



Alberta Committee of Citizens with Disabilities

Assessing Barrier-Free Hotels and Hotel Accommodations in Alberta

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Introduction to the Project

For people with disabilities, traveling is often fraught with uncertainty, especially when it comes to hotel accessibility. In recent years, the Alberta Committee of Citizens with Disabilities (ACCD) has been approached by an increasing number of individuals and groups who are concerned by the lack of accessible accommodation in Alberta's hotel industry. We have heard from people with disabilities who attend conferences, families traveling with children who have a disability, and many others who have found their travels compromised by inaccessible accommodations.

In 1994 ACCD developed its business accessibility assessment guide. The guide evaluates a business' level of accessibility by examining the placement and measurements of its exterior and interior design features. This includes parking stalls, sidewalks, entryways, passageways, treatment areas, customer service areas, washrooms, elevators, and ramps. At times the assessment goes beyond the barrier-free requirements cited in the Alberta Building Code and recommends things like lower counter heights in washrooms and longer delays for electric and hydraulic doors when they are closing. Despite the business accessibility guide's stringent criteria, it must be noted that ACCD's assessment is not meant as a negative criticism of a business' accessibility; its purpose is to educate about the need for barrier-free design.

ACCD's involvement in accessibility assessments over the past fifteen years has now moved forward with hotel accessibility assessments, a project that emphasizes our organization's mandate to ensure the full participation of people with disabilities in society. From the project's outset, our strategy has been to produce an assessment guide, choose a sampling of hotels to assess, and to use the data collected to measure the status of accessibility in the hotel industry. Several questions were raised while determining the scope of this strategy:

- On which set of standards should we base our assessment guide?
- What should the range in age be of the buildings we assess?
- How many hotels should we assess?
- Where will they be located?

Project Design

The most relevant way to assess the hotel industry's level of accessibility is through an analysis of current building trends to see if they adhere to the barrier-free requirements in the Alberta building Code, a legal framework against which relevant data regarding a hotel's state of accessibility can be measured and recorded. We hypothesized that the results of an analysis based on building code standards would show that Alberta hotels are not in total compliance with the barrier-free requirements of the Alberta Building Code.

We determined our analysis of hotel accessibility would include properties either built or renovated between 1997 and 2009, but during this period the Alberta Building Code had been updated. To deal with this problem two assessment guides based on the Alberta Building Code were developed: one containing all the criteria related to barrier-free design found in the 1997 Alberta Building Code, and another accounting for minimal changes made to the code in 2006, changes that went into effect on September 2nd, 2007. Both assessment tools pose every requirement in the code's barrier-free section and related sections as a question to be answered with a simple Yes, No, or NA. Questions answered "Yes" indicate compliance with the code, questions answered "No" indicate non-compliance, and questions answered "NA" mean that the criteria referred to in the questions did not apply to the areas of the hotel being assessed in those particular instances. The following are the general categories of areas assessed with the guide:

- Exterior parking, driveways and walks
- Entrances and doorways
- Exterior ramps and stairs
- Interior path of travel and doorways

- Washroom
- Counters

Our sample consisted of nineteen hotels throughout the Edmonton-Calgary corridor built between 1997 and 2009. (We tried to have a sampling of twenty hotels, but five hotel managers denied our request for an assessment¹). We chose to conduct our study in the Edmonton-Calgary corridor because of the large concentration of new hotel construction and renovation that has happened in response to the overwhelming need to accommodate recent influxes of workers in the oil and gas sector, and other business people connected to these industries.

Another reason for choosing a sampling of hotels in the Edmonton-Calgary corridor was logistics. We felt it would be far more time and cost effective to travel from Edmonton to Calgary, assessing hotels along the way, than it would have been to conduct hotel assessments in towns and cities across the province.

The intent of this study is to show trends in the hotel industry regarding non-compliance with the Alberta Building Code, not to point a finger at specific hotels – chains or otherwise – that are the least compliant. To ensure that we have stayed true to our intent, the name of each hotel in our sample is represented by a letter and the city in which it is located. Hotels that are part of a chain maintain the same lettering throughout and can be differentiated from one another by the city in which they are located.

Hotel Sample

Hotel	New/Reno
1. Hotel A (Edmonton)	New (2002)
2. Hotel B (Edmonton)	Reno (1998)
3. Hotel C (Edmonton)	New (2003)
4. Hotel D (Leduc)	New (2004)

¹ Since this study was completed, ACCD met its goal of assessing twenty hotels. However, the results from this additional assessment are not included in this report.

5. Hotel E (Leduc)	New (2008)
6. Hotel F (Edmonton)	Reno (2008)
7. Hotel G (Edmonton)	New (1998)
8. Hotel H (Edmonton)	Reno (2008)
9. Hotel I (Red Deer)	New (2008)
10. Hotel J (Red Deer)	New (2005)
11. Hotel D(Red Deer)	New (2007)
12. Hotel B (Red Deer)	Reno (2007)
13. Hotel K(Calgary)	Reno (2005)
14. Hotel I (Calgary)	New (2006)
15. Hotel L (Calgary)	Reno (2007)
16. Hotel A (Calgary)	New (2005)
17. Hotel M (Calgary)	Reno (2008)
18. Hotel N (Calgary)	Reno (2006)
19. Hotel B (Airdrie)	New (2006)

With limited time and resources, it was important to pick a manageable sample that accurately reflects accessibility trends across the province. In order to achieve this, American and Canadian chain hotels were chosen. The logic behind these choices was that, in addition to the legal requirements of the Alberta Building Code, hotel chains tend to enforce their own design standards, making each location reasonably similar, and they also have a wide distribution across the province. Because of the similarities and wide distribution, we feel the data collected in hotels located throughout the Edmonton-Calgary corridor is largely representative of accessibility trends in hotel chains throughout the province.

Although they are less common, two independent hotels in Calgary were also assessed. Every request to assess independent hotels in Edmonton was denied. Independent hotels were chosen in order to show accessibility trends outside of chain establishments.

Exemptions

Clause 2 of section 3.8.1.1 of the 1997 building code's barrier-free section states that relaxation can be granted to one or more of the requirements if a building's owner can demonstrate that specific requirements are unnecessary, or that extraordinary circumstances prevent compliance (clause 2 of section 3.8.1.1 is changed in the 2006 update – it states that all buildings required to be barrier-free must comply with all requirements designed to assist persons with physical, sensory and developmental disabilities). This was a potential problem. If the owner of a hotel built prior to the code change had been granted relaxation on barrier-free design features that we were unaware of, then our study was at risk of unfairly assessing the property for compliance, and the accuracy of our data would be compromised. Fortunately our research revealed that no hotel in the province of Alberta has ever been granted relaxation on building code criteria regarding barrier-free design during new construction or renovation projects.

Advisory Committee

Over the course of the project, a six member cross-disability advisory committee met once a week to provide ideas, and to make suggestions and recommendations concerning the direction and content of our research. Advisory committee members, each of whom lives and works within the Edmonton-Calgary corridor, were selected for their unique and personal perspectives as people with disabilities such as visual impairment, hearing impairment, quadriplegia, and paraplegia.

Additional Assessments Included in this Study

In addition to the building code assessment guides, two assessment guides concerning accessible hotel rooms and elevators were developed as a result of advisory committee recommendations. Elevators and hotel rooms are two areas of hotels not specifically dealt with in the barrier-free section of the Alberta Building Code. Our room assessment guide is based on a March 2008 building code interpretation STANDATA regarding accessible

dwelling units. The criteria found in the STANDATA is nearly identical to criteria found in the Alberta Building Code's barrier-free section regarding features such as toilet heights, counter heights, and door widths.

Despite its strengths, the STANDATA fails to give adequate consideration to a variety of disabilities, like hearing and visual impairment. To make up for this shortcoming, we took note of the hotel industry's best practices regarding design and construction of accessible hotel rooms, practices that consider as many disabilities as possible. Recording best practices provided insight into the kinds of barrier-free design being voluntarily implemented in some hotels, while giving us an overall picture of the current disparity between the hotel industry's best and worst accommodations labeled "accessible."

The elevator accessibility guide is based on Appendix E of CAN/CSA B44-M – Elevator Requirements for Persons with Physical Disabilities. Although the barrier-free section of the Alberta Building Code refers readers to Appendix E of CAN/CSA B44-M, the building code itself has only one criterion concerning elevator car dimensions. The code requirement states that an elevator car must be 2010 mm long by 610 mm wide in order to accommodate a stretcher in the prone position. Although this is an important legislated design feature, we felt that it was important to assess elevators in their entirety, especially since Appendix E of CAN/CSA B-44 includes code that is of extreme importance to people with visual and hearing disabilities.

Limitations of the Study

Over the course of our hotel accessibility assessments, a few specific limitations to our study were identified. It became apparent that assessing hotels for certain criteria in the building code was either difficult or impossible. When assessing ramps, the Alberta Building Code's criteria begged interpretation. In more than one instance, an exterior barrier-free path of travel had a sloped section that seemed as though it should have been designed as a ramp. Trying to determine its design classification by features such as guards and handrails was impossible, since the absence of these features might just have been further infraction of the code rather than a cue

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that the feature was not supposed to be designed as ramp. We determined that if the edges of a sloped barrier-free path of travel rose more than 75 mm from the adjacent ground at its highest point, then it would be categorized as a ramp and be assessed according to the appropriate criteria. To put it another way, it is possible that some of the data collected regarding ramps might reflect a miss-classification of a design feature, despite our attempts to create a precise operational definition.

Determining whether or not exterior doors and interior doors in vestibules were exempt from the limit of allowable force required to open them was not always possible. According to the building code, an exterior door is permitted to exceed 38 N of force and an interior door is permitted to exceed 22 N of force if increased force is needed to close doors for reasons such as mechanical systems that increase indoor air pressure. Because hotel staff members we spoke with were unsure of the reason for excessive door weights, every door exceeding the maximum allowable force limit required to open it was marked as non-compliant. The logic behind this decision was that if a person with a disability cannot exert more than 38 N of force to open an exterior door, or 22 N of force to open an interior door in a vestibule, then the doorway is not accessible, regardless of the reason for the door's excessive weight. This problem is outlined in the summary letters sent to hotels following the assessments, with the recommendation that automatic door openers be installed if excessive door weight cannot be avoided.

We also had problems determining whether or not hotels had appropriate design features to ensure a barrier-free egress route in the event of a fire. Hotel managers and maintenance staff could not answer with any certainty whether or not they had the appropriate firewalls in place, or if there was at least one elevator with a fire-resistant shaft designed to run temporarily during a fire. This information is decidedly important, especially for a person with a disability who, in the event of an emergency, relies on the hotel staff or the fire department to evacuate him or her as quickly and as safely as possible. Unfortunately, we were unable to collect any data from hotel staff members regarding these code requirements. In an effort to supplement this lack of data, every hotel manager was asked to explain his

or her fire evacuation plan in detail. Although every manager has an evacuation plan that gives primacy to the safe egress of guests with disabilities, Hotel E (Leduc) has the most comprehensive plan in place. The manager keeps a logbook detailing which room a person with a disability is staying in, the nature of his or her disability, and a planned route of egress. The hotel also provides regular training to ensure that emergency egress will be conducted as quickly and efficiently as possible.

