicle access should be provided from the lower classification roadway abutting a site, unless the site frontage to the lower classification road is too short or there are specific site constraints.
- Adjacent active modes facilities and the intensity of their use are factors in reviewing vehicle access to a site. Vehicle access may be redirected to other roadway frontages if required.
- All-turns accesses may not be feasible.
- Additional access to be used exclusively by emergency vehicles may be requested by the City of Edmonton.
- Secondary vehicle access may be requested for multi-family residential sites greater than 250 units. Where site frontage is limited, a single widened access may be required to accommodate additional traffic volume.

5.1.1 Transit Considerations

The following transit considerations are relevant to determining site access along existing or future transit routes:

- Transit requirements of Drawing #4000 and #4010 of the Edmonton Complete Streets Design and Construction Standards should be met.
- 10m must be provided between the head of an existing or future transit stop and the edge of the nearest site access (face of curb) for transit stops located upstream of the site access.
- Existing or planned transit stops adjacent to a site should not be impacted by site access. In some circumstances it may be possible to adjust the location of an existing transit stop at the expense of the applicant to accommodate the needs of the applicant and transit. However, as transit stops are typically identified in pairs on either side of the roadway, both transit stops in addition to crosswalk locations and sidewalk connections must be considered in the event that a transit stop is permitted to be relocated to accommodate site access.
- All-turns accesses are restricted along roadways with existing or planned LRT and may not be permitted along planned Semi-Exclusive Transit Routes.

5.1.2 Access Spacing from Midblock Pedestrian Crossings

Midblock pedestrian crossing locations represent a multi-modal intersection within the City's transportation network; therefore, they are treated as intersections within these guidelines. If a vehicle access is desired in close proximity to a midblock pedestrian crossing, the access and the crossing should be aligned such that the pedestrian crossing connects on one side of the access, similar to a typical intersection configuration. If it is not feasible to align the access with the midblock pedestrian crossing, the access should be spaced to meet the minimum distances provided in this document for access spacing from an intersection based on the road classification and modal priorities.

5.1.3 Residential Front Drive Access

Residential front drive access is provided for a variety of ground-oriented housing types (e.g., single family, duplexes, row houses). The spacing requirements identified in Section 5.3.8 are greater than the spacing typically associated with residential front drive access. The following considerations apply to residential front drive access:

- Residential front drive access is permitted along local and collector roadways only.
- Residential front drive access is not permitted along collector roads with shared pathways or designated bike facilities.
- Residential front drive access is not permitted across from existing or future school sites.
- Residential front drive access is not permitted along collectors accommodating more than 5,000 vpd. If front drive access is required to be considered based on a topographical or other natural/man made condition, an eyebrow should be used as illustrated in **Figure 5.1**.
- On a neighbourhood-wide basis, the proportion of lot frontage zoned for ground-oriented residential land uses fronting onto and having direct access to collector roads shall be no more than 30% of the total length of frontage available along the collector roadways.
- Residential front drive accesses should be developed in pairs as shown in **Figure 5.2** to increase opportunities for on-street parking.

Figure 5.1: Example of an Eyebrow

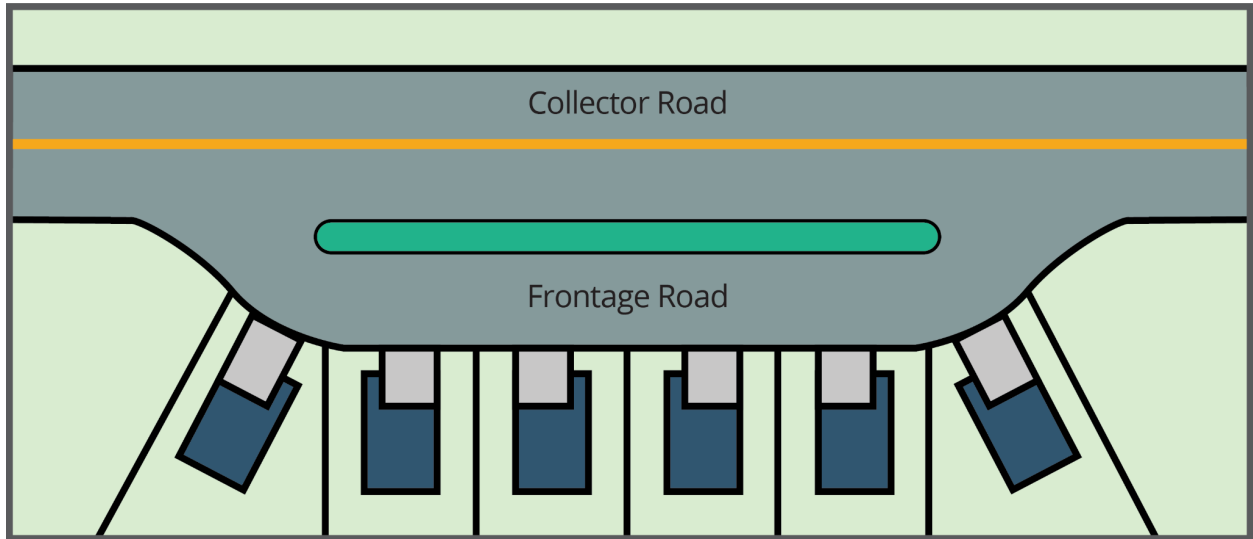
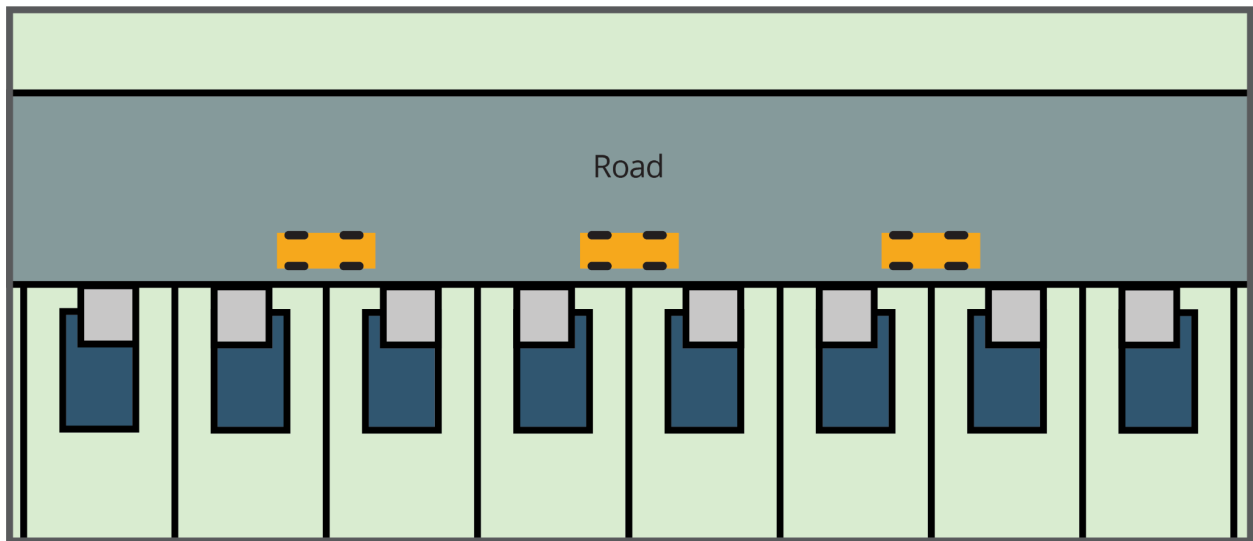


Figure 5.2: Residential Driveway Pairs



5.1.4 Access Spacing from Street Furniture

Relocation of street furniture (e.g. trees, utilities) may be required to meet spacing requirements identified in the latest version of the Edmonton Complete Streets Design and Construction Standards. Any relocations or removals will need to be approved by the appropriate City department and/or Utility agency.

5.1.5 Access Spacing from Heavy Rail/LRT

The spacing of site access in proximity to a rail crossing should be based on the latest version of Transport Canada's Grade Crossings Standards.

