

RESEARCH REPORT

External Research Program



Accessibility to Atlantic Canada University
Residences by the Physically Handicapped
Students



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Accessibility to Atlantic Canada University Residences
by the Physically Handicapped Students

by

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INTRODUCTION

The International Year of the handicapped has brought in its wake a host of challenging problems. It has made the public aware that building facilities have been constructed to primarily accomodate so-called normal persons. If older buildings satisfy perchance the needs of the physically handicapped, it is more by accident than by way of planned designs. Ten years ago, even if one in ten persons had a handicap¹, no thought was given to rendering buildings accessible to the person in a wheelchair. One has only to examine countless inaccessible staircases and main entrances of many public buildings. From the point of view of aesthetics, these are very pleasing to the eye but remain functionally inaccessible to the physically handicapped. The problem of adaptating or renovating existing buildings, including university residences, to meet the needs of the physically handicapped student is now a concern of every maritime university campus administration. In times of budgetary restraints, universities are tempted to look at priorities in teaching and research activities rather than rendering existing dormitories and residences accessible to the physically handicapped students.

The thrust of this investigation is to find out if

students in spite of their handicaps enjoy a choice of suitable housing and personal independence at Atlantic university campuses. It would appear that two ideal conditions would have to be taken into consideration when and if this were to happen: firstly, ambulatory persons with moderate disabilities should be afforded a wide range of choice in the type and quality of their residential accommodation; secondly, the moderately disabled, including those confined to a wheelchair, should be free to choose where to live in the community; they should have a broad access to educational and employment opportunities; and their housing should allow a maximum degree of independence from personal assistance in performing everyday activities.

Two basic postulates arising out of these two above mentioned goals are advanced; firstly, ambulatory students attending Atlantic universities with moderate disabilities have a limited choice in the type and quality of their residential accommodations; secondly, moderately disabled university students, and those confined to wheelchair are not «free» to attend the Atlantic university of their choice due to limited access to buildings and grounds and in particular university residences.

Review of the literature

Physically handicapped persons apparently face two major obstacles in society. Tausig (1981) found that they

are prone to be subjected to negative attitudes on the part of so-called normal persons, and secondly, they are faced with a great number of architectural barriers which prevent them from gaining easy access to buildings and grounds in the community.²

Physically handicapped persons, according to Chestler (1965) are very often placed in the category of a minority group subjected to ethnocentric and prejudicial attitudes.³ These persons are viewed by society as being both intellectually and socially inferior. It is also believed that they cannot match in professional output and accomplish tasks with the same degree of efficiency as their counterparts - the non-handicapped. It may be noted as Higgs, (1972) observed that the female sex appears to have a more favorable attitude toward the handicapped than do males.⁴ The previously mentioned author states that the lack of contacts and misinformation about the physically handicapped nurture negative feelings. Two other authors, Bond and Weisberger (1977) have arrived at the same conclusions.⁵ However there may be differences in perceptions due to different cultural backgrounds. In a study undertaken in Japan by Ishikawa and Fujita (1979) it was observed that personal contacts mattered less than personality traits.⁶ It was concluded that a desirable and acceptable social behavior contributed to a better acceptance of the handicapped person.

The school milieu is apparently not different from

other segments of society, for example Patten (1979) found that teachers exhibit the same attitudes toward the handicapped as displayed by the general public. It is also interesting to note, according to Patten, that students at the secondary level are more prone to possess negative attitudes than students at lower levels of instruction. Miller (1980) has observed that from the standpoint of physically accessible facilities, architectural barriers prevent the handicapped student from fully taking advantage of educational services.⁸ Negative feelings are experienced by handicapped student when grounds, entrances, door widths, multi-story buildings, rest rooms and classrooms are inaccessible. For example, at the Université de Montréal Imbeault (1981) found that 28 per cent of the handicapped students did not use library facilities because of obstacles to be overcome.⁹ Two-thirds of the handicapped students avoided cultural and recreational activities because of inaccessibility, and, 61 per cent had to be assisted by other students in gaining access to the cafeteria. Another study done at the same university by Bolduc (1980) revealed that, in addition to these barriers, telephone booths and other accessories were often not within reach of the handicapped persons.¹⁰ DePape et al. (1971) undertook at the University of Manitoba what appears to be a pioneering study in Canada in order to examine the question of accessibility of campus buildings for the physically

handicapped. Their study revealed that the campus was not accessible and they suggested measures of adapting buildings in order to provide a modicum of access.¹¹

In North America, the United States have led the way in making buildings and grounds accessible to the physically handicapped on university campus, residences have naturally been part and parcel of the renovations. The concern for making buildings and grounds accessible to the physically handicapped has been the object of many important federal agencies and associations, namely the Architectural and Transportation Compliance Board, the Association of Physical Plant Administrators, the Department of Health and Welfare, and the National Easter Seal Society. In each state, measures have been taken and plans have been devised to make buildings, including university residences, accessible to the handicapped. Many universities have undertaken campus surveys in order to determine the quality and quantity of universal accessibility to buildings and grounds. Finally, norms and checklists for accessibility, too numerous to identify in this report, have been developed in the course of much research in this area.

The Problem

The problem in this investigation relates to the following question: To what extent do physically handicapped students have access to atlantic university residences?

The other specific questions related to the problem are identified as follows:

- (1) Which residences, if any, at atlantic universities are completely accessible to the physically handicapped?;
- (2) What renovations, if any, at atlantic universities residences have been made to render them adequately accessible prior to or during international year of the handicapped;
- (3) When will measures be taken, if any, in the foreseeable future, to eliminate architectural barriers in orders to make at least two residences accessible to physically handicapped males/females attending an atlantic university.

Significance of the Problem

The findings of the study may have numerous and beneficial effects for both the non-handicapped and handicapped populations. Firstly, it may bring about an awareness of the need to eliminate architectural barriers, at least to have some residences made accessible to the physically handicapped. It may assist university officials in identifying the kind of accessibility desired for campus residences and in specifying other measures that have to be taken to eliminate outstanding architectural barriers. Secondly, it will make known to the handicapped persons in atlantic Canada what university residences are adequately accessible to them. Thirdly, it will help handicapped individuals gain access to

university education; to enrol in programmes leading to a professional occupation; to restore the personal dignity and worth necessary to persons capable of working for the good of society.

Definitions of Terms

For the sake of clarity, words frequently used in this study are being defined to inform the reader of their scope and meanings intended in this investigation:

- (1) Accessibility - denotes grounds, and buildings that may be used by a physically handicapped person, and in this study access and functional use of a university residence.
- (2) Physically handicapped - implies a person who is physically diminished with an impairment, ranging from a mild ambulatory defects to a seriously disabling one and confining the person to a wheel-chair.
- (3) Architectural barriers - signifies impediments and obstructions that hamper or prevent the physically handicapped persons to gain access to buildings and grounds.
- (4) University residence - imply buildings at atlantic university campus that are being used to accomodate in a non-permanent fashion students living on campus.

The objectives

The three basic objectives for which this study is being undertaken are expressed as follows:

- (1) To gather from directors of students' residences the extent to which atlantic university residences are accessible to the physically handicapped students;
- (2) To find out from physically handicapped students, living in university residences, the level of their satisfaction or dissatisfaction concerning accessibility to residences;
- (3) To obtain from the director of pupil personnel services advice on the matter of access by the physically handicapped to the campus and their acceptance by the university community.

Assumptions

The review of literature revealed certain basic assumptions which partly stimulated this investigation.

- (1) That handicapped students are integral citizens of our society and therefore must have equal opportunity to faculty and programmes desired, and they must not be barred from campus because residence designs forbid admission.
- (2) That utilisers of campus, administrators, teaching personnel, students, auxiliary personnel provide relevant

and meaningful measures to dispel all disquieting factors in terms of attitudes on the one hand, and physical barriers at the other in order to help the handicapped gain full access to the campus.