Over the course of our elevator assessments, it became clear that more than one code criterion could not be measured with the means available to us. For example, measuring lumens – the unit of measure used to discern total light output from lighted visual indicators – was impossible. To do this, one requires specific equipment and expertise. We were also unable to assess if elevator cars had automatic floor leveling devices, since doing so would have required assessing the car's exterior in the hoist way, or fetching the expert advice of an elevator service person. Finally, we could not be certain if emergency telephones were equipped with receivers capable of generating a magnetic field in the area of the receiver cap, or if the phones had volume control that complied with CSA standards T515.

The final limitation to this study was the small sampling of independent hotels. In our limited assessment of independent hotels, the results show similar levels of building code compliance found in larger American and Canadian chains, but at this point we are not convinced that this is an accurate reflection of building code compliance by independent hotels across the province. Because American hotel chains are subject to mandatory compliance with the American Disabilities Act in the United States, they tend to incorporate the ADA's criteria into their chain's standard design aesthetic, which is applied in hotels located both inside and outside of the United States. This explains relatively high levels of Alberta Building Code compliance in American hotel chains.

The larger Canadian chains we assessed have several locations in the United States, which require adherence to the American Disabilities Act. Like the American chains, most of the ADA's criteria are reflected, intentionally or no, in the standard design aesthetic of Canadian hotel chains that have

properties in the United States. Local independent hotels, however, are not subject to ADA's criteria, and none of the representatives from independent hotels that we spoke with were even aware of the ADA. Therefore, a further study of a larger sample of independent hotels might show results that are contradictory to the findings of this study.

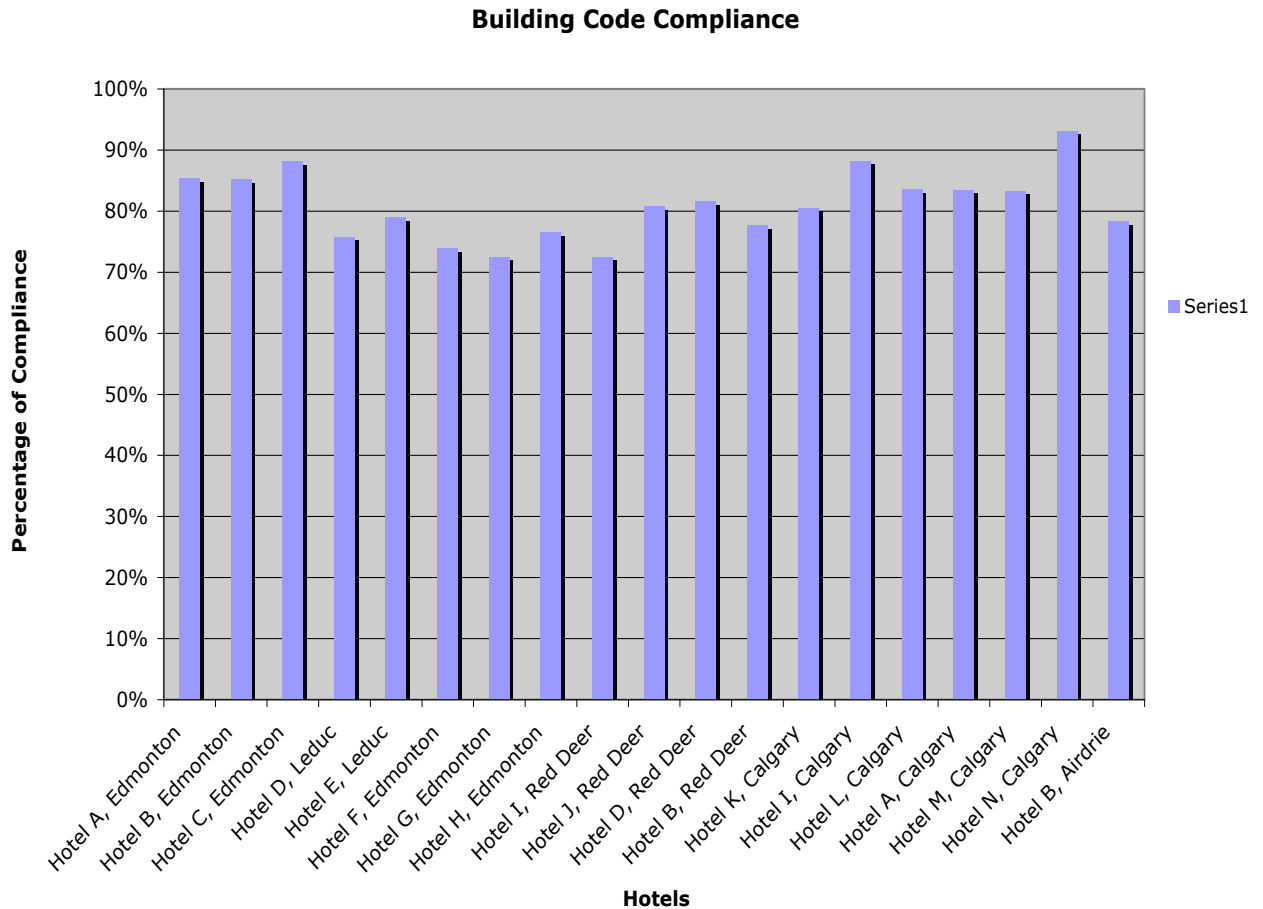
Statistical Results

Overview

The data gleaned from our hotel assessments is arranged to show four different statistical perspectives representing both general and specific trends of compliance with the Alberta Building Code:

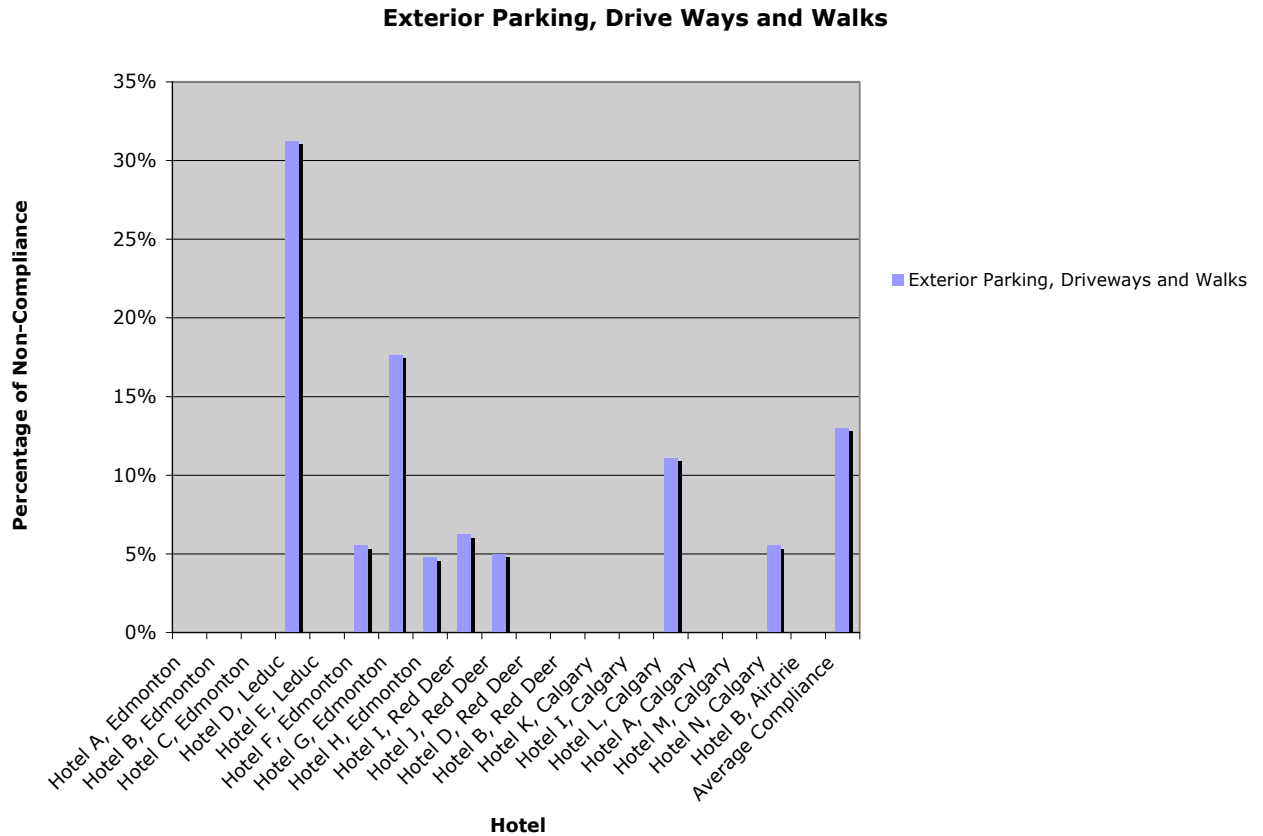
- Overall compliance with the Alberta Building Code
- Percentage of non-compliance with each criterion in the Alberta Building Code that is posed as a question in our assessment
- Overall percentage of non-compliance in each category of the Alberta Building Code's barrier-free criteria. (exterior parking, drive ways & walks; entrances and doorways; exterior ramps and stairs; interior path of travel and doorways; washrooms; and counters).
- A comparative statistical analysis of ADA-compliant American chains, Canadian chains with properties in the United States, Canadian chains based only in Canada, and independent hotels.

Percentage of Building Code Compliance



The overall percentage of the sample's compliance with the Alberta Building Code is 80%, with Hotel G (Edmonton) scoring the lowest percentage of compliance at 71%, and Hotel N (Calgary) scoring the highest percentage of compliance at 93%. Although these compliance levels appear to be relatively high, it is important to note that 100% compliance is what provincial law legally requires, since non-compliance with any one criterion in the code can drastically hinder accessibility for a person with a disability.