5.2 Access Staging

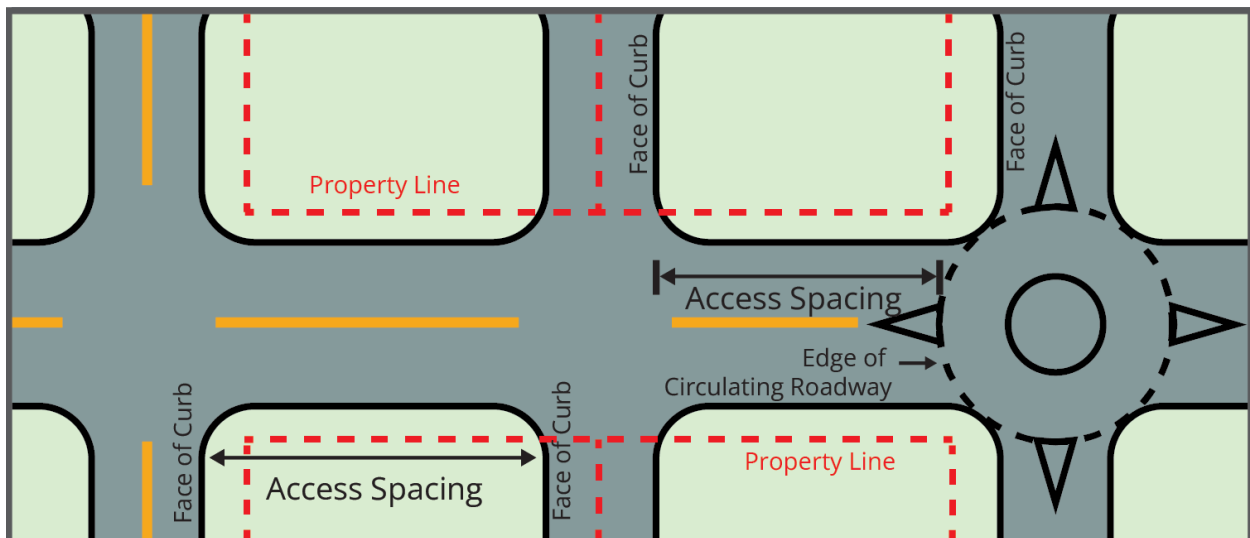
The type and spacing of access to a roadway should be evaluated based on the ultimate roadway configuration. Mitigation measures may be required to ensure the proper function of the access under the interim roadway condition.

For example, divided arterials can be constructed as an undivided arterial in the initial stages; however, access to the interim roadway should be designed to meet the guidelines associated with the ultimate roadway configuration. In this situation, a right-in/right-out access planned to an ultimate divided arterial requires the construction of a centre median to ensure the access accommodates right in/right out movements only, as per the ultimate intent, under the interim condition.

5.3 Access Spacing

The access spacing identified in the sections below are measured face of curb to face of curb (or edge of access to edge of access), unless otherwise specified, except when measuring from a roundabout where the spacing should be measured from the edge of the circulating roadway as shown in **Figure 5.3**.

Figure 5.3: Access Spacing Measurement



5.3.1 All-Turns Access Spacing on Freeways, Expressways, Principal Roadways, and Divided Arterials

Access spacing to/from all-turns intersections should be relatively generous. This ensures reasonable traffic flow and safety, especially on major roads. Higher classification roads require greater spacing due to higher traffic speeds and the complexity of driver decision making. Greater spacing is also needed to allow room for queuing and deceleration. The guidelines outlined in **Figure 5.4** and **Table 5.1** should be applied for all-turns accesses along freeways, expressways, principal roadways, and divided arterials regardless of existing or future traffic control (e.g., signalization).

Figure 5.4: Spacing for All-Turns Accesses on Freeways, Expressways, Principal Roadways, and Divided Arterials

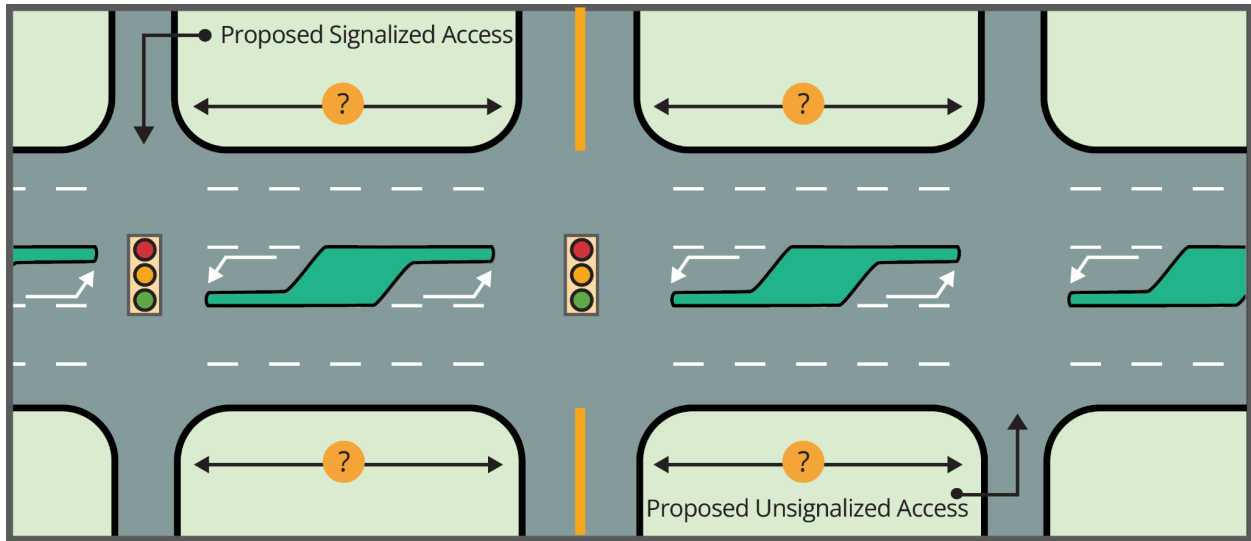


Table 5.1: Spacing Guidelines for All-Turns Accesses on Freeways, Expressways, Principal Roadways, and Divided Arterials

Classification of Road Being Accessed	Minimum Spacing
Freeway and Expressway	Access Not Permitted
Divided Principal Roadway	400m
Divided Arterial	200m up to 4 lanes (2 travel lanes in each direction) ¹
	400m more than 4 lanes

¹subject to the development of back to back left turn bays

5.3.2 All-Turns Accesses on Undivided Arterials

The framework and access spacing identified for undivided arterial roadways reflects the historic roadway designation and block layout in Edmonton. These guidelines have been developed to reflect the unique context of these existing roadways while also considering future potential applications. Accesses along undivided arterials should align with existing or future access across the roadway. If alignment is not possible, access offsets must meet the spacing requirements below to reduce the risk of interlocking left turns. The guidelines outlined in **Figure 5.5** and **Table 5.2** should be applied for all-turns accesses along undivided arterials.

Figure 5.5: Spacing for All-Turns Accesses on Undivided Arterials

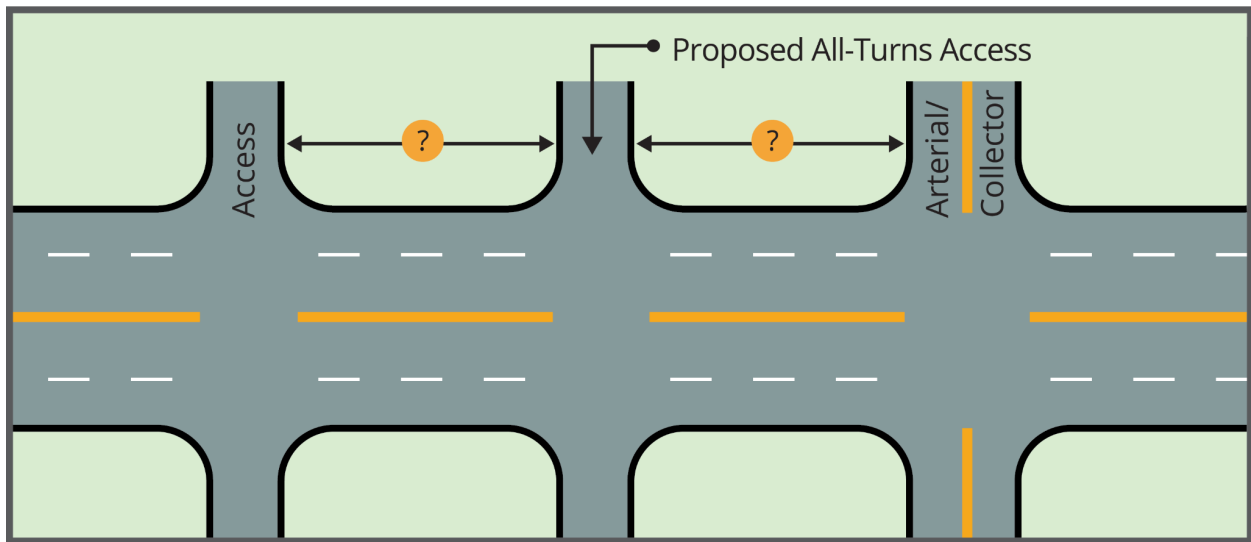


Table 5.2: Spacing Guidelines for All-Turns Accesses on Undivided Arterials

Classification of Road Being Accessed	Access Traffic Control	Minimum Spacing
Undivided Principal Roadway and Undivided Arterial	Signalized/ Roundabout	200m up to 5 lanes (2 travel lanes in each direction and a centre left turn lane) 400m more than 5 lanes
	Unsignalized	60m except approaching arterial/arterial or arterial/collector intersections where minimum spacing is 100m

