



Rural Accessible and Age-Friendly Infrastructure Assessment

Summary of events and findings from
community consultation

**Yarmouth, Nova Scotia
May 28th, 2022**

Report by the PEACH
Research Unit
September 2022



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Key Terms

PEACH	Planning for Equity, Accessibility and Community Health
RAAFIA	Rural Accessible and Age-Friendly Infrastructure Assessment
Accessibility	Persons' equal opportunity to travel to, use, and participate in physical and social environments regardless of age or ability. (Mahmood et al., 2019)
Walkability	A term used to describe when physical and environmental conditions allow people to get from one place to another and access basic services and amenities within a landscape without major impediments. (Forsyth, 2015)
Rollability	A term used to describe the extent to which the environment supports the ability to move around for a person who uses an assistive device with wheels. (Gan et al., 2021)
Indicators	Variables that describe the state of a larger system (Walz, 2000). The list of indicators used for this research include qualities or quantities of design elements in the built environment, policies, and community member characteristics.
Age-friendliness	A term used to describe the extent to which a community promotes the “policies, services, settings, and structures to support and enable people to age actively” (WHO, 2007 , p. 5).
Built environment	The human-made spaces in which people live, work, and play, including buildings, community spaces, transportation infrastructure, and parks and trails (Glanz et al., 2016).

For a full list of references cited, please view [Appendix I](#).

Introduction

The **[Planning for Equity, Accessibility, and Community Health \(PEACH\) Research Unit](#)** of Dalhousie University held a consultation session in Yarmouth, Nova Scotia, on May 28th, 2022 to help us gain expert knowledge on **[accessibility](#)** and **[age-friendliness](#)** directly from Yarmouth residents. Seven local residents and one guest consultant, all with lived experience of aging and disability, participated. The participants were recruited through online advertising on social media platforms such as Facebook and through the Accessibility Advisory Committees of Town of Yarmouth and the County of Yarmouth. Attendees received \$100 compensation for their time and expertise, along with food and refreshments.

The community consultation participants included persons with mobility disabilities, low vision, hearing impairment, auto-immune diseases and neurodivergence. Some attendees were also caregivers to others experiencing disability and advocates for accessibility, and a few attendees spoke about their experience of aging. We were excited to hear from people with such a diverse range of experiences and eager to learn from them about what to look for when assessing the accessibility of Yarmouth.



A group of participants watches a presentation during the consultation session.

What is RAAFIA?

Rural Accessible and Age-Friendly Infrastructure Assessment – shortened in this report to **RAAFIA** – is being developed as part of a research project being undertaken through the PEACH Research Unit in partnership with Nova Scotian municipalities.



RAAFIA is a tool for collecting and analyzing information about the **built environment** to indicate the accessibility and age-friendliness of rural communities. This audit tool is used to systematically assess public spaces of the built environment, which may include streets, sidewalks, parks, and public buildings like libraries, recreational facilities, and government buildings.

A critical part of the RAAFIA project is to include the perspectives of local community experts with experiences of aging and disability. Doing so will give us a more complete understanding of what is important for making a community accessible and age-friendly for all and help us to determine what factors should be assessed and monitored more closely to inform decision-makers.

Why create the RAAFIA tool?

One in five adults and over a third of older adults identify as having some type of disability in Canada, and the proportion is likely even higher in rural communities. Older adults and people with disabilities experience many challenges when navigating the built environment due to a gap that exists between the form and the function of built environments and the needs of older adults and people with disabilities as active users of community spaces.

Did you know?

