

HYBRID CODES

A BEST PRACTICE FOR LAND USE PLANNING

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Executive Summary

The purpose of this report is to provide an overview of the emerging best practice in zoning – the hybrid code. This report provides an overview of what a hybrid code is, why they are important, who is doing them, and what can be learned for The City of Calgary in the consideration of a new land use bylaw.

The land use bylaw is the only regulatory tool for municipalities in Alberta to regulate the use and development of land and are critically important in affecting how a city evolves over time. Most bylaws are based on a primarily use-based approach developed in the early twentieth century. While attempts have been made to better align bylaw regulations with a city's strategic direction, the approach is fundamentally flawed. As many municipalities are grappling with a better way to implement the policies of their comprehensive plans, hybrid codes are emerging as the best practice.

A hybrid code is an adaptation of the use-based regulations with a newer form-based approach. This approach balances these two types of development standards while uniquely focusing on a more predictable, outcome-based application process. A hybrid code is the outcome in the creation of clear, quantifiable standards expressing the 3-dimensional vision for a city. It respects a community's current state while accommodating future growth. When planning policy is implemented through use of a hybrid code and clearly defined application process:

- The user experience is elevated;
- Processing times are reduced; and,
- Expectations set with community members and stakeholders are respected.

The use of a hybrid code becomes a key tool for delivering the vision of the Municipal Development Plan.

An integration of form and use standards in a bylaw is not new. Most have traditionally included both elements. However, what is unique about a hybrid code is the relationship between form, use and the application process. Instead of use over form, or form over use, a hybrid code balances the two equally to be organized by the application process. Three of the most prominent hybrid code examples in North America are High River, Alberta; Halifax, Nova Scotia; and Denver, Colorado. These examples show:

- The ability to adopt a municipal-wide hybrid code in Alberta with recognized success in strengthening relationships with community and stakeholders;
- How a larger Canadian municipality's use of a hybrid code permitted an overwhelming success of new development and expansion of the approach to established communities; and
- How adopting a hybrid code through an incremental progression encourages the integration of context-sensitive design through a layered approach.

For Calgary to deliver a new hybrid code, key considerations recommended include:

1. Building on the learnings and success of the mixed-use main street districts and the Guidebook for Great Communities as the foundation for creating a made-in-Calgary code;
2. Re-focusing the code on form to provide more clarity on the strategic implementation of the Municipal Development Plan;
3. Defining clear and predictable outcome-based standards so as not to burden individual applications with strategic decisions;
4. Developing clear application processes that reinforce quantitative regulations; and,
5. Elevating the user experience of the bylaw to reduce cross-referencing and confusion of interpretation.

Together, these recommendations would result in a predictable application process with quantified design standards that allow for a mix of uses appropriate to different areas of the city. The various elements of a complete community are defined and known to all users and stakeholders, conveyed in a bylaw that first and foremost is easy to understand.

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1 What is a hybrid code?

The land use bylaw is the only mandatory requirement for regulating the use and development of land that essentially include three key components:

- A. Zones or districts with defined uses;
- B. Form or design components; and
- C. Permitting / approvals process.

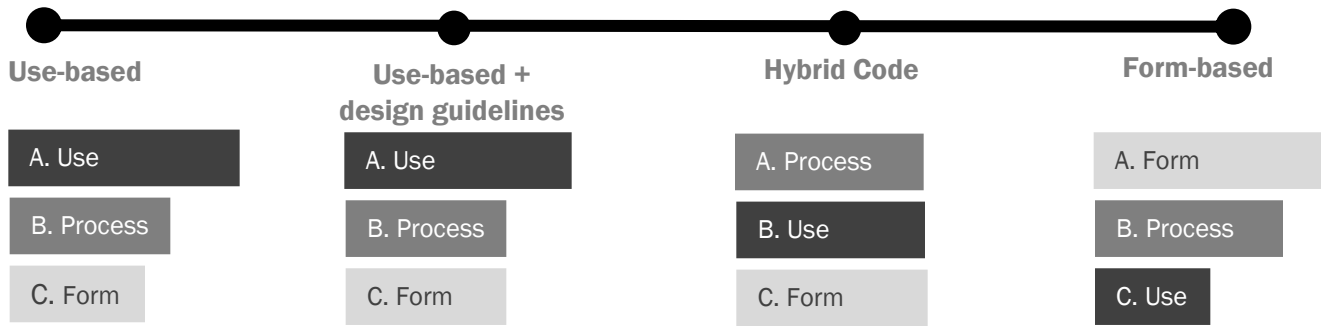
All land use bylaws have these three components; however, each approach results in a focus or emphasis on one aspect over another (See Figure 1).