5.3.3 Right-in/Right-out/Left-in Accesses

Right-in/right-out/left-in access is restricted to inbound and outbound right-turning movements and inbound left-turning movements only. This access type is permitted on roads with a centre median. Generally, right-in/right-out/left-in accesses can tolerate smaller spacing from other accesses as compared to all-turns accesses provided adequate left turn bay and tapers can be provided. Recommended spacing for right in/right out/left in access is outlined in **Figure 5.6** and **Table 5.3**.

Figure 5.6: Spacing for Right-in/Right-out/Left-in Accesses

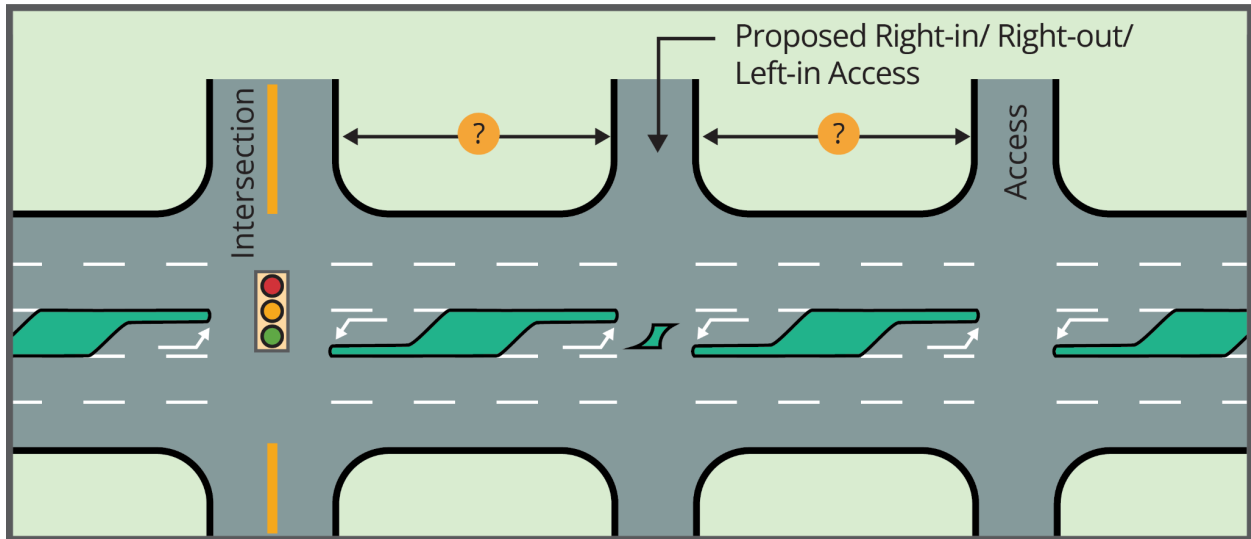


Table 5.3: Spacing Guidelines for Right-in/Right-out/Left-in Accesses

Classification of Road Being Accessed	Minimum Spacing
Freeway and Expressway	Access Not Permitted
Divided Principal Roadway	200m
Divided Arterial	200m

5.3.4 Right-in/Right-out Accesses

Right-in/right-out access is restricted to right-turning movements only for vehicles using the access. This access type is permitted on roads with a centre median but can include accesses on the right side of a one-way road. Compared to all-turns accesses, right-in/right-out accesses are simple intersections and can therefore tolerate a smaller distance separating them from other accesses.

The spacing requirements for right-in/right-out accesses along divided arterials vary based on the proximity to adjacent intersections and are dependent on site-specific context. There are three factors to be considered when determining the minimum spacing for a right-in/right-out access along a divided arterial:

- Right turn configuration at the intersection upstream of the access (e.g. free flow or yield control with a channelizing island);
- Requirement for a right-turn bay at the access; and
- Provision of a transit stop upstream of the access (existing or planned).

Figure 5.7 illustrates the various measurements from the proposed access to downstream (A) and upstream (B) intersections.