Delimitations

This investigation has been undertaken at atlantic university campus where enrolments exceed one thousand pupils, and where a variety of programmes were offered throughout various faculties. For the purpose of this investigation the following maritime universities were selected for the object of studying access to their respective residences. In New Brunswick, Mount Allison University, Université de Moncton, and University of New Brunswick were selected. In Prince Edward Island, the only existing university is the University of Prince Edward Island. The five universities selected in Nova Scotia were Acadia, Dalhousie, Mount Saint Vincent, Saint Francis Xavier and Saint Mary's. Also, Newfoundland has one major university, Memorial at Saint John's.

This investigation concerned itself with architectural barriers in atlantic university residences met by students with certain physical handicaps, namely the semi-ambulants, the blind, the deaf and the paraplegics. Although severely handicapped such as quadraplegics might possibly live in a campus residences, it was felt that most atlantic university

campus, buildings and grounds might not be accessible for this type of severe disability. Only one university reported that a quadraplegic was living in residence on campus.

It is sometimes difficult to ascertain the nature and degree of the physical handicap from survey questionnaires. The individual, for personal reasons, wishes not to describe in detail the severity of his handicap and in some other cases the handicap is maximized, namely in the case of the semi-ambulants.

METHODS AND PROCEDURES

The development of a questionnaire and its subsequent administration as a general rule entails a number of precautions. Firstly, it must measure what it purports to measure. Secondly, the respondents must provide what they believe to be the correct answers. Validity and reliability are essential components of a reasonably good research. Finally, the reporting of meaningful results depends on the degree to which the first two components have been controlled. All efforts possible were made to ensure that the questionnaires were properly constructed in order to enable the investigator to obtain useful information. Prior to their administration, the questionnaires were sent to the Canadian Housing and Mortgage Corporation for verification. Modifications were made to correct inadequacies. Other shortcomings of the research can only be attributed to errors or omissions made on the part of the investigator.

The three questionnaires were adapted and developed from available literature on the subject of accessibility by the handicapped to grounds and buildings of University campuses. Some Canadian provinces and states south of the border have developed checklists to determine the extent to which buildings and grounds are accessible to the handicapped. After an analysis of a great many of these lists, it was

observed that most of them resembled each other excepting perhaps in their format. The survey instruments found in Milner,¹² namely the Facility Architectural Accessibility Profile Report and Accessibility of Buildings Higher Education Accessibility Project were very useful even though they had to be adapted to serve atlantic universities needs.

The two most important canadian references used for the development of the questionnaires were the National Research Council of Canada's brochure on Building Standards for the Handicapped¹³, and the Central Mortgage and Housing Corporation document entitled Housing the Handicapped¹⁴. Some additional comments provided by Champagne¹⁵ made the questionnaires more understandable and more comprehensive in matters of physical layout and other details needed to make rooms optionally accessible to the handicapped.

From an analysis of the literature received, it would appear that some functional characteristics ought to be taken into consideration if the residences are to be made accessible to the handicapped. Two set of such characteristics will be discussed. Firstly, those that may be considered essential in order to provide ease of access to an ease of movement within residential buildings; secondly, those that may be considered desirable in order to achieve both external and internal accessibility.

Essential Characteristics

Grounds near the residential dwelling should be free of barriers. Designated parking areas within close proximity of the building would appear necessary. The student in the wheel-chair should be able to gain entrance by way of sidewalks free of curbs, or by way of a ramp or elevator if there are entrances stairs. The entrance door should be sufficiently wide and there should ideally be locker and sanitary facilities located in the proximity of the entrance hallway and easily accessible to the physically handicapped.

In a residence, dormitory or apartment, several rooms and apartments ought to be specifically designed to accommodate the needs of the physically handicapped. Corridor access, elevator to the room or apartment must provide sufficient space for wheel-chair movement and the main door to the room or apartment measuring slightly less than a meter wide (32"). Control buttons of all types should be no more than (60") and the room or apartment should provide sufficient floor space for wheel-chairs manoeuvring including the bathroom.

If the student resides in a dormitory, wherever the cafeteria is located it must be readily accessible. Ideally, all social and recreational services should be made universally accessible, these include study lounges, parlors, movies rooms, play rooms, laundry and all other facilities used by students, ie. public telephones, drinking fountains, windows, and floor surfaces. All these above mentioned

features determine the quality and quantity of the characteristics that determine whether or not a residence is accessible.

Thus, two main components to be considered for evaluating the accessibility characteristics of a residential dwelling are as follows: (1) the external (grounds and terrain) and (2) the internal characteristics of residential dwellings. Checklists drawn to evaluate accessibility features of dwellings usually contain four parts: (a) accessible, (b) partially accessible, (c) non accessible and (d) non applicable. All floor spaces and width necessary for the functional operation of a wheel-chair, as well as other necessary service requirements for the handicapped have been identified by national organisations and agencies.

FINDINGS

This section is devoted to a presentation of data which seemed appropriate for this investigation. The data collected required treatment by descriptive statistic in which percentages and cumulative averages formed the content of the tables presented in this section of the study. The three respondents to the questionnaires were: a) the handicapped student; b) the director of student affairs, and c) the director of residence or his delegate.

The Handicapped Students

This questionnaire dealt mainly with components of university residence accessibility in atlantic Canada. The handicapped student was called upon to answer questions of accessibility to residences on campus according to his perceptions. Table I establishes age groups, the number of respondents, the raw percentages, and cumulative averages of handicapped students as defined in this study.

Although directors of student affairs had identified 60 handicapped students, only 25 students responded. Of these 25 students, only 17 live in university residences. The remaining 35 handicapped students live in the community. Some are known to be severely handicapped while others, for personal reasons conceal a handicap that is not readily

apparent to the public.

Table I

Age Group	No. of Respondents	Raw Percentage	Cumulative Average
16-20	8	33.3	33.3
21-25	8	33.3	66.6
26-30	2	8.3	74.9
31-35	4	16.7	91.6
35-40	1	4.2	95.8
40- -	1	<u>4.2</u>	100.0
Age unknown	<u>1</u>	100.0	
Total	25		

Table I shows that the greatest number of students enrolled were in age ranges of sixteen to twenty-five, the normal age range of students attending university in general. The fact that some respondents were in the age range of thirty to thirty-five and beyond is significant and is probably indicative of maritime university campus interest in integrating handicapped students to their campus. In other words, it is quite unlikely that the so-called normal population of regular full-time students in attendance with

ages beyond thirty would comprise one quarter of the total university enrolment.

The table below illustrates the handicaps, the number of students with the stated handicap, the raw percentages and cumulative averages.

Table II

Handicaps	No.	Raw Percentage	Cumulative Average
Paraplegics	6	24.0	24
Quadraplegics	2	8.0	32
Blind	0	0.0	32
Deaf	2	8.0	40
Muscular Dystrophy	2	8.0	48
Acute Arthritis	3	12.0	60
Visual Problem	1	4.0	64
Others	6	24.0	88
No response	<u>3</u>	<u>12.0</u>	100
Total	25	100.0	

Paraplegics were found to be equal to the number of respondents appearing in Others, a total of six in each case. The paraplegic is a handicapped person readily identifiable and the quadraplegic even more so because of the severity of

the handicaps. Those respondents in Others were afflicted with such malaise as cerebral palsy, kidney disfunction, modibility handicapped dislocated shoulders, amputee, and osteogenesis.

