WALK Mississauga, CYCLE Mississauga
A Spatial Analysis of Cooksville

STRATEGY DEVELOPMENT 2012

HCSC HEALTHY CITY STEWARDSHIP CENTRE

Ontario Trillium Foundation / Fondation Trillium de l'Ontario

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Executive Summary

"In 2001 noncommunicable disease accounted for almost 60% of the 56 million deaths annually and 47% of the global burden of disease", presenting a major challenge to global public health. Canada is the 5th most overweight country in the world. Research proves that in an industrialized nation such as Canada, obesity rates can consistently drop when alternative forms of transportation, such as walking and cycling are used. Moreover, "The way a city is built is as important to obesity and its related consequences".

It is not only the way a city is built, but also the configuration of its population that affects health. In a city such as Mississauga with 52% of its population identified as foreign born it is important to note that generally, new immigrants are healthier than long-term immigrants or non-immigrants. Despite the initial health advantages of a newcomer "immigrants face major life changes that generate high stress levels and undermine health". The City of Mississauga has integrated aspects into its Strategic Plan that focus on newcomers and highlights action items such as designing streets around the idea of pedestrians first.

In Mississauga, a unique partnership exists that discusses health in the local community, the Healthy City Stewardship Centre (HCSC). The HCSC was originally formed through a partnership between the University of Toronto Mississauga campus and the City of Mississauga. Now it is a partnership which includes 15 member organizations. The HCSC is organized around the concept of government, universities, corporations, community and non-government agencies channelling information to a designated collection point which interprets and structures the data into a forum helpful to policy makers.

Due to the above listed reasons, the Healthy City Stewardship Centre, with funding from the provincial governments' Ontario Trillium Foundation and Healthy Communities Fund, undertook a spatial analysis of one community in Mississauga with a significant newcomer demographic, to determine assets and barriers that influence the participation in walking and cycling. The community of Cooksville was chosen. The project goals were to make specific recommendations and develop a replicable Strategy to mitigate the barriers identified.

The strategy brings together maps and research utilizing the Healthy Community Model created by Trevor Hancock. The Healthy Community Model approach organizes indicators related to walking and cycling with health at the centre of the model.

The major findings of the research and analysis indicate:

Community:

- Most of Cooksville residents speak English; however over 30 languages are spoken as well
- There is wide range of median income and different cultures in this neighbourhood
- Gender and Age ranges vary evenly throughout Cooksville

Walking and Cycling:

- Most people in Cooksville have low levels of walking and cycling to work as a form of transportation, but a larger portion do take public transit, which is usually linked with walking and cycling at the beginning and end of the transit trip
- 80% of survey respondents found walking valued in their organization compared to 54% found that cycling is valued in their organization

Infrastructure:

- Most of the infrastructure needs are in place in the community (sidewalks, trails, routes, lights, trees) or are scheduled to be built within the next few years

Newcomers:

- More work is required to understand the relationship between culture and walking and cycling activities

The Healthy Community Model, as a project process, was deep and inclusive of a variety of stakeholder viewpoints. It was also a long process so dedicated staff time, the mapping capabilities available to the coordinator conducting the project, and the commitment from people of different organizations need to be considered when undertaking this process. Utilizing the Healthy Community Model to analyze one community was beneficial as it gave a greater perspective to the influences on walking and cycling. Clearly more needs to be done to draw in the diversity of a neighbourhood, when seeking to increase the daily physical fitness of the local population.

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Introduction

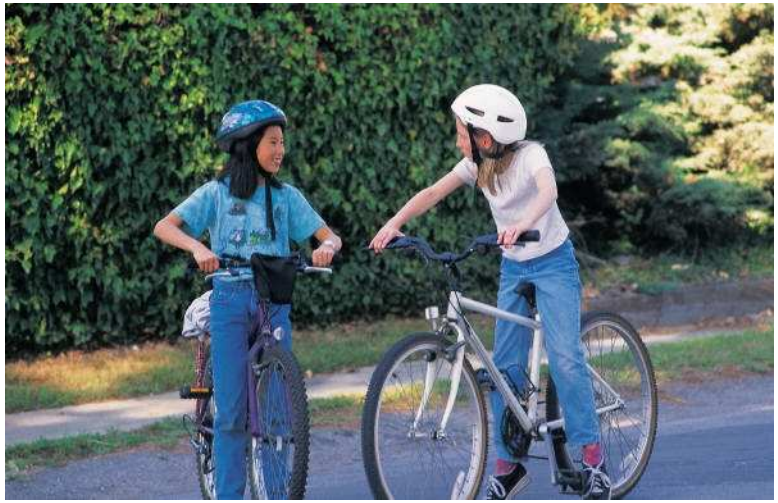
Obesity rates are on the rise. Here are some of the facts and why developing strategies to promote healthy living is essential. Both people and communities must be healthy: "A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity"[25]. "In 2001 noncommunicable disease accounted for almost 60% of the 56 million deaths annually and 47% of the global burden of disease"[24], presenting a major challenge to global public health. Morbidity and mortality of noncommunicable disease are associated with these risk factors: high blood pressure, high concentrations of cholesterol in the blood, inadequate intake of fruits and vegetables, overweight and obesity, physical inactivity and tobacco use[24]. Further understanding and mitigation of these risk factors is necessary to curtail the incidence rates of noncommunicable disease in developed nations.

