Accessibility Calculator

Part 1 of 2

Facility Name	Ayr Fire Station
Building ID	WF003
Number of Storeys	1
Split Levels (Y/N)	N
Programming on non-principal level	Y
Can the programming be moved	Y
Total GFA ft²	15,752

Accessibility Summary	
1. Parking	$0
2. Barrier Free Path - Exterior	$20,000
3. Barrier Free Path - Interior	$5,000
4. Fire Alarm	$0
5. Washroom - Universal	$75,000
6. Washroom - Regular	$44,500
Estimated Total Cost	$144,500

1. Requirement - Parking

Reg	Section	Section Name	Description
IAS (O. Reg. 191/11)	80.34	Types of accessible parking spaces	Type A, a wider parking space which has a minimum width of 3,400 mm and signage that identifies the space as "van accessible". Type B, a standard parking space which has a minimum width of 2,400 mm.
IAS (O. Reg. 191/11)	80.35	Access aisles	Space between parking spaces that allows persons with disabilities to get in and out of their vehicles. Access aisles may be shared by two parking spaces. 1. They must have a minimum width of 1,500 mm. 2. They must extend the full length of the parking space. 3. They must be marked with high tonal contrast diagonal lines.
IAS (O. Reg. 191/11)	80.36	Minimum number and type of accessible parking spaces	1 to 12 parking space = 1 type A spot 13 to 100 parking spaces = 4% dedicated for persons with disability (split between type A and B) - if even, 1/2 A and B - If odd, 1/2 and extra odd is B 101 to 200 = 1 + 3% 201 to 1000 = 2 + 2% 1000 = 11 + 1%

Category	Questions		Unit Cost (100 per m2)	INPUT - AVAILABLE SPOTS	Code Requirement (2016	Cost
Parking	1	Total existing parking spots available (including A&B)	N/A	60	2	N/A
	2	Total existing Type A accessible spots	$3,000	1	1	$0
	3	Total existing Type B accessible spots	$2,500	1	1	$0
					Total	$0

2. Requirement - Exterior - Barrier Free Path of Travel

Reg	Section	Section Name	Description
BC (O. Reg. 332/12)	3.8.1.2	Pedestrian Entrances	1 to 3 entrance = 1 barrier free entrance 4 or 5 entrance = 2 barrier free entrances more than 5 = not less than 50% must be barrier free entrances One of the barrier-free entrances shall be the principal entrance to the building. Only one doorway required to be barrier free where there are multiple doorways.
BC (O. Reg. 332/12)	3.8.1.3	Barrier free path of travel	Every barrier-free path of travel shall provide an unobstructed width of at least 1 100 mm for the passage of wheelchairs and illuminated Every barrier-free path of travel less than 1 600 mm in width shall be provided with an unobstructed space not less than 1800 mm in width and 1800 mm in length located not more than 30 m apart (passing/turn area). Minimum headroom of 1980 mm or a guardrail or other barrier provided.
BC (O. Reg. 332/12)	3.8.2.1	Areas Requiring Barrier Free Path of Travel	Throughout entrance storey, normally occupied floor areas serviced by elevators and parking Does not apply to: (1) service rooms; (2) portions of a floor area that are not at the same level as the entry level, provided amenities and uses provided on any raised or sunken level are accessible on the entry level by means of a barrier-free path of travel
BC (O. Reg. 332/12)	3.8.2.2	Access to Parking Areas	Provide a barrier-free path of travel from barrier-free entrances to parking area.
BC (O. Reg. 332/12)	3.8.3.2	Exterior Walks	Uninterrupted width of not less than 1 100 mm and a gradient not exceeding 1 in 20 (ramp required if gradient exceeds) Level gradient at entrance
BC (O. Reg. 332/12)	3.8.3.3	Doorways and Doors	Every doorway that is located in a barrier-free path of travel shall have a clear width of not less than 860 mm when the door is in the open position
BC (O. Reg. 332/12)	3.8.3.4	Ramps	Have a minimum width of 900 mm between handrails Have a maximum gradient of 1 in 12 Level area at the top and bottom of ramp (1670mm by 1670mm) and at 9m intervals or abrupt changes in direction (1670mm) Curb and guard on both sides of the ramp

Category	Questions		Unit Cost	INPUT - BARRIER FREE PATH	Code Requirement (2016	Cost
Entrance - Exterior	1	Total number of pedestrian entrances (excluding service entrances)	N/A	2	1	N/A
	2	Number of entrances with width > 860 mm? (cost for door/hardware)	$5,000	0	1	$5,000
	3	Number of entrances with door operators	$15,000	0	1	$15,000
	4	Ramps: total meters in ramps required to address change in gradient	$1,500	0	N/A	$0
	5	Exterior walks: total meters in walk (linked to barrier free path) less than 1,100 width (for required entrances)	$1,000	0	N/A	$0
					Total	$20,000