Exterior Parking, Drive Ways & Walks

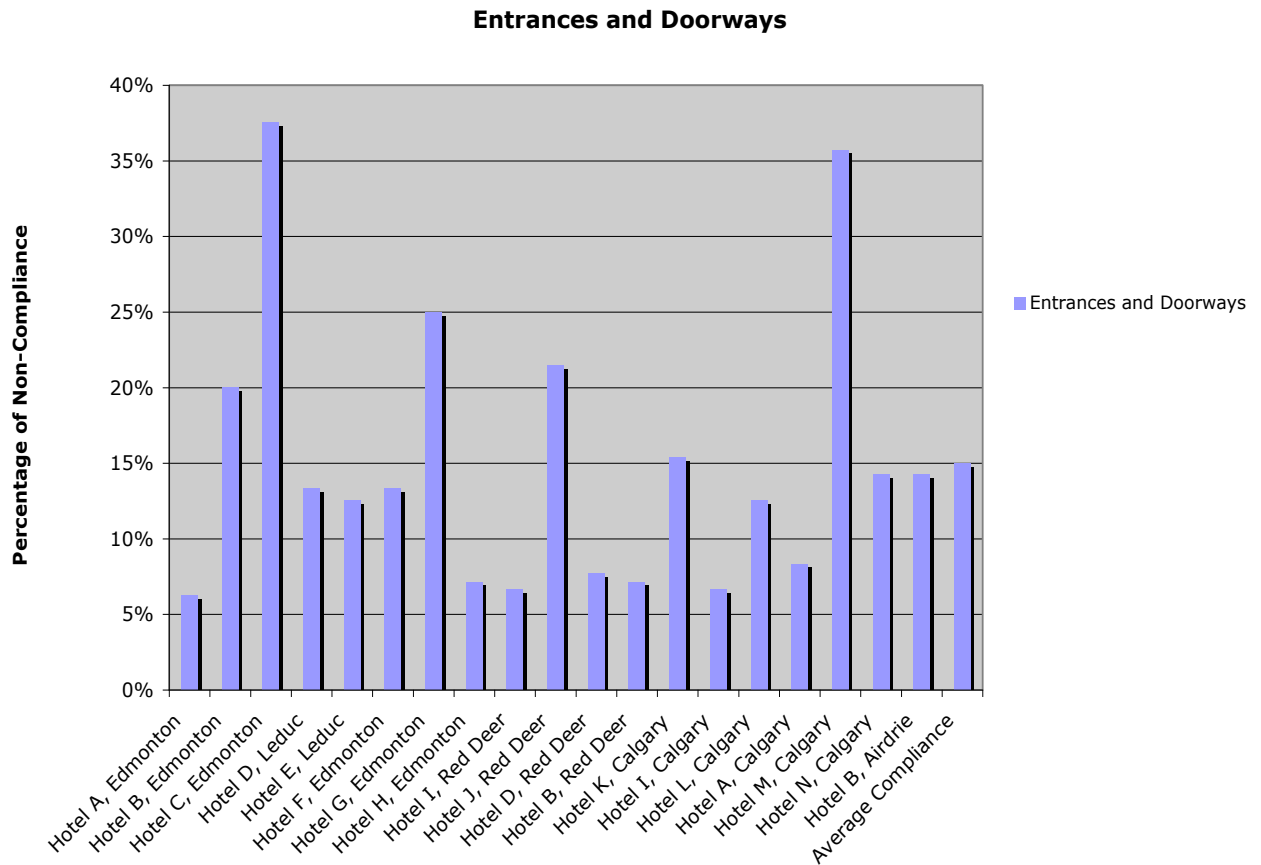


The total percentage of hotel non-compliance in exterior parking, drive ways and walks is 13%. This percentage does not include Hotel K (Calgary) or Hotel L (Calgary), two hotels located in a downtown core that provided no guest parking area at the time of the assessment. The parking area at Hotel K (Calgary) is currently under construction and, according to management, is scheduled to be open for public use in roughly four months. Hotel L (Calgary)'s guests are required to park in a private lot next to the hotel. Although the private lot is still required to adhere to the Alberta Building Code's barrier-free criteria, we felt assessing it with regards to hotel accessibility was irrelevant, since Hotel L (Calgary) presumably has no control over the maintenance and design of the private lot. As shown in the

graph above, eleven of the nineteen hotels were in total compliance with the Alberta Building Code.

Clearly marked accessible parking stalls are the greatest area of concern in this category. Two of the nineteen hotels we assessed – Hotel J (Red Deer) and Hotel N (Calgary) – failed to provide visible signage clearly indicating accessible parking for people with disabilities. Although the provision of vertical signage is not a code requirement (this feature’s addition to the code’s barrier-free criteria is pending approval for a 2011 Alberta Building Code revision), our assessment highlighted the need for such a feature. At Hotel J (Red Deer), management was asked to point out their accessible parking stalls. When the hotel manager pointed to where the stalls were, each stall was covered in snow and ice, and a car that failed to display a parking placard for persons with disabilities occupied one of the stalls. Accessible stalls at both hotels have an international symbol of accessibility painted on the asphalt (the minimum code requirement), but, as the scenario involving Hotel J (Red Deer) shows, markings on the asphalt are insufficient when the parking lot is covered with snow and ice.

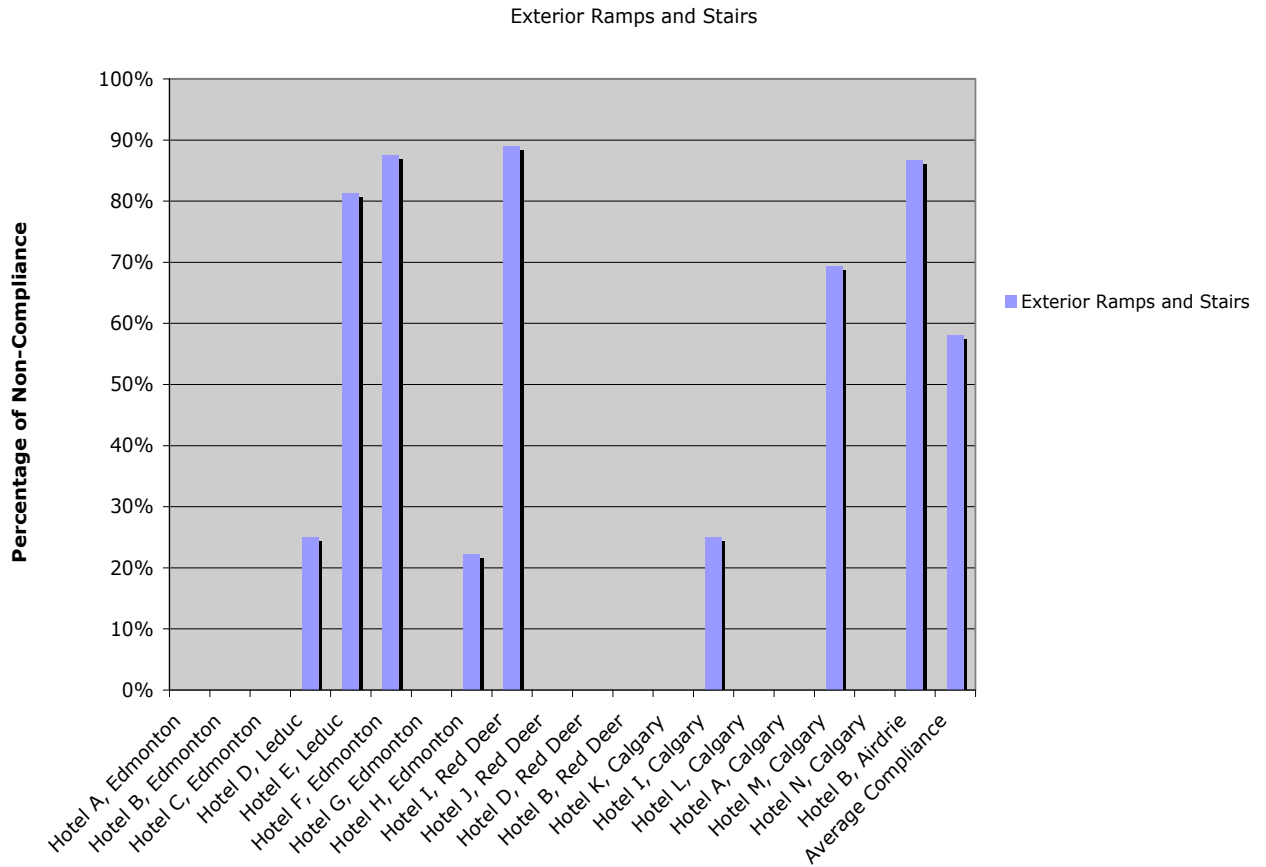
Entrances and Doorways



The overall percentage of non-compliance to building code criteria regarding entrances and doorways is 15%. Failure to properly mark a barrier-free entrance with an international symbol of accessibility was the most common building code infraction in this category – 89% of the hotels in our sample failed to provide any means of discerning which entrances were barrier free. This is of particular concern to people with limited mobility who rely on visual cues that denote accessibility. Although every hotel we assessed had sliding doors operated by motions sensors at their front entrances, we could never be certain if entrances at the sides of buildings providing access to the ground floor hallways and staircases were barrier-free until we physically inspected them, even though most side entrances were accessible by a barrier-path of travel.

16% of hotels assessed failed to make 50% or more of their entrances barrier free. Hotel B (Edmonton) provided the most striking example of non-compliance with this criterion. Each of the ground floor emergency exits are constructed with accessibility in mind, since the hotel's accessible rooms are nearest the exits. But once a person with a disability makes it out of doors, he or she must negotiate a six-inch drop from the curb to the asphalt, a significant barrier – especially in the event of an emergency. Of the three exits at Hotel B (Edmonton), the front entrance alone constitutes a barrier-free egress route.

Exterior Ramps and Stairs



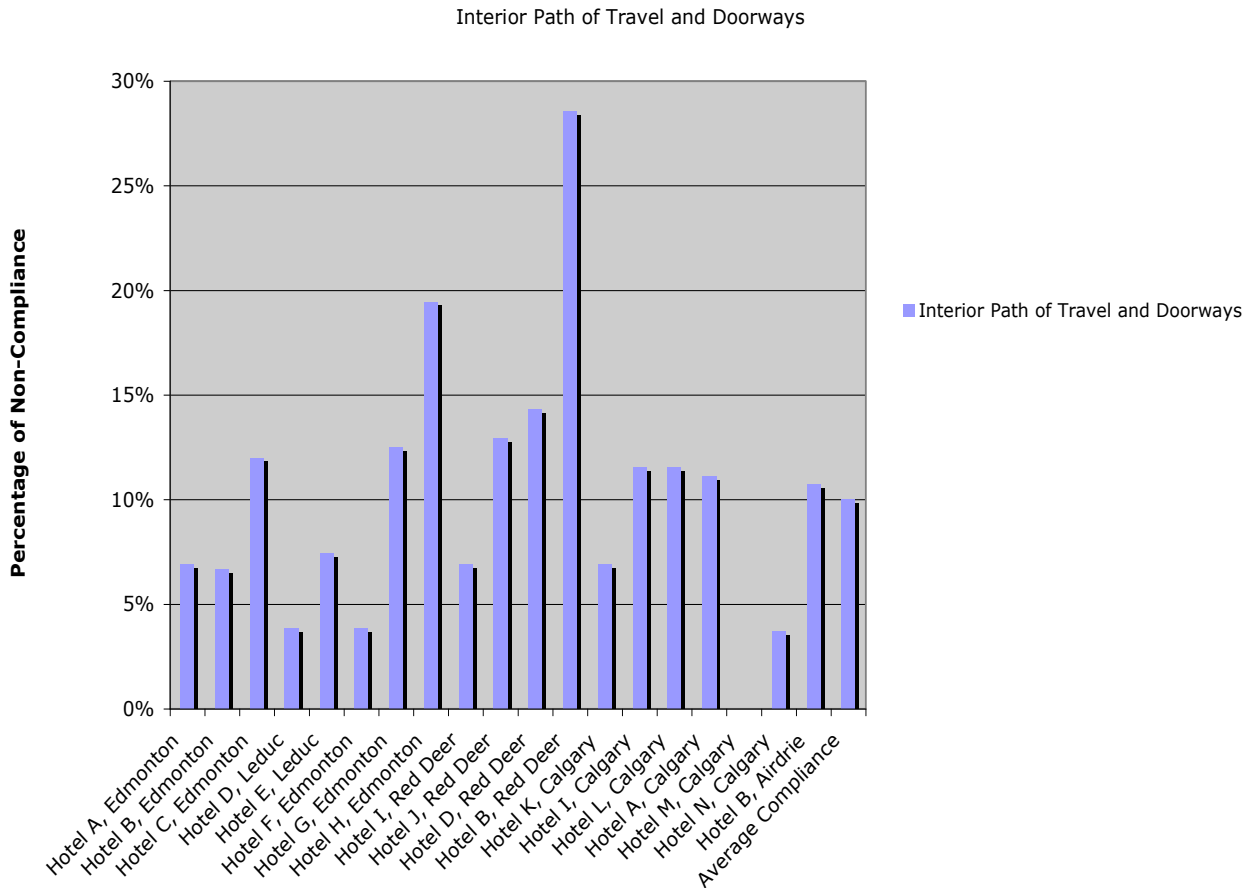
Eight of the nineteen hotels assessed have an exterior ramp, an exterior staircase, or both. In each instance these exterior features were built with disregard for the building code. The total average of non-compliance in the category of exterior stairs and ramps is the highest of all categories at 58%, and the highest levels of non-compliance were found at Hotel I (Red Deer) (89%), Hotel B (Airdrie) (88%) and Hotel F (Edmonton) (88%).