The four primary types of zoning approaches include:

1. **Use-based bylaw.** These are traditional bylaws found throughout Alberta and Canada, where each land use district first defines the uses, or activities on a given parcel. Limited form standards are included, such as height or setbacks, followed by an application process that respects but does not address gaps in the *Municipal Government Act (MGA)*. Use-based bylaws segregate activities and are challenged to implement policies for complete communities.
2. **A use-based bylaw coupled with non-statutory design guidelines.** In this case, the bylaw is very similar to (1), but with detailed, non-prescriptive design direction addressing built-form considerations. These guidelines often include massing, orientation, entranceway design, and / or architectural considerations. While including additional design guidelines it risks additional processing times to applications due to the discretion involved.
3. **A form-base bylaw.** Primarily popular in the United States, this zoning approach emphasizes form, or design, over use. The intent with this type of bylaw is to regulate the site (primarily the public realm) and building design. This allows for a mix of uses as the activities can become more flexible. As the form standards do not separate uses, they can better implement policies for complete communities. It is sometimes assumed that the prescriptiveness of the form elements would make the application process clearer through the use of visualization and graphics. However, the form-based terminology is often too technical and difficult for the average user to clearly understand.
4. **A hybrid bylaw** is a mix of both use (1)- and form-based (3). It integrates design standards quantitatively in a regulatory format. In order to balance both use and form-based elements, the organizing principle becomes the application process. As a result, through the creation of the bylaw, or code, strategic decisions and consensus are required before adoption. This consensus upfront thereby reduces the need for these same decisions repeated during the application process.

Hybrid codes balance use and form standards in a user-based experience with predictable application processes.

Figure 1: The Zoning Spectrum



Increasingly, zoning bylaws are shifting away from design guidelines as the flexibility imbued in them creates uncertainty for applicants and the community. The ‘made-in-Canada’ hybrid bylaw approach to zoning is emerging where design standards are quantitatively included with a focus on the

application process. This provides increased certainty and clarity by defining the elements that are most important to the future growth of the city. This shift from primarily use-based offers a balanced approach to form and use that falls in the middle of the zoning spectrum.

1.1 LEGISLATIVE CONTEXT

All aspects of a hybrid bylaw are enabled in the *Municipal Government Act (MGA)*. The MGA provides broad direction while still allowing for municipalities to respond to local conditions. As such, the MGA enables hybrid codes through a combination of both the mandatory and optional items, identified in Table 1.

By definition, all land use bylaws must include the mandatory items and can, although do not have to, include the optional items. Currently, most land use bylaws also include the majority of optional built-form items listed in the right-hand column of Table 1. Height, setbacks, lighting, parking, signs, fences, access / egress, alterations, and floor area are all common items and are also form-based considerations. While the MGA requires uses and application processes to be defined it also enables form. Most municipalities have included some, if not all, of these form

elements. Together these elements create the form, or design, of a site.

These regulations also allow for building design requirements. To do so, building design must be clearly and quantitatively defined like the standards developed for site design elements.