25%
of the population
of Yarmouth is
**over the age of
65**

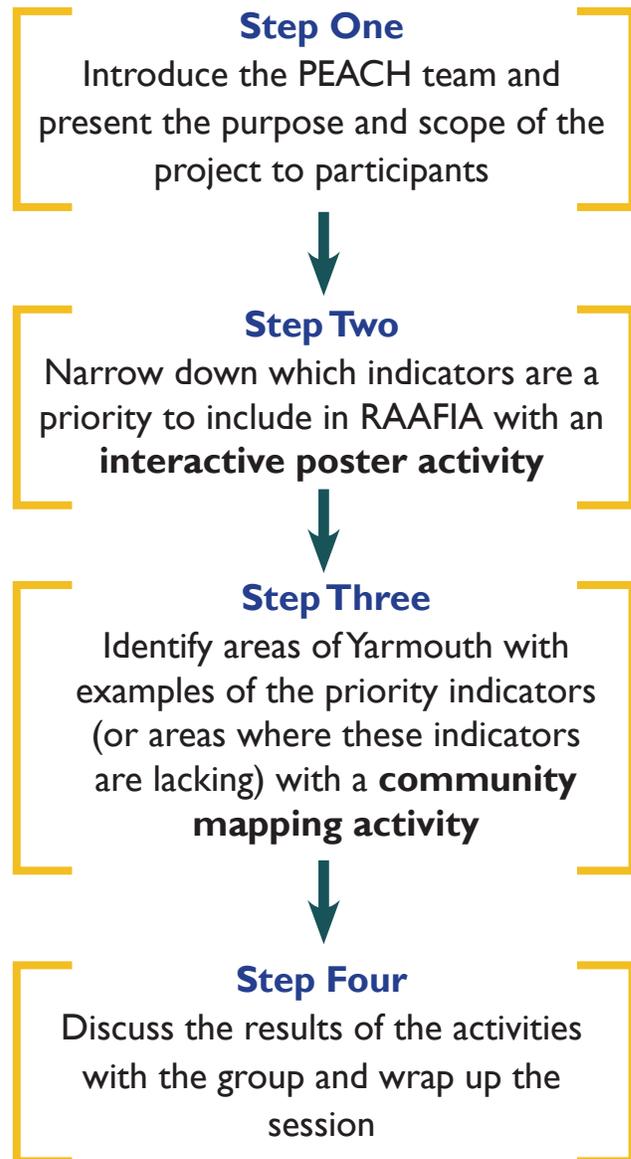
30%
of Nova Scotians
**live with
some form of
disability**

Activities

The PEACH team approached the community consultation event with the following questions in mind:

- » **What indicators for accessibility are a priority for Yarmouth residents and should be included in the RAAFIA audit tool?**
- » **What areas of Yarmouth should the team investigate to measure these indicators?**

To answer these questions, we asked the participants to engage in a few activities to get their expert input. A summary of the day's activities is pictured at right. For the more detailed agenda provided at the consultation session, please see [Appendix 2](#).

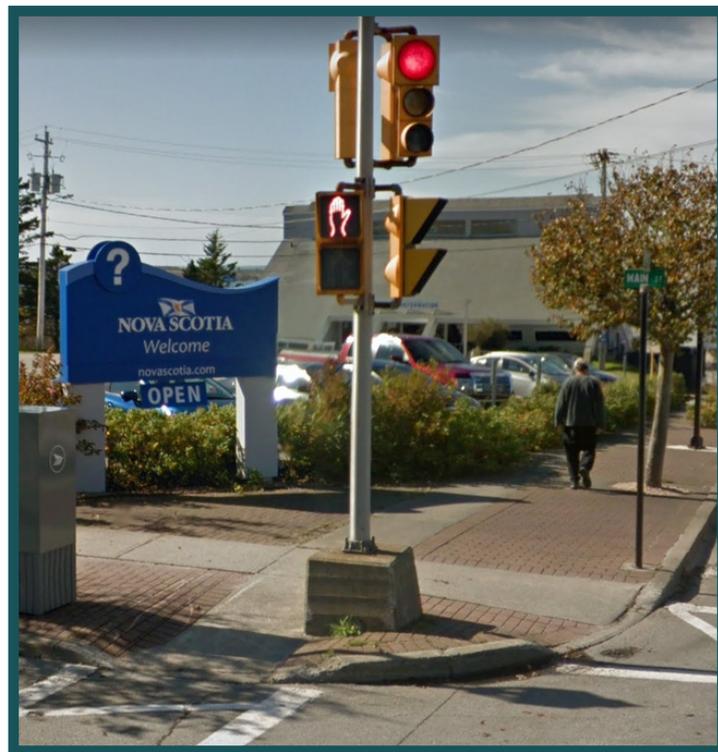


A table covered in handouts, colourful stickers, name tags, markers, and sticky notes that participants used for the activities.

Interactive Poster Activity

The PEACH team assembled a list of **indicators** derived from several well-established accessibility audit tools (for a full list of the indicators we presented, please see **Appendix 3**). We use indicators to measure a community's accessibility and age-friendliness in the built environment. They were presented in four categories: 'Destinations', '**Walkability/Rollability**', 'Amenities and Others', and 'Soft Infrastructure' (note: 'soft infrastructure' refers to non-physical elements such as community programming and policies).

The participants were asked to view the poster gallery and use coloured stickers to highlight indicators that would benefit older adults and people with accessibility challenges in the context of Yarmouth. The participants could use as many stickers as they saw fit against any of the indicators to emphasize a certain indicator they viewed as a priority.