Table III

Dwellings	No. of Respondents	Raw Percentage	Cumulative Percentage
University Residences	14	56	56
Student Apartments	3	12	68
Off-Campus Residences	8	32	100

University Residences appear to be the favorite dwelling unit for the handicapped student although eight students chose to live off-campus. Whether or not these latter student found more suitable dwellings in the community remains a moot question.

The foregoing table IV provide some interesting data in terms of handicapped students perception of university residence by the 17 students living on campus.

Table IV

Accessibility Conditions	No. of Residence	Raw Percentage	Cumulative Percentage
Total-Accessibility	1	6.0	6.0
Partial-Accessibility	6	35.2	41.2
Non-Accessibility	<u>10</u>	<u>58.8</u>	<u>52.8</u>
Total	17	100.0	100.0

From an analysis of the above data it would appear that handicapped students do not find their residence accessible. The majority of the students have described 10 residences of the total as being non-accessible.

The next table provides more details by the handicapped students on those characteristics that appear to facilitate and/or hamper access to the seventeen residences occupied by themselves. Residential accessibility characteristics are expressed in percentages.

Table V

Characteristics	Accessible	Part. Access.	Non Access.	N.A.
<u>Outside Access</u>				
Parking Spaces	11%	56%	33%	0%
Sidewalks	44%	50%	6%	0%
Entrances	17%	83%	0%	0%
Ramps	12%	41%	18%	29%
<u>Interior Access</u>				
Corridors/Hallways	83%	11%	6%	0%
Elevators	47%	18%	0%	35%
Vestibules	18%	12%	24%	47%
Cafeteria	61%	0%	39%	0%
Kitchen	16%	27%	6%	44%
Lounge	52%	12%	24%	12%
Laundry	6%	88%	6%	0%
Fountains	16%	28%	33%	22%
Telephones	12%	55%	33%	0%
Windows	28%	67%	5%	0%
Over-all Access by wheel-chairs	23%	0%	77%	
<u>Sanitary Facilities</u>				
Toilets	47%	0%	47%	0%
Accessoires	33%	50%	17%	6%
Bath rooms	11%	28%	55%	6%

From an interpretation of data furnished in Table V, firstly in the accessible column, corridors/hallways were

often found to be accessible. Older buildings have often been constructed with wide barrier-free spaces, naturally making them more accessible. The least accessible spaces are the sanitary facilities and especially bathrooms, according to data provided in the non-accessible column.

The director of student affairs

The questionnaire forwarded to the director of student affairs contained three sections: (a) a general information section, (b) a special services section, (c) an appraisal of the accessibility situation for the physically handicapped to atlantic university residential dwellings.

A summary table was drawn up in order to present the availability or non-availability of accessibility characteristics. Firstly, in the general information section, only two universities appear to have a written policy statement concerning accessibility to the campus by the physically handicapped, i.e. Memorial and Moncton. While no atlantic university excluded the physically handicapped directly, some indicated that programmes are physically non-accessible. Understandably, a blind student cannot logically enroll in a school of architecture, nor a quadraplegics in a physical education teaching programme. The reason why some universities evaded this question is perhaps due to the fact that physically handicapped students know their limitations and do not apply

Table VI

Summary of access characteristics for the physically handicapped as provided by Directors of Student Affairs for each Province Atlantic University Campuses.

Atlantic University Campus	Acadia	Dalhousie	Mt. St. Vinc.	St. F. X.	S. M. U.	Memorial	Mt. Allison	U. N. B.	U. de M.	U. P. E. I.
N = No										
Y = Yes										
- = No return										
I <u>General Information:</u>										
Written Access Policy	N	N	N	-	N	Y	N	N	Y	N
Excl. of Phys. Hand.										
a) from campus	N	N	N	-	N	N	N	N	N	N
b) from some Faculty	N	N	N	-	N	N	N	Y	N	N
Incompatible Prog.	N	N	Y	-	Y	N	N	Y	N	Y
II <u>Special Services:</u>										
Activities										
a) recreation	N	Y	N	-	Y	Y	N	N	Y	N
b) Socio-Cult.	N	Y	N	-	N	N	N	N	Y	N
Free transportation										
a) on Campus	N	Y	N	-	N	N	N	N	Y	N
b) to Campus	N	Y	-	-	Y	N	N	Y	Y	N
Personal Care Services	Y	Y	-	-	Y	Y	N	N	Y	Y
Braille Materials	Y	Y	N	-	Y	Y	N	N	N	N
Special Audio-Visuel Equipment	N	Y	N	-	Y	N	N	N	Y	Y
Interpretors for Deaf	N	N	N	-	Y	N	N	N	N	N
III <u>Accessibility situation:</u>										
General Access	N	N	Y	-	Y	Y	N	N	N	N
Free & Secure Access	N	Y	Y	-	Y	Y	-	Y	N	Y
Recent Renovation Acc. (past 2 yrs)	Y	Y	Y	-	Y	Y	Y	N	Y	Y
Existing Archit. Barriers	Y	Y	Y	-	-	Y	Y	Y	Y	Y
Proposed Renovation in near-futures	Y	Y	N	-	Y	Y	Y	Y	Y	N

Secondly, in the area of provision for special services, Dalhousie and Saint Mary's Universities provide the most services. The fact that these two universities are situated in Halifax, near an important medical complex might serve as a possible explanation; and it may happen that the university personnel have a keener awareness of the need to integrate the physically handicapped and provide equal educational opportunity to all irrespectively. It is noteworthy that one of the two universities, Saint Mary's, reported the availability of an interpreter to assist the deaf. Finally, on the subject of overall-accessibility to campus and measures taken, or to be taken, to eliminate architectural barriers, answers provided are as varied as there are universities. Although some campuses are quaintly nestled on hill sides; with picturesque entrance stair cases, these nevertheless serve as a physical barrier to access by the handicapped¹⁶. Older buildings are costlier to renovate in order to make them accessible. In spite of various difficulties in overcoming certain barriers, there appears to be an affirmative action programme aimed at elimination barriers at some campuses. A number of universities have already overcome selected barriers and others are intended for removal in the future.

The Director of Student Residences

Questionnaires on Accessibility of University Students Residences in Atlantic Canada were forwarded to the University director of residences. In some instances the Directors chose to personally answer all the questionnaires; in other instances, each residence don, manager or person responsible for one residence completed the questionnaire. The list of residences were obtained from university calendars. Additional questionnaires were mailed to take care of omissions.

Table VII shows the numbers of questionnaires forwarded and the numbers of questionnaires returned.

Table VII

	Acadia	Dalhousie	Mt. St. Vinc.	St. F. X.	S. M. U.	Memorial	Mt. Allison	U. N. B.	U. de M.	U. P. E. I.	Total
Forwarded	12	7	7	10	3	9	10	12	7	3	80
Returned	12	7	0	9	3	5	10	12	7	3	68

The preceding table indicates that there were 80 university residences in Atlantic Canada. A return of 68 questionnaires on the question of accessibility to these residences meant an 85% response. For example, both Acadia and U.N.B. reported 12 residences at each campus. It may be surmised that some of U.N.B.'s residences house more students because the enrollment is larger, however the important question in this study is to determine whether or not the residences are accessible to the physically handicapped. In cases where residences were non-accessible the questionnaire could be quickly answered. However if the residence were totally or even partially accessible, the questionnaires were rather lengthy to complete.

Certain criteria would have to be met before a residence can be described as being adequately accessible to the physically handicapped student. Firstly, it would be essential that the grounds present no obstacles to access, i.e. specified parking spaces, no curbs, non-slip surfaces, no other obstructions. Secondly, accessible entrance means a sufficiently wide door easily openable, a ramp if necessary, thresholds flush, or almost, to the floor. Thirdly, it is required that at least one or more toilets should be constructed for the handicapped person with the necessary facilities included to meet the needs of the handicapped student. Fourthly it is imperative that the room and/or apartment should contain provisions for handicapped person

needs, for example an accessible door, manoeuvrable space within, control systems within reach, and appropriate furniture and toilet facilities. Finally, cafeteria services must be within easy access to the physically handicapped in a wheelchair. Once all these conditions are met it may be surmised that the residential dwelling is accessible to the physically handicapped student. Several other features could also be included such as auxiliary services, i.e. lounges, laundry, etc.