The City of Calgary Charter, 2018 Regulation (City Charter) does not change these basic requirements, but rather also allows The City of Calgary to create provisions for inclusionary housing and adjust the definitions and setback requirements to wastewater treatment facilities, and landfills, hazardous waste management facilities, or storage sites. These additional regulations provide greater flexibility in developing a made-in-Calgary bylaw, or code.

Table 1: Municipal Government Act Requirements for Land Use Bylaws in Alberta

Mandatory (S.640 (2))	Optional (S.640 (4))
The Land Use Bylaw must include:	The Land Use Bylaw may include:
<ul style="list-style-type: none"> • Divide the municipality into districts • Prescribe permitted and / or discretionary uses; • Establish a method of making decisions on applications; • Provide for how and to whom notice of the development permit is given; and • Establish the number of dwelling units permitted on a parcel. 	<ul style="list-style-type: none"> • Subdivision design standards • Ground area, floor area, height, size and location of buildings • The amount of land to be provided around or between buildings • The location, height and maintenance of fences and walls • The design, character and appearance of buildings • The location and amount of access to lots from roads • The lighting of land, buildings or other things • The enlargement, alteration, repair, removal or relocation of buildings • The landscaping of land or buildings

1.2 USE OF PRESCRIPTION AND DISCRETION

The unique outcome of applying a hybrid bylaw is increased clarity for key elements of design while also allowing discretion on aspects that are not as important. When a hybrid code is not used, the application of design standards is affected by the interpretation and can reduce clarity.

Clear design regulations result in a common set of rules with clear expectations. Coupled with a clearly defined process for review:

- The user experience is elevated;
- Processing times are reduced; and,
- Expectations with community members and stakeholders are respected.

The application process is therefore key for a successful hybrid bylaw. It reflects and supports implementation of the community vision with appropriate stages of review commiserate with the value to The City, community and stakeholders.

Qualitative and Quantitative Standards

One of the major contributions of hybrid-codes to the zoning spectrum has been the introduction of quantitative design standards. While form-based codes tend to quantify many aspects of building design, including architecture, the Canadian approach of hybrid codes has been to identify and quantify only those elements of building design that are identified as the most important for the

municipality and the community. These types of quantitative design considerations often include building orientation, massing, building entrance standards for accessibility, tower separation distances, and façade articulation.

The use of qualitative versus quantitative standards is directly associated with prescription and discretion. As the MGA requires uses to be defined as either permitted or discretionary, building design standards had previously been considered discretionary only. For example, most land use bylaws define the number of parking stalls required for a given type of development. That number of parking stalls defines how the site is designed by determining how much land is required and

Clear rules coupled with clear processes elevates the user experience, reduces processing times, and expectations with community members and stakeholders are respected.

where accesses or landscaping will be placed. The remainder (minus setbacks) is the location of the building(s), sidewalks, landscaping, etc. The parking is a set number in the bylaw. As such, a permitted use can include the requirement for parking because a clear requirement can be applied without discretion. Like parking, by quantifying building design standards, the significant elements of building design are clear as part of the bylaw.

The use of design standards can differ by location simply through the application of land use districts, or zones. The zoning or districting tool in the land use bylaw allows for context-sensitive design and the application of location-based discretion.

1.3 RELATIONSHIP TO POLICY

Land use bylaws implement the strategic direction of comprehensive plans and land use policies of a municipality. As the only regulatory tool defined in the MGA, land use bylaws are uniquely required to implement that direction. Yet the ‘rules’ of the bylaw have demonstrated to be ineffective in that regard resulting in increased processing times to ‘fit’ an application to the rules—similar to the round peg, square hole analogy.

Use-based zoning, developed in the early twentieth century, is a uniquely North American approach. The goal at that time was to separate uses considered to be incompatible. Comprehensive planning in the form of policy followed in the 1920’s when it was realized that zoning alone could not address the land use planning needs of defining growth patterns or future community needs. Zoning became, and remains, the rules

for development that implement the strategic vision or policy for a community. The two tools—policy and zoning—make up the planning system and are expected to work in concert with one another.

