Campus Accessibility Action Plan
2012-2017

FACILITY SERVICES
In April 2012, an audit of the McMaster campus was conducted by Facility Services to assess its degree of accessibility. The scope of the audit was very specific: to review the existing conditions of the campus entrances, interior corridors, public washrooms, fire alarm systems, elevating devices, and drinking fountains based on current code requirements or best practices. This scope addresses most of the current accessibility requirements. This audit did not address off-campus buildings.

The results of this audit will help guide Facility Services and the McMaster Accessibility Council (MAC) in establishing priorities for deferred maintenance and capital funding investments in order to provide an accessible campus and comply with the AODA. The next steps in this process are to confirm the priorities with the campus stakeholders, establish budget for the work and to create a multi-year plan to address all of the requirements. Availability of budget capacity will determine the rate at which the CAAP proceeds, and will be the most likely obstacle to the success of this plan. This summary is intended to provide a starting point and initial direction for this work.

1. Academic/Administrative Buildings

1.1. Building Entrances

Only 40% of the campus academic buildings remain fully accessible from the exterior. Fully accessible was deemed to be when every exterior entrance to a building is accessible at ground level for individuals with mobility issues. When considering a definition of partially accessible, where at least one entrance to the building is accessible by individuals with mobility issues, the campus buildings are 79% compliant. Exterior entrances to campus are equipped with automatic door openers in 71% of the buildings. Where buildings were not equipped with automatic door openers on exterior doors, 10% of those buildings did have at least one exterior door that was equipped to provide an accessible entrance. Therefore, 81% of our buildings have at least one door that is accessible.

1.2. Interior Corridors

Interior corridors were fully accessible in 73% of the academic buildings. This determination was made based on the ability for an individual requiring the use of a mobility device to access all the public corridors of the building once inside, irrespective of the method used to gain access to the building.

1.3. Public Washrooms

The level at which accessible public washrooms are truly accessible is a function of the age of the washroom. What constituted accessible at time of construction has changed dramatically over the years. Washrooms that are currently labeled as an accessible washroom in a number of campus buildings may indeed not be accessible based on the code of today, or the AODA expectations for the future. To be compliant as an accessible washroom, the facility needs to have the proper turning radius for a mobility device, meaning the stall and sink area needs to be the proper size. There
must be door openers interlocked with a locking mechanism on the main door to the single occupant washroom. There are requirements for grab bars in the stall and the paper dispenser needs to be at the proper height. The sink, towel dispenser and/or hand dryer all need to be at the proper height. The Building Code will dictate the standard that we have to construct to, and to be fully accessible, we cannot allow ‘grandfathered’ accessible washrooms to mean compliance. Currently, 79% of buildings contain at least one labeled accessible washroom. In many of these, the washroom will have a toilet stall that was designed to be of accessible size, but other items in the washroom are not accessible (i.e. sinks, soap dispensers, paper towel dispensers, etc). Not all of the accessible washrooms have door operators on the door. This must be a requirement to making them fully accessible to individuals requiring this feature. We estimate that only 20% of our buildings would comply with current standards.

1.4. Fire Alarm Systems

Older fire alarm systems were designed to provide audible notification of fire or potential fire to building occupants. New designs and upgrades include the use of strobe lights to notify occupants who have issues with the use of an audible system as the only method of notification. 40% of the campus buildings have a system where strobe lights are incorporated into the notification method. The remaining 60% of the campus buildings use a horn or bell notification method only.

1.5. Elevating Devices

There are presently 66 elevators and lifts in use in the academic buildings. Some elevators are designed and situated to be used as freight elevators only, and others double for both freight and passenger use. Only seven multi-story buildings on campus do not have access to an elevating device. 79% of elevating devices incorporate the use of Braille in the call buttons or floor buttons within the elevators, and 7% of the elevators use voice notification or a talking keypad to assist individuals with vision issues.

1.6. Drinking Fountains

Like accessible washrooms, the mounting height of drinking fountains has changed with time. Not all campus buildings have water fountains in use. For those that do have water fountains, 60% of them have at least one fountain in the building that is at accessible height.

1.7. Summary of Least Accessible Buildings

The least accessible buildings on campus are: Alumni House (Building #7), E.T. Clarke Utility Centre (#12), Nuclear Reactor (#15), Divinity College (#17), Wentworth House (#21), Biology Greenhouse (#30), Campus Services Building (#31), Applied Dynamics Laboratory (#33), Temporary Buildings T18 and T26. These buildings reduce our overall compliance in all of the categories examined. They account for over 41% of our exterior entrance accessibility issues, and none of these buildings have elevators to aid in transportation within the building.
These buildings are, in many cases, among the least critical to the delivery of our core mission and we will prioritize actions accordingly.