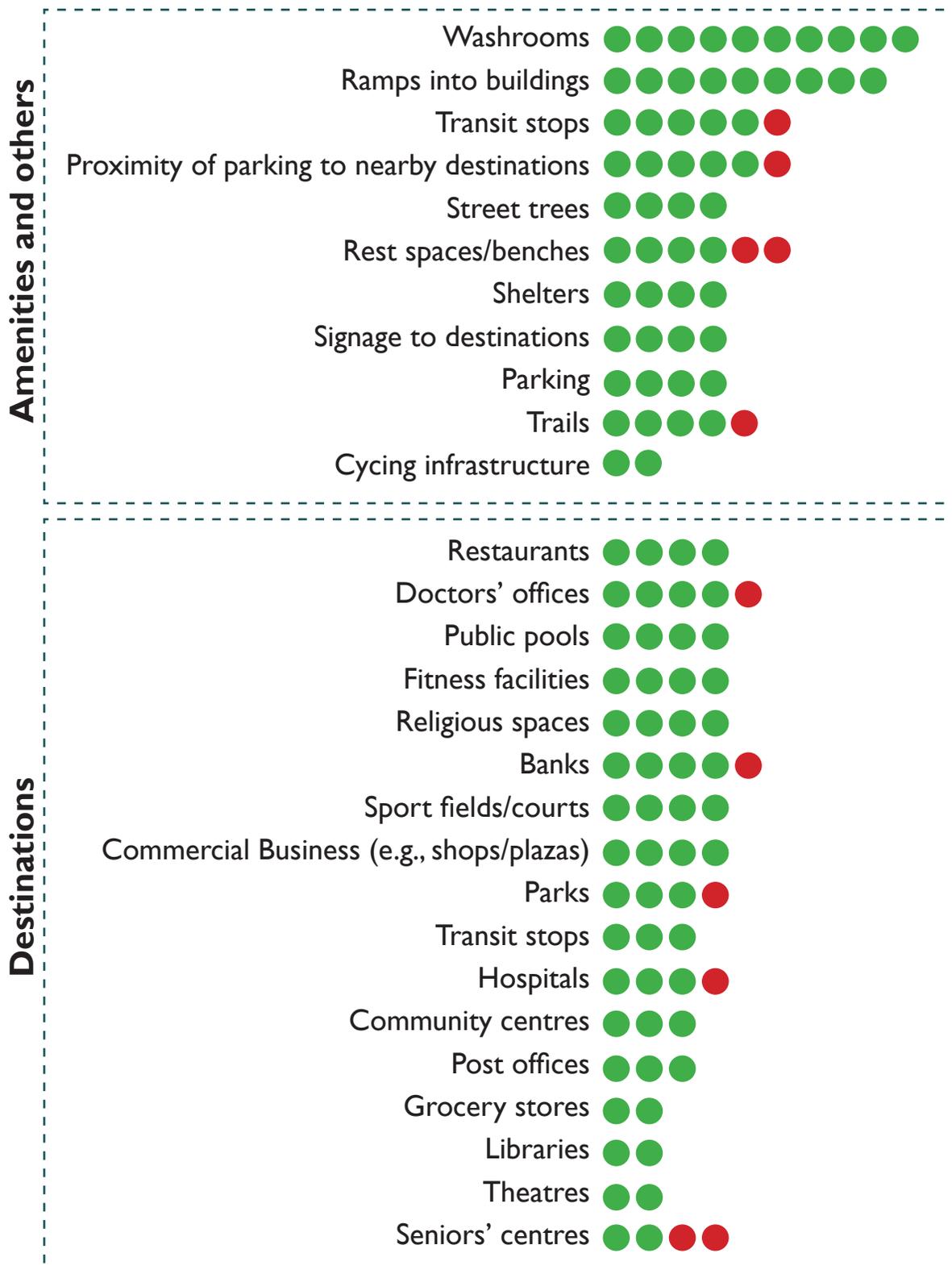
The image above includes several examples of what we might measure as 'indicators' in the built environment, such as curb ramps, pedestrian crossing signals, and signage.



