



FIRE SUMMIT VI

**Building Alberta Safely: Defining the Next 25
Years of Building and Development Safety**

July 2016

Introduction

The Fire Summit is a biannual gathering that brings together key stakeholders – fire services, builders, representatives from the municipal and provincial governments, and consumer advocates – to discuss fire-related issues in the province. Past topics have included arson, fire safety in residential care facilities, and the fire rescue needs of the elderly and others who are incapable of self-preservation during an emergency.

Introduction by Fire Chief Ken Block



In 2006, the first fire Summit focused on raising awareness of issues associated with the Alberta Building Code. This very successful event, attended by stakeholders across the province and leaders at the municipal level, drew significant provincial and national attention and ultimately initiated a process culminating in the development of 22 Ministerial recommendations impacting the building code.

Now every two years the City of Edmonton and Fire Rescue have hosted summits to provide an opportunity for government representatives, fire service representatives, health care officials, community stakeholders and leaders in the building, development and planning industry to meet and discuss emerging life and fire safety issues for Albertans. I believe it is events like this that enhance relationships between jurisdictions, industry and government promoting an improved understanding of issues.

Sustainable development of our communities has evolved into a concept which is inclusive of so many factors. Through the process of building our cities and towns, we now place huge expectations on energy efficiency and ecology, affordability, cultural inclusion, local economics, walkability; the list goes on and on. In short, we are expanding our definition of responsible development, which continuously challenges our current processes and standards. The need for teamwork and relationships to achieve the numerous and broad goals of sustainability cannot be over-stated.

Today, we are hoping to look at the role of fire and life safety within this issue. It is unlikely that we could ever reach our goals of sustainability with a rigid and inflexible system of standards alone, and this is never more clear than when we talk about the impact of building and fire safety regulations. While it is essential that we continue to manage public safety responsibly, it is clear that some action must occur so that our expectations for safety do not suffer, but at the same time they do not hamper our vision for excellent and responsible development.

Your attendance today suggests that there is a willingness to listen to each other's perspective and present your own industry challenges and opportunities for consideration by the room. Having a balanced discussion with consideration of the five presentations should result in realistic strategies that each of us can bring back to our industry to advance the common goal of sustainable, safe development.

Purpose and Context of Fire Summit VI

Cities across North America are taking steps to create more sustainable, vibrant, walkable, and inclusive communities, and this shift in urban planning is revealing the shortcomings of the current building code. Addressing these deficiencies, however, is not a simple matter of amending the code with an eye to enhancing safety. A host of competing considerations also need to be taken into account, including housing affordability, accessibility, and environmental sustainability.

Put succinctly, the building landscape is changing rapidly, both from consumer and community demands, new technologies, and the diversity of new housing stock. As municipalities work through these unique development issues, are we taking a balanced approach to livability and public safety?

The ultimate goal of Fire Summit VI was to develop a list of recommendations to address these challenges.

The Panelists and Their Presentations

Before turning to the participants for their input and suggestions, five panelists gave presentations that provided some necessary context. Presenters included:

- Russell Dauk, the Vice President of Land Development and Commercial with Rohit Land Development, was the first to present, speaking of the need to think beyond model regulations.
- Joan Maisonneuve, the Manager of Policy and Industry Issues at the Canadian Home Builders' Association, spoke of the importance of balancing safety and affordability.
- Kevin Griffiths, the Director of Inspections and Permit Services at The City of Calgary, tackled the question of whether regulations are becoming too complex.
- Matthew Lam, the Assistant Director of the Building Review Branch and the Deputy Chief Building Official at the City of Vancouver, discussed how his city has developed responsive regulations that address emerging development trends.
- Edmonton Fire Rescue Services Chief Ken Block was the final panelist to address the participants, speaking about how the fire service should adapt to trends in development to ensure public safety.

Key Points from Presentations

- The move towards greater densification in urban areas needs to be taken into consideration when revisiting the building code
- Demographic changes are driving the need for more accessible housing

- Sustainable community design is leading to more interface between communities and natural areas, which can have implications for fire mitigation
- The growing unaffordability of housing is a pressing issue. Code changes can increase costs, which could push homeownership beyond the reach of even more Albertans. The cost of new changes need to be weighed against the potential benefit
- Different communities face different risks of wildfires, so the building code should not treat them uniformly
- Fire services should work with the building industry to assess the safety of new products
- Government needs to be more proactive in adapting to new trends in home design. The role of regulators also needs to change, moving away from simply saying “no” to facilitating a way to say “yes”
- Developing relationships is critical to ensuring that fire services’ goals are not seen as barriers to building sustainable, livable communities
- Although fire risk is a community issue, it is currently being addressed on an individual structure basis. Providing fire-safety planning early in the development process would allow for fire and life safety to be built into our communities without hampering other goals of development

Overview of Discussion

After hearing from the presenters, Fire Summit VI participants were led through a process to build recommendations that address the challenge presented at the beginning of the day by Chief Block.

First, participants brainstormed in small groups about opportunities for positive change. They were asked;

- *“What changes are necessary to make development and construction in Alberta smarter, safer, and economical?”*

Major themes from the answers to this question were synthesized and placed on large pieces of paper positioned around the room. Participants were each provided with three stickers and asked to indicate which of the nine major themes they would prioritize as most important. Through this prioritization exercise, six key recommendations were identified.

Once the recommendations had been identified, participants reconvened in order to provide any insights and advice they had about implementation. For each recommendation, they were asked to identify both:

- *“What momentum, if any, do we have that can be built upon?”*
- *“What challenges will we face?”*

Key Recommendations

1. Push For Greater Collaboration During the Planning Process

The number one recommendation from Fire Summit VI is to push for greater collaboration between regulatory agencies, fire services, and builders. This collaborative approach would focus on problem solving and creative ways to “get to yes” rather than focusing on prescriptive, one-size-fits-all approach to building standards.