The next section of this study will deal with the question of accessibility of residential dwellings on atlantic Canada campuses. The nine tables appearing in succession (Tables VIII-XVI) will present a compilation of data provided by the residential managers, or their delegate, in each campus residence. The description of the quality of accessibility of residential dwellings is as follows:

A = Fully accessible
Na = Non-accessible
Pa = Partially accessible
O = Not applicable
- = Nil

The dormitories, houses, and other residences are identified according to characteristics of site, entrance, residence interiors and over-all access.

The format used did not permit the investigator to make comments before or after the presentation of each table. The reader is therefore invited to turn to the page of comments,

page 37.

Residence directors or the respondent will find that the following data that confirm the obvious, that most university residences are inaccessible to the physically handicapped. The thrust of this investigation was to make available to directors of residences and student personnel services and the students themselves the quality and quantity of accessibility to residences throughout Atlantic Canada. It is believed that these tables present in a succinct manner data indicating which residences are barrier-free to the handicapped and those that are not.

Table VIII

Acadia University Residences (Houses, Towers, Etc.)

Accessibility for the Physically Handicapped

	Horton	Eaton	Whitman	Cutten	Crowell	Dennis	Willet	Chipman	Chase	Seminary	Memorial	Raymond
A = Accessible												
Na = Non-Acc.												
Pa = Part. Acc.												
O = Not applicable												
- = Nil												
A <u>Site Development</u> (exterior)												
Parking spaces & Residence access	Na	A	Pa	Pa	Pa	Pa	Pa	Na	Na	Na	Pa	Pa
B <u>Entrance</u>												
Characteristics	Na	Pa	Na	Pa	Pa	Pa	O	Na	Na	O	Pa	Pa
C <u>Residences</u> (Interior)												
Elevators	O	A	O	A	A	O	Na	A	O	O	O	O
Toilets	Na	Pa	O	A	Pa	Pa	Pa	Pa	Na	O	Na	Pa
Lavatories (sink)	O	Na	O	Pa	Na	Pa	Pa	Na	Pa	O	Na	Na
Shower & Bath	Na	Pa	O	A	Pa	Pa	Pa	Na	Na	O	Na	Na
Rooms	Na	A	A	A	Na	A	A	Na	Na	O	A	Na
Kitchen	-	A	Na	Na	Pa	Pa	A	Na	Na	O	Pa	Na
Halls	-	A	A	A	A	A	A	A	A	O	A	A
Laundry	A	A	A	Na	A	A	A	A	A	O	O	A
Controls	Na	Pa	Pa	Pa	Pa	A	Pa	Na	A	O	Pa	Pa
Windows	A	Pa	Na	A	Pa	A	A	Na	A	O	Na	A
Safety	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	O	Pa	Pa
D <u>Over all Access</u>												
to residence	Na	Pa	Na	Pa	Pa	Pa	Pa	Na	Na	Na	Pa	Pa

Dalhousie University Residences (Hall, Apt., Houses, Places, Etc.)
 Accessibility for the Physically Handicapped

	How	Shirriff	Ardmore	Glengary	International	Residences (A)	Fenwick
A = Accessible Na = Non-Acc. Pa = Part. Acc. O = Not applicable - = Nil							
A <u>Site Development</u> (exterior)							
Parking spaces & Residences access	A	A	A	A	-	-	Pa
B <u>Entrance</u>							
Characteristics	A	Pa	Pa	Na	-	-	Pa
C <u>Residences</u> (Interior)							
Elevators	A	A	O	O	-	-	A
Toilets	A	A	A	O	-	-	Na
Lavatories (sink)	Pa	A	A	O	-	-	Na
Shower & Bath	Pa	Pa	A	O	-	-	Na
Rooms	A	A	A	O	-	-	A
Kitchen	O	A	Pa	O	-	-	Na
Halls	A	A	A	O	-	-	A
Laundry	Na	A	Na	O	-	-	Na
Controls	Pa	A	Pa	O	-	-	Na
Windows	Na	A	A	O	-	-	Na
Safety	Pa	Pa	Pa	O	-	-	Na
D <u>Over all Access to Residences</u>							
	A	Pa	Pa	Na	Na	Na	Na

St. Mary's University Residences (House, Etc)
Accessibility for the Physically Handicapped

	Edmond Rice	Loyola	Vanier
A = Accessible			
Na = Non-Accessible			
Pa = Part. Access.			
O = Not applicable			
- = Nil			
<hr/>			
A <u>Site Development</u> (exterior)			
Parking spaces & Residences access	A	-	-
B <u>Entrance</u>			
Characteristics	Pa	-	-
C <u>Residences</u> (Interior)			
Elevators	A	-	-
Toilets	A	-	Na
Lavatories (sink)	A	-	-
Shower & Bath	Pa	-	-
Rooms	A	-	-
Kitchen	-	-	-
Halls	-	-	-
Laundry	-	-	-
Controls	-	-	-
Windows	-	-	-
Safety	-	-	-
D <u>Over all Access to Residences</u>	A	A	Pa

Memorial University Residences (Courts, Etc.)
Accessibility for the Physically Handicapped

	Cabot	Guy	Gilbert	Cartier	Corte Real
A = Accessible Na = Non-Acc. Pa = Part. Acc. O = Not applicable - = Nil					
A <u>Site Development</u> (exterior)					
Parking spaces & Residences access	Pa	Pa	Pa	Pa	Pa
B <u>Entrance</u>					
Characteristics	A	Na	Na	Na	Na
C <u>Residences</u> (Interior)					
Elevators	O	O	O	O	Na
Toilets	Pa	Na	Na	Na	Na
Lavatories (sink)	Na	Na	Na	Na	Na
Shower & Bath	O	O	O	O	Na
Rooms	Na	Na	Na	Na	O
Kitchen	Pa	Pa	Pa	Pa	O
Halls	Na	Na	Na	Na	O
Laundry	O	O	O	O	A
Controls	Pa	Pa	Pa	Pa	O
Windows	Na	Na	Na	Na	O
Safety	Pa	Na	Na	Na	Na
D <u>Over all Access to Residences</u>					
	A	Na	Na	Na	Na

Prince Edward Island University Residences (Hall, Etc.)
 Accessibility for the Physically Handicapped

	Blanchard	Marian	Bernadine
A = Accessible			
Na = Non-Accessible			
Pa = Part. Access.			
O = Not applicable			
- = Nil			
<hr/>			
A <u>Site Development</u> (exterior)			
Parking spaces & Residences access	Pa	Na	Na
B <u>Entrance</u>			
Characteristics	O	O	Na
C <u>Residences</u> (Interior)			
Elevators	Na	O	O
Toilets	Na	Na	Na
Lavatories (sink)	O	O	Pa
Shower & Bath	O	O	Na
Rooms	Na	Na	Na
Kitchen	A	Na	Na
Halls	A	A	A
Laundry	A	-	A
Controls	O	Na	Pa
Windows	Na	Na	A
Safety	Pa	Pa	Pa
D <u>Over all Access to Residences</u>	Na	Na	Na

New Brunswick University Residences (House, Hall, Etc.)
Accessibility for the Physically Handicapped