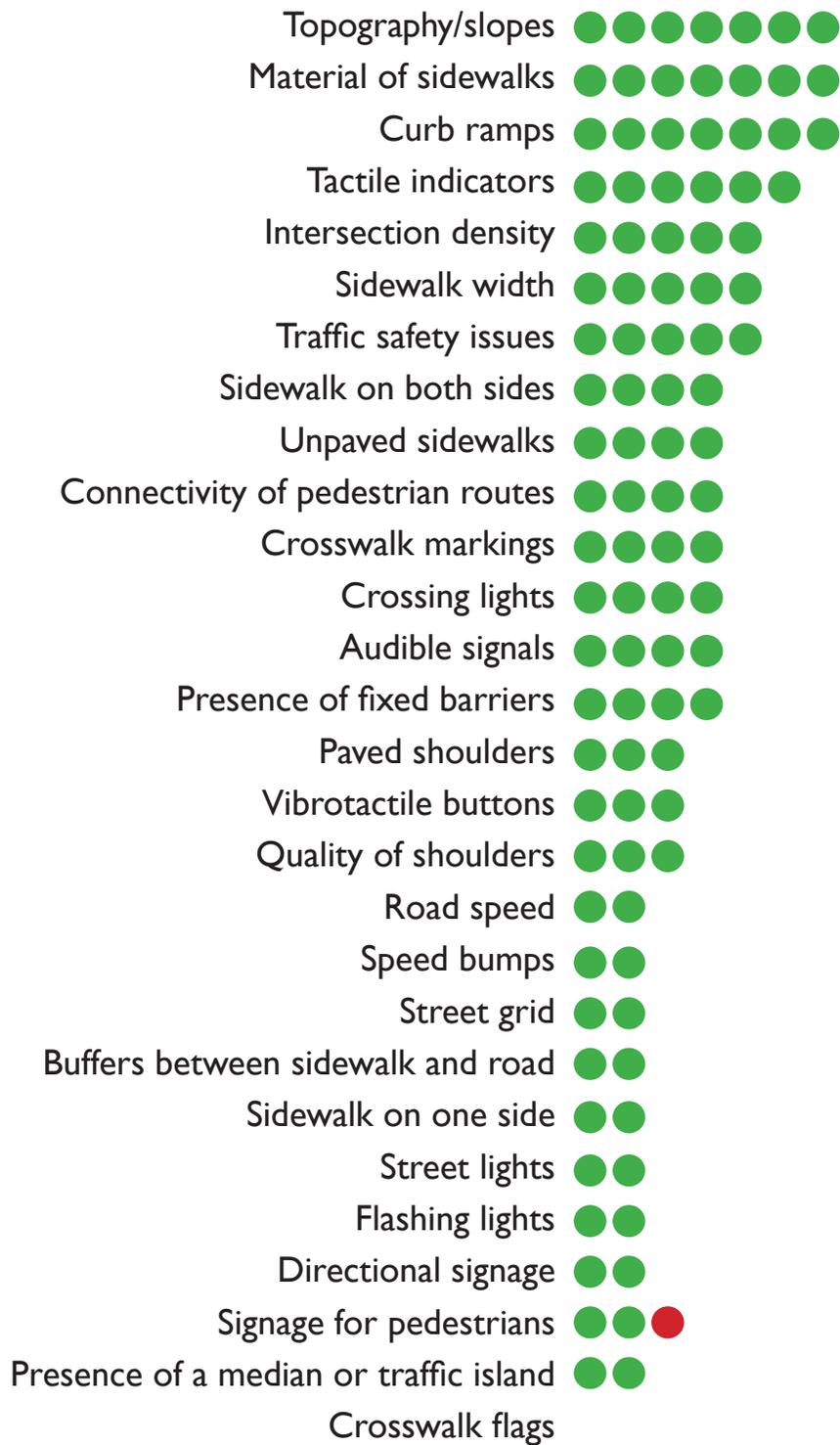
Participants place stickers next to their preferred indicators on a series of posters.

Results from Poster Activity

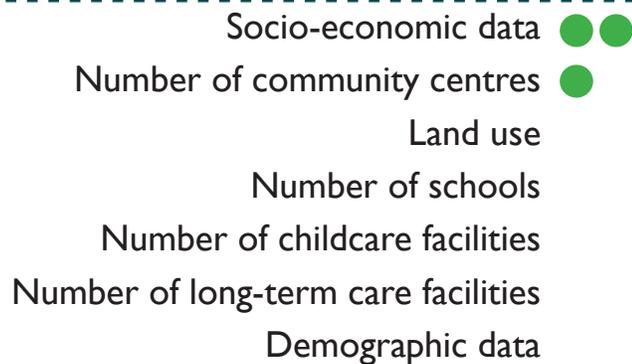
The following chart shows counts of the number of stickers that participants allocated for each of the indicators we provided. **Green** stickers denote areas of concern for accessibility, and **red** stickers denote areas of concern for older adults specifically. For a screen reader compatible version of this infographic, [please click here](#).



Walkability/Rollability



Soft Infrastructure



Community Mapping Activity

Once participants were more familiar with the role that indicators play in community audits, we asked them to identify some of them in a Community Mapping activity. Since no one from the research team is from Yarmouth, this was a valuable opportunity for us to get first-hand knowledge of the town from the perspective of its residents. The participants were presented with a printed map of Yarmouth and a digital map (Google Maps & Google Street View) displayed on a projector screen. The participants were asked to mark locations on either of the maps where there were known examples of infrastructure that helped or hindered accessibility.

The participants had a clear idea of which areas they wanted to share with us to investigate for the RAAFIA project. Google Street View in particular proved to be a useful tool to show us these areas. We took screen captures of these spaces and recorded the participants' comments as well as their locations on the map.