However, the use of zoning based on the separation of uses has persisted throughout the years despite a drastic re-focusing of policy to encourage mixing uses and fostering development of complete communities. The historical approach is unable to support the current policy direction without a significant change.

Steps have been made by The City of Calgary to create mixed-use, complete communities within the current use-based approach including the new mixed-use districts or direct control districts that provide a greater variety of uses with some quantifiable design

standards. The template of these types of districts is the starting point for exploring a city-wide approach.

Traditional use-based zoning approaches do not implement policies for complete communities and mixed uses.

1.4 OPPORTUNITIES AND CONSIDERATIONS

Predictability & Process

Hybrid codes provide several unique opportunities. The development of a hybrid bylaw requires key strategic decisions being made prior to adoption rather than on the backs of individual applications. When a bylaw does not fully reflect, or is in conflict with policy, the strategic direction must be evaluated as part of the application process. The hybrid bylaw reduces these incidents of uncertainty, which in turn supports decreasing processing times and increasing predictability.

A hybrid code is primarily executed through a clearly defined application process. One that balances use and form. This balanced approach is a clear reflection of the strategic priorities of a municipality with defined standards to accommodate growth and change.

A vision collectively developed in the form of the comprehensive plan (i.e., local area plans and the municipal development plan) is more effectively implemented when the predictability of the land use process provides increased certainty and comfort for users.

Reduced Red tape

A predictable process with clear standards requires less discretion and reduces red-tape. To foster this environment, the development of a hybrid bylaw on which aspects of design are quantified and clarifying what:

- Quantifiable standards should be; and,
- Uses in districts which should be permitted rather than the majority be discretionary.

This approach sets a clear and defined standard for the activities that are supported; and most importantly, how the application processes will result in a higher level of certainty for all users from the outset.

Heritage

Hybrid codes are uniquely positioned to integrate standards for heritage considerations. Form standards are often a key requirement in defining heritage standards as they relate directly to building design. In municipalities that have adopted or considered additional building design standards, heritage is often a key factor. A hybrid codes balance of form and use can support the integration of heritage assets while addressing transition concerns associated with growth.

Affordable Housing

Hybrid codes also provide an additional opportunity for affordable housing by defining a clear and consistent design standard while de-emphasizing the use. Hybrid bylaws emphasizes an approach to balance use and form to clarify how housing form is defined, but not confusing it as a use.

Parking

Parking minimums are often a key consideration for new bylaws, specifically a hybrid approach meant to balance use and form requires a reconsideration of how parking can best achieve The City's vision. There are many options for re-calibrating parking that balance community needs with both short- and long-term land requirements for The City.

Why Not a Pure Form-Based Approach

Form-based zoning used in the United States is organized around street patterns. In Canada the land use bylaw does not regulate streets and has difficulty regulating much of the public realm which falls to the engineering standards and land title instruments. American form-based codes, while more visual than traditional use-based bylaws, often have such a detailed level of prescription and design that users still find them confusing and

are not easily adapted to a colloquial understanding of residential, commercial and industrial development.

Considering the Canadian context, a hybrid code can be used and designed to reinforce the policy direction in a way that creates a positive user experience with both form and use standards.

Transitioning to a New Approach

Hybrid bylaws are not new and there are significant precedents in Alberta, Canada, and the U.S. that can inform a made-in-Calgary approach. The creation of the bylaw itself is an opportunity for greater understanding and collaboration by all potential users including community members, staff, developers, and other stakeholders. The development of the districts and specific standards are a platform for training and generating support and a more successful transition.

2 Hybrid code precedents

Many municipalities have modified, or tried to modify, their regulations to integrate new buildings design standards and form elements. The hybrid approach addresses the cost of their development (of the code) and incongruences with current forms by focusing on:

- Use of simple graphics and terms;
- Clear processes;
- Less ambiguity on the application of discretion; and,
- A focus on clear objectives that streamline the development of the code.