3. Requirement - Interior - Barrier Free Path of Travel (principal floor)

Reg	Section	Section Name	Description
BC (O. Reg. 332/12)	3.8.1.3	Barrier free path of travel	Every barrier-free path of travel shall provide an unobstructed width of at least 1 100 mm for the passage of wheelchairs and illuminated Every barrier-free path of travel less than 1 600 mm in width shall be provided with an unobstructed space not less than 1800 mm in width and 1800 mm in length located not more than 30 m apart (passing/turn area). Minimum headroom of 1980 mm or a guardrail or other barrier provided.
BC (O. Reg. 332/12)	3.8.2.1	Areas Requiring Barrier Free Path of Travel	Throughout entrance storey, normally occupied floor areas serviced by elevators and parking Does not apply to: (1) service rooms; (2) portions of a floor area that are not at the same level as the entry level, provided amenities and uses provided on any raised or sunken level are accessible on the entry level by means of a barrier-free path of travel
BC (O. Reg. 332/12)	3.8.3.3	Doorways and Doors	Every doorway that is located in a barrier-free path of travel (as determined in 3.8.2.1) shall have a clear width of not less than 860 mm when the door is in the open position

BC (O. Reg. 332/12)	3.8.3.4	Ramps	Have a minimum width of 900 mm between handrails Have a maximum gradient of 1 in 12 Level area at the top and bottom of ramp (1670mm by 1670mm) and at 9m intervals or abrupt changes in direction (1670mm) Curb and guard on both sides of the ramp
BC (O. Reg. 332/12)	3.5.2.2/ 3.8.3.5	Barrier-free design (elevators)	Passenger elevators shall conform to Appendix E of ASME A17.1 / CSA B44, "Safety Code for Elevators and Escalators". - Automatic verbal (and visual) announcement that announces the floor at which the car has stopped - Handrails on all non-access walls (height of 800 to 920 mm, with space of 35 to 45 mm from wall) - Audible signals shall sound once for the UP direction and twice for the DOWN direction, or shall have verbal annunciators that state the word UP or DOWN. - Raised character and Braille floor designations shall be provided on both jambs of elevator hoistway - Where the area of an elevator makes it difficult for a person using a wheelchair to turn around, a mirror should be provided on the rear wall to allow the user to see the car position indicators and the door opening. - Visual alarm to flash in conjunction with audible alarm. - Buttons with floor designations shall be located a maximum of 1220 mm

Category	Questions		Unit Cost	INPUT - BARRIER FREE PATH	Code Requirement (2016	Cost
Entrance - Interior	1	Number of interior entrances with width < 860 mm? (cost for door and hardware)	5,000	1	1	$5,000
	2	Ramps: total meters in ramps required to address change in gradient	1,000	0	0	$0
	3	Is an elevator present?	Y/N	N	N/A	<- Enter Y/N
	4	Number of floors used for programing (exclude service floors)?	150,000	1	N/A	
					Total	$5,000

4. Fire Alarm

Reg	Section	Section Name	Description
BC (O. Reg. 332/12)	3.2.4.19	Alert and Alarm Signal	Visual signal devices shall be installed, in addition to audible signal devices, in a corridor used by the public and in a floor area or part of a floor area where the public may congregate. Shall also be installed in a washroom for public use
BC (O. Reg. 332/12)	3.2.4.22	Smoke Alarms	Smoke alarms should have an audio and visual signalling component - conforming to the requirements in 18.5.3. (Light, Color and Pulse Characteristics) of NFPA 72, "National Fire Alarm and Signaling Code"

Category	Questions		Unit Cost	INPUT FOR FIRE ALARM	Code Requirement (2016	Cost
Fire Alarm	1	Alarm system present with audio and visual component?	2.77	Y	43,633	$0

5. Requirement - Washroom - Universal

Reg	Section	Section Name	Description
BC (O. Reg. 332/12)	3.8.2.3	Washrooms required to be barrier-free	Minimum number of universal washroom: 1 universal washroom required in building if 1 to 3 floors, 2 required if 4 to 6 floors, over 6 floor 3 (1 for each 3 floor increment above 6) (if greater than four floors then two are required) Minimum number of water closets: - If 1 to 3 water closets: one must be barrier free, unless universal washroom is 45m away - if 4 to 9 water closets: two must be barrier free - 10 to 16 water closets: three must be barrier free
BC (O. Reg. 332/12)	3.8.3.12	Universal washroom	- Served by a barrier free path of travel - Have a door that is capable of being locked from the inside and released from the outside in case of emergency - Grab bars and coat hook - Be designed to permit a wheelchair to turn in an open space not less than 1 700 mm in diameter - Door shall be equipped with power door operator - Emergency call system that consists of audible and visual signal devices inside and outside of the washroom activated by a control device inside the washroom

Category	Questions		Unit Cost	INPUT FOR UNI. WASH.	Code Requirement (2016	Cost
Univ. Washroom	1	Number of floors	N/A	1	N/A	N/A
	2	Number of universal washrooms present?	$75,000	0	1	$75,000
					Total	$75,000

5. Requirement - Washrooms - Repeat per washroom on barrier free storey

See tab 2

Comments / References

Comments	Board	

Comments	Assessor	

Title	Reg	Current Version	Reference
Integrated Accessibility Standards	O. Reg. 191/11	01-Jan-13	https://www.ontario.ca/laws/regulation/110191
Ontario Building Code	O. Reg. 332/12	01-Jan-16	https://www.ontario.ca/laws/regulation/120332