	Neil	Neville	Lady Ponw	Tibbits	McLeod	Maggie	Aitken	Bridges	Harrison	Jones	Lady Beaver Brook	MacKenzie
= Accessible												
= Non-Access.												
= Part. Acces.												
= Not applicable												
= Nil												
<u>Site Development (exterior)</u>												
Parking spaces & Residences access	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa
<u>Entrance</u>												
Characteristics	A	A	Pa	Pa	Pa	Pa	A	A	A	A	A	A
<u>Residences (Interior)</u>												
Elevators	0	0	Pa	Pa	A	0	0	0	0	0	0	0
Toilets	Pa	Pa	Pa	Pa	Na	Pa	Pa	Pa	Pa	Pa	A	Pa
Lavatories (sink)	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	A	Pa
Shower & Bath	Na	Na	Pa	Pa	Pa	Na	Na	Na	Na	Na	A	Na
Rooms	Pa	Pa	Na	Na	Na	Na	Pa	Pa	Pa	Pa	Pa	Pa
Kitchen	0	0	Pa	Pa	Pa	Pa	0	0	0	0	0	0
Halls	A	A	A	A	A	A	A	A	A	A	A	A
Laundry	A	A	A	A	A	A	A	A	A	A	Na	A
Controls	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa
Windows	Pa	Pa	Na	Na	A	Na	Pa	Pa	Pa	Pa	Pa	Pa
Safety	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa
<u>Over all Access to Residences</u>	Pa	Pa	Na	Na	Pa	Na	Na	Na	Na	Na	Pa	Pa

Université de Moncton Residences (Apt., Etc.)
Accessibility for the Physically Handicapped

	LaFrance	598 High	100 McLaughlin	LeFèvre	263 Jones	150 Morton	160 Morton
<p>A = Accessible Na = Non-Access. Pa = Part. Access. O = Not applicable - = Nil</p>							
A <u>Site Development</u> (exterior)							
Parking spaces & Residences access	Pa	Na	Na	Pa	Na	Pa	Na
B <u>Entrance</u>							
Characteristics	Pa	Pa	Na	Na	Na	Pa	Na
C <u>Residences</u> (Interior)							
Elevators	A	O	O	O	O	O	O
Toilets	Pa	O	Na	Pa	Pa	Pa	Pa
Lavatories (sink)	Pa	Na	Na	Pa	Pa	Pa	Na
Shower & Bath	Pa	Na	Na	Na	Na	Na	Na
Rooms	A	A	Na	A	A	Na	O
Kitchen	O	A	Na	O	A	A	A
Halls	A	A	A	A	A	A	O
Laundry	Na	A	Na	A	A	A	Na
Controls	Na	Pa	Na	Pa	Na	Na	Pa
Windows	Na	Pa	A	Na	Pa	Pa	Na
Safety	Pa	Na	Pa	Na	Na	Na	Pa
D <u>Over all Access to Residences</u>							
	Pa	Na	Na	Na	Na	Na	Na

Comments on Residences

Nova Scotia University Campuses

Acadia University. Table VIII on page 28 identifies the 12 residences situated or belonging to the Acadia University campus. The table indicates that seven residences are partially accessible to the physically handicapped: Eaton, Cutten, Crowell, Dennis, Willett, Memorial, and Raymond. The other five residences: Horton, Whitman, Chipman, Chase and Seminary are identified as being non-accessible to the physically handicapped. The most serious architectural barrier appears to be the sanitary facilities. Understandably, cost to renovate old buildings and interior facilities sometimes make it difficult to correct the situation when University budgets have limited renovation funds for that purpose.

Dalhousie University. Table IX indicates that Dalhousie meets the criteria of over-all access in one residence, Howe Hall, Shirriff and Ardmere are partially accessible. The other residences namely, Glengary, Fenwick, International and Residences (A) are almost completely inaccessible according to data submitted from the residence directors office.

St Mary's University. The data furnished by the Director in Table X indicate that Edmond Rice and Loyola residences are accessible to the physically handicapped. The Vanier

residence is partially accessible even if room are designed to accomodate the physically handicapped because of inadequate sanitary facilities.

Saint Francis Xavier University. Data in Table XI indicates that all residences at Saint Francis Xavier University have been judged non-accessible to the physically handicapped by the residence directors. Evidently barrier-free architecture was not in the minds of builders even ten years ago. It is therefore not surprising to find at Saint Francis Xavier as well as other Atlantic Canada campuses, a dire lack of access to campus residences.

Memorial University in Newfoundland. Data in table XII furnished details on five residences. Unfortunately questionnaires were not returned for other remaining residences. The table shows that one residence is accessible, namely Cabot Court. The other four residences: Guy, Gilbert, Cartier and Corte Real were considered non-accessible for reasons of inadequate entrances, and architectural barriers within the buildings.

University of Prince Edward Island. Date in table XIII indicates that residences could not meet the criteria of accessibility for the Physically handicapped.

New Brunswick Universities

Mount Allison University. (Table XIV) university residences are described by directors of residences as being all non-accessible to the physically handicapped. The commonly found architectural barriers are entrances, sanitary facilities and other inadequate interior planning to accomodate the needs of the physically handicapped.

University of New Brunswick. Table XV shows that five of the twelve residences are partially accessible while the other seven are judged as being non-accessible to the physically handicapped. As is the case elsewhere, sanitary facilities appear as an important barrier. As was indicated earlier, in older campuses some built over one hundred years ago, it is not surprising to find non-accessible characteristics sometimes very difficult to cope with and costly to renovate.

Université de Moncton. Table XVI indicates that only one residence is partially accessible, yet the first building on campus was erected a mere twenty years ago. All apartment houses owned by the University in various parts of the city of Moncton are judged to be non-accessible to the physically handicapped.

Mount Saint Vincent. Unfortunately, no data was obtained from the directors of residences on accessibility to campuses

residences.

Summary Evaluation

Table XVII presents a global picture of accessibility of campus residences in atlantic Canada. The University is identified with the number of buildings evaluated, also the number of residences that are considered accessible, and those that are partially or non-accessible to the physically handicapped.

Table XVII

University Campuses Residences	No. of Res. evaluated		No. of Access. residences		No. of Part- Access. Res.		No. of Non- Access. Res.	
		%		%		%		%
Acadia	12	17.6	0	-	7	11.5	5	8.1
Dalhousie	7	10.3	1	1.6	2	3.3	4	6.5
Mt. St. Vinc.	-	-	-	-	-	-	-	-
St. Mary's	3	4.4	2	3.3	1	1.6	0	-
St. Francis X.	9	13.2	0	-	0	-	9	3.3
Memorial	5	7.5	1	1.6	0	-	4	6.5
U.P.E.I.	3	4.4	0	-	0	-	3	5.0
Mt. Allison	10	14.7	0	-	0	-	10	16.4
U.N.B.	12	17.6	0	-	5	8.1	7	11.5
U. de M.	7	10.3	0	-	1	1.6	6	10.0
Total	68	100.0%	4	5.8%	16	27.8%	50	71.4%

A quick analysis of the figures provided above show that for 68 residences evaluated only 4 (5.8%) were accessible, only 16 (22.8%) were judged partially accessible, and last 50 (71.4%) residences were termed non-accessible to the physically handicapped.

CONCLUSIONS AND RECOMMENDATIONS

The problem of removing existing architectural barriers to accommodate the physically handicapped appears to be ever present at Atlantic campus residences. The fact that only four residences: two at St. Mary's, one at Dalhousie and one at Memorial, out of a total of sixty-eight qualified as being fully accessible is indicative of the measures that have to be taken to redress the situation. While all the University personnel contacted in this investigation appeared to be in favor of correcting the «inequality» access to building and grounds including residences, progress is slow. Residence directors, directors of students affairs, and the students themselves have made many valuable suggestions on ways and means of removing architectural barriers and making residences universally accessible. The problem seems to be a financial one. The universities have a duty of establishing priorities in this time of budgetary cuts. Architectural barriers will be removed once appropriate funding is made available. Unlike U.S. campuses, there is no legal requirement to force Universities to exercise affirmative conduct and comply with barrier-free legislation in Atlantic Canada.