Municipalities that have successfully implemented hybrid codes with clear policy direction and a phased approach generally helped facilitate the transition from a more traditional bylaw. Form and design elements are often already included in policy as they are

important to the creation of complete communities and many regulations already include many of the desired design elements. Often, they are unclear or not recognized. The transition to a new code then is focused on clarifying what is already there with a emphasis on who and how it will be used in the future.

Table 2 represents Canadian municipalities identified in a review of literature. This is not a comprehensive or exhaustive list, but demonstrates that consideration of a new zoning approach is not unique. Approaches are varied and scaled to the needs of each municipality. Each community also developed a hybrid code as a clear implementation tool of the comprehensive or local area plans that set the vision and broad policy direction. The geographical scope and methodology used were appropriate for each municipalities' unique policy direction.

Table 2: Canadian Municipalities with a Hybrid Zoning Approach

Municipality	Geographical Scope	Method	Adoption date	Applicability
Halifax, NS	Downtown & Established Neighbourhoods	Hybrid LUB	Downtown Halifax, 2006; Established Neighbourhoods, September 2019	Mandatory
Beaumont, AB	Municipality	Hybrid LUB	2018	Mandatory
High River, AB	Municipality	Hybrid LUB	2017	Mandatory
Surrey, BC	City Centre	FBC LUB	2016	Mandatory
Whistler, BC	Town Centre	FBC LUB	2015	Mandatory
Wood Buffalo, AB	Downtown	FBC LUB	2013	Mandatory
Revelstoke, BC	Municipality	FBC LUB	Draft 2013	N/A
Centreport, MB	Municipality	Hybrid LUB	2013	Mandatory
Calgary, AB	Main Street	FBC DC and MU Districts	2013	Mandatory
Cornerbrook, NL	Municipality	Development Regulations	2012	Mandatory
Chestermere, AB	Municipality	Hybrid LUB	2011	Advisory
Truro, NS	Municipality	Hybrid LUB	2010	Mandatory
St. Albert, AB	Municipality	Hybrid LUB	Draft 2010	N/A

2.1 CASE STUDY: HIGH RIVER, ALBERTA

The Town of High River was the first municipality in Alberta to successfully adopt a municipal-wide hybrid land use bylaw in 2016. Following the flood in 2015, Council and Administration realized their current land use bylaw was ineffective in helping homeowners rebuild. The process was cumbersome and lengthy and did not support the re-creation of what was lost. Nor did it facilitate the community envisioned the comprehensive plan. As a result, they wanted a new bylaw – one that could support redevelopment in an easy-to-use, innovative way. To achieve those goals, the hybrid bylaw emerged from both the use- and form-based approaches, and with an emphasis on what the Town was to become as opposed to what it was at the time the bylaw was drafted.

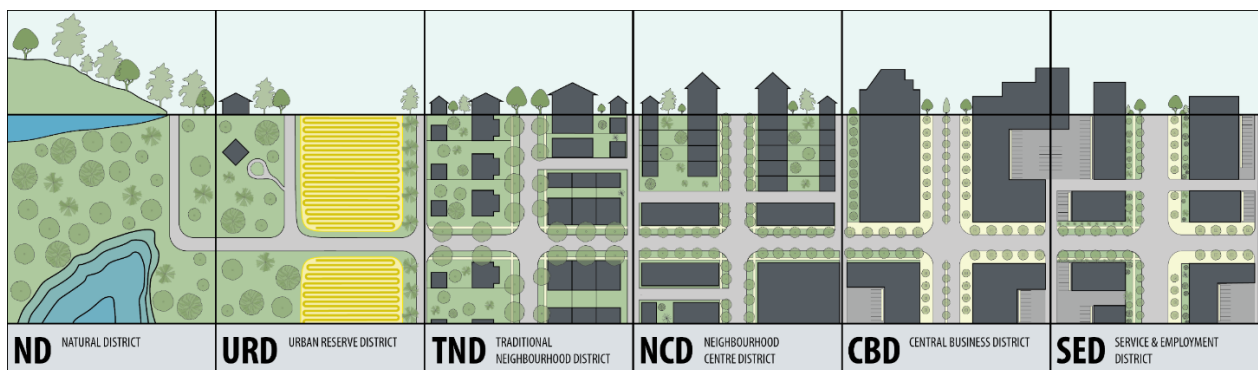
The High River Land Use Bylaw was the first of its kind to be based entirely on the user experience. The bylaw itself was re-structured based on how an average citizen would understand and read it. The Town's 37 land use districts with few uses were reduced to 6 districts all with a variety of uses. Specific use-based standards were developed based on each district as opposed to municipal-wide