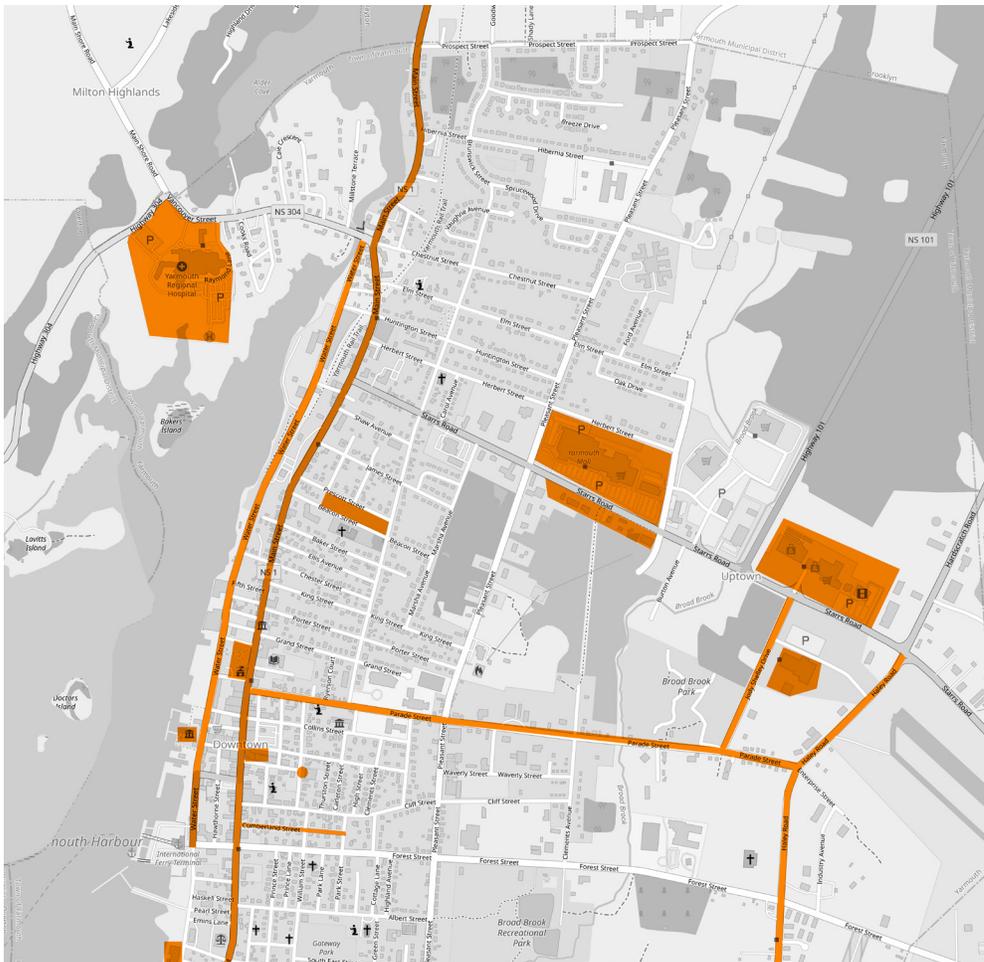
A research assistant draws on a map of Yarmouth marking areas where participants have indicated are important for the PEACH team to investigate further.

Results from Community Mapping Activity

We used the results from the mapping activity to create a map that indicated areas that we should investigate during the RAAFA project (pictured below). We also compiled a gallery of images with comments from the participants captured using Google Street View (a sample of these images is pictured below). We will use this information, in conjunction with the data collected from the first activity, to determine which indicators are most important to Yarmouth residents and incorporate them into the audit tool.



A research assistant projects Google Street View imagery on the wall so that participants can point out areas to investigate.



A map of Yarmouth created from the feedback received during the session. Areas highlighted in orange indicate areas for the PEACH team to investigate further to find barriers and enhancements to accessibility.



Maud Lewis Trail; smooth, wide, has rest stops



Parking spot right in front of curb cut at a popular restaurant in the town.

The above images represent positive and negative accessibility features that the participants indicated during the mapping activity.

Themes from the Discussion

Throughout the day, participants shared personal stories and experiences with the group in order to highlight some of the barriers they face on a daily basis in the built environment. Several recurring themes emerged from these discussions and are outlined below. Quotes throughout this section are real quotes from the participants at the session.

Pedestrian safety



Pedestrian safety was a major concern for the participants. The group frequently highlighted a lack of street safety infrastructure in Yarmouth, particularly a lack of sidewalk infrastructure and short pedestrian crossing times at intersections. The group also suggested removing barriers to visibility at street crossings (e.g., benches that block a driver's view of the pedestrian at the intersection) and increasing connectivity through features such as a continuous network of sidewalks on both sides of the street. Poor sidewalk and curb cut conditions, particularly in the winter months, were frequently cited as barriers to accessibility.