Figure 5.7: Spacing and Measurements for Right-in/Right-out Accesses

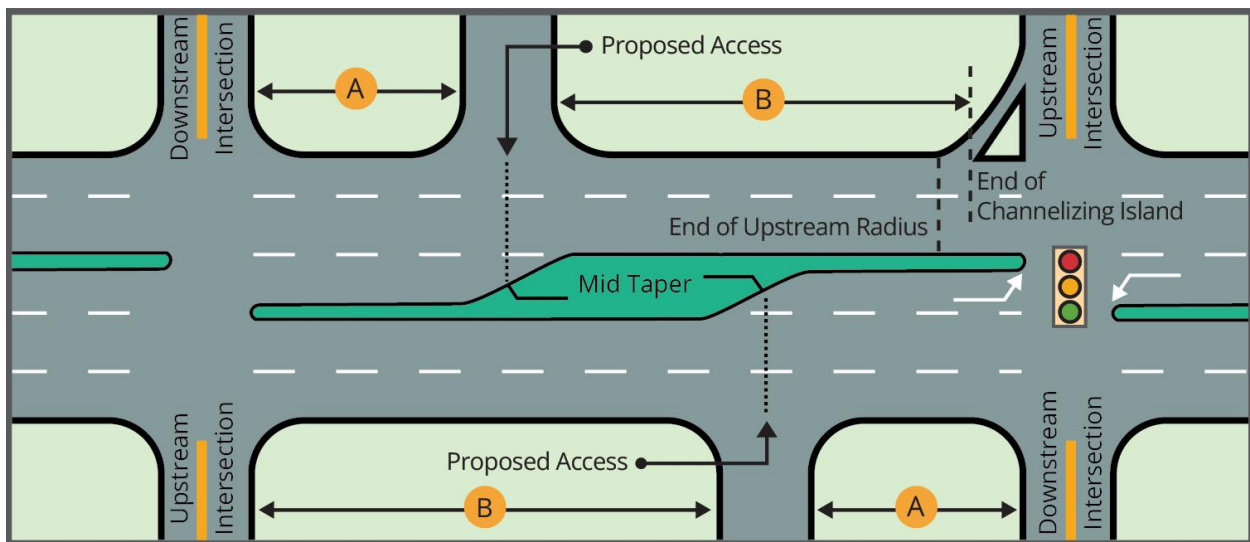


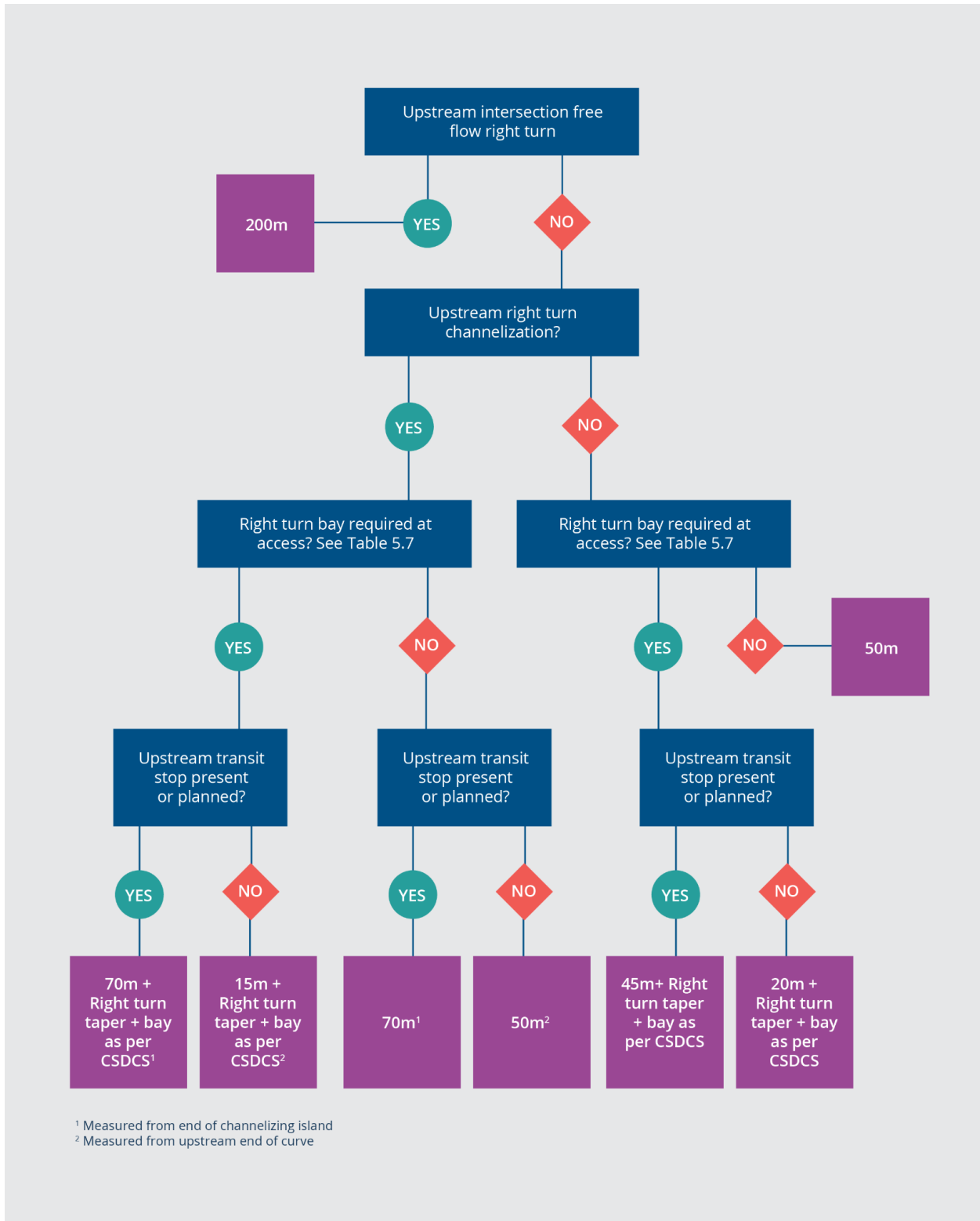
Table 5.4 outlines the spacing guidelines for right in/right out accesses in relation to intersections and all-turns accesses. **Figure 5.8** provides further direction regarding the location of right in/right out accesses in relation to upstream intersections or all-turns accesses.

Table 5.4: Spacing Guidelines for Right-in/Right-out Accesses

Classification of Road Being Accessed	Minimum Spacing
Freeway and Expressway	Access Not Permitted
Divided Principal Roadway	Distance to Downstream Intersection or All-Turns Access (A): 200m Distance from Upstream Intersection or All-Turns Access (B): 200m
Divided Arterial	Centreline of the access must be located across from or upstream of the mid-point of the left turn taper. Distance to Downstream Intersection or All-Turns Access (A): Not less than 50m Distance from Upstream Intersection or All-Turns Access (B): See Figure 5.8

In cases where the upstream intersection is a roundabout, the minimum spacing will be determined assuming channelization in **Figure 5.8** but measured from the edge of the circulating roadway. In cases where the downstream intersection is a roundabout, the minimum spacing will be measured from the edge of the circulating roadway.

Figure 5.8: Spacing Guidelines for Right-in/Right-out Accesses from an Upstream Intersection or All-Turns Access on Divided Arterials



5.3.5 Right-in Only Accesses

Right-in only accesses are limited to allowing right turn inbound movements only. These accesses are permitted along roads with a centre median but can include accesses on the right side of a one-way road. The access spacing guidelines for right-in only accesses in relation to signalized and non-signalized intersections or all-turns accesses are similar to right-in/right-out accesses noted in the previous section, except that they can be located a minimum of 50m upstream of signalized and non-signalized intersections or all-turns accesses along arterial roadways as there is no requirement to mitigate outbound flows into a left turn bay. The remaining measurements should be determined through the process outlined for right in/right out accesses in Section 5.3.4.

5.3.6 Right-out Only Accesses

Right-out only accesses are limited to allowing right turn outbound movements only. These accesses are permitted along roads with a centre median but can include accesses on the right side of a one-way road. The access spacing guidelines for right-in/right-out accesses outlined in Section 5.3.4 should be used to determine spacing for right-out only accesses.

5.3.7 Spacing Between Right-in/Right-out, Right-in Only, and Right-out Only Accesses

The minimum spacing between multiple right in/right out, right-in only, and right-out only accesses assumes that separate right turn bays and tapers are not required between consecutive accesses as shown in **Figure 5.9**. If right turn bays are required for the accesses, an auxiliary lane can be provided between consecutive right turns to minimize the access spacing to the values noted in **Table 5.5**.

If a right-in only is proposed to be located adjacent to a right-in/right-out access, or a right-out only access, the right-in only access must be located upstream of the right-in/right-out access or the right-out only access to reduce vehicle conflicts.

Figure 5.9: Spacing between Right-in/Right-out, Right-in Only, and Right-out Only Accesses

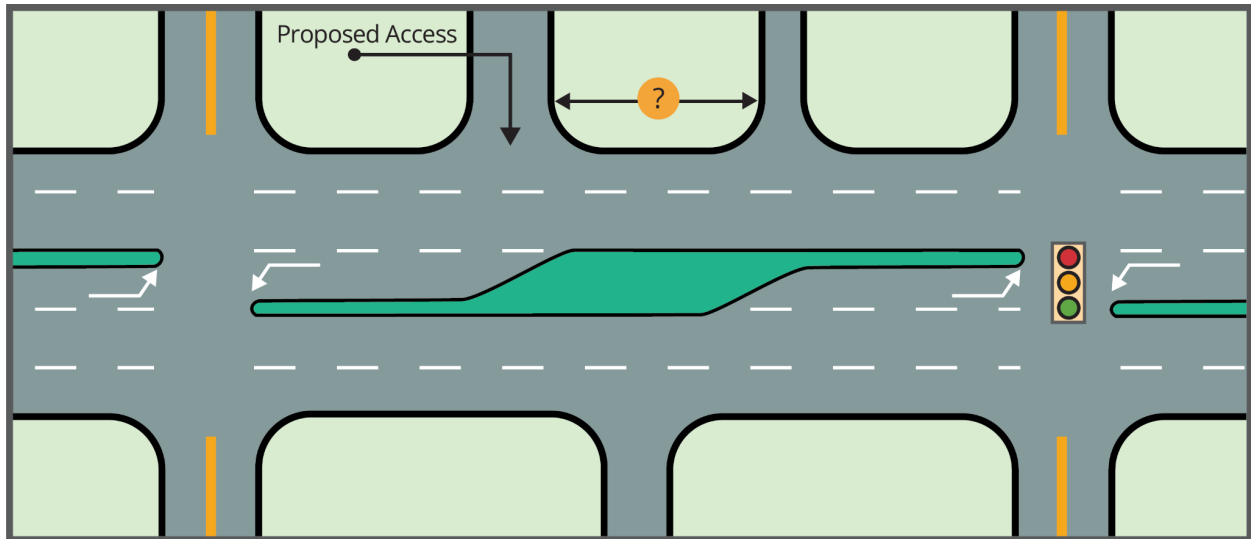


Table 5.5: Spacing Guidelines between Right-in/Right-out, Right-in Only, and Right-out Only Accesses

Classification of Road Being Accessed	Minimum Spacing
Freeway and Expressway	Access Not Permitted
Divided Principal Roadway	100m
Divided Arterial	50m ¹

¹Assumes an auxiliary lane is provided between accesses where right turn bays are required.

5.3.8 Access Spacing on Alleys, Local Roads, and Collector Roads

Access spacing on alleys, local roads and collector roads can be significantly smaller than that required for other road classifications because traffic volumes and speeds are lower as compared to higher classification roadways. Therefore, smaller access spacing is identified on these minor roads (alleys, locals, and collectors) except near intersections with major roads (expressways, principal roadways, or arterial roads). Accesses along collector and local roadways should align with existing or future accesses across the roadway. If alignment is not possible, access offsets should meet the spacing requirements below. The spacing guidelines along alleys, local roads, and collector roads are outlined in **Figure 5.10** and **Table 5.6**.