standards and design standards were included to provide clear direction on those building elements that were most important to the community. Parking minimums were removed based on best practices and maximum site area requirements were introduced in their place.

The clearly defined standards and permissibility have reduced processing times and resulted in applications for new development by and for the community that the previous bylaw would have prohibited. A monitoring program was put in place following adoption of the bylaw to capture tweaks that could not be foreseen in the development stage, to ensure a high level of customer service was maintained, and to support clearly defined processes.

As a result of this innovative approach both the Canadian Institute of Planners and the Alberta Professional Planners Institute awarded the Town's Land Use Bylaw with Awards of Merit in 2018.

Figure 2: High River Land Use Districts



2.2 CASE STUDY: HALIFAX, NOVA SCOTIA

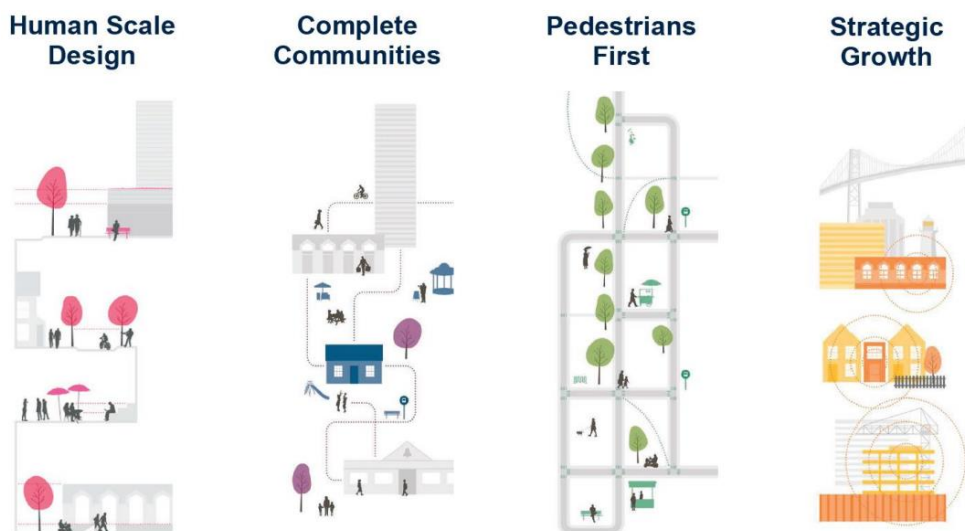
Halifax is the largest municipality in Canada to use a hybrid code through the Downtown Halifax Secondary Planning Strategy and Land Use Bylaw (2006). The new planning framework integrated, policy, a hybrid bylaw and design guidelines. The outcome of this Plan was an increase in design standards throughout the downtown not previously seen in Halifax - 21 new developments in the centre city within seven years of adoption. The approach decreased conflict between community and developers, and re-focused decisions on clearly defined standards.

Due to the Downtown Halifax Plan exceeding its implementation targets, the area where a hybrid code will be used is being expanded with the Centre Plan (established communities) initiative. With a public hearing scheduled for September 2019, the draft Centre Plan Policy and Land Use Bylaw sets a new zoning precedent for larger municipalities. The regulations were developed through extensive consultation with community, stakeholders, and committees.