“Oh, it’s horrible in the winter like I don’t even leave my house in the winter cause if I have to walk, forget it. I’ve slipped and fell too many times.”

Accessibility of indoor and outdoor spaces



The group noted that several indoor and outdoor spaces in Yarmouth, many of which are considered essential services (e.g., post offices), do not have accessible entrances. This was a concern for all participants, not only wheelchair users. Participants also pointed to the limited availability of accessible services provided in the town, such as full-service gas stations for individuals with mobility disabilities. Some participants shared that they avoid leaving their homes unless absolutely necessary because they assume their destination will be inaccessible to them. Since many people live in rural areas outside the Town, it can be difficult to justify making the trip if there is uncertainty about how accessible the destination is.

“I actively stay in my apartment and don’t go out because I know I’m gonna get excluded and I can’t do anything [...] everybody already assumes everything is not accessible.”

Accessible parking



The participants expressed concerns regarding the safety issues around accessible parking spots. The town of Yarmouth has accessible parking spaces allotted across the town, however the group noted that these parking spots are often not designed to meet their needs, particularly in the winter when snow accumulation reduces the amount of space available between the parking spot and incoming traffic. The group recommended that parking facilities should be regularly audited to ensure they meet current design and safety standards.

“I drive a small car and I can hardly get in it [the parking spot]. So, I can’t imagine a van with a ramp. That would be torture. And then getting across, it’s so slanted... it’s like it’s so (steep)... it’s a mess.”

Reliable washroom access



Many people talked about the lack of accessible washrooms available in downtown Yarmouth. From their experience, very few private establishments include an accessible washroom and only a few public buildings have them (the public library, the town hall, and the community YMCA). Since public buildings tend to only be open during business hours, access to accessible washrooms is extremely limited in the evening hours.

Awareness, education, and communication



The group expressed considerable concern about the lack of awareness and education about accessibility issues for employers, businessowners, and the general public. For instance, many were frustrated that businessowners did not take advantage of government grants that could help to cover the cost of making a business more accessible. It was suggested that a future event similar to this one that also includes community members at large would be helpful to promote advocacy and awareness about how to remove barriers. Participants were also frustrated at how difficult it could be to report accessibility problems to the Town and indicated having problems with navigating the website to find an appropriate contact to report to.

“I wish everyone in the Town of Yarmouth could have been here [at this session] today.”

How is accessibility being addressed in Yarmouth?

The Town of Yarmouth is making clear strides to become more accessible. [ACCESSIBLE Yarmouth](#), the town's accessibility plan drafted by the Accessibility Advisory Committee, describes their achievements in accessibility to-date, the barriers that still exist, and policy and action items that will address these barriers in the future. The proposed action items throughout the plan often directly address the concerns that participants expressed during the session. As well, many of the barriers and achievements highlighted by the plan are consistent with what we heard at the consultation session. The table below highlights the themes we identified during the session and describes where the ACCESSIBLE Yarmouth plan happens to align with these themes.

RAAFIA Theme	Relevance to ACCESSIBLE Yarmouth Plan
Pedestrian safety	<ul style="list-style-type: none">• Many of the barriers to accessibility outlined in the plan, including steep sidewalk easements, cobblestone paths that are difficult to roll on, and lighting of public parks and playgrounds at night, are consistent with those identified by participants during the session.• The improvement of sidewalks and curb cuts and an accessibility audit are priority action items in the plan. These actions are in line with what participants wanted to see happen.• The plan lists several examples of projects that are considered achievements for accessibility. While some recent achievements were echoed by participants (e.g., improved trail infrastructure, particularly the Clements Ave. multi-use trail), others were deemed not as successful (for instance, although the Main Street streetscaping project included some accessibility safety features, other streetscape elements block the view of pedestrians to drivers, making it dangerous to cross the street.)
Accessibility of indoor and outdoor spaces	<ul style="list-style-type: none">• The plan indicates that the municipality will promote the grants that are available to local businesses to help them add accessible features. This aligns with the concerns of participants that local business owners did not seem to care that their establishments were inaccessible.• The plan acknowledges some barriers to accessibility in their transit system. However, one significant barrier that participants noted that was not included in the plan was that the transit system does not run on Sundays and has more limited hours on Saturdays.• The plan highlights recent renovations to make some public spaces more accessible. Although the newly renovated fire hall (where this consultation session was held) includes several accessible features, participants were frustrated that the front entrance was not well-marked and that the accessible entrance was not immediately obvious when they arrived. Additionally, participants noted that the playground with accessible swings was not easily accessible to parents.