Canada is the 5th most overweight country in the world[13]. "Obesity is at the root of a myriad of diseases and health problems, and inactivity is one of the major contributing factors to obesity"[25]. Sedentary living is known to cause a huge strain on the healthcare system. "Building convenient and accessible pedestrian and cycling infrastructure makes it easier for physical activity to become part of people's daily routine"[26]. Additionally, current trends indicate that people are increasingly turning to unscheduled and unorganized activities such as walking and bicycling as a form of daily exercise[26]. It can be noted that with an increase of active transportation use there is usually a decrease in the incidence of pedestrian and cycling injuries within a community[26]. According to Statistics Canada's 2005 Community Health Survey walking is by far the most popular form of physical activity in Canada, with bicycling placing in the top five[21]. Research proves that in an industrialized nation such as Canada, obesity rates can consistently drop when alternative forms of transportation, such as walking and cycling are used[26].

In Ontario, strategies have been developed by the Ministry of Health Promotion and Ontario Planner's Association to discover how to increase physical activity through several mechanisms including the built environment and effective communication on the prevention of noncommunicable disease. In Peel Region, further evidence denotes links between obesity (food consumption and physical activity) being influenced by urban form and the built environment. "Evidence is available linking urban sprawl to lower

levels of physical activity, to diminished social capital, transportation injuries, and to pollution. The way a city is built is as important to obesity and its related consequences"[20]. Moreover, almost 50% of Peel's population is foreign-born which is approximately 25% more than the Ontario and Canadian average[20]. It is known that "immigration status and length of time since immigration can have a significant impact on health status for a variety of reasons"[20]. Generally, newcomers to Peel Region are healthier than long-term immigrants or non-immigrants. Despite the initial health advantages of the newcomer in Peel, "immigrants face major life changes that generate high stress levels and undermine health"[20].

Similar to Peel Region's percentage of foreign-born populations, Mississauga has a slightly higher percentage with 52% of the population identified as foreign born[2]. Understanding the challenges of the newcomers is sometimes a difficult process which is why the City of Mississauga's Strategic Plan (2009) highlights areas to ensure the health of all Mississaugans including that of newcomers is not undermined. Mississauga's Strategic Plan (2009) highlights actions such as "Design streets around the idea of 'pedestrian first' and 'create more bike friendly facilities', which can help to reduce both pedestrian and cycling injuries[4]. These are two examples among many action items highlighted in the Strategic Plan. It is these action items that necessitate the need for a replicable Strategy to ensure that all citizens, including newcomers are able to participate in walking and cycling as a form of physical activity, increasing healthy living and in turn decreasing obesity.



In Mississauga, a unique partnership exists that discusses health in the city, the Healthy City Stewardship Centre (HCSC). The HCSC was originally formed through a partnership between University of Toronto Mississauga Campus and the City of Mississauga.

The HCSC has 15 member organizations which include[12]:

- AstraZeneca Canada Inc.
- City of Mississauga
- Dixie Bloor Neighbourhood Centre
- Dufferin-Peel Catholic District School Board
- Mayor's Youth Advisory Committee
- Mississauga Board of Trade
- Mississauga Halton LHIN
- Peel District School Board
- Peel Regional Police
- Peel Public Health – Region of Peel
- Sheridan College Institute of Technology and Advanced Learning
- Trillium Health Centre – Credit Valley Hospital
- United Way of Peel Region
- University of Toronto Mississauga
- YMCA of Greater Toronto

The HCSC's vision is that Mississauga will be a Healthy City of people with optimal physical, mental and spiritual health[12]. The framework used by the HCSC will bridge the gap between research and policy-making at the municipal level. HCSC is organized around the concept of government, universities, corporations, community and non-government agencies channelling information to a designated collection point which interprets and structures the data into a forum helpful to policy makers[12].

Objectives of "Walk Mississauga, Cycle Mississauga: Strategy Development"

With funding from the Ministry of Health and Long-Term Care, this toolkit was created as the HCSC wanted to spatially analyze one community within Mississauga, with a significant immigrant newcomer demographic, to determine assets and barriers that influence the participation in walking and cycling. The intention is to then make specific recommendations and develop a replicable Strategy to mitigate barriers that are identified.

The grant was received in February 2011 from the Ministry of Health and Long-Term Care Healthy Communities Fund Grant Stream. "The Healthy Communities Fund (HCF) supports communities to plan and deliver integrated programs that improve the health of Ontarians. The Fund plays a key role in helping to achieve the program's vision of healthy communities working together and Ontarians leading healthy and active lives. The goals of the Healthy Communities Fund are to:

- Create a culture of health and well-being;
- Build healthy communities through coordinated action;
- Create policies and programs that make it easier for Ontarians to be healthy; and
- Enhance the capacity of community leaders to work together on healthy living."[15]

The objectives of this project were to target ethnic communities through research and to understand if there is a link between walking and cycling and culture. The process undertaken was Community Asset Mapping in which spatial analysis was utilized. Key deliverables of the project include:

- Meetings and workshops with stakeholders
- Identification of relevant indicators
- Engagement of community partners
- Replicable strategy
- Expert Forum