Access adjacent to roundabouts should follow the minimum spacing guidelines identified in **Table 5.6** measured from the edge of the circulating roadway and located outside of the splitter island taper.

Figure 5.10: Spacing on Alleys, Local Roads, and Collector Roads

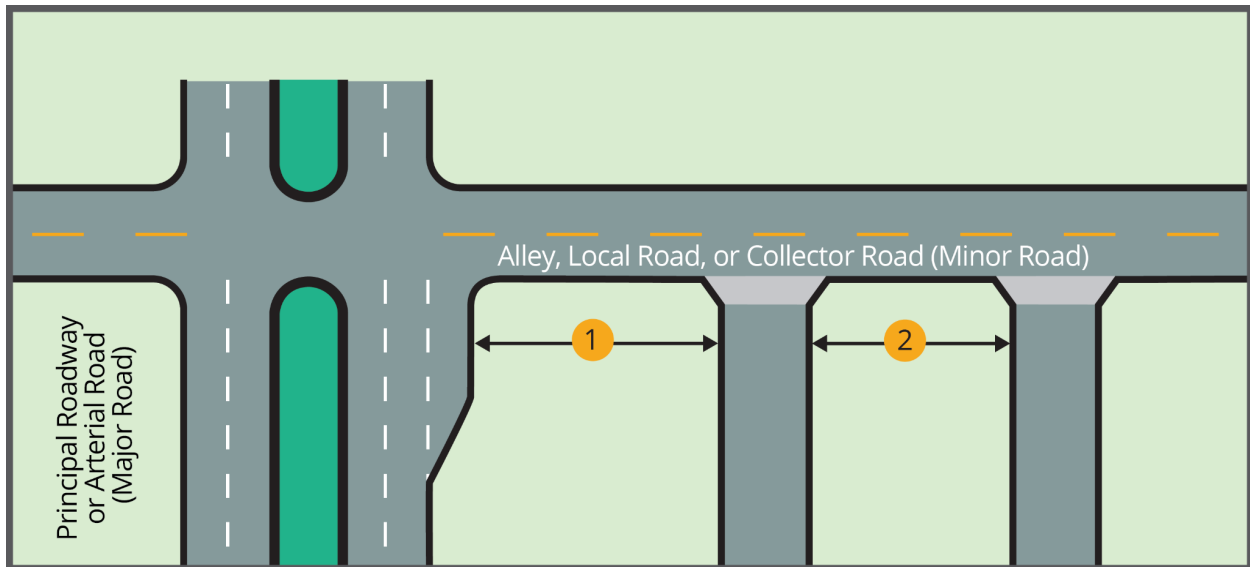


Table 5.6: Spacing Guidelines on Alleys, Local Roads, and Collector Roads

Classification of Road Being Accessed	Minimum Spacing from Major Road (1)	Minimum Spacing from Access or Minor Road (2)
Collector	40m	30m ¹
Local	40m	20m ¹
Alley	10m	N/A

¹Where the access spacing is larger than the lot width, the lot access shall be positioned as far away from the access or minor road as possible.

5.3.9 Right-Turn and Left-Turn Bays

Right-turn and left-turn bays are separated from through traffic and are provided to prevent turning traffic from blocking or impeding through traffic. Usually, the turning bay is introduced by a taper - a transition that gently introduces the full width of the turning lane, allowing drivers to distinguish and smoothly move into the turn bay as they decelerate. An auxiliary lane may be developed to accommodate right turn movements at several consecutive accesses. Turn bays are typically needed along roadways where vehicle traffic flow is prioritized, especially for left turning vehicles. This section identifies where turn bays into site accesses should be considered. Turn bays and tapers should be designed and constructed in accordance with the latest version of the Edmonton Complete Streets Design and Construction Standards. The provision of right turn bays at site accesses should consider the following:

- Existing and future road volumes, access volumes, and access operations;
- Transit stop locations and current transit operations (eg. Curb-side vs. layby); and
- Corridor design including existing or future active transportation facilities, existing and future context, and roadway classification.

Where a right-turn bay is provided, site access should be designed with smaller curb radii to minimize active transportation crossing distances and lower vehicle speeds crossing active transportation facilities when entering and exiting the site. **Table 5.7** summarizes the guidelines for the development of right turn bays at site accesses.

Table 5.7: Right-Turn Bay Guidelines

Classification of Road Being Accessed	Right Turn Lane Needed?	Exception Considerations
Expressway and Principal Roadway	Yes	None
Divided Arterial	Yes	<p>Where right turn volume represents <10% of the approach volume, or is less than 100 vph.</p> <p>Where right turn bays are provided along <50% of site accesses/intersections within 1km on either side of the site access.</p> <p>Where buses stop in the through lane.</p> <p>Posted speed is ≤50 km/h.</p>
Undivided Arterial	No	Where access is planned to be signalized.

Left turn bays are generally required along expressways, principal roadways, and divided arterials. Undivided arterials in Edmonton may include painted left turn bays or centre two-way left turn lanes, or may not provide any separation of left turning vehicles from through traffic. Therefore, the provision of left turn bays at site accesses along undivided arterials should consider the following:

- Roadway classification and goods movement requirements;
- Existing/proposed left turn bays (painted or otherwise) along the corridor;
- Existing and future arterial road volumes; and
- Anticipated access volumes.

Where an access is proposed to an undivided arterial and development of a left turn bay is not proposed, supporting documentation should be provided with the site access strategy outlining the rationale for the development of the access without a left turn bay. A capacity analysis may be required at the direction of the City department responsible for transportation planning. **Table 5.8** summarizes the guidelines for the development of left turn bays at site accesses.

Table 5.8: Left-Turn Bay Guidelines

Classification of Road Being Accessed	Left Turn Lane Needed?
Principal Roadway	Yes
Divided Arterial	Yes
Undivided Arterial	Review Context ¹

¹Provide justification with submission of access strategy.

5.4 Access Type

In Edmonton there are five types of access as shown in **Figure 5.11**. The following describes how the different types of access are typically used.