Of all the exterior stairs assessed, only Hotel D (Leduc) provides a handrail. Unfortunately the handrail is too low and it does not extend 300 mm beyond where the stairs terminate making it non-compliant with the building code.

It is evident the exterior stairs leading to Hotel I (Red Deer)'s emergency exit had had a handrail at one time, but at some point hotel staff removed it and grinded the footing down to make it flush with the concrete. The exterior stairs at Hotel I (Red Deer) present a further hazard on the left hand side where the concrete wall on which the handrail had been mounted is pulling away from the staircase. There is currently a meter long gap running parallel to the path of travel between the landing at the top of the stairs and the concrete wall, a serious hazard to have at any exit let alone an emergency exit. The gap is 1 cm at its narrowest point and 12.5 cm at its widest.

The only hotel in our sample that provides a ramp with a handrail is the Hotel H (Edmonton), but it is still hazardous due to the absence of a guard preventing anything the size of a 100 mm sphere from passing through it.

Interior Path of Travel and Doorways



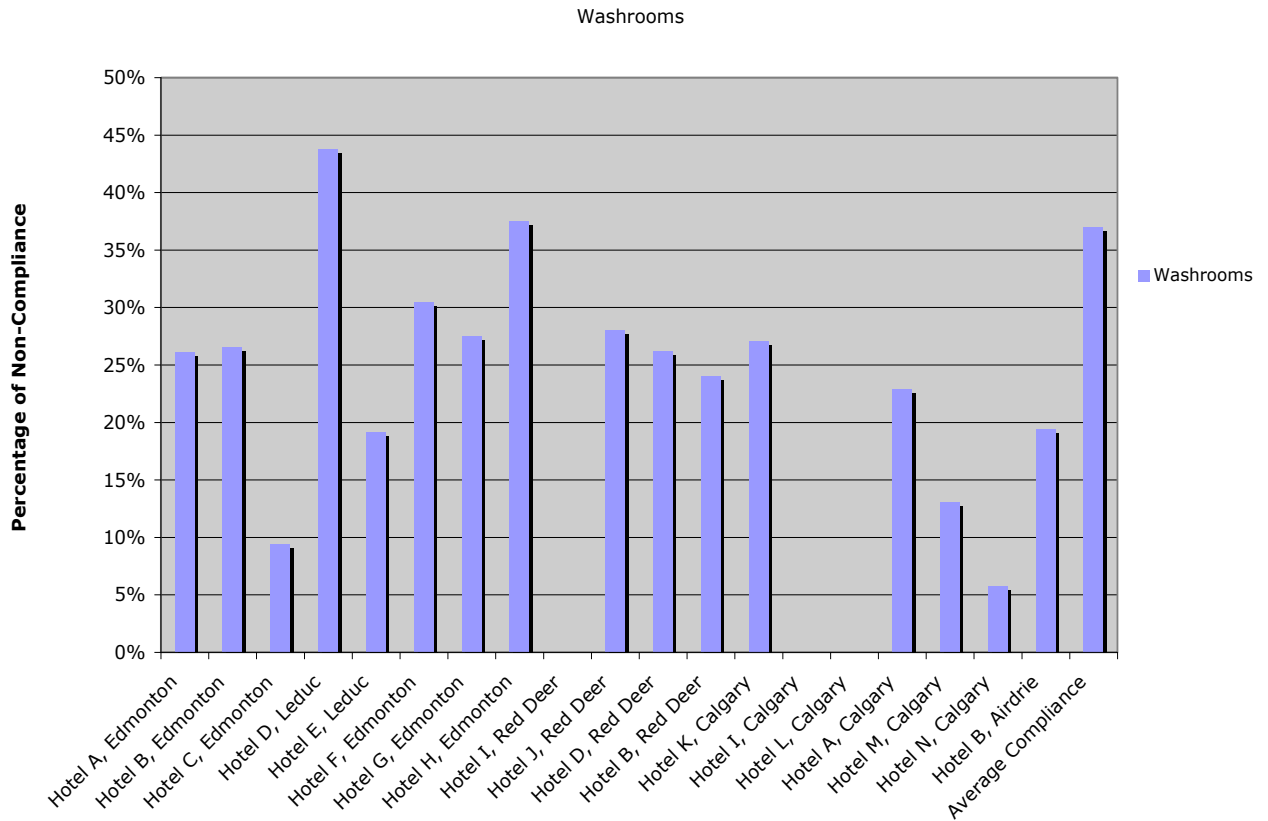
The smallest percentage of non-compliance to the Alberta Building Code came under the category of interior barrier-free path of travel and doorways, with a total percentage of 10% non-compliance. The hotels that have the lowest percentage of non-compliance in this category are Hotel F (Edmonton) (4%) and Hotel D (Leduc) (4%) – both lack signage indicating barrier-free paths of travel within the hotel, the lone code infraction in this area for each hotel. Hotel M (Calgary) was in total compliance in this category.

By far the worst area of compliance in this category concerned the placement of a 600 mm wide tactile warning strips at the tops of stairwells to signal a change in elevation. These strips should be cane-detectable so people with visual disabilities are able to negotiate changes in elevation as they make their way through the hotel. 100% of hotels assessed failed to mark any change in elevation with a tactile strip. It seems that because 95% of hotels assessed had carpeted stairs, this feature was completely overlooked.

The second largest infraction in this category concerned signs indicating barrier-free entrances to rooms within the building. Conference rooms and dining areas overwhelmingly lack proper signage to indicate if their entrances are barrier-free, and the majority of barrier-free washrooms lack a universally recognized symbol of accessibility. In 79% of hotels assessed, negotiating a barrier-free path of travel in and out of rooms and common areas in hotels is simply a game of trial and error.

The final two areas involving high percentages of non-compliance with the Alberta Building Code in this category concern handrails on stairs. 32% of handrails are either too high or too low, and 28% fail to extend 300 mm beyond the final step at the top or bottom of stairs, a definite hazard to the elderly, people with visual disabilities, and, in general, anyone who has problems with mobility.

Washrooms



The Percentage of non-compliance of all the washrooms assessed in the hotel sample is 37%. This total includes barrier-free washrooms – gender specific facilities that include, among other things, accessible counters, lavatories, and water closets in their design – and special washrooms, which are defined as accessible facilities that are usually, but not always, designed for either gender and an attendant. Although 37% seems like a relatively low percentage of overall non-compliance, there are several specific code criteria that have an alarmingly high overall percentage of non-compliance, infractions that seriously compromise the independence, dignity and – in several instances – the safety of people with disabilities who access washrooms in hotels.

Three hotels in our sample do not provide public washrooms: Hotel I (Red Deer), Hotel I (Calgary), and Hotel L (Calgary). Guests of these hotels who wish to use public washroom facilities must do so in adjoining mercantile occupancies.

Opening the door is the first challenge faced by people with disabilities trying to access barrier-free washrooms and special washrooms. 45% of doors to barrier-free washrooms that we assessed require an excess of 22 N of force to open them, and 18% of these doors reach a point 75 mm from the closed position in less than three seconds when the door is let close from an angle of 70°. In special washrooms 36% of doors require more than 22 N of force to open them and 25% reach a point 75 mm from the closed position in less than three seconds when the door is let close from an angle of 70°.

The lavatories in barrier-free washrooms scored high percentages of non-compliance with the Alberta Building Code. 36% of sinks are mounted too high, 55% of counters are too low, 50% of soap and towel dispensers are out of reach, and 45% of mirrors are mounted too high.

The percentage of non-compliance to criteria concerning lavatories in special washrooms is 25%. Of the four special washrooms assessed in our sample, only one had a counter height that was less than 735 mm at the front edge.

None of the barrier-free washrooms or special washrooms assessed in our sample provides a mirror that is inclined to the vertical for use by people who use wheelchairs.

Exposed pipes underneath lavatories create a burn hazard for people who have lost the sense of touch in their limbs. 76% of pipes below lavatories in the barrier-free and special washrooms that were assessed are currently exposed. This is perhaps the most frightening percentage of non-compliance measured in this study considering the potential an exposed pipe has to seriously burn an unsuspecting individual.

Water closet stalls are another area of serious concern. In the sixteen hotels from our sample that provide public washrooms (this includes barrier-free and special washrooms) the total percentage of non-compliance with the building code's criteria regarding water closet stalls is 46%. The non-compliance regarding barrier-free water closet stalls involves several small oversights:

- 55% of stalls do not have a sliding latch
- 73% do not have a proper door pull on the inside of the door
- 45% do not have a coat hook on the inside of the door

Every hotel manager we spoke with had never considered the drastic difference these simple design features can have to guests with disabilities who require a barrier-free water closet stall when using washroom facilities. In every instance, hotel managers were receptive to learning how water closet stalls could be improved with simple additions like a sliding latch and a door pull on the inside of the door.

27% of water closets assessed have dimensions smaller than the minimum code requirement of 1500 mm x 1500 mm. Water closet stalls that are not compliant with this criterion prevent people who use wheel chairs from moving freely about the stall, an oversight of unfortunate consequence for people whose independence is often determined by the presence or absence of barrier-free design.

Non-compliance with the minimum required dimensions in special washrooms is high. 57% of special washrooms assessed have a dimension less than 1700 mm, the minimum amount of space required for a person with a disability who is accompanied by an attendant, or a parent who is using the special washroom to change a small child.