The Centre Plan includes the central pre-1960 developments in Halifax proper as well as Dartmouth. Like High River, the draft Centre Plan Land Use Bylaw proposes a reduced number of land use districts, additional permitted uses, clear building and site design requirements presented graphically and in text, and three clearly defined application processes dependent on the location and type of application.

The clearly quantifiable standards have removed the requirement for a design review committee in the established neighbourhoods. The 2006 Downtown Halifax Secondary Planning Strategy allows for a shortened application timeframe due to the regulations in the Halifax Charter. This timeframe can be accommodated with clearly defined requirements for a complete application, which have the added benefit of vetting speculative applications that could not meet the complete application standards.

Figure 3: Halifax Centre Plan Core Concepts

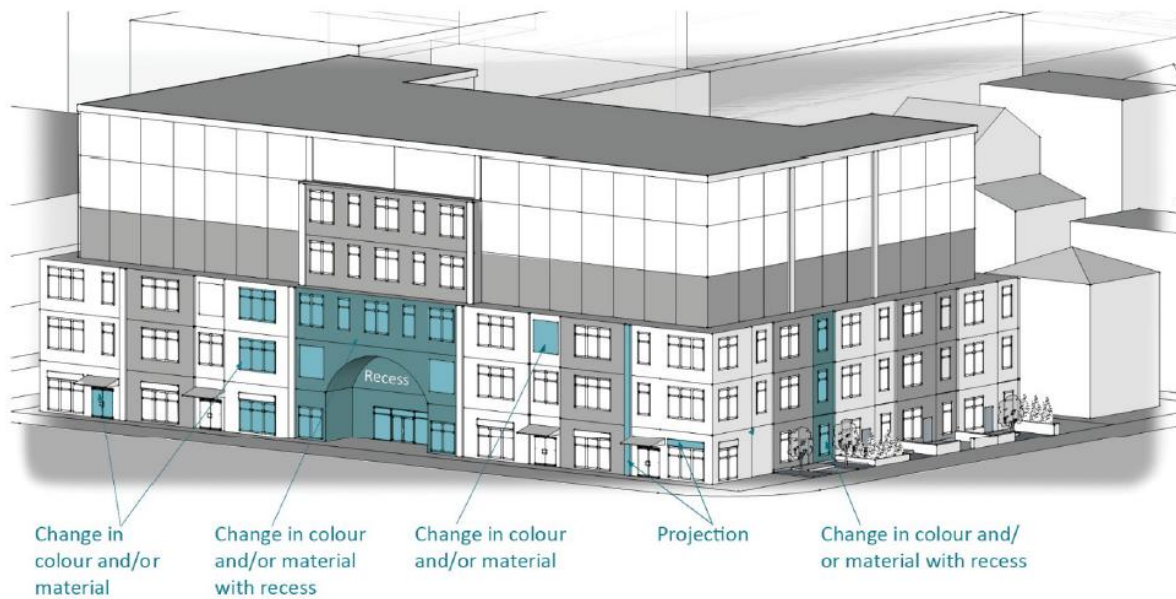


Outside of the downtown, the design standards proposed are not as stringent but are still clearly defined. This approach reflects a balance of higher design standards without significantly adding costs in strategic locations such as main streets.

Additionally, the proposed bylaw includes a density bonusing requirement and two

performance zoning measures. The community identified the need for affordable housing which is the single trigger to access density bonusing. Furthermore, performance measures were added for both wind and shadowing as those elements were considered necessary to design appropriate buildings but are not easily quantifiable.

Figure 4: Halifax Design Standards



2.3 CASE STUDY: DENVER, COLORADO

Denver adopted a hybrid code in 2010 based on a mix of use- and form-based standards. This code applied a leveled approach with broad land use categories followed by specific use typologies within each category and building form standards. The approach was designed to reduce the reliance on discretionary permits.