RAAFIA Theme	Relevance to ACCESSIBLE Yarmouth Plan
Accessible parking	<ul style="list-style-type: none"> The plan acknowledges that some accessible parking spots do not provide appropriate areas to disembark from a vehicle or curb-cuts to directly access sidewalks. This aligns with the issues that participants expressed during the session. The plan includes a policy to provide accessible parking locations with associated curb cuts across the core area. Participants were more concerned about the quality of how the current accessible parking spots were being maintained (particularly during the winter months) and less concerned with the quantity of parking spots available.
Reliable washroom access	<ul style="list-style-type: none"> The plan includes a policy to provide access to public washrooms (included within a list of other items, such as public buildings and public parks), however the plan does not specify whether they will build more public washrooms or improve the ones already in public buildings. Participants expressed that they had poor access to accessible washrooms in the downtown area outside of working hours.
Awareness, education, and communication	<ul style="list-style-type: none"> The plan says the Town will promote accessibility awareness through events, promotion of grants to help businesses become more accessible, and other advocacy initiatives. Participants felt strongly that more needs to be done to increase awareness of accessibility issues. The plan includes policies to enhance outward communication (i.e., from the Town to the public), but does not include strategies to improve communication from the public to the Town (e.g., reporting accessibility problems such as a broken sidewalk or snow piled up in an accessible parking spot). Participants reported having difficulty with reaching municipal officials to report cases of accessible infrastructure in need of repair.

Although many of the achievements cited in the plan technically meet certain accessibility criteria, participants remarked that there was still work to be done to make these spaces more meaningfully accessible. This was a consistent theme across all sections of the plan. There is a clear overlap between the themes that came up during the consultation session and the priorities of Yarmouth’s accessibility plan. The insight that the participants provided could serve to further enrich the plan by providing additional details and alternative ways of thinking about accessibility issues in the built environment.

Moving forward

Continuing the RAAPIA project, the PEACH team will be conducting similar consultation events in other rural municipalities in Nova Scotia. Our next consultation event will be held in Bridgewater on September 24, 2022. The indicators we developed during this session will be shared with the Town of Yarmouth's planning department and the results will be made publicly available on our website. If you have any questions about the project, please contact us at peach@dal.ca.

Acknowledgments

Our thanks go to the residents of Yarmouth who volunteered their time as experts of their community and their lived experience. We sincerely appreciate how open the group was and how willing they were to share their experiences with us. We also wish to thank the municipal staff and representatives who have supported this work.



The participants from the group consultation are gathered around a U-shaped table arrangement engaged in discussion with the PEACH researchers.

Appendix I: References

Mahmood, A., O’Dea, E., Bigonnesse, C., Labbe, D., Mahal, T., Qureshi, M., & Mortenson, W. (2020). Stakeholders Walkability/Wheelability Audit in Neighbourhoods (SWAN): user-led audit and photographic documentation in Canada. *Disability & Society*, 35(6), 902-925. doi: 10.1080/09687599.2019.1649127

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Walz, R. (2000). Development of Environmental Indicator Systems: Experiences from Germany. *Environmental Management*, 25(6), 613–623. <https://doi.org/10.1007/s002670010048>

World Health Organization (WHO) (2007). *Global Age Friendly Cities: A Guide*. Geneva, Switzerland: World Health Organization.

Appendix 2: Agenda for the consultation session

Yarmouth Fire Hall, May 28, 2022, 1:00 – 4:00 PM

1:05 Opening (5 minutes)

Introduction of PEACH and PEACH staff

PEACH team: Mikiko, Mehvish, Raghav, Tim, Katherine

Special guest: Ellen Johnson

1:10 Roundtable introductions (10 minutes)

Tell us your name

Tell us the first thing you think of when you hear “accessible and age-friendly”

1:20 Presentation of project purpose/scope (20 minutes)

What is in this presentation:

Explanation of RAAFIA

Purpose of this consultation: To co-develop measures to assess accessibility and age-friendliness based on residents’ local knowledge living in Yarmouth

Introduction of some similar assessment tools that inform RAAFIA

Q and A

***** Break (10 minutes) *****

1:50 Introduction to activities (10 minutes)

Goals of activities:

Prioritise indicators

Suggest indicators that are unique to Yarmouth that are not listed already

Identify where to look in Yarmouth for the indicators

Explore potential sources of data

2:00 Activity 1: Poster gallery walk-and-roll-about (30 minutes)

View the indicators listed on each poster at your own pace
Discuss the indicators with others
Use green stickers to tell us what indicators to prioritize (for all)
Use red stickers to tell us what indicators to prioritize for aging
Write your comments and/or suggestions on the posters

***** Break (10 minutes) *****

2:40 Activity 2: Community mapping exercise (30 minutes)

Look at map of Yarmouth together
Tell us 'what and where' to look for primary data collection

***** Break (10 minutes) *****

3:20 Finalizing indicators (30 minutes)

Group discussion

3:50 Thank-you's

Appendix 3: Indicators

The following are lists of indicators that were discussed throughout the consultation session. These indicators were compiled from existing audit tools with similar goals to RAAFIA. Lists were derived from similar indicators such as SWAN (Seniors' Walkability Audit in Neighbourhoods) SWEAT-R (Seniors Walkability Environment Audit Tool - Revised), RALA (Rural Active Living Assessment), and the WHO (World Health Organization) Checklist for Age-Friendly Cities.