1.8. Off-Campus Buildings

In view of the recent date of construction of most of the off-campus buildings, it is probable that all except for the DTC will have a high degree of accessibility.

2. Residence Buildings

2.1. Building Entrances

Based on the definition, 67% of the campus residences are fully accessible from the exterior. When considering a definition of partially accessible, where at least one entrance to the building is accessible by individuals with mobility issues, all the campus residences, save one, are compliant. This means that we are 92% compliant. Exterior entrances to the residences are equipped with automatic door openers on only 25% of the buildings.

2.2. Interior Corridors

Interior corridors were fully accessible in 75% of the residences, a number very close to accessibility in the academic/administrative buildings. The buildings that are not accessible on the interior will prove very difficult to make accessible. Two of the buildings are Heritage buildings (Edwards and Wallingford Halls), with a very complex set of small stairs at entrances, and the third (Matthews Hall) is designed with many swinging doors throughout the corridors. None of these three buildings are equipped with elevators. So even with a 92% compliance for building entrances, there are two buildings where movement around the building is virtually impossible even if you can get inside an exterior door and one building where there is absolutely no ground access and no interior access for an individual in a mobility device.

2.3. Washrooms

As a residence, the washrooms are designed to be used by the building residents and less the general public. Depending on the design of the building, there can be individual private washrooms (i.e. several per floor) or, gang/group washrooms. Only 50% of the residences have at least one accessible washroom. The three newest builds have multiple washrooms that comply with accessibility standards, but again, these are primarily designed for people living in the building and less for someone who may be visiting the building as a guest.

2.4. Fire Alarm Systems

As part of a multi-year plan, 75% of the residences have been modernized to have both strobe lights and a siren notification system. The remaining 25% will be
changed over to a combination strobe and siren when the fire alarm systems are upgraded through the deferred maintenance program.

2.5. Elevating Devices

All but three of the residences are equipped with at least one passenger elevator. Again, as part of a multi-year plan, all of the elevators have been modernized meaning that 100% of elevating devices incorporate the use of Braille in the call buttons or floor buttons within the elevators. None of the elevators (0%) use voice notification or a talking keypad to assist individuals with vision issues, but as a recent modification available during a modernization overhaul, this was not available when the residence elevators were upgraded. The lack of elevators in three buildings is seen as a barrier for making those buildings fully accessible.

2.6. Residence Practice

As part of the admission process and assignment procedure, Housing and Conference Services will place students with accessibility requirements in those buildings with the least issues for the student.

3. Recommended Minimum Accessibility Measures

The scale of accessibility issues and the cost of correction are such that interim standards are required. The suggested standards are as follows:

3.1. Providing at least one accessible entrance to all buildings should be a minimum goal. This would entail every building on campus having at minimum one ground level or ramped entrance, equipped with a door operator. Where building interior corridors are not fully accessible, a second accessible entrance should be considered to provide access to all interior locations of the building.

3.2. Mobility through buildings for the purpose of providing access to all floors where the core mission of the university occurs should be a minimum goal. Defining the core mission needs to occur in order to determine if specialty buildings that are not accessible (e.g. ADL, TB18) will be made accessible. Accessibility could be made using elevating devices or ramps where feasible.

3.3. Where the provision of an automatic door opener, to provide access to an exterior or interior door, would allow for compliance to accessibility standards, this should be considered a priority.

3.4. Having at least one fully compliant accessible washroom in each building functioning at the current OBC requirement, and where possible, compliance with future AODA standards should be a minimum goal.

3.5. Determine how accessible washrooms will provide compliance for the residence buildings where guests were not considered during design is required.
3.6. Providing at minimum one accessible water fountain or hydration station in buildings should be considered a minimum goal.

3.7. A review of accessibility to buildings that do not have passenger elevators needs to be completed in conjunction with recommendation 3.2. If the construction of elevators for existing buildings is required, significant capital would be needed.

4. Proposed Solutions to the Recommended Minimum Accessibility Measures

To comply with the suggested standards in Section 3, the following projects could be undertaken:

4.1. Design and installation of ramps or compliant entrances on buildings where accessibility is currently not available.