Spatial Analysis

Spatial analysis includes any of the formal techniques which study entities using their topological, geometric or geographic properties. For the purpose of this project we examined geographic properties of Cooksville using geographic information systems (GIS). "Spatial analysis is the crux of GIS because it includes all of the transformations, manipulations, and methods that can be applied to geographic data to add value to them, to support decisions, and to reveal patterns and anomalies that are not immediately obvious. Spatial analysis is the process by which we turn raw data into useful information"[14]. "Spatial approaches empower health professionals, decision-makers, community groups and individuals with a new set of informative tools:

- Front-line health care providers can learn more about their patients/clients and the environments they live in.
- Local residents can learn to identify environmental contributors to their health conditions where to look for appropriate care
- Health service planners and policy makers can use spatial information to assess the effectiveness of existing service provision levels and to design new programs to address unmet service needs in the most optimal way given available budgets and other constraints.
- Community groups and individuals can employ spatial knowledge in their advocacy, fundraising efforts and promotion of healthy living behaviours"[14].

Spatial approaches are quickly becoming an essential part of various types of research at the local level. Understanding the health and knowledge of a community visually is instrumental in acknowledging the facts surrounding the make-up of a community. It starts a discussion around statistics that can then inform policy and hopefully drive change within a community or neighbourhood. In order to take spatial analysis one step further, the Healthy Community Model by Dr. Trevor Hancock was applied in order to organize the information. "A growing body of research supports the notion that where people live has a significant impact on their health. The relationship between neighbourhood environment and health may be due, at least in part, to the availability of resources in a community, and in particular, to the availability of resources that promote a health lifestyle"[14].

Healthy Community Model

Utilizing the conceptual model provided by Hancock the issue of how to analyze walking and cycling in a community with respect to community health can be achieved. It is understood that with the application of this conceptual model, maintaining a holistic health approach can be advantageous in regards to bettering the health of all members in a community.

The framework ultimately illustrates that human health is dependent on the health of our planet and of the natural ecosystems within which we live. Following this model one must recognize that the natural ecosystems in which we live are now cities, towns and communities. Communities, which is a broader definition for cities and towns, have both physical and social dimensions to them and now our health is notably dependent on the health of urban ecosystems such as communities.

Three concentric circles form the framework for the Healthy Community Model with health at the centre of all the circles.

Listed below are the general representations of each of the circles and their connecting features[10].

1. Health: is at the centre of the model. The three circles and their overlaps describe six qualities of a community which all contribute to health.
2. Community Conviviality: is concerned with the web of social relations and social cohesion. It can also be described as the civic community and social solidarity
3. Environmental Viability: refers to the quality of the community's local environment including air, water, soil and the food chain.
4. Economic Adequacy: refers to having a sufficient level of economic activity to ensure the basic needs for all are met.
5. Livable Built Environment: necessitates a built environment designed at a human scale that is safe, pleasing and encouraging of conviviality, so that it encourages a sense of belonging and a sense of place.
6. Socially Equitable: requires a community in which the benefits of economy and of power and resources are distributed fairly, all community members' basic needs are met, they are treated with fairness and justice and they have an equal opportunity to achieve their maximum potential
7. Ecologically Sustainable: means that in meeting the needs of today's population the community's economy must not impair ecosystem health or deplete natural resources to the extent that the needs of future generations cannot be met.

The history of a Healthy City/Community began in the mid 1980s. Dr. Trevor Hancock created the model at the "Beyond Health Care" meeting. It was created in order to bring the two trends of environmental health, as in the sustainability and preservation, and the urban environment, poverty and related issues together. The immediate response was from the World Health Organization (WHO), which started a program in Europe. Similarly, the Pan American Health Organization (PAHO) has helped to create Saludo Municipales throughout Latin America. Other initiatives have taken place in North America and Africa. In Canada, there are three provincial networks associated with Healthy Communities: Quebec's Villes et Villages en Sante, Ontario's Healthy Communities Coalition and BC's Healthy Communities initiative[10].

A holistic approach to healthcare can be seen in Trevor Hancock's Healthy Communities Conceptual Model. Firstly, a holistic approach has significant implications for the structure and functioning of local government, as with this model it is unable to use the

traditional 'top-down' methodology for policy implementation. Secondly, Hancock's Healthy Community Model has indicators for growth on a long term scale/implementation of the project therefore, this approach shifts thought from economic development to human development[10]; human "…development is centered as in integration of health/social well-being, environmental quality/ecosystem health, and economic activity"[10]. Lastly, this model has the ability to incorporate the needs of a broad range of communities as each specific community develops indicators, which they consider pertinent for their own vision of a healthy community. Overall this approach has a focus on prevention and promotion, which are integral components as public health has a very strong component of leadership and mobilizing people.

Cooksville

Cooksville was chosen as the community to analyze as it was a neighbourhood that had distinct boundaries and character. It is also a community with a significant newcomer population. Cooksville's population is 7.1% of Mississauga's population with 43 140 people which is quite a significant portion of Mississauga's population[3]. Cooksville is also known for its multi-culturalism with over 20 different ethnic origins residing within its borders.

"The Cooksville District has historically been centred around the Hurontario Street and Dundas Street intersection, commonly known as the "The Cooksville Corners". The Cooksville Corners was originally a small village settled in the 1820s and became formally known as Cookville in 1836 when it was named after Jacob Cook, the area's leading business entrepreneur.