Implementation Advice

While the increased use of objective-based safety codes in Alberta is a step in the right direction, there are gaps in the development process where fire and life safety are generally left to building construction at latter stages of community development. The result is missed opportunity for incorporating community benefits/features which may achieve multiple goals. Some of this type of collaboration is already underway across Alberta. Fire services, builders, and regulatory agencies are working more closely on performance-based flexibility during the design and building process, and considering the impact of community development standards that can allow for increased affordability, and flexibility when addressing life safety issues. This momentum can be built upon to further improve relationships and information sharing.

2. Take a Community-Based Approach to Fire Safety Standards

Repeatedly, participants observed that every community is different, and thus fire safety standards must take into consideration the type of community to which they are meant to apply. For example, communities with large wildland interfaces will have different fire safety requirements than predominantly urban areas. Mature communities have different considerations than new communities. And different types of dwellings require different levels of protection.

Implementation Advice

Participants recognized the challenge of this approach, and acknowledge that a balance must be struck between creating standards for unique communities and creating province-wide standards. Without some level of universal application, many participants said that too many standards would add further complexity to the Safety Codes and impose additional costs on builders and municipalities. One approach to solve this issue is development of condition or performance-based standards, which can provide a consistent solution, without hampering innovation and holistic design to community development.

3. Create Greater Responsiveness to Emerging Technology

Advancements in building materials and designs move rapidly, but approval to use these innovative materials and techniques from regulators can take years from the time of their release. The regulatory system must be able to evaluate emerging technologies quickly so that safety doesn't wait for the rulebook – it evolves based on what we are capable of changing today.

Implementation Advice

Care has to be exercised with respect to emerging technologies, as not all of them are true innovations in safety. It is especially important to clearly define the roles of certification and research bodies like the Standards Council of Canada, and the National Research Council, and the role they play in developing standards for innovative products.

4. Push for Greater Policy Clarity and Consistency Across the Province

Consistent enforcement and interpretation of Safety Code requirements by regulatory bodies across the province is of paramount importance – for both consumers and for builders. Consumers should be assured that the safety of a home in Alberta does not depend on what jurisdiction it was built in, and builders need consistency in order to allow them to plan and build efficiently.

Implementation Advice

Participants suggested that consistency may come, in part, from sharing information about decisions made in different jurisdictions. They suggested creating and regularly updating an archive of “case studies” where different regulatory bodies could outline their approach to certain planning issues or building variances. They felt this is particularly important to ensuring regulatory variances are “predictably flexible”.

5. Greater Use of Research and Data in Planning and Regulatory Processes

Today, governments and private enterprises have access to more data than ever before. This can and should be used to inform decision making about Safety Code changes, as well as during the planning processes of new neighbourhoods in order to ensure communities are as efficient as possible.

Implementation Advice

Participants believed that generally, this recommendation would be relatively straightforward to implement. Already, governments are using data to inform its decision-making. These processes simply must be expanded to consider Safety Code changes and municipal planning from a fire-safety standpoint.

6. Increased Use of Residential Sprinklers

Increasing the use of residential sprinkler systems is an example of a measure that can have substantial impacts on fire and life safety, but also as a measure for addressing

community sustainability. Sprinklers are proven to contain fires early and can substantially reduce the damage and risk to life from residential structure fires, but are often overlooked for the impact they can have on development of a community; for example the distance between buildings, the size and length of roadways, and the size of infrastructure like water mains.

Implementation Advice

The main barrier to wider adoption of residential sprinkler is education. Sprinklers are an example of fire and life safety measures which are almost never considered during the land development phase of a community, but which can have a substantial impact on how that community is built. As well, there are existing regulatory hurdles which prevent municipalities from considering items regulated by the Safety Codes. It is essential that safety systems such as residential sprinklers are not excluded from land development considerations allowing for greater flexibility in the development of communities, without negatively impacting public safety.

Conclusion

Our world has become more complex, and as we strive for improvements in process and design, it becomes demonstrably clear that solutions can be found in taking a larger view of our world. Although technology improvements are making some aspects of our communities safer and more livable, there is an ever-present need to manage the affordability and accessibility of our communities. We must find a way to strike a balance between safety, consumer and community demand, and changing technology all the while trying to maintain affordability. This will not be an easy task, but we must be able to realize how we can find common ground on these topics, and leverage both to making truly better communities. In other words, safety need not suffer at the hands of affordability, and by the same token affordability of communities need not be affected by improvements in safety. However, finding the way to merge these concepts requires careful consideration of the roles of all those involved, hence the purpose of this summit.

Continued collaboration between fire services, regulatory agencies, and industry representatives is an integral measure to find the balance and shift the way we think about community planning and safety measures.

Appendix 1: Other Major Themes

While the discussion process identified six key recommendations, three other major themes emerged during the conversation on the question “what changes are necessary to make development in Alberta smarter, safer and economical.” These additional themes have been included here for reference.

1.) Increase fire safety education for industry and the public

Fire safety education was frequently identified as important, both for consumers and for industry. Participants felt that both builders and consumers may not know enough about fire safety to make fully informed choices about the how design and construction material impacts the fire safety of homes purchases.

2.) Increase the use of fireproof materials

While finished structures are generally quite fire-safe, participants noted that buildings under construction are much more susceptible to fire. They believed that increased use of fireproof material would help minimize the risk of fire to buildings during construction.

3.) Apply a cost benefit analysis to code changes

Participants frequently discussed the cumulative cost of building code changes and the impact they have on housing affordability. Several people suggested that each code change should be analyzed to ensure that its impact on safety is commensurate with its implementation cost.