4.2. Installation of door opener devices on interior corridors where needed and washrooms marked as being accessible.

4.3. Ensure all washrooms marked as being accessible are indeed accessible.

4.4. Install accessible washroom facilities in buildings where none exist.

4.5. Elevators will require at minimum Braille buttons, with the installation of voice notification being the optimal design. Voice notification should be incorporated on all modernizations and new installations.

4.6. At minimum, one accessible drinking fountain should be provided for buildings where drinking fountains are currently in use.

5. Accessibility Audit

Facility Services conducted a campus accessibility audit based on the measures outlined in Section 3, and it is attached to this report as Appendix A. The appendix details the building condition on the accessibility systems audited, as well as an estimated cost to achieve the proposed solutions as detailed in Section 4. Based on the available and allocated university funding, the outstanding accessibility items requiring installation, modernization or renovation in order to meet the minimum accessibility measures will be prioritized, and an annual plan developed.

6. Recommended Next Steps

6.1. Existing Buildings

The audit found in Appendix A indicates that a total estimated budget of $32M is required to satisfy the measures as outlined in Section 3. The vast majority of this money is required to deal with vertical accessibility and conveyance through the installation of lifts and elevators to buildings that were not originally designed with elevators. Though accessibility to all floors of all building is a recommended minimum accessibility requirement, it is believed that the unique function and design of the
buildings that currently do not have elevators, coupled with the functional profile of the rest of the campus buildings will allow the postponement of the installation of vertical conveyance to a later phase of this project.

The postponing of accessibility initiatives in three highly administrative buildings (i.e. #12, #31, #47) as well as the Biology Greenhouse (#30) to a later phase of the project will reduce the immediate financial impact of this CAAP. Along with these four buildings, it is recommended that the suggested projects for the non-teaching temporary buildings (i.e. T18 and T26) be postponed to a later phase.

Based on these two recommendations, the $32M program could be reduced to a more manageable program of approximately $2.49M for the entire campus. The recommended projects for $2.49M are detailed in Appendix B.

Removing all buildings from the recommended list that self-fund their operations (i.e. residences, athletics, Divinity College and the MUSC), the overall program of $2.49M reduces to $1.37M, or $273,000 per year on a five year plan. The university funded the 2012-13 accessibility program with $334,000 which suggests that the minimum recommended measures for the main academic buildings of the campus could be completed with no new additional funds in a 5 year program, with approximately $60,000 available each year to fund the soft costs associated with the projects such as design, permits and project management.

Removing the vertical conveyance projects from the project list for the residence buildings reduces the overall program for those buildings from $12M to $998,000, a very manageable amount to be incorporated into the existing deferred maintenance program for this portfolio. Given the greater flexibility to accommodate students in different residence buildings based on accessibility requirements, a commitment of $100,000 per year to address accessibility measures would mean the residence minimum requirements would be completed in a 10 year program.

It is further recommended that the annual program take a balanced approach to address items in each of the accessibility categories. This would allow for a prioritization of projects on campus in the buildings where need is determined to be greatest. The recommended projects for this first year of the CAAP are found in Appendix C.

The implications arising from the AODA Built Environment standards have not been considered in the above recommendations, as details regarding the AODA implementation are still not finalized. As they become available, the CAAP will be reviewed and alterations to the current 5-year plan will be revisited. It is possible that the full implications of AODA may not be known for 3-5 years, at which time phase two of the CAAP can capture these requirements.

6.2. Future Buildings

Accessibility requirements for new construction will continue to be governed by the Ontario Building Code (OBC). As the entire province awaits the issuance of the AODA Built Environment Standards, and in anticipation of the needed revisions to the OBC,
the AODA Committee on Standards will be moved under the purview of the Ministry of Municipal Affairs to ensure the AODA Built Environment Standards are incorporated into the OBC.

Until the revised OBC is enacted into law, McMaster will continue to construct and renovate in accordance to the current OBC, but will also apply accessibility initiatives in accordance with the recommendation contained within the CAAP.

These initiatives will include all the items surveyed for in the CAAP, and contained within Section 3. Specifically, new construction will have:

- Barrier free entrances,
- Barrier free corridors,
- Barrier free washrooms,
- Classrooms will be designed to allow access to the learning space for persons using mobility devices,
- Buildings will be accessible by use of an elevator,
- Elevators will have voice notification,
- Life safety systems will be designed to provide notification for all building users,
- Potable water will be available at accessibility heights.

Though many of these initiatives are already contained within the OBC, it is the desire for new construction to be above the minimum standards to allow greater accessibility to the McMaster community.