In 1852, fire destroyed many of the original homes and businesses in the village and the area began to fall into decline. Much of the economic activity moved south to Port Credit as the result of the federal government's decision to build a railway along the Lake Ontario shoreline rather than along Dundas Street. The area continued to decline economically until the 1870s when Cooksville was chosen over Streetsville as the new site for the Toronto Township Hall and remained the centre of Toronto Township until the 1970s.

Between the 1950s and the 1980s numerous residential neighbourhoods, such as North Cooksville, Munden Park, West Cooksville and Gordon Woods to name a few, evolved in all directions surrounding the original village.

During the 1980s and 1990s, office, commercial and institutional uses started to leave the Cooksville area as a result of earlier decisions to develop a City Core for these types of uses near the Square One regional shopping mall and the surrounding lands south of Highway 403. Today, Cooksville has become a transitional area with future focus on both redevelopment and preservation of existing established neighbourhoods"[3]. "The Cooksville Corners" has turned into a major area for transit development and will be under redevelopment in the next 10 years with Light Rail Transit to go through Cooksville. The Cooksville boundaries are the GO Rail Line (N), Cawthra Road (E), QEW (S), and Mavis (W).

Through research at the Region of Peel, Epidemiology Department, several health indicators from the Canadian Community Health Survey were compiled related to: obesity, general health, diabetes, asthma, and physical activity. Below are tables with the results comparing Cooksville to Mississauga and the Peel region.

OBESITY - Body Mass Index (BMI)	Cooksville			Mississauga			Peel		
	Per cent	95% Confidence Interval		Per cent	95% Confidence Interval		Per cent	95% Confidence Interval	
		Lower	Upper		Lower	Upper		Lower	Upper
Underweight (BMI <18.5)	NR	--	--	3.7	3.0	4.6	3.6	3.1	4.3
Normal weight (BMI 18.5-24.9)	55.7	48.4	62.7	49.8	47.8	51.9	48.3	46.7	49.9
Overweight (BMI 25.0-29.9)	26.0	20.6	32.2	33.3	31.4	35.3	34.1	32.6	35.7
Obese (BMI >=30.0)	14.0*	9.8	19.6	13.1	11.8	14.6	13.9	12.9	15.1

GENERAL HEALTH (SELF-RATED)	Cooksville			Mississauga			Peel		
	Per cent	95% Confidence Interval		Per cent	95% Confidence Interval		Per cent	95% Confidence Interval	
		Lower	Upper		Lower	Upper		Lower	Upper
Excellent	22.1	16.6	28.9	21.6	20.1	23.2	22.0	20.8	23.2
Very Good	31.7	25.7	38.2	37.5	35.7	39.4	36.8	35.4	38.2
Good	31.2	25.2	37.9	29.9	28.2	31.6	29.8	28.5	31.2
Fair	10.0*	6.7	14.7	8.0	7.0	9.1	8.3	7.6	9.2
Poor	5.0*	2.9	8.5	3.0	2.4	3.7	3.1	2.6	3.7

DIABETES	Cooksville			Mississauga			Peel		
	Per cent	95% Confidence Interval		Per cent	95% Confidence Interval		Per cent	95% Confidence Interval	
		Lower	Upper		Lower	Upper		Lower	Upper
Yes	10.2*	6.6	15.5	5.5	4.6	6.5	5.5	4.8	6.3
No	89.8	84.5	93.4	94.5	93.5	95.4	94.5	93.7	95.2

ASTHMA	Cooksville			Mississauga			Peel		
	Per cent	95% Confidence Interval		Per cent	95% Confidence Interval		Per cent	95% Confidence Interval	
		Lower	Upper		Lower	Upper		Lower	Upper
Yes	4.9*	3.0	8.0	7.7	6.8	8.6	7.6	6.9	8.4
No	95.1	92.0	97.0	92.3	91.4	93.2	92.4	91.6	93.1

PHYSICAL ACTIVITY LEVEL	Cooksville			Mississauga			Peel		
	Per cent	95% Confidence Interval		Per cent	95% Confidence Interval		Per cent	95% Confidence Interval	
		Lower	Upper		Lower	Upper		Lower	Upper
Active	20.7	15.9	26.6	25.8	24.3	27.5	23.6	22.4	24.8
Moderately Active	20.0	14.6	26.6	23.7	22.1	25.3	22.5	21.3	23.7
Inactive	59.3	52.3	66.0	50.5	48.6	52.4	53.9	52.4	55.4

NR – Not releasable due to high sampling variability *Use estimate with caution

As one can denote from the tables:

- Obesity is lower in Cooksville than in Mississauga and Peel;
- General health (self-rated) is rated lower than Mississauga and Peel;
- The prevalence of Diabetes in Cooksville is higher than Mississauga and Peel;
- Asthma in Cooksville is lower than Mississauga and Peel;
- More People are Inactive in Cooksville than Mississauga and Peel.

Methodology

For the purpose of this project, three teams were created: Research Team, Mapping Team and the Community Development Team. It was decided that three teams would be best as it would include representation from various sectors of the community which is aligned to the Healthy Community's Model wide community participation and multi-sectoral involvement. These three teams were integral to the project success as they would produce the best results in the most efficient manner.

During the meetings consensus was reached using a consensus model. A consensus during this project means that people are not simply for or against a decision, but have the option to situate themselves on a scale that lets them express their individual opinion more clearly.