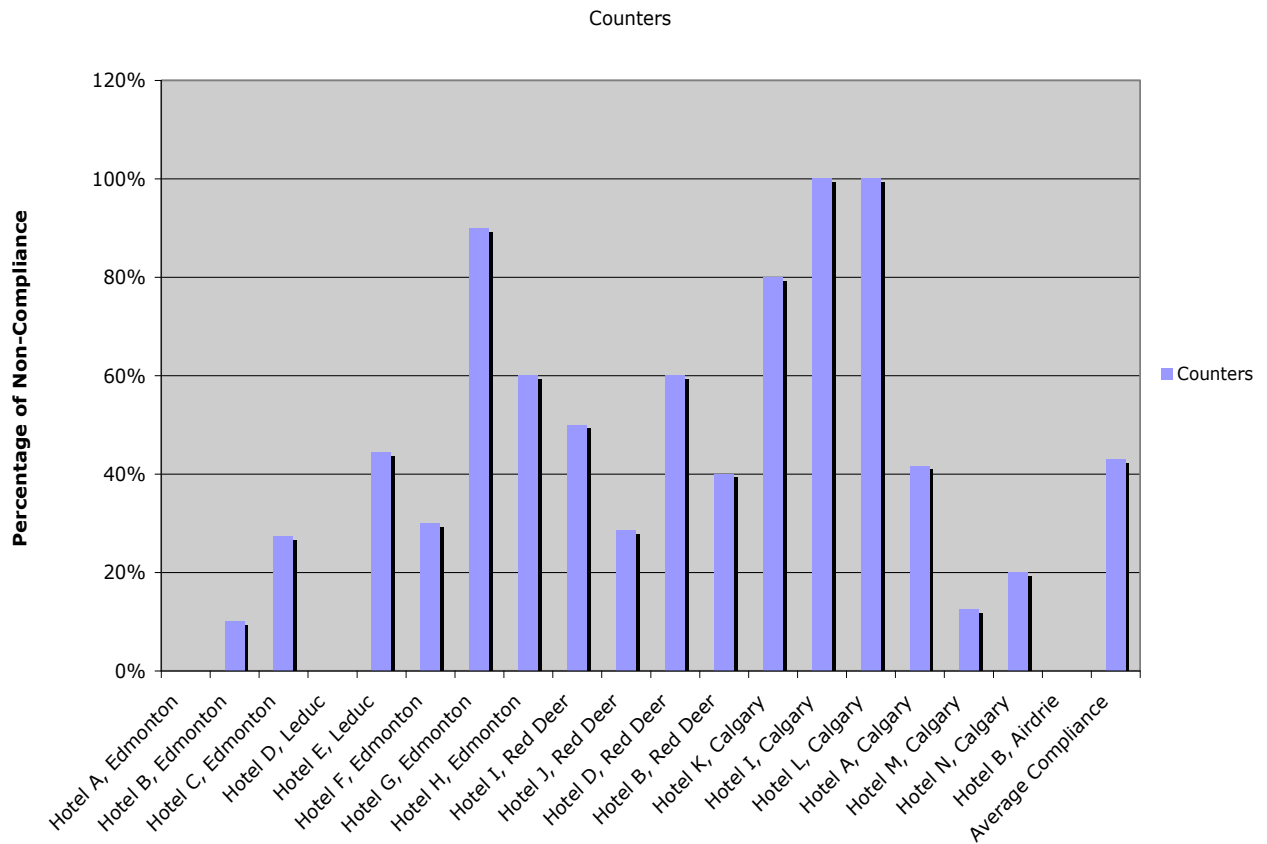
Grab bars are yet another high area of non-compliance, with 66% percent of grab bars having been installed incorrectly. At Hotel B (Edmonton), a grab bar is provided in the water closet stall designated as barrier-free, but it is installed on an adjacent wall that stands over 2 meters away. In other

instances, the bars are mounted too high on an adjacent wall, or too far back to be useful to people who rely on them.

27% of grab bars in barrier-free washrooms and 29% of grab bars in special washrooms failed to handle a load of 1.3 kN. At Hotel E (Edmonton) the grab bar was pulled from the wall when less than 30 lbs of force was applied to it. The grab bar test at Hotel E (Leduc) was stopped short of pulling the bar from the wall once it was apparent the bar had been mounted to the drywall using only drywall screws, a mounting method also used in special washrooms at Hotel J (Red Deer) and Hotel E (Edmonton). With each instance of an improperly installed grab bar hotel staff were notified, and we were assured the problem would be fixed immediately.

Urinals had the highest percentage of non-compliance in this category. 80% of urinals in barrier-free washrooms were mounted higher than the maximum limit of 512 mm above the floor. 80% hotels with barrier-free washrooms also failed to comply with code requiring the installation of vertical grab bars on either side of the urinal.

Counters, Phones & Controls



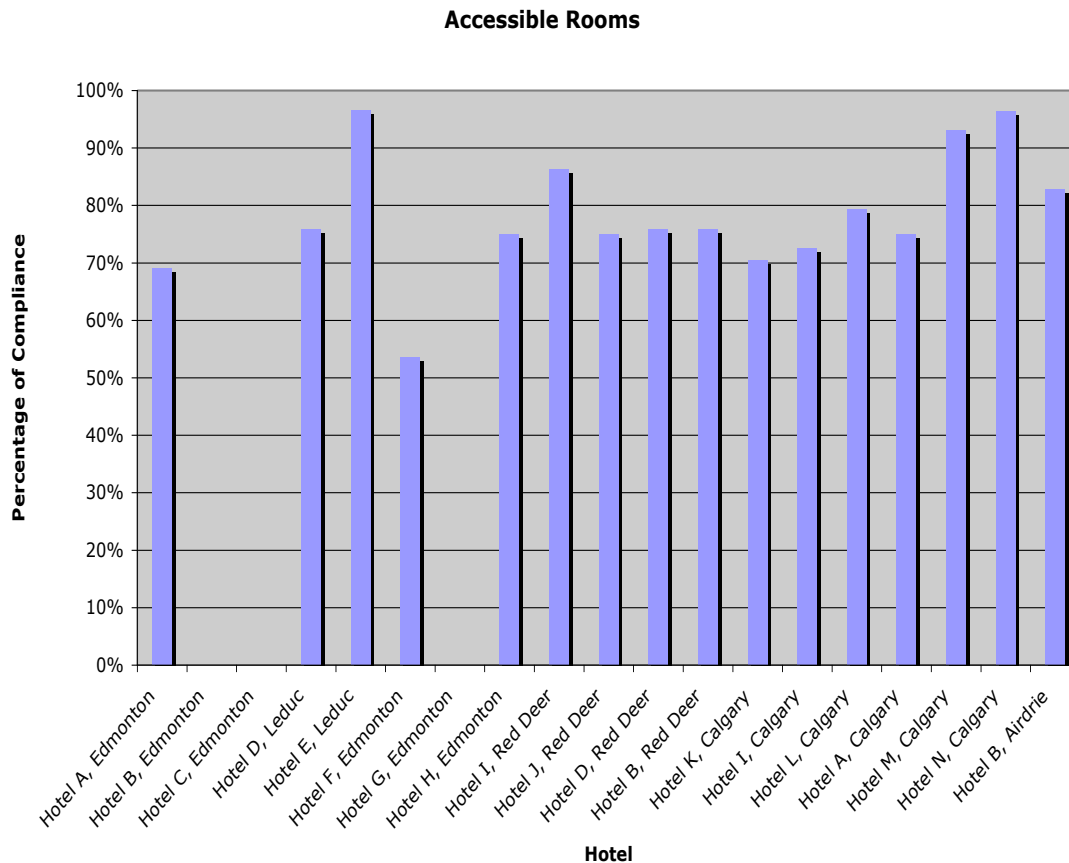
In this category, the only counters that are included in our study are the front desks of hotels and the counters mounted under payphones. The overall percentage of non-compliance to building code criteria regarding counters and workspaces in hotels is 34%. Of the nineteen hotel counters assessed, three are 100% inaccessible to people with disabilities, while 32% are in total compliance with the Alberta Building Code. Thirteen of the nineteen hotels assessed (68%) provide a lowered section at the front desk so people who use wheel chairs can conduct business, but in each case, there is a problem with counter height, or the width and depth below the counter – a problem that makes these counters decidedly inaccessible. Although Hotel F (Edmonton) technically provided a barrier-free portion of the front desk, it was inaccessible at the time of our assessment because hotel staff were using

it to display brochures and pamphlets that advertised tourist destinations around Edmonton.

10 of the 19 hotels assessed (53%) provide payphones in the lobby. Out of the ten that provide payphones, only 50% are mounted at a height accessible to people in wheelchairs. Of the ten hotels that provide pay phones and the two hotels that provide courtesy phones, only three are TTY enabled, meaning 75% are non-compliant with the Alberta Building Code's criteria regarding barrier-free access to public telephones.

The section of this category regarding controls refers to the barrier-free requirements of water fountains and the heights of building controls such as thermostats and fire alarms. 43% of public water fountains rise more than 915 mm from the floor, an inaccessible height for a person who uses a wheel chair, not to mention an infraction of the building code. Of the seven water fountains that were assessed, only one had controls that were inoperable to a person with limited mobility or dexterity.

Accessible Rooms



As mentioned earlier, the criteria used to measure hotel room accessibility are not part of the barrier-free section of Alberta's building code. Because the barrier-free section of the Alberta Building Code does not address hotel rooms, we used relevant criteria from a March, 2008 building code interpretation STANDATA, a document released jointly by Alberta Municipal Affairs and Housing, and the Safety Codes Council. This STANDATA interprets the building requirements for adaptable dwelling units either fully or partially funded by the Government of Alberta. Since hotel rooms and adaptable dwelling units necessarily have several similarities, we felt most of the required designs and dimensions outlined in the STANDATA would provide a relatively accurate measure of hotel room accessibility. The assessment tool developed by ACCD includes all the

criteria in the STANDATA except for those pertaining to kitchens and laundry rooms.

Only sixteen of the nineteen hotels in our sample were able to let us assess their accessible rooms. (During our assessments, the accessible rooms were occupied at three of the hotels in our sample: Hotel B, Edmonton; Hotel C, Edmonton; and Hotel G, Edmonton). The percentage of overall compliance for the sixteen rooms we were able to assess was 78.25%. Like the overall building code compliance of 80%, this number seems high at first, but it falls desperately short of what travelers with disabilities require in accessible rooms.

The overall percentage of non-compliance in accessible living areas of hotel rooms is 15.2%, but it should be noted that the criteria concerning accessible living areas is sparse. Although the STANDATA acknowledges details such as adequate space for wheelchairs to make 360° turns and widened doorways, it fails to consider features that would ensure optimal accessibility, features such as visual and auditory cues for fire and carbon monoxide alarms, or spaces below beds to accommodate lifts, to name a few.

In the common living space of 44% of accessible hotel rooms, controls and switches, such as thermostats and light switches, are out of reach for people who use wheelchairs. Another area of concern in the common living areas of accessible hotel rooms is windows. 25 % of windows cannot easily be opened without tightly grasping or twisting the latch. Also, the height of 35% of closet hanging rods in accessible rooms is either out of reach or situated so low that any outfit hung on them would partially lie on the ground.