Figure 5.11: Access Types

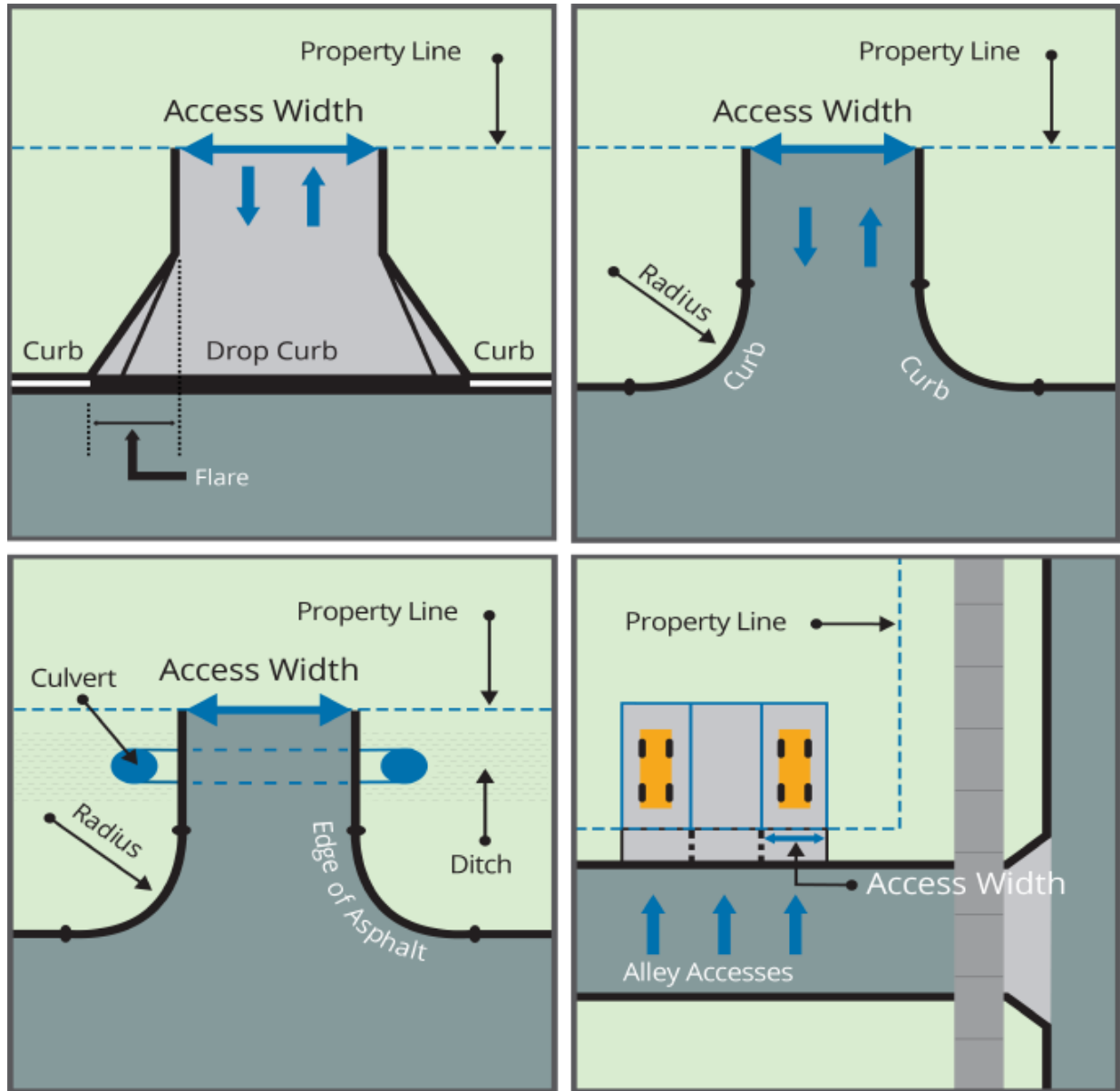


Table 5.9 summarizes the preferred access type between curb return and commercial crossing accesses, depending on the road classification. All signalized accesses must be constructed as curb return accesses.

Table 5.9: Commercial Crossing and Curb Return Guidelines

Classification of Road Being Accessed	Preferred Access Type
Principal Roadway	Curb Return
Divided and Undivided Arterial	Commercial Crossing, unless any of the following criteria are met, then a Curb Return must be used: <ul style="list-style-type: none"> • The access is planned to be signalized; • The access is at the end of a turning lane; • The access is uni-directional (eg. right-in only, right-out only); or • To accommodate design and construction requirements, the applicant's aesthetic requirement, grade criteria, or utility issues.
Collector and Local	Commercial Crossing

Commercial Crossing (Curb Drop) - An access where the vertical curb is dropped to allow vehicles to pass, but the gutter continues to allow drainage along the curb line, and a flared concrete apron connects the public road to the private land parcel.

Private Crossing - A smaller version of a commercial crossing. Private crossings are used only for single-family homes where the curb is not low profile or if the landowner chooses to request a private crossing.

Curb Return - A paved asphalt driveway with smooth radius concrete curbs connecting to the curbs of the adjacent road. Curb returns are used on roadways with curb and gutter where grade control is important.

Culvert Crossing (Rural) - An asphalt paved driveway with a culvert along the ditch line of a rural road. Used where rural roads (ditch drainage) exist including crossing a bioswale. Culvert crossings should be used along rural roads with approval from the City department responsible for drainage.

Alley Access - A paved connection at the grade of the lane directly to the private property. Alley accesses are to be used in alleys only.

5.4.1 Vehicle Access Crossing Active Transportation Facilities

Regardless of access type, consideration should be given to vehicles crossing existing or planned active transportation facilities including protected bike lanes, shared pathways, monowalks, and boulevard sidewalks. Commercial crossings are preferred where boulevards are provided as the sidewalk elevation can be maintained across the access.

Access design should adhere to the latest version of the Edmonton Complete Streets Design and Construction Standards.

5.5 Access Width

Access width is the width of the driving surface at the property line as shown previously in **Figure 5.11**. The access width depends on the design vehicle, the number of lanes required, and the access type.

Access widths should be minimized to reduce the conflict area where vehicles cross active transportation facilities. **Table 5.10** outlines the access width guidelines for commercial, industrial, and mixed use sites.

Table 5.10: Access Widths for Commercial, Industrial, and Mixed-Uses

Lane Configuration and Design Vehicle Type	Width ¹
Two-way, passenger vehicles	7.5m to 9.0m
Two-way, medium trucks	9.0m to 11.5m
Two-way, large trucks and Edmonton transit buses	11.5m to 13.5m
One-way exit or entry, all vehicles	5.0m ²
Multiple lane (as identified by the City or through a Transportation Impact Assessment)	3.3m per lane ³

¹Width does not include median; if median is used, the median should be between 1.0m and 4.0m wide.

²6.0m may be required for entrances that need to accommodate emergency vehicles.

³If the access includes a median, clearance width in each direction should be at least 5.0m wide.

Table 5.11 outlines the access width guidelines for residential sites. Proposed access widths smaller or larger than the widths identified in the tables below require a swept path analysis to confirm site design vehicle requirements. Swept path analysis must be prepared and authenticated by a Professional Engineer registered with APEGA or a Professional Architect licensed with the Alberta Association of Architects that deems swept path analysis to be within the scope of their practice.

Table 5.11: Access Width for Residential Sites

Type of Residence	Width ¹
Multi-family sites < 250 units	7.5m to 9.0m
Multi-family sites >250 units	9.0m to 10.0m ²
Single family sites	3.0m target width

¹Width does not include median; if median is used, it should be between 1.0m and 4.0m wide.

²Drive aisle to accommodate two outbound lanes and one inbound lane. If the access includes a median, the inbound lane should be at least 5.0m wide.

5.5.1 Channelizing Islands

The introduction of channelizing islands at accesses is not preferred; however, they may be considered when the required access width determined through a swept path analysis results in a significant crossing distance for active transportation users. Where previously channelizing islands were often used to accommodate turning movements at higher speeds, channelizing islands should be used to minimize the active transportation crossing distances while accommodating swept path movements and should be designed to provide a pedestrian refuge and highlight visibility of vulnerable road users within the boulevard.

Channelizing islands will not be accepted to restrict access to right in/right out only along undivided roadways. Centre medians on the public roadway will be required to manage turn restrictions at site accesses.

5.6 Access Throat Length

Access throat length (a) is the length of the access from the public roadway face of curb to the first on-site intersecting drive aisle or parking stall as shown in **Figure 5.12**. This length depends on the development size, land use, and the road classification as outlined in **Table 5.12**. For major developments a Traffic Impact Assessment may be required to determine access throat lengths.

For sites with controlled access (e.g., security gates), the access control should be positioned such that at least one vehicle can queue entirely on-site and clear of the public road right-of-way including sidewalks, shared pathways, parking lanes, and travel lanes. The vehicle length should be determined based on the largest design vehicle for the site.

On collector roads, a throat length of at least 12m is required, while a minimum throat length of 6m is required on local roads. There is no minimum throat length requirement for alleys.