This model is usually used with a round table, so that everyone in the meeting is given the opportunity to state where they are according to the following six levels:

1. Fully Support
2. Support with reservations
3. Acceptable
4. Will not block it, can live with it
5. Need more information or more discussion
6. No; cannot accept it

If everyone is at level number 4 or above, a consensus has been reached.

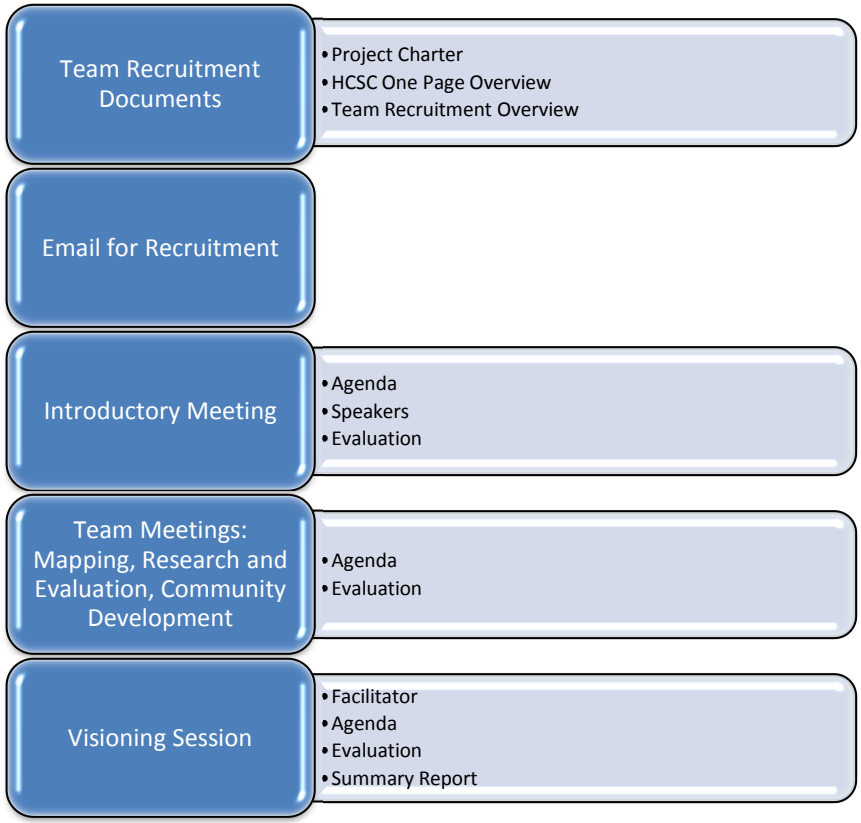
If someone is at number 2, 3 or 4, they have the option of explaining their reservations. These can be addressed in the meeting, if the group wishes to do so. This is not absolutely necessary for achieving consensus if everyone is already at number 4 or higher, but it usually improves the recommendations or suggestions being discussed.

If someone is at number 5, they have the obligation to explain what information or discussion they require from the group. If someone is at number 6, it is important for them to try to offer a solution that can accommodate their needs and the needs of the rest of the group.

In addressing someone's reservation, it is important to:

a) Ask everyone for possible solutions (the person expressing the concern and the rest of the group both have a responsibility to find solutions), and
b) Ask people to suggest improvements or alternatives that meet the objectives of the entire group.

Team Recruitment and Discussion



Team recruitment was facilitated by the HCSC member organizations. Team recruitment documents were created by the Project Coordinator, City of Mississauga City Advisor and Get Active Mississauga Coordinator. The team recruitment documents include the Project Charter (Appendix A), HCSC One Page Overview (Appendix B), and Team Recruitment Overview (Appendix C). The documents took approximately 3 months to create and refine. These documents were selected as part of the team recruitment documents as they indicated the project purpose, goals, member involvement, and time commitments, as well as an overview of the HCSC. The team recruitment documents provide an overview of team member expectations and responsibilities for the project duration.

Once all the documents were prepared, an email (Appendix D) was sent out for recruitment of project team members to the representatives of the HCSC. The members of the HCSC then forwarded the documents on to the team members selected.

An introductory meeting was held. The meeting was approximately 2.5 hours in duration. The agenda (Appendix E) included an introduction of the HCSC Chair, understanding the Healthy Community Model a review on walking, cycling, newcomer and injury prevention facts, project charter review, short and long-term goals, and a discussion on measuring walking and cycling. Speakers included the HCSC Chair, an employee of the Ontario Healthy Communities Coalition (to review the Healthy Communities Model), and the Get Active Mississauga Coordinator, who facilitated the discussion on short and long-term goals around walking and cycling in the Cooksville neighbourhood. The rest of the

meeting was led by the Project Coordinator. Finally, the group received a quick paper evaluation (Appendix F) to evaluate the introductory meeting. At the end of the introductory meeting, meeting dates for individual team meetings were selected.

Individual Team Meetings were held for each team: Mapping, Research and Evaluation, and Community Development. Each team would meet monthly to bi-monthly to discuss mapping, indicator development and community survey development. At each meeting an agenda would be created as well as either a verbal or paper evaluation of the meeting.