A barrier-free campus includes more than accessible buildings (residences). The physical as well as the psychological milieu must be assessed in order to dispe

those disquieting factors that prevent the complete integration of the physically handicapped. We are all responsible for doing our share to avoid the status quo where the qualified handicapped university student is perpetually frustrated because of a barrier-laden architecture.

It would appear, that the following six recommendations will have to be implemented if the handicapped student is to achieve personal independence and find a completely accessible university campus.

- (1) there is a need for a written statement on admission policies for the handicapped student;
- (2) there is a need, first and foremost, to make two residences available for males/females, at each of the ten university campuses included in this investigation;
- (3) there is a need to remove psychological barriers that separate the handicapped persons from the normal persons;
- (4) there is a need in each province to implement affirmative action legislation and to provide funds to assist universities in removing pressing architectural barriers, thus permitting access to residences;
- (5) there is a need to provide special services, and appropriate equipment, commensurate with the needs of the handicapped student at the majority of atlantic university residences.
- (6) there is a need for a concerted effort to be made by

the directors of residences, student affairs, public relation, recruitment, etc. to integrate the physically handicapped on campus, and to demonstrate in a tangible way that handicapped students are indeed welcomed at university and hopefully in completely accessible campus residences.

APPENDIX A

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QUESTIONNAIRE ON ACCESSIBILITY OF UNIVERSITY RESIDENCES
FOR THE HANDICAPPED

General Questions

- 1) Please indicate below your physical handicap.
Example: semi-ambulant, blind, paraplegic, etc...
-

- 2) Please indicate the age group to which you belong. Insert a checkmark (✓) please.

- | | |
|------------------|------------------|
| (1) 16 to 20 () | (4) 31 to 35 () |
| (2) 21 to 25 () | (5) 35 to 40 () |
| (3) 26 to 30 () | (6) 40 + () |

- 3) Please identify your Faculty and the programme of studies:
-

- 4) Please identify the type of residential building that you live in during this academic year

- | | |
|-----------------------------------|-----|
| (1) University residence | () |
| (2) University apartment | () |
| (3) Cottage or house | () |
| (4) Other accomodations (specify) | () |
-

- 5) Please identify the level of students living in your residence

- | | |
|---|-----|
| (1) Undergraduate student | () |
| (2) Graduate student | () |
| (3) Undergraduate and graduate students | () |

- 6) Please name the Residence: _____

INSTRUCTIONS- Please answer YES or NO or NOT APPLICABLE by inserting a check mark (✓)

- | | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|--|------------|-----------|------------|
| 1) Handicapped persons in a wheel chair or using crutches have access to all areas in the residence.... | () | () | () |
| 2) Balconies are accessible and the dimensions are adequate for a person moving about in a wheelchair..... | () | () | () |
| 3) Post Office boxes are within reach for the person in a wheelchair..... | () | () | () |
| 4) Handicapped persons other than those in wheelchairs have access to all areas of the residence..... | () | () | () |
| A) PARKING LOCATIONS | | | |
| 1) Parking stations allocated to the handicapped are clearly indicated with adequate signs..... | () | () | () |
| 2) Spaces reserved are conveniently located at or near the entrance..... | () | () | () |
| 3) Car spaces reserved for vehicles allow for wheelchair transfer and are on solid ground level.... | () | () | () |
| 4) Access space is protected from rain and snow..... | () | () | () |
| 5) Persons with physical disabilities may avoid passing behind cars..... | () | () | () |
| 6) Handicapped persons gain access without obstructions to the entrance from the parking lot..... | () | () | () |
| B) EXTERIOR CIRCULATION | | | |
| 7) Walking surfaces are firm and they can be utilized by a person in a wheelchair, or on crutches..... | () | () | () |
| 8) Walkways are sufficiently wide for a person in a wheelchair..... | () | () | () |
| 9) Curbs are blended at intersections..... | () | () | () |
| 10) Stairs and/or ramps are provided at changes in ground level..... | () | () | () |
| C) BUILDING ENTRANCE | | | |
| 11) Doors are sufficiently wide to permit passage by wheelchair..... | () | () | () |

- | | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|---|------------|-----------|------------|
| 12) Door (regular or swing) opens easily..... | () | () | () |
| 13) Door (revolving or with turnstiles) may be avoided
by way of another entrance..... | () | () | () |
| 14) Entrance is clearly identified with an appropriate
sign..... | () | () | () |
| 15) Access is gained from entrance to main parts of
the building..... | () | () | () |
| 16) Entrance is protected from rain and snow..... | () | () | () |
| 17) Entrance stairs have suitable handrails and/or
a ramp is available..... | () | () | () |
| 18) Floor surfaces inside and out remain non-slip
when wet..... | () | () | () |
| 19) The shoulders are easily overcome..... | () | () | () |
| 20) Vestibule spaces provide sufficient room for free
movement for a person in a wheelchair or on
crutches to open inner and outer doors..... | () | () | () |

D) FLOOR CONDITIONS

- | | | | |
|--|-----|-----|-----|
| 21) Floor surfaces are maintained in a non-slip condi-
tion..... | () | () | () |
| 22) Floor covering (rugs etc.) permit easy wheelchair
displacement..... | () | () | () |
| 23) a) Functional important areas are located on
same floor..... | () | () | () |
| b) Areas are accessible by way of a ramp or an
elevator..... | () | () | () |
| 24) Sufficient space is provided for adequate wheel-
chair manoeuvring..... | () | () | () |
| 25) Corridors used are sufficiently wide..... | () | () | () |
| 26) Ramps and stair flights are protected from
traffic..... | () | () | () |

E) STAIRS

- | | | | |
|--|-----|-----|-----|
| 27) An alternative solution to stairs is provided..... | () | () | () |
| 28) The stairs are well lighted..... | () | () | () |

- | F) RAMPS | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|---|------------|-----------|------------|
| 29) Ramp approach is well indicated by an appropriate sign..... | () | () | () |
| 30) Ramp approach is protected from rain and icy conditions..... | () | () | () |
| 31) Ramp surface is of non-slip type..... | () | () | () |
| 32) Ramp has a horizontal landing at top and bottom leading to a doorways..... | () | () | () |
| 33) Ramp slope is easily manoeuvrable, has appropriate handrails..... | () | () | () |
| 34) Ramp possesses a landing at each turning point..... | () | () | () |
|
G) ELEVATORS | | | |
| 35) Elevators are accessible from entrance by way of a wheelchair..... | () | () | () |
| 36) Elevators stop at each floor (including garage).... | () | () | () |
| 37) Turning clearance for wheelchair is provided in front of elevator doors..... | () | () | () |
| 38) Internal dimensions of elevator permit wheelchair accomodation..... | () | () | () |
| 39) Handrails are provided on three sides of the cab... | () | () | () |
| 40) Controls are easily accessible..... | () | () | () |
| 41) Net width of door is adequate for free passage in and out of elevator..... | () | () | () |
|
H) OTHER CONTROLS: Switches, Electric Outlets, Thermostats, Fire Alarm. | | | |
| 42) All Emergency controls are within easy reach..... | () | () | () |
|
I) HANDRAILS | | | |
| 43) Handrails are easy to grasp..... | () | () | () |
| 44) Handrails are located on both sides of stairs..... | () | () | () |
|
J) CLOAKROOMS | | | |
| 45) Wheelchair manoeuvring space is sufficient..... | () | () | () |
| 46) Rails (with removable hangers) or coat hooks are mounted within easy reach from the floor for a person in a wheelchair..... | () | () | () |

- | | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|--|------------|-----------|------------|
| K) DINING AREAS | | | |
| 47) Dining facilities are accessible including all equipment..... | () | () | () |
| L) KITCHENS | | | |
| 48) The plans allow for ease of movement between working areas..... | () | () | () |
| 49) The work can be done in a sitting position..... | () | () | () |
| 50) The reaching ability of a handicapped person has been considered for the use of appliances and kitchen accessories..... | () | () | () |
| M) LOUNGE AREAS | | | |
| 51) Adequate space for circulation and manoeuvring is provided in front of storage accommodation..... | () | () | () |
| 52) The type of furniture is suitable to the semi-ambulant..... | () | () | () |
| N) WASHROOM FACILITIES | | | |
| 53) The toilet rooms are accessible and marked with the appropriate sign..... | () | () | () |
| 54) A person in a wheelchair can enter the room and use the facilities: one toilet large enough to accommodate a person in a wheelchair..... | () | () | () |
| O) ACCESSORIES | | | |
| 55) A person in a wheelchair can see in the mirror.... | () | () | () |
| 56) The following accessories are accessible: | | | |
| a) towel racks..... | () | () | () |
| b) towel dispensers..... | () | () | () |
| c) waste basket..... | () | () | () |
| d) soap dishes..... | () | () | () |
| P) SHOWER STALLS | | | |
| 57) Access from a wheelchair is possible..... | () | () | () |
| 58) The bottom of the tub is provided with a non slip surface..... | () | () | () |
| 59) The accessories are situated in the proper positions..... | () | () | () |

YESNON/A

- 60) The curb or sill to the shower stall is low and ramped.....() () ()
- 61) A folding seat is provided in the shower stall...() () ()
- 62) The floor is non-slip.....() () ()
- 63) The shower stall is wide enough and sufficiently deep.....() () ()
- 64) Grab bars, controls and soap holders are provided in appropriate positions.....() () ()

Q) LAUNDRY FACILITIES

- 65) Front loading washing machines are provided.....() () ()
- 66) Front loading drying machines are provided.....() () ()
- 67) The ironing board is securely fixed and of adjustable height so that ironing may be done in a seated position.....() () ()
- 68) Sufficient clearance is provided in front of fixtures.....() () ()

R) DRINKING FOUNTAINS

- 69) The fountain is accessible to a person in a wheelchair.....() () ()
- 70) The controls are operable.....() () ()

S) TELEPHONE

- 71) One pay telephone at least may be used by a person in a wheelchair.....() () ()
- 72) A phone book is located for convenient use by a person in a wheelchair or on crutches.....() () ()
- 73) At least one phone is equipped with an adjustable sound amplifier.....() () ()
- 74) A push button telephone has been provided.....() () ()

T) WINDOWS

- 75) In living rooms and bedrooms the sill is low enough to allow the occupant to see out.....() () ()
- 76) The opening and closing controls are operable by a person with disabilities() () ()
- 77) The blinds and curtains and drapes are easily operable.....() () ()

Additional Comments. Please feel free to express them below.

APPENDIX B

DIRECTOR - STUDENT AFFAIRS

QUESTIONNAIRE

NAME OF CAMPUS: _____

1. Has there been mobility impaired students at your University during the two-year period 1980-81, 1981-82.

	<u>YES</u>	<u>NO</u>	<u>NUMBER</u>
Handicaps: Paraplegics	_____	_____	_____
Blind	_____	_____	_____
Deaf	_____	_____	_____
Blind-Deaf	_____	_____	_____
Colour blind	_____	_____	_____
Visually impaired	_____	_____	_____
Muscular dystrophy	_____	_____	_____
Multiple sclerosis	_____	_____	_____
Arthritis	_____	_____	_____
Others, please specify	_____	_____	_____
_____	_____	_____	_____

YES NO

2. a) Has your university developed a written statement or policies concerning the physically handicapped students. () ()

b) Are handicapped students (mobility impaired) excluded from the Campus. () ()

c) From certain Faculties at your University () ()

Which ones _____ Handicaps _____

- | | <u>YES</u> | <u>NO</u> |
|---|------------|-----------|
| 3. a) Has there been instances where available programs were incompatible with the desires of a handicapped students. If yes, please identify one example, if possible. | () | () |
| <hr/> | | |
| 4. Does your University provide special services for the mobile handicapped student in the following areas: | | |
| a) Education and recreation activities. | () | () |
| Example _____ | | |
| b) Social and cultural activities. | () | () |
| Example _____ | | |
| c) Free campus transportation | () | () |
| Example _____ | | |
| d) Accessible transportation to and from the campus | () | () |
| Example _____ | | |
| e) Personal care services provided by the university | () | () |
| Example _____ | | |
| 5. a) Does your Library or any other Resource Center contain appropriate aids such as Braille materials for the blind. | () | () |
| b) Audio-visual equipment to assist the Deaf-Blind | () | () |
| c) Interpreters for the Deaf | () | () |

GENERAL OBSERVATIONS

6. It is possible for a mobility impaired student in a wheel chair, on crutches, or a blind person, to have access to all campus buildings without difficulty, i.e. to gain access from the residence to the Faculty(ies), Cafeteria, and other needed facilities on Campus.
-
-
-

7. Is it possible for the handicapped persons described in number 6 to move freely on campus without danger and problems of security.
-
-
-

8. Have there been recent modifications made on buildings and grounds in order to increase accessibility for the handicapped persons during the two years, 1980-81, 1981-82.
-
-
-

9. Are there still readily apparent characteristics in buildings and grounds which impede access to facilities by the mobile handicapped persons on Campus.
-
-
-

10. Do you foresee renovations, modifications to existing facilities and/or new constructions planned for complete accessibility during this Year of the Physically Disabled person, 1981-82.
-
-
-

LIST OF MOBILITY IMPAIRED STUDENT
ATTENDING UNIVERSITY CAMPUS
ACADEMIC YEAR 1981-82

Name	Address	Telephone Number
------	---------	------------------

Thank you.

APPENDIX C

QUESTIONNAIRE:

ACCESSIBILITY OF UNIVERSITY STUDENTS RESIDENCES

IN MARITIME UNIVERSITIES

For each university student residence, please answer the following questions:

Name of Campus _____

Name of Residence _____

Date of Report _____ Name of Respondent _____

GENERAL INFORMATION

1) Type of residence

- () Standard Dormitory
 () Apartment building
 () Cottage or Home
 () Others (specify)

2) Sex of students

- () Male
 () Female
 () Co-ed

- 3) Number of floors in the facility including basement ()
 4) Number of entrances permitting access to building by
 handicapped persons (tunnels, bridges, etc.) ()
 5) Number of non-accessible entrances ()
 6) Number of floor level entrances ()
 7) Number of floors utilized by handicapped students ()
 8) Number of rooms in the residence ()
 9) Number of rooms accessible to the handicapped ()

If the building contains other services such as study halls, recreation rooms, etc., please identify those accessible to the handicapped.