Figure 5.12: Access Throat Length

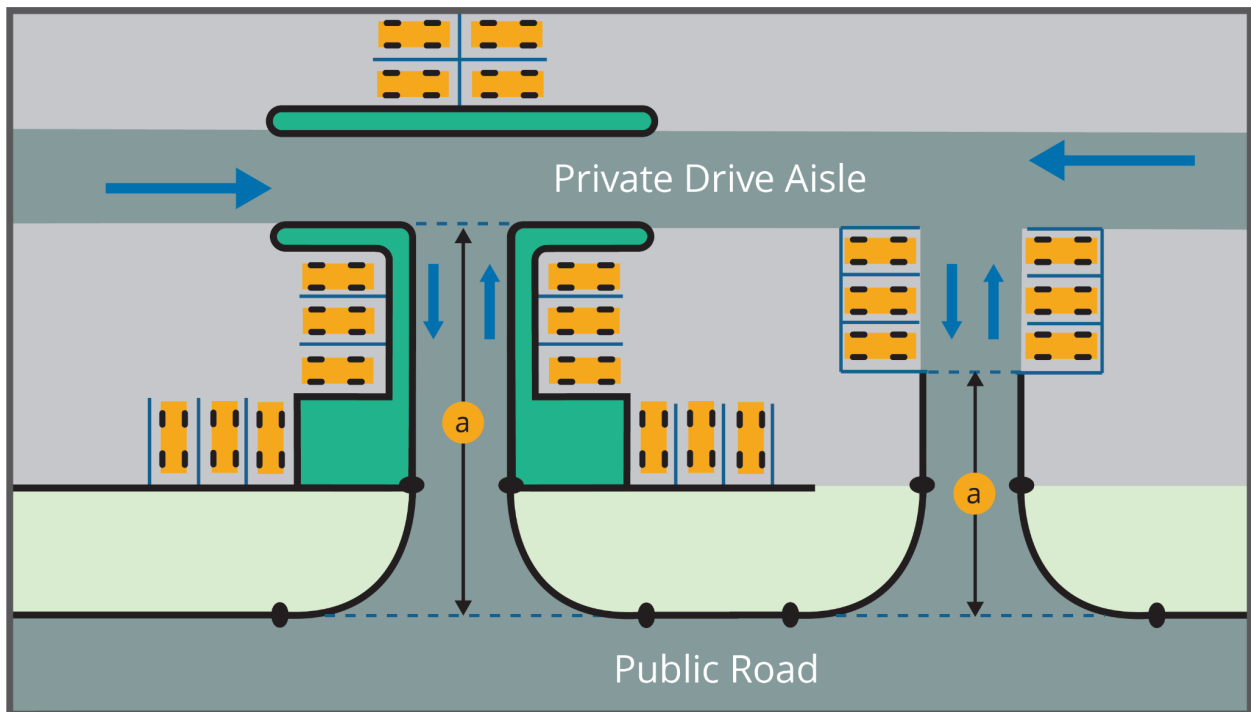
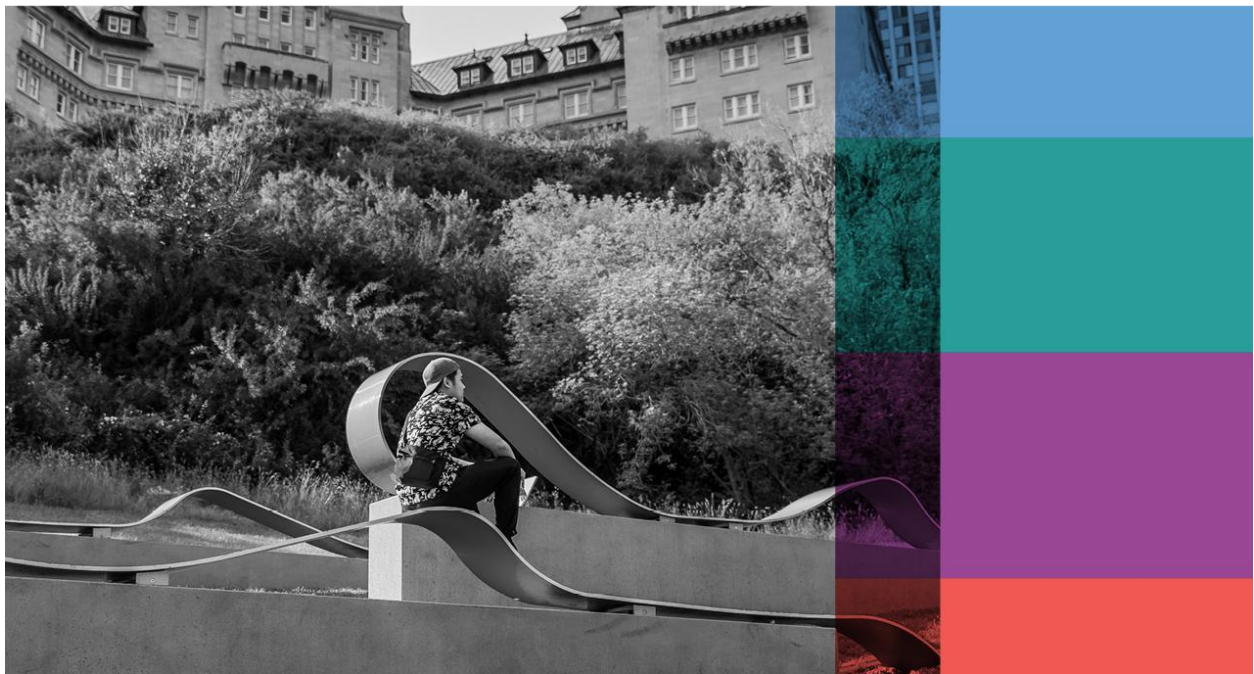


Table 5.12: Access Throat Length Guidelines

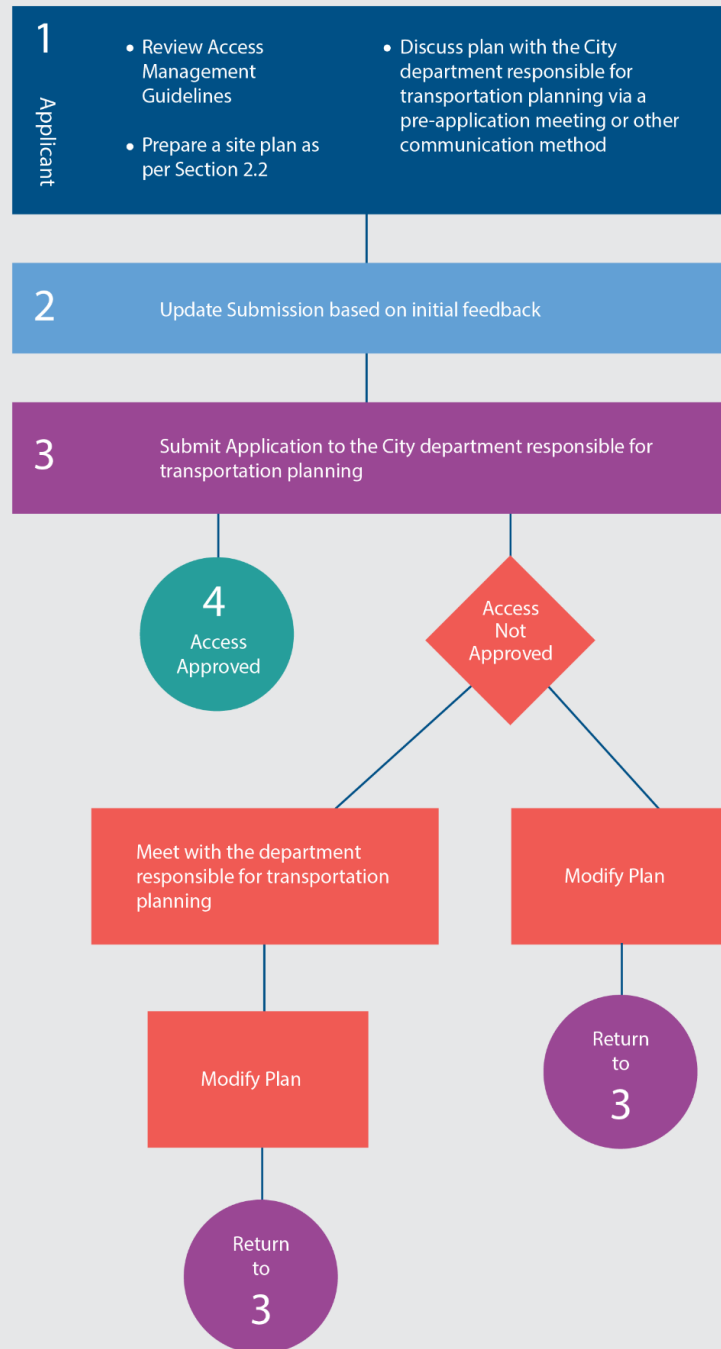
Land Use	Site Area	Minimum Throat Length	
		Arterial	Principal Roadway
Light Industrial	Less than 10,000m ²	15m	40m
	More than 10,000m ²	30m	70m
Shopping Centre	Less than 45,000m ²	30m	60m
	More than 45,000m ²	45m	130m
Office	Less than 10,000m ²	25m	60m
	More than 10,000m ²	50m	130m
Drive Through Restaurants	All Sizes	40m	70m
Gas Bars ¹	All Sizes	30m	60m
Mixed use	All Sizes	30m	70m
Multi-family	All Sizes	20m	50m

¹A swept path analysis may be requested to confirm fuel truck circulation.