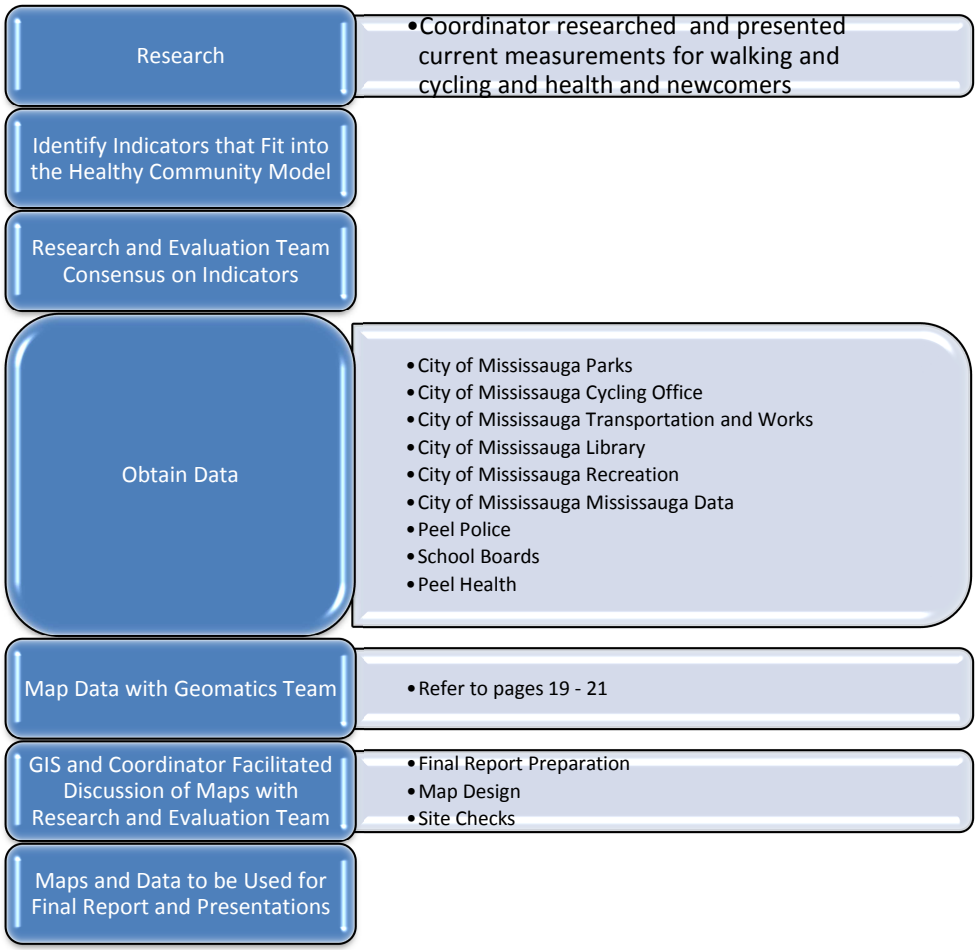
To ensure all team members understood the direction of the project a visioning session was held. The duration of the visioning session was 4 hours. Lunch and snacks were provided to attendees. A facilitator ran the session to ensure that impartiality of the vision was achieved. Various stakeholders participated in a facilitated session to craft a vision and agree upon indicators. The 4 hour session was devised into 2 main sections as outlined on the agenda:

1. Craft a vision statement – the group's vision for healthy walking and cycling in Cooksvilles
2. Agree on indicators – determine the state of walking and cycling for Cooksville now and transferable into the future.

An evaluation was provided to the participants at the end of the session. Following the session a summary report (Appendix G) was created and given to all participants.

Appendices in this document are provided to be used as templates for future spatial analyses of neighbourhoods.

Research and Mapping



Research was conducted mostly by the coordinator to identify current measurements for walking, cycling, health, newcomers and injury prevention; Journals, websites and web-updates via email were reviewed and then presented to the working teams. Workshops and conferences were also attended to gather the most current information on the topics listed. This research effort is ongoing throughout the duration of the project.

Indicators from the research were then identified that fit into the Healthy Community Model. In a healthy community social, economic, and environmental interests are aligned, and the decision-making processes needs to take all these factors into account. It must be noted that the decision-making process is not a matter of balancing them or trading off one for another. The ideal solutions should be the best socially, economically and environmentally. Following the Healthy Community Model a community can be sustainable, livable, equitable and prosperous.

In developing healthier communities, there are 4 elements that are particularly important to the process or approach that is used:

1. Wide community participation
2. Multi-sectoral involvement
3. Local government commitment
4. The creation of healthy public policy[9].

As identified earlier our three teams have achieved numbers one and two. To fully complete the model local government or decision-makers, would demonstrate support and policies would be identified (which was outside the boundaries and timing of this project)

Next, the Research and Evaluation team met to provide a consensus on the indicators selected during the visioning session. Once the indicators were discussed and agreed upon they were organized into the Healthy Community Model. The next step was to identify data related to the indicators that needed be obtained from available additional sources. A few items must be covered in this step in order to prepare to obtain the data. The group must identify a contact person or the Project Coordinator must identify a contact person to obtain the data from various organizations that are part of the project working teams. A draft email or phone conversation must be prepared that details the project statement and why the project is collecting information. Once completed a call or email may be made to obtain the data. Timelines for obtaining the data was also an important part of the process. The data for this project was obtained from the following organizations: City of Mississauga Mississauga Data, Peel Regional Police, School Boards, Peel Health, City of Mississauga Parks, City of Mississauga Cycling Office, City of Mississauga Transportation and Works, City of Mississauga Library, and City of Mississauga Recreation. The duration of this process was approximately one year. As soon as the data was retrieved via email it was stored in an electronic file to be accessed as needed.