INSTRUCTIONS

Please answer YES or NO or NOT APPLICABLE by inserting a check-mark (✓)

- | A) SITE DEVELOPMENT | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|---|------------|-----------|------------|
| 1) Parking space 3.7m or wider (12') are reserved for handicapped students..... | () | () | () |
| 2) Parking spaces are located near and accessible to an entrance..... | () | () | () |
| 3) Parking spaces are identified for the use of physically handicapped persons..... | () | () | () |
| 4) Exterior walks have nonslip surfaces..... | () | () | () |
| 5) Exterior walks have at least 920mm width (3' 3")... | () | () | () |
| 6) Exterior walks have a continuous surface and do not have abrupt changes in level such as steps and curb..... | () | () | () |
| 7) Exterior walks have a rough or gravelled strip to warn blind persons of the intersection..... | () | () | () |
| 8) Obstructions such as signs, guy wires, trees and parking meters are not permitted along outdoor walk ways..... | () | () | () |

B) ENTRANCE

Please indicate the characteristics of the most accessible entrance into the building. In the first place:

- | | | | |
|--|-----|-----|-----|
| 1) Ramp has a non slip surface..... | () | () | () |
| 2) Ramp has a minimum width of 914mm (3')..... | () | () | () |
| 3) Gradient for ramp | | | |
| a) does not exceed a slope of 1" in 12"..... | () | () | () |
| b) in no case exceeds a slope of 1" in 7"..... | () | () | () |
| 4) A level area of at least 1.52m x 1.52m (5' x 5') is provided at the bottom of the ramps..... | () | () | () |
| 5) Ramp has a handrail on at least one side which extends at least 300mm (1') beyond the top and bottom of the ramp..... | () | () | () |
| 6) Entry level is at ground-level or accessible by a ramp..... | () | () | () |

- | | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|--|------------|-----------|------------|
| 7) The door is readily opened independently by a person in a wheelchair or on crutches. (Consider force required to push or pull door open, direction of opening, placement of door handles, presence or absence of an electric eye and presence or absence of a double door)..... | () | () | () |
| 8) The door in the open position is at least 760mm (2' 6") and is free of protruding hardware..... | () | () | () |
| 9) Thresholds are flush with the floor in doorways or do not exceed 4mm (1/8") in height..... | () | () | () |

C) INTERIOR OF RESIDENCE: Internal Level Changes

- 1) Building type: () Single story
() Multistory

If single story, skip to part "D" TOILET ROOMS

- | | | | |
|--|-----|-----|-----|
| 2) If multistory, residence has elevators..... | () | () | () |
| 3) Elevators serve all floors of the building used by students..... | () | () | () |
| 4) Disabled students are permitted to use elevators (includes elevators which all students may use and those to which disabled students are issued keys).. | () | () | () |
| 5) Elevator door width is at least 813mm (2' 8")..... | () | () | () |
| 6) Elevator cab size is at least 1.52m x 1.52m (5'x5')..... | () | () | () |
| 7) Elevator control buttons inside and call buttons outside at wheelchair level, are no more than 1.52m (5') from floor..... | () | () | () |
| 8) Raised, recessed numbers and letters found in elevator cab..... | () | () | () |
| 9) The elevator car provided has at least one handrail..... | () | () | () |

D) TOILET ROOMS

Please indicate the characteristics of the most accessible bathroom(s) in the building (i.e.), with the widest entrance door and the widest toilet stall as follows;

- | | | | |
|--|-----|-----|-----|
| 1) Entry door to bathroom is at least 810mm (2'8") wide..... | () | () | () |
| 2) The door swings outward..... | () | () | () |
| 3) Water closet stalls have at least 1.37m (4'6") in width by 1.52m (5') in depth..... | () | () | () |
| 4) Grab bars or handrails are located in stalls..... | () | () | () |

- | | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|---|------------|-----------|------------|
| 5) Toilet seat is placed 475mm (1' 5") above floor....() | () | () | () |
| 6) Sufficient clear space at least 914mm (3') on one side of toilet for a standard wheelchair.....() | () | () | () |

E) LAVATORIES

- | | | | |
|--|-----|-----|-----|
| 1) Lavatories have a clearance of 600mm (2'2") in beneath the bottom of the lavatory to a point at least 254mm (10") in from its front.....() | () | () | () |
| 2) Waste outlet pipes which constitute a burn hazard are insulated.....() | () | () | () |
| 3) A single lever controls sink faucets.....() | () | () | () |
| 4) Indicate which of the following are accessible from a wheelchair (maximum 1m (3' 3") above floor level) | | | |
| a) Soap dispenser.....() | () | () | () |
| b) Towels.....() | () | () | () |
| c) Mirror.....() | () | () | () |
| d) Other accessory (specify).....() | () | () | () |
| 5) The door to the special toilet room has been identified for use by physically handicapped persons.....() | () | () | () |

F) SHOWER AND BATH TUBS DIMENSIONS

- | | | | |
|---|-----|-----|-----|
| 1) Shower stall is a minimum of 914mm (3') by 1.22m (4').....() | () | () | () |
| 2) Sloped or level access into shower stall.....() | () | () | () |
| 3) The access area to a bathtub is at least 762mm (2'5") in width by 106mm (3'6") in length.....() | () | () | () |
| 4) Clearance at one side and in front of a water closet is at least 760mm (2' 6").....() | () | () | () |
| 5) Grab bars and Handrails on sides of shower stall...() | () | () | () |
| 6) Non-slip surface on floor of shower stall.....() | () | () | () |
| 7) Sink and soap and towel dispensers are installed in conformance with Section "E" above.....() | () | () | () |

G) ROOMS

- | | | | |
|--|-----|-----|-----|
| 1) The bedrooms are specially designed to allow free movement of a wheelchair within the bedroom.....() | () | () | () |
| 2) Space on all sides of bed are sufficient to allow wheelchair manoeuvring.....() | () | () | () |

- | | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|--|------------|-----------|------------|
| H) KITCHEN | | | |
| 1) A clearance of at least 1.37m (4'6") is provided in front of base cabinets, work surfaces, counter tops and appliances..... | () | () | () |
| 2) Knee space is provided under to accommodate persons in a standard wheelchair..... | () | () | () |
| I) HALLS | | | |
| 1) The clear width of the hallway is at least 965mm (3' 2")..... | () | () | () |
| J) LAUNDRY FACILITIES | | | |
| 1) A Clearance of at least 1.37m (4' 6") is provided in front of laundry tubs, automatic washers and dryers..... | () | () | () |
| K) CONTROLS | | | |
| Controls of frequent or essential use are placed within reach of persons in wheelchairs. | | | |
| a) Controls for lights..... | () | () | () |
| b) Controls for cooking..... | () | () | () |
| c) Controls for heating and ventilation..... | () | () | () |
| d) Controls for windows and draperies..... | () | () | () |
| e) Controls for intercom..... | () | () | () |
| f) Other similar controls..... | () | () | () |
| L) WINDOWS | | | |
| 1) Openable windows are designed and located so that they can be easily opened by a person in a standard wheelchair..... | () | () | () |
| 2) Opening mechanisms allow easy operation..... | () | () | () |
| M) SHARED FACILITIES | | | |
| 1) Shared recreation and service facilities in the residence are accessible to handicapped students..... | () | () | () |
| N) INTERIOR SAFETY | | | |
| Please indicate which of the following features are contained in the building. | | | |
| 1) Fire alarms that are reachable from a wheelchair (No more than 1.52m (5'))..... | () | () | () |

YES NO N/A

2) Fire alarms that are equipped with both audible and visible signals.....() () ()

3) Doors that have a knurled or textured handles to warn the blind of danger areas.....() () ()

O) ACCESSIBILITY FEATURES FOR STUDENT RESIDENCES.

Please indicate the number of rooms with the following features.

1) Doors with a minimum 760mm (2' 6").....() rooms

2) Room plans which permit easy access and other required furniture to accommodate the needs of the physically handicapped students.....() rooms

P) Please specify below any additional modifications, adaptations or characteristics of this residence which facilitate its use by disabled student (e.g., water fountains or pay telephones at wheelchair level, etc....)

Q) Please specify below any additional characteristics of this building which hinders its use by disabled students (e.g. steps to enter rooms, heavy doors, narrow corridors, narrow doors, shag or thick carpeting, etc.

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