APPENDIX A: ACCESS REVIEW PROCESS



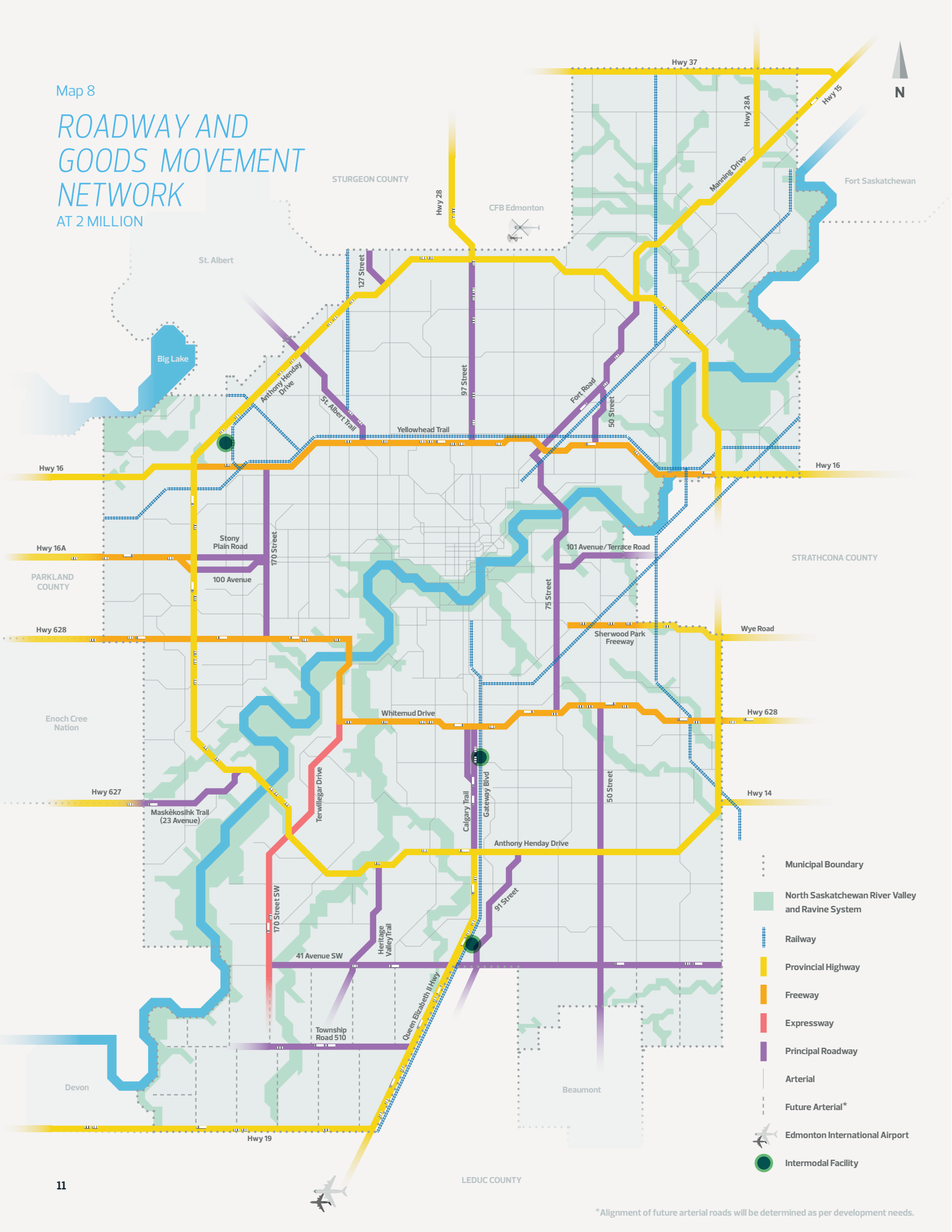
ACCESS REVIEW PROCESS



APPENDIX B: MAPS



ROADWAY AND GOODS MOVEMENT NETWORK AT 2 MILLION

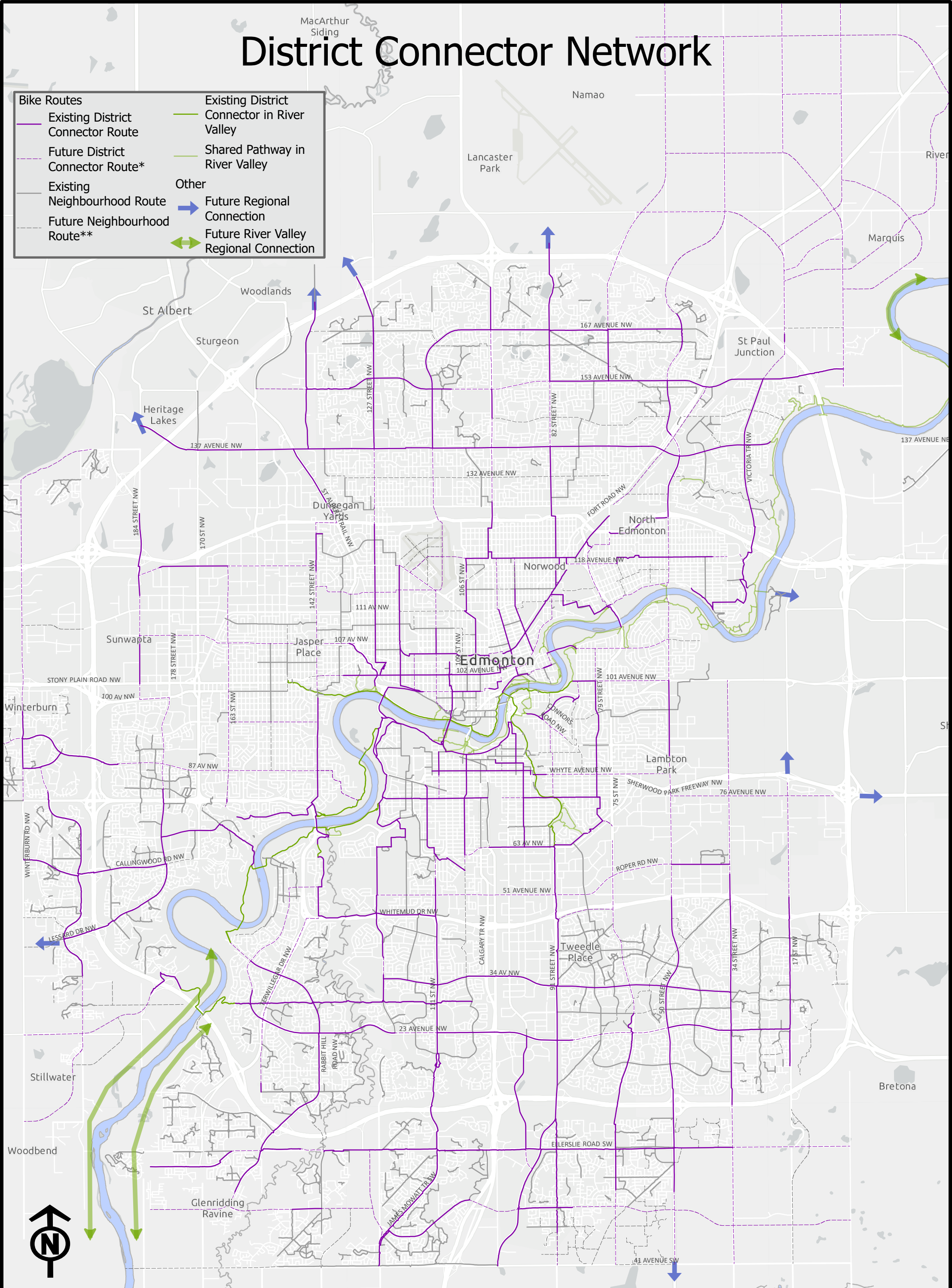


- Municipal Boundary
- North Saskatchewan River Valley and Ravine System
- Railway
- Provincial Highway
- Freeway
- Expressway
- Principal Roadway
- Arterial
- Future Arterial*
- Edmonton International Airport
- Intermodal Facility

*Alignment of future arterial roads will be determined as per development needs.

District Connector Network

Bike Routes	
	Existing District Connector Route
	Future District Connector Route*
	Existing Neighbourhood Route
	Future Neighbourhood Route**
	Existing District Connector in River Valley
	Shared Pathway in River Valley
	Other Future Regional Connection
	Future River Valley Regional Connection









Recommended Route Spacing
 City Centre = 400m
 Tier 1 Central = 400 - 600m
 Tier 3 Central + Suburban = 800 - 1,000m
 Tier 3 + 4 + 5 Suburban and Industrial = 1,600 - 2,000m

*Future bike route is intended to communicate a need for a connection in the vicinity of the line shown, but the specific alignment for each route is not yet determined.
 **The majority of future neighbourhood routes are not shown as they will be planned and designed at a local level based on network spacing and input from residents. Potential future neighbourhood routes are identified where they provide continuous biking opportunities across neighbourhood boundaries. See Edmonton.ca/BikePlan for more details.

Mass Transit for 1.25 million People By Service Type

Legend

-  Existing + Assumed Future LRT
-  Semi-Exclusive
-  Limited Stop Rapid
-  Frequent
-  Regional Connector
-  Airport Connector