The next step was to identify data that could be mapped based on the availability of data at the micro level for the geographic area of Cooksville. Some data received could not be mapped as it was at the macro level for Cooksville, meaning it could not be broken down into the neighbourhood level in Cooksville, also referred to as MPZ areas according to the census or by postal code level in Cooksville; for example, the health data was only available for Cooksville at-large and was included in the final report in chart format

instead of a map. Data that can be mapped either by postal code or MPZ area was mapped by the City of Mississauga Geomatics team.

As outlined in the Cooksville Mapping Flowchart and table in the subsequent pages, information for mapping came from a few sources including City of Mississauga:

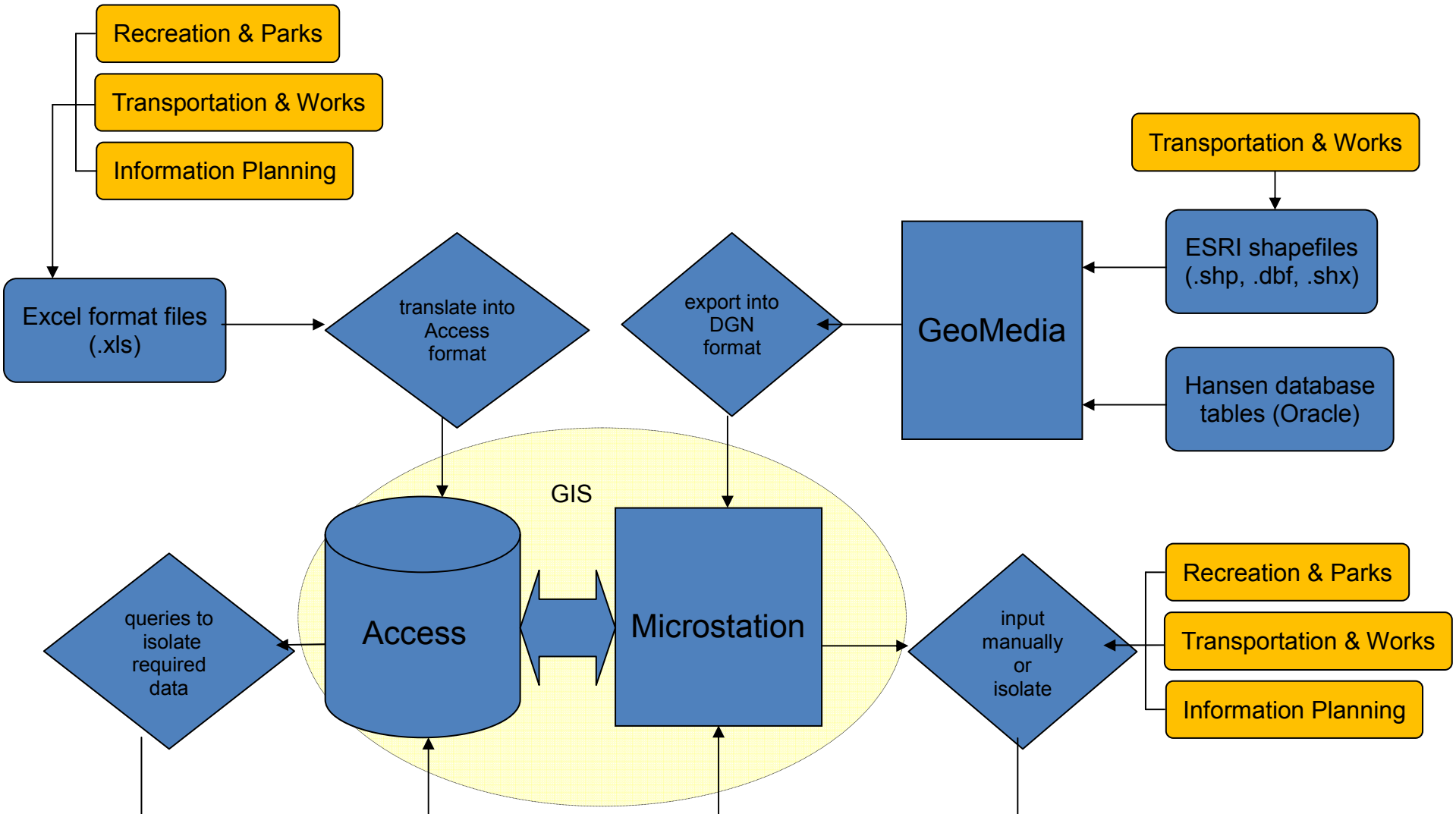
- Recreation and Parks,
- Transportation and Works and
- Information Planning.

There are a few file formats in which the information was received:

- Excel
- ESRI Shapefiles
- Hansen Database Tables

All of the files were then converted or translated by Geomedia, Access or Microstation. The final outputs of this process were maps that are presented in the results section of this paper.