The most accessible common living space we assessed was at Hotel N (Calgary). The room at Hotel N (Calgary) is dividable into two rooms (French doors with clouded glass separate the space), so a guest with a disability can have privacy if he or she is accompanied by an attendant, colleague, friend, or family member. The room has an accessible kitchen area, with lowered counter heights, and accessible controls for the oven and

all other kitchen amenities. The room also comes equipped with a king size bed that has space underneath the box spring to accommodate a lift. In terms of safety devices, Hotel N (Calgary) scores high. The fire alarm and the carbon monoxide detector produce both visual and audible signals, as does the suite's doorbell, itself an innovative feature. Although it is not perfect, the accessible room's common living space at Hotel N (Calgary) was by far the most accessible. Furthermore, the hotel manager was eager to know where improvements could be made, and, pending a few minor improvements, it could serve as a standard model for accessible common living spaces throughout the hotel industry.

The overall percentage of non-compliance for washrooms in accessible hotel rooms is 24%. When the criteria constituting the washroom portion of the hotel room assessments are analyzed, some troubling trends emerge. 56% of all showers had inaccessible dimensions, meaning they were less than 1500 mm wide and 900 mm deep. Aside from the poor dimensions, roughly half of the hotels considered a bathtub accessible if it had a plastic seat in it. Despite this troubling statistic, more than one hotel went to great lengths to provide a washroom that considered as many disabilities as possible. Hotel M (Calgary) provides a washroom with a roll-in shower and a tub, as well as an emergency call button that connects the room's occupant with the front desk in the event of an emergency. Hotel N (Calgary) also gave careful consideration to the development of the washroom in its accessible room. Hotel N (Calgary), too, has a roll-in shower, along with a visual and auditory indicator for fire, and a visual and auditory door bell to notify the room's occupant if someone is at the door.

A surprising oversight in the majority of the hotel rooms we assessed was lavatory counter height. 63% of the sixteen lavatory counters we assessed are lower than 735 mm. When counters are installed at a height lower than 735mm, people who use wheelchairs either have great difficulty or are completely unable to use the lavatory to do simple things such as washing, or brushing teeth.

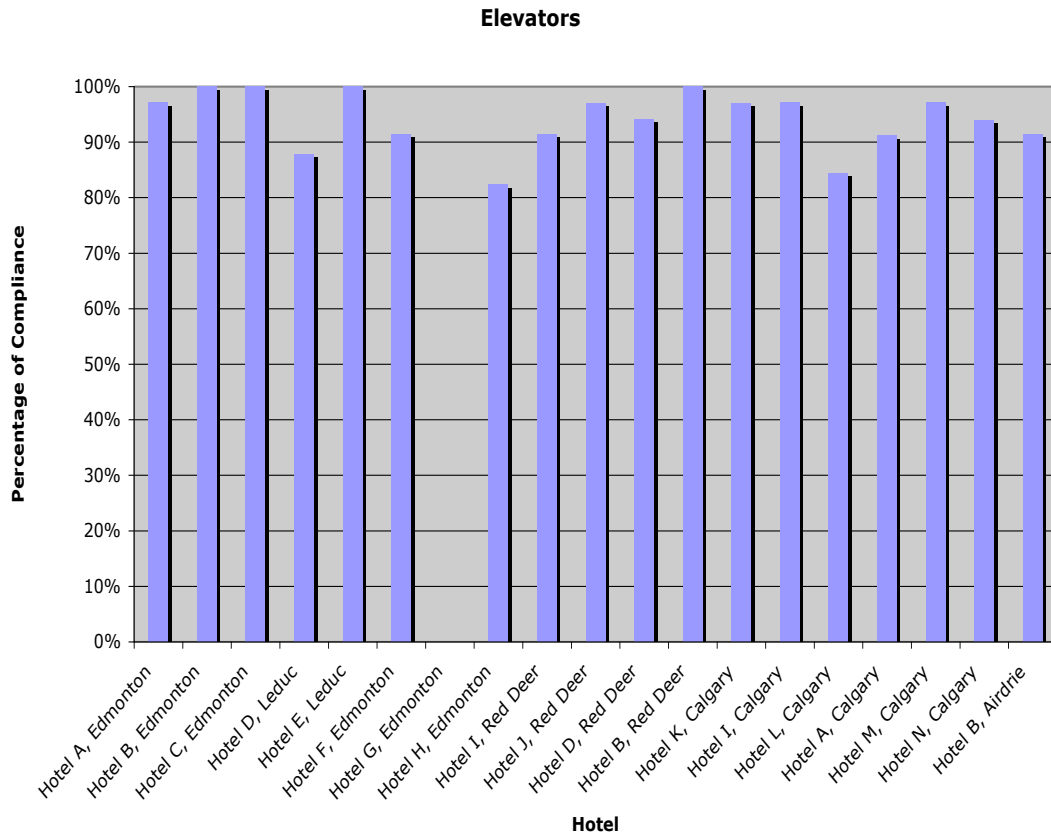
Worse than the high percentage of improper lavatory counter height, 69% of pipes underneath washroom sinks are not insulated, a potentially dangerous

barrier to the health and well-being of a person who has lost the sense of touch in his or her limbs.

The STANDATA recommends that a toilet be situated between 285mm and 305mm, on one side, from an adjacent wall. Unfortunately 75% of washrooms in accessible hotel rooms do not meet this recommended clearance between the toilet and an adjacent wall. This means that in many instances, a person who requires the use of a grab bar cannot reach it, or items such as toilet paper are just beyond his or her reach. There are also instances where the toilet has been installed too close to an adjacent wall making it difficult or impossible for people with limited mobility to reach things like grab bars or toilet paper once they are seated on the toilet. On a related note, 25% of the washrooms we assessed do not provide adequate space for a wheelchair to back in alongside the toilet.

On average, the washrooms in accessible rooms are only 75% compliant with our assessment, which only assessed the minimal requirements one should expect to find in a washroom labeled “accessible.” This is a troubling reality for travelers with disabilities whose comfort and well-being rely on a hotel room environment designed to ensure their comfort, safety and independence.

Elevators



Elevators proved to be an area of hotels that closely adhere to the code that regulates their safety and accessibility. On average, elevators in eighteen of the nineteen hotels we assessed were 94% compliant with Appendix E of CAN/CSA B44-M – Elevator Requirements for Persons with Physical Disabilities. (At the time of our first assessment – Hotel G (Edmonton) – we did not have an elevator assessment tool. This tool was developed later on, based upon advisory committee recommendations). As mentioned in our introduction, we were unable to determine if the elevator phones were equipped with receivers capable of generating a magnetic field in the area of the receiver cap, or if the phones had volume control that complied with CSA standards T515. We were also unable to measure lumens cast from lighted visual indicators located inside the car and the hallway. It stands to

reason that proper assessments of these features could lower the average percentage of overall compliance.

The criterion that received the highest percentage of non-compliance in elevators was that placement of Arabic numeral floor indicators in the door jambs of each floor serviced by the elevator. 44% of the elevators we assessed do not currently provide this indication, a source of potential confusion for all people who use elevators, not just people with disabilities.

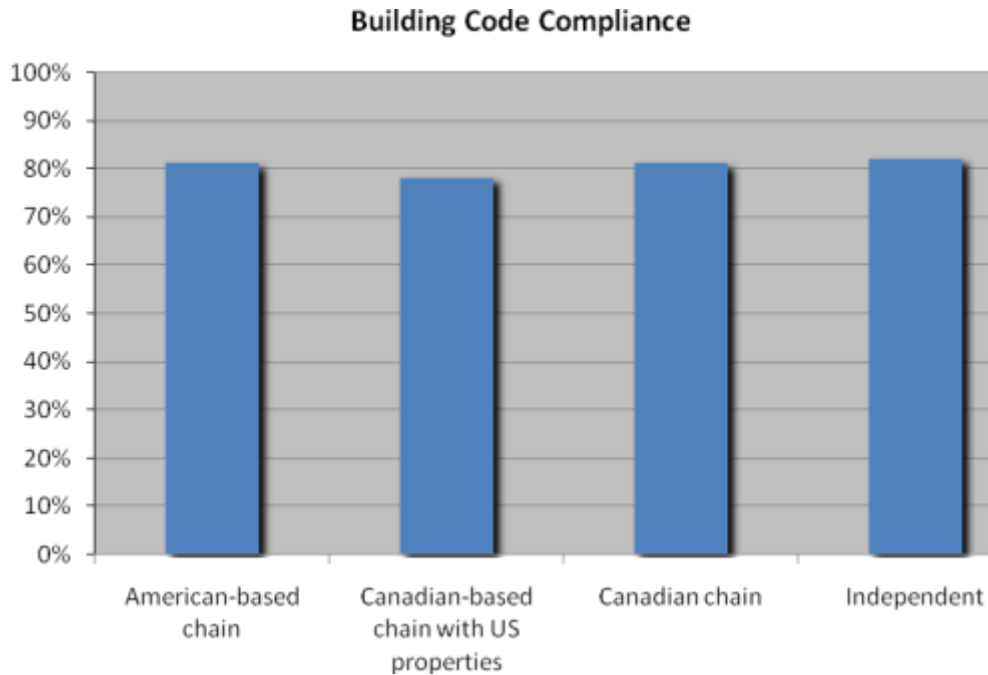
Comparison of American-Chain and other Hotels

American hotels are subject to mandatory compliance with the American Disabilities Act. As a result, these hotels tend to apply the ADA's criteria to their chains' standard design aesthetic both within and outside the United States. While the majority of hotels assessed during this project (13 of 19) belong to large, American-based chains, it is still useful to compare their overall levels of Alberta Building Code compliance with those of non-ADA hotels and chains. For the purpose of comparison, this section divides the 19 hotels assessed into the following groupings:

- Member of an American-based chain (13 hotels)
- Member of a Canadian-based chain with properties in the United States (two hotels)
- Member of a Canadian chain (two hotels)
- Independent (two hotels)

Given the small sample of hotels not belonging to American-based chains, these findings should be used with caution.