Destinations
Parks
Restaurants
Transit Stops
Hospitals
Doctors' Offices
Public Pools
Fitness Facilities
Community Centres
Religious Spaces
Libraries
Post Offices
Theatres
Banks
Seniors' Centres
Sport Fields/Courts
Commercial Business (e.g., shops, plazas)
Grocery stores

Amenities & Others
Transit stops
Washrooms
Street trees
Rest spaces/benches
Shelters
Cycling infrastructure
Ramps into buildings
Signage to destinations
Proximity of parking to nearby destinations
Parking
Trails

Walkability/Rollability

Road speed
Speed bumps
Street grid
Intersection density
Sidewalk width
Material of sidewalks
Buffers between sidewalk and road
Sidewalk on one side
Sidewalk on both sides
Unpaved sidewalks
Paved shoulders
Connectivity of pedestrian routes
Crosswalk markings
Crossing lights
Curb ramps
Streetlights
Flashing lights
Directional signage
Signage for pedestrians
Tactile indicators
Vibrotactile buttons
Audible signals
Presence of a median or traffic island
Traffic safety issues
Presence of fixed barriers
Quality of shoulders
Crosswalk flags

Soft Infrastructure

Commercial typologies
Residential typologies
Number of schools
Number of community centres
Number of childcare facilities
Number of long-term care facilities
Demographic data
Socio-economic data

Appendix 4:

Screen reader-compatible version of poster activity results

The following tables show the results of the poster activity. Each table represents one of the categories of indicators: Destinations, Amenities and Others, Soft Infrastructure, and Walkability/Rollability. Each of these categories contains several indicators (column 1). The numbers in the two proceeding columns represent counts of the number of stickers participants placed on each indicator. Each table has arranged the indicators from highest to lowest sticker counts. **Green** stickers (column 2) denote areas of concern for accessibility, and **red** stickers (column 3) denote areas of concern for older adults specifically.

Table 1: Destinations

Indicator	Green stickers (areas of concern for accessibility)	Red stickers (areas of concern for older adults)
Restaurants	4	0
Doctors' offices	4	1
Public pools	4	0
Fitness facilities	4	0
Religious spaces	4	0
Banks	4	1
Sports fields/courts	4	0
Commercial businesses (e.g., shops/plazas)	4	0
Parks	3	1
Transit stops	3	0
Hospitals	3	1
Community centres	3	0
Post offices	3	0
Grocery stores	2	0
Libraries	2	0
Theatres	2	0
Seniors' centres	2	2

[Click here to go back to the poster activity section](#)

Table 2: Amenities and others

Indicator	Green stickers (areas of concern for accessibility)	Red stickers (areas of concern for older adults)
Washrooms	10	0
Ramps into buildings	9	0
Transit stops	5	1
Proximity of parking to nearby destinations	5	1
Street trees	4	0
Rest spaces/benches	4	2
Shelters	4	0
Signage to destinations	4	0
Parking	4	0
Trails	4	1
Cycling infrastructure	2	0

Table 3: Soft infrastructure

Indicator	Green stickers (areas of concern for accessibility)	Red stickers (areas of concern for older adults)
Socio-economic data	2	0
Number of community centres	1	0
Land use	0	0
Number of schools	0	0
Number of childcare facilities	0	0
Number of long-term care facilities	0	0
Demographic data	0	0

[Click here to go back to the poster activity section](#)

Table 4: Walkability/Rollability

Indicator	Green stickers (areas of concern for accessibility)	Red stickers (areas of concern for older adults)
Topography/slopes	7	0
Material of sidewalks	7	0
Curb ramps	7	0
Tactile indicators	6	0
Intersection density	5	0
Sidewalk width	5	0
Traffic safety issues	5	0
Sidewalk on both sides	4	0
Unpaved sidewalks	4	0
Connectivity of pedestrian routes	4	0
Crosswalk markings	4	0
Crossing lights	4	0
Audible signals	4	0
Presence of fixed barrier	4	0
Paved shoulders	3	0
Vibrotactile buttons	3	0
Quality of shoulders	3	0
Road speed	2	0
Speed bumps	2	0
Street grid	2	0
Buffers between sidewalk and road	2	0
Sidewalk on one side	2	0
Street lights	2	0
Flashing lights	2	0
Directional signage	2	0
Signage for pedestrians	2	1
Presence of a median or traffic island	2	0
Crosswalk flags	0	0

[Click here to go back to the poster activity section](#)