In 2000, Denver adopted a new Comprehensive Plan. It identified the inability of the existing zoning code to implement the city's sustainability goals. A complimentary plan called the Blueprint Denver was developed in 2002 to determine how to best to adopt a new code that would realize the city's vision. Blueprint Denver specifically defines 'areas of change' or growth and areas of 'stability'. The 'areas of change' were typically located around multimodal corridors or areas where mixed-use developments were desired.

This foundation led to the adoption of three main street mixed-use districts that

successfully integrated design standards in target areas for redevelopment or infrastructure improvements. This incremental success demonstrated the value of the hybrid approach and enabled the 2010 municipal-wide code.

The Code divides the City into 67 zoning districts based on a use-based approach within seven intensity-based neighbourhood types intended to integrate context. Each of the 67 zones are characterized by existing or permitted building typologies.

The primary criticism of the Denver Code is its continued complexity. Despite the balanced approach of form and use standards, the user experience and the development processes were not defined as clearly as they could be. The additional contextual considerations have continued to be somewhat confusing to interpret and apply, reducing the effectiveness of the overall approach.

Figure 5: Denver Code Design Standards



3 Recommendations

This scan and overview of hybrid codes has identified some clear recommendations. In conclusion, the following recommendations should be considered for a new land use bylaw in Calgary:

1. Build on existing successes with the Mixed-Use Districts and principles of the Guidebook for Great Communities.

The development of a new code is the continuation of the approach and vision developed over years of policy development, land use bylaw amendments, and community conversations. It is not new and should be recognized as such. Instead it is a further development and clarification of the direction The City is moving.

2. Re-focus conversations on form-based regulations that strategically implement the Guidebook and Municipal Development Plan.

Clarity of both building and site design elements that reflect the vision for The City is the goal for a hybrid code. As such, conversations need to be focused on what aspects of the City's vision need to be quantified and where? Only consideration of the bylaw in full can shift from the round peg / square hole approach of a use-based bylaw to the right-sizing of the balance of form and use offered by a hybrid bylaw.

This approach is most important when defining the locations of the land use

districts. When the districts are based on form, the divisions within The City are restructured to the types of buildings as well as the activities that are occurring. A mix of uses are enabled that more effectively reflect the policy direction and provides clarity both on the location and type of growth to be accommodated.

A form-based approach also requires key decisions on a variety of site and building design elements that reflect the Municipal Development Plan. Often, parking minimums are a key aspect of these conversations as large parking minimums have been demonstrated to be counter to the vision. Where land is competing for a variety of potential needs, parking is often not the highest or best use.

3. Decide on quantifiable design standards that are predictable and outcome-based.

A new code needs to include key strategic decisions that are made through the creation of the bylaw resulting in predictable and outcome-based standards. By clearly defining the design and development standards in the bylaw, these decisions are not burdening individual applications. The result is reduced processing times, increased predictability, and known outcomes for everyone.

4. Develop clear application processes that reinforce quantifiable regulations.

To create a positive user experience, application processes should focus on the implementation of that strategic vision. Similar to Halifax, clear application processes, timelines, and requirements for complete applications facilitate reduced processing times and predictability. As such, community and stakeholder relationships are respected. To be predictable, outcomes should not include incremental amendments to the bylaw that facilitate one particular development. The use of spot-zoning or one-off considerations should be the exception rather than the rule. Therefore, a hybrid code needs to be robust and strong enough to provide clear direction to Administration, as is intended in the MGA.

5. Re-structure the bylaw to be user friendly.

High River provided a clear example of what the land use bylaw could be to put the user first. The elimination of cross-referencing and clear tables with limited technical terminology is a significant step in creating regulations that are more accessible and easier to understand. Coupled with defined and clear processes similar to Halifax, the user experience would be elevated to a level not yet seen in the regulatory environment. An increased user experience inadvertently leads to better processes where all parties can clearly understand and articulate the key issues and rules in place.

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