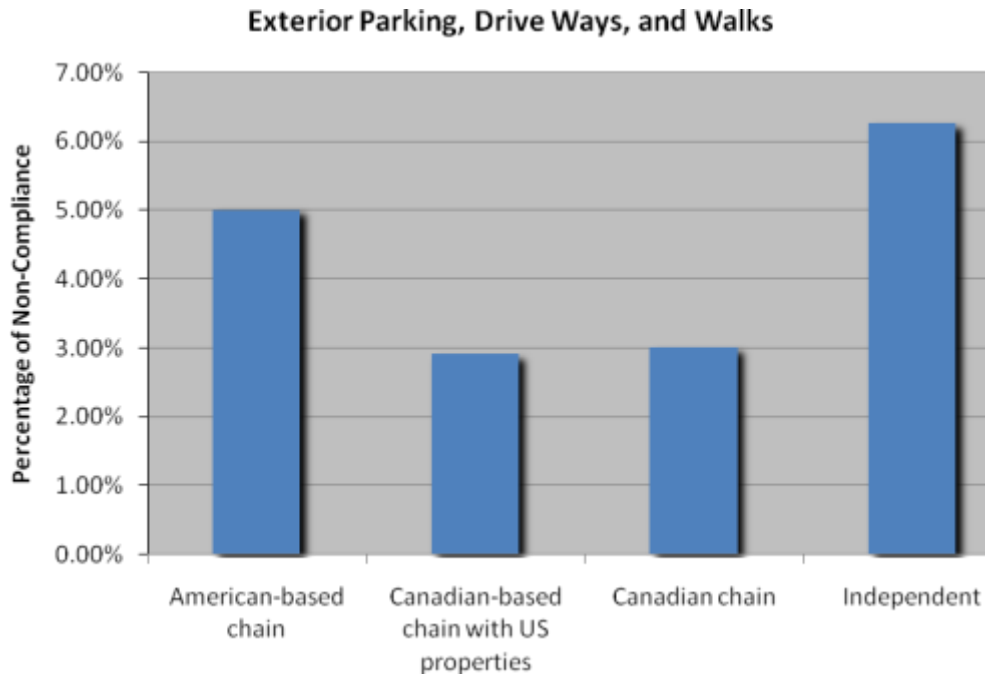
Percentage of Building Code Compliance



There is little difference in mean overall compliance by hotels in each of the four categories. Hotels belonging to American-based chains have a mean overall compliance of 81%, compared to 79% for Canadian-based chains with US properties, 81% for Canadian chains, and 83% for independent hotels.

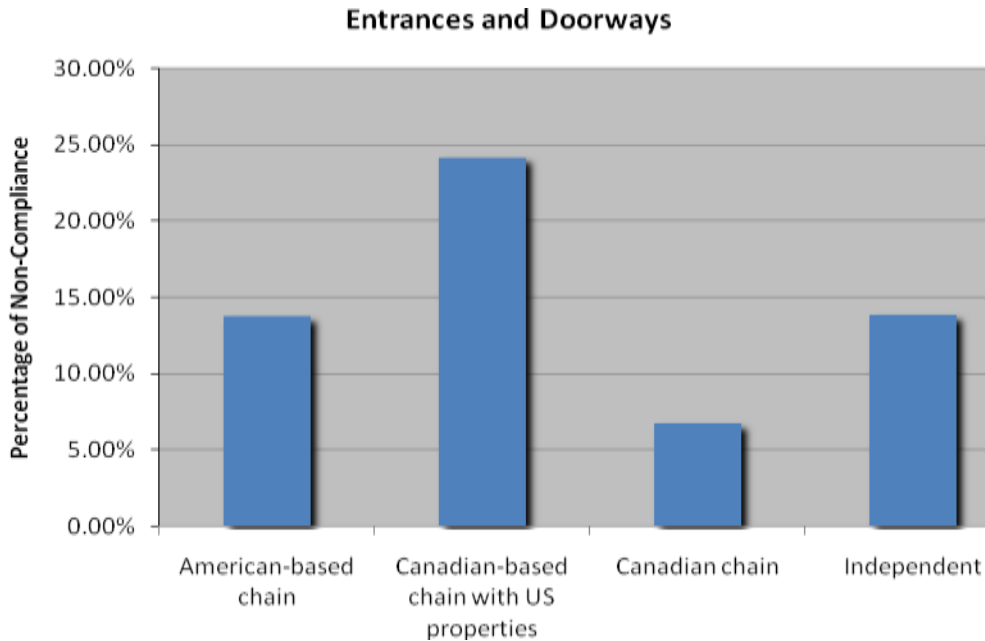
When broken down further by Building Code category, only slightly greater differentiation emerges.

Exterior Parking, Drive Ways & Walks



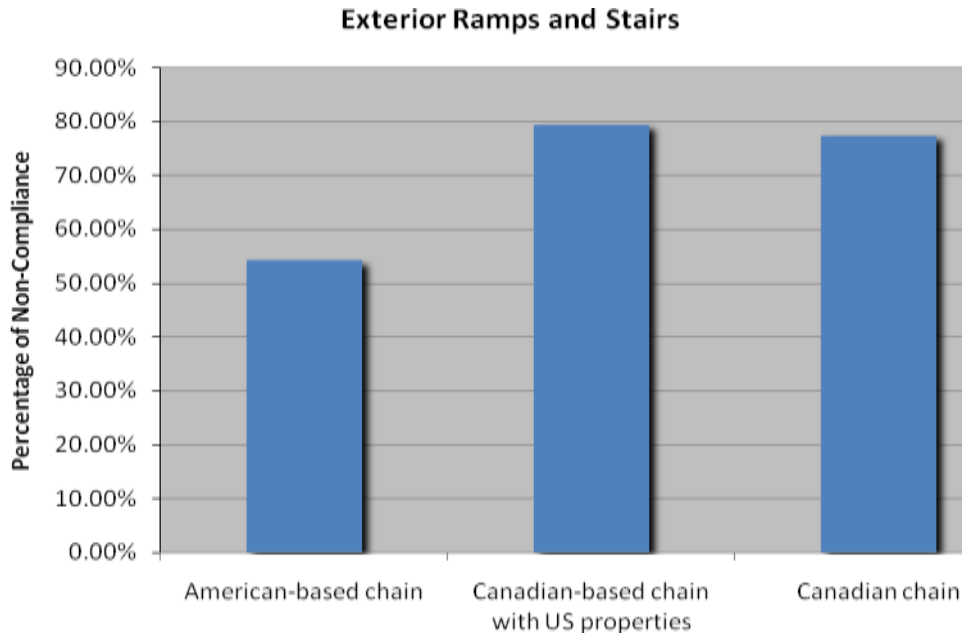
There is little overall difference in non-compliance in this category among the four hotel groupings. American-based chains have a 5.0% rate of non-compliance, compared with 2.9% for Canadian-based chains with US properties, 3.0% for Canadian chains, and 6.25% for independent hotels.

Entrances and Doorways



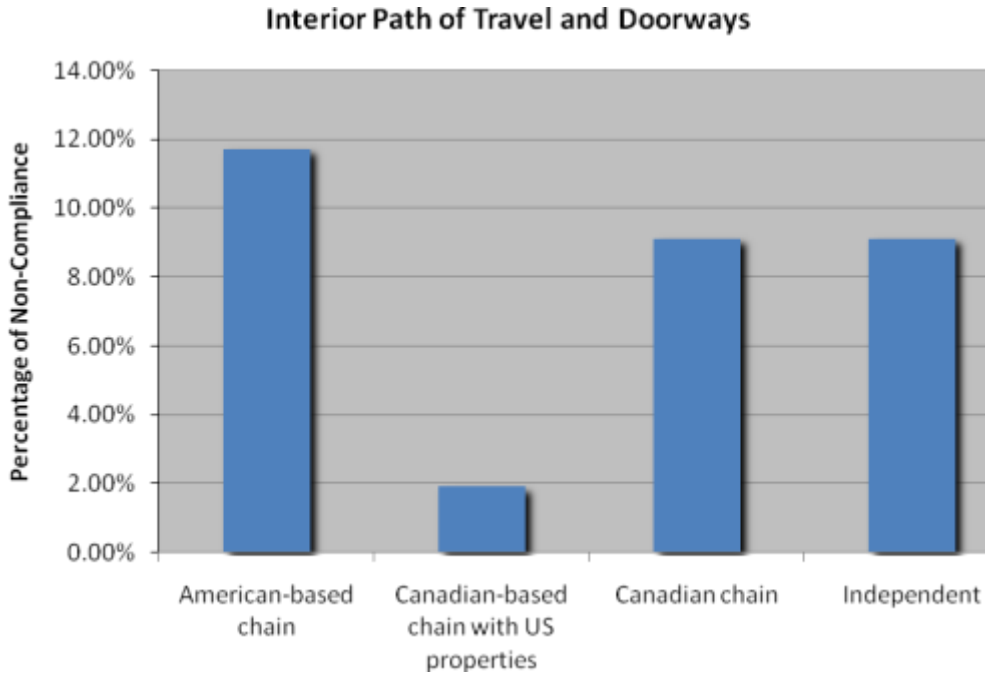
Again, there is little overall difference in non-compliance in this category among the four hotel groupings. American-based chains have a 13.7% rate of non-compliance, compared with 24.1% for Canadian-based chains with US properties, 6.7% for Canadian chains, and 13.8% for independent hotels. The higher rate of non-compliance among Canadian-based chains with US properties is attributable to a high rate of non-compliance in doorway accessibility by a single hotel.

Exterior Ramps and Stairs



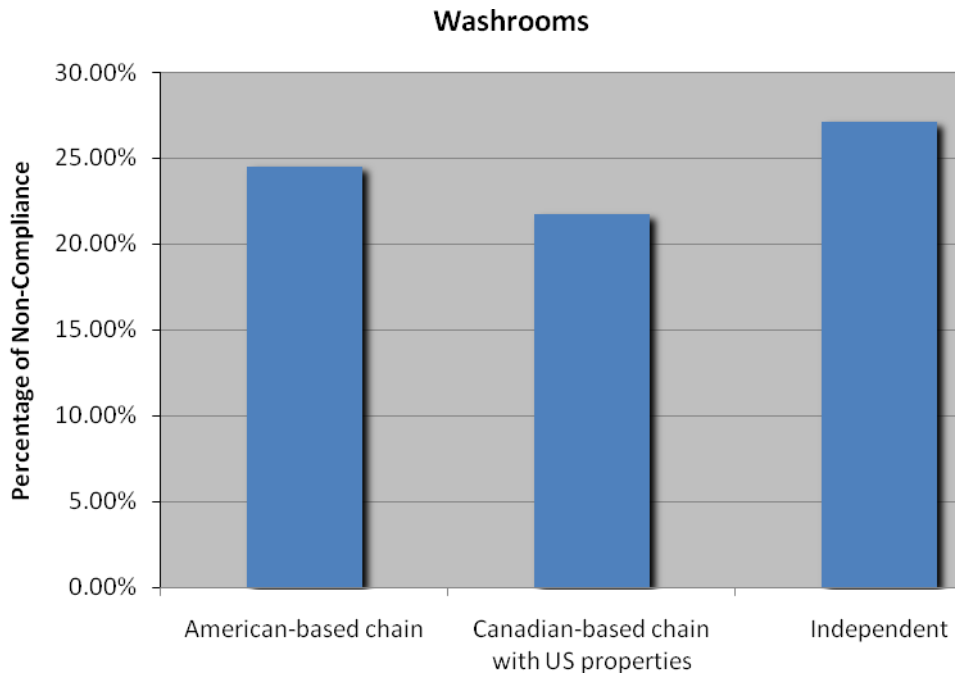
Independent hotels are omitted from this category, as neither independent hotel had an applicable exterior ramp or stairs. All hotel groupings have high levels of non-compliance in this area, with American chains non-compliant with 54.1% of criteria, compared with 79.3% for Canadian-based chains with US properties and 77.3% for Canadian chains. In all three groupings, handrails and guards account for the large majority of non-compliance.

Interior Path of Travel and Doorways



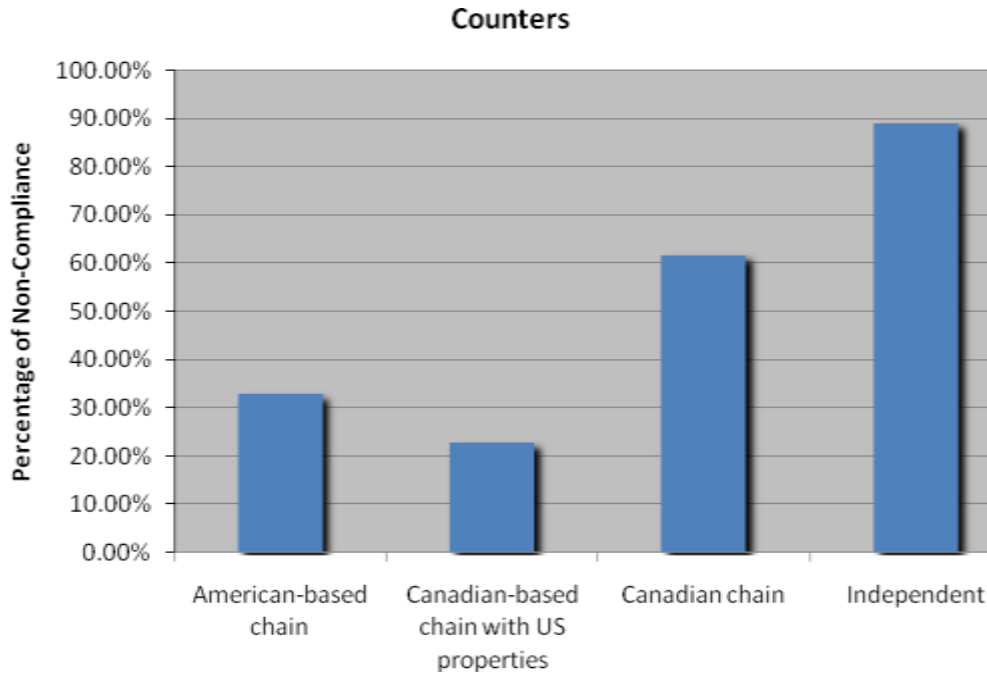
Again, there is little meaningful difference in non-compliance in this category among the four hotel groupings. American-based chains have an 11.7% rate of non-compliance, compared with 1.9% for Canadian-based chains with US properties, 9.1% for Canadian chains, and 9.1% for independent hotels. The low rate of non-compliance among Canadian-based chains with US properties is mostly attributable to high levels of compliance in doorway design (appropriate door weights), which exert a strong statistical influence in such a small sampling.

Washrooms



Canadian-chain hotels are omitted from this category, as the two assessed hotels in this grouping do not provide public-access washrooms. American-based chain hotels had a non-compliance rate of 24.5%, compared with 21.7% for Canadian-based chains with US properties and 27.1% for independent hotels. All three groupings are frequently non-compliant in a variety of areas, including urinal design, doorways, mirrors, and space requirements, and given small sample sizes, no useful distinctions between groupings can be drawn.

Counters



There are substantial differences between hotel groupings in this category, and while small sample sizes make it difficult to draw meaningful conclusions, it should be noted that hotels belonging to chains with American properties are significantly more compliant (32.7% non-compliance for US-based chains and 22.7% for Canadian-based chains with US properties, compared with 61.5% for Canadian chains and 88.9% for independent hotels). The most frequent areas of non-compliance for American-chain hotels and Canadian-chain hotels with US properties are in telephone design and counter knee space. Higher non-compliance rates among independent and Canadian-chain hotels can be attributed to the fact that three of four hotels in these groupings do not provide barrier-free counter spaces in public service areas.

As noted above, the majority of hotels assessed during this project belong to large, American-based chains, and the smaller sample of hotels not

belonging to this group cannot be considered representative. However, it is clear that hotels built in general compliance to the ADA cannot be assumed to be fully compliant with the Alberta Building Code. In most categories, as well as overall, rates of non-compliance among American- and Canadian-based hotels are very similar.

Conclusions and Recommendations

Percentage-wise, the level of compliance with the Alberta Building Code is relatively high, but, as mentioned in our introduction, each hotel that we assessed still falls short of its legal obligation to meet a standard of 100% compliance with the code's barrier-free section. Although many areas of non-compliance might seem insignificant to a person who does not have a disability, non-compliant design features, such as a counter height that is too high, a stair case that does not provide a cane-detectable tactile strip to warn of a change in elevation, or an improperly mounted grab bar, can have a distinct negative effect on a person with a disability, an effect that reduces that person's independence by segregating him or her from full participation in aspects of daily life that most people without disabilities take for granted.

As we have shown through the report of this project's statistical findings, specific and significant areas of concern regarding non-compliance with particular sections of the Alberta Building Code's barrier-free section begin to emerge when individual criterion in each category are analyzed. An example of this can be seen in the category of washrooms. Only one hotel scored a level of non-compliance that is less than 10%. The rest of the hotels have washrooms with levels of non-compliance ranging between 19% and 38% – scores that are absolutely unacceptable. Other areas of concern include the high levels of non-compliance in the design of exterior stairways, ramps, and hotel counters. Improvements in these areas are crucial if the hotel industry ever wishes to deem itself barrier-free.

Hotel rooms also emerged as a significant area of concern. In the absence of any legal framework regulating barrier-free design in hotel rooms, the hotel industry is free to design rooms with value-per-dollar as a priority rather than actual accessibility. Indeed, every hotel manager we spoke with

claimed their accessible rooms are scarcely ever occupied. If this is in fact the case, then urging the hotel industry to improve accessibility based on the premise that it will increase their market share will be futile.

We must also consider the possibility that people with disabilities are not frequently checking into accessible hotel rooms because the current state of accessibility simply does not meet their needs. If this is the case, then the problem is circular: the hotel industry has no financial incentive to improve accessibility based on increased market share because the disability community will not stay in accommodations that are not already adequately accessible. At present, the most likely solution to this problem is to make recommendations regarding hotel accessibility to the Safety Codes Council citing the need for legislation under the barrier-free section of the Alberta Building Code to include hotel rooms. If legislation is in place, and if it is enforced, the state of accessibility in hotel rooms will improve dramatically for travelers with disabilities.

If barrier free legislation is revised to include hotel rooms, several key design features should be taken into consideration. During our assessments, we saw, on more than one occasion, a door to an accessible suite that met the width requirement, but the space leading up to the door inside of the suite had dimensions that were unsuitable for a wheelchair user wishing to open or close the door. Providing adequate approach space is essential, particularly if a guest who uses a wheelchair is staying alone.

The STANDATA on which our accessible room assessment tool is based also makes no mention of maximum allowable door weight. In every accessible room we assessed, the force required to open the door was in excess of 22 N. This poses a significant barrier to many people with disabilities.

Future legislation should also regulate a guest's access to an accessible room's bed. This can be done by requiring a track lift on the ceiling, or by requiring beds in accessible rooms to leave a space below the box spring to accommodate a portable lift.

Currently, there is no code regulating a room's safety mechanisms for people with hearing or visual disabilities. Providing fire alarms and other safety devices that emit audible and visual signals detectable by people who are blind, hard of hearing or deaf are essential. Although many hotels that we assessed voluntarily included these sorts of devices, installation of such devices is by no means a hotel industry standard.

Finally, improved enforcement of the barrier-free section of the Alberta Building Code would dramatically increase code adherence. Unlike other sections of the building code that require the interpretation of qualified inspectors, the barrier-free section could be enforced by informed disability community organizations that have acquired an acute knowledge of the criteria cited in the code's barrier-free section. This move would be similar to the power delegated by the Government of Alberta to AEDARSA – a non-profit organization of qualified professionals who inspect elevators throughout the province. Like other professionals who contribute their expertise to certain areas of code interpretation, people with disabilities who acquire an acute knowledge of the barrier-free section of the building code, and whose daily life experiences provide them with the necessary expertise, will be the best qualified to enforce it, especially since barrier-free code is designed to meet their needs, and to ensure their comfort, safety, and full participation in society.

Although this study was not designed to determine the specific causes of the hotel industry's failure to fully comply with the barrier-free section of the Alberta Building Code, pre- and post-assessment conversations with hotel managers and staff gave us insight into the hotel industry's level of self-awareness regarding accessibility. In nearly every hotel we visited, managers praised their hotels' level of accessibility, and in more than one instance claimed that the level of accessibility went above and beyond what was required by the Alberta Building Code. When oversights such as the absence of insulation on pipes under lavatories were pointed out, hotel managers and staff were often surprised and admitted to having never thought about the need for such design features.

The primary reason for the hotel industry's failure to fully comply with the barrier-free section of the Alberta Building Code is a lack of awareness. When people without disabilities design or manage a hotel they are generally not aware of the issues people with disabilities face each day. In addition to improved legislation, an education campaign is needed, one that is targeted at new hotels during the design phase, one that could drastically improve the hotel industry's compliance with the Alberta Building Code. If compliance is met while a hotel is still being designed, the need for costly future renovations aimed at bringing a hotel up to code could be avoided altogether. An education campaign should be based on findings of this study – findings that illuminate overwhelming areas of non-compliance, such as barrier-free washrooms – and it should be presented at annual hotel industry gatherings, like the Alberta Hotel and Lodging Association's annual trade show and convention, and the Hotel Association of Canada's annual conference. Presenting a research-based accessibility awareness campaign to the hotel industry during its annual gatherings could have an inestimable impact on the lives of people with disabilities, an impact that potentially helps compass the future course of hotel accessibility across Alberta and Canada.

Recommendations in Brief

1. Increasing enforcement of the building code will ensure increased adherence the code's barrier-free criteria. This can be done by boosting the number of current inspectors, or by empowering non-profit disability organizations that have gained expertise in barrier-free legislation to inspect buildings for barrier-free code adherence.
2. The Barrier-Free Council should use the findings of this study to push for the inclusion of hotel rooms in future revisions to barrier-free legislation. Hotel room accessibility is critical to the comfort, safety, and independence of persons with disabilities. The hotel industry will never be able to deem itself fully accessible until this problem is dealt with.
3. Although some areas of Alberta's barrier-free building code are excellent, the code does not go far enough. We advise that the code be emboldened and expanded beyond the consideration it gives to limited physical disabilities, so that the public sphere becomes a safer, more inclusive environment for all people with disabilities.
4. During the course of this study, we gained an overwhelming sense that a lack of education and perspective is largely responsible for imperfect adherence to the building code's barrier-free criteria. Indeed, each hotel owner and manager we spoke with was eager to provide as accessible an environment as possible, and they were surprised that their hotels weren't entirely up to code. We recommend a research-based education campaign aimed at the hotel industry, so that barrier-free design ideas are made known and implemented. This effort will almost certainly improve the experiences of travelers with disabilities.