Cooksville Mapping Flowchart



	Format of data to begin with	Customized process to translate data into workable format	Customized process to extract desired database records	Further processing to translate data into thematic DGN format	Final thematic product	Final Map product
1)	Digital data maintained by Geomatics as part of mapping responsibilities - input from various City departments	no further processing required - turn on desired level	no further processing required	no further processing required	Thematic DGN file representing layer of interest	**DGN thematic map layers combined (referenced) in various combinations to represent desired MAP output**
2)	Digital data maintained by Geomatics as part of mapping responsibilities - input from various City departments	further work to isolate the graphic information that represents the desired theme or layer (ie. sidewalk islands)	no further processing required	no further processing required	Thematic DGN file representing layer of interest	
3)	Excel spreadsheet (data extracted from Stats Can dbase / Rec & Parks registration dbase/ TTS Transportation Tomorrow Survey dbase)	Microstation vba program to translate .xls file into Access database table	customized queries in Access to produce database tables to work with desired data	Thematic file created in Microstation using Access data (DGN format)	Thematic DGN file representing layer of interest	
4)	ESRI shapefile	create connection to ESRI shapefile in Geomedia	customized queries in Geomedia to produce graphic maps showing desired theme.	export Geomedia thematic file into Microstation DGN format	Thematic DGN file representing layer of interest	
5)	Hansen database information maintained by various city staff (EIMSPRD Oracle database)	create connection to EIMSPRD database in Geomedia	customized queries in Geomedia to produce graphic maps showing desired theme.	export Geomedia thematic file into Microstation DGN format	Thematic DGN file representing layer of interest	

6)	No digital data available Word document created by PMR* with address locations added for thematic layer of interest	manually add points/ locations into Microstation DGN file	no further processing required	no further processing required	Thematic DGN file representing layer of interest
7)	No digital data available but exists on website somewhere (ie. Peel Police stats)	manually add points/ locations into Microstation DGN file	no further processing required	no further processing required	Thematic DGN file representing layer of interest

*PMR – Person Most Responsible

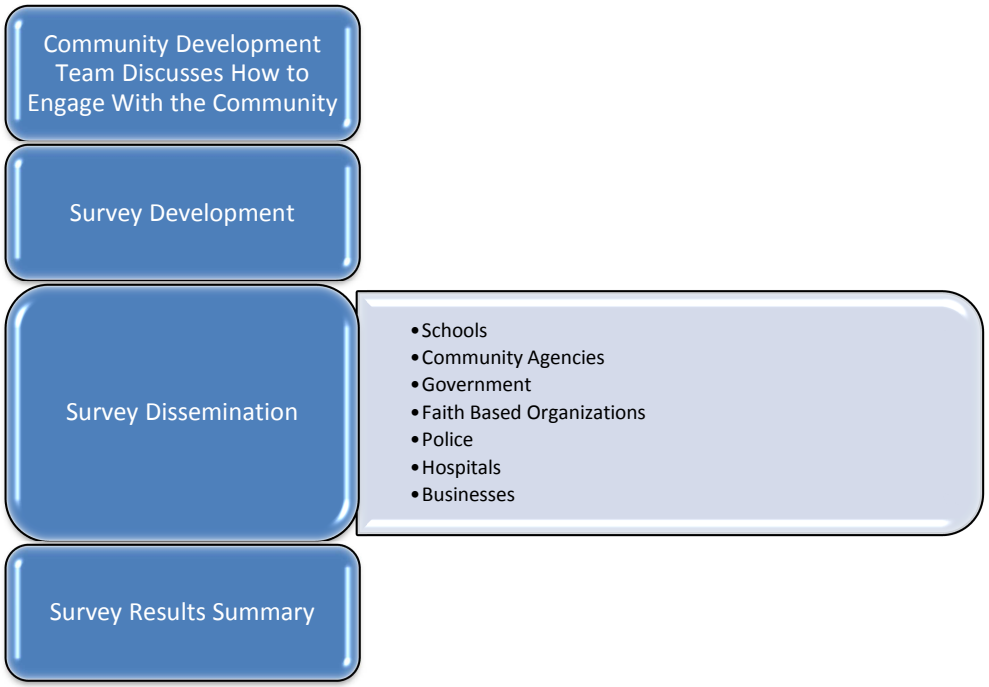
Subsequently, facilitated sessions were held with the Research and Evaluation Team to review the maps generated to date. The facilitated sessions were led by Karen Spencer- City Advisor, Brenda Callaghan – Get Active Mississauga, and Lisa Limarzi – HCSC Project Coordinator. The leaders of the facilitated sessions reviewed and analyzed the data before the meetings. The meetings were fairly simple; the maps were displayed via an overhead projector and a discussion then ensued. There were also 5 pieces of chart paper around the room with the following headings for further discussion or follow-up:

1. Final Report, But Not Mapped
2. Site Visits
3. Map Discussion
4. Next Meeting Connections
5. Mapping Questions.

A total of 4 facilitated discussions were held over a two month period. Each facilitated session was 2 hours in length. Finally maps and data were compiled for the final report.

Community Development

The Community Development Team was set-up to identify and contact relevant organizations in the Cooksville neighbourhood utilizing the community asset mapping process and to create a community survey.



The first step the community development team took was to discuss how to engage with the community. A discussion took place during the first meeting to understand the options available.

The questions discussed were:

1. What organizations do you know that have a connection to walking and cycling or newcomers or injury prevention in the Cooksville area?
2. How would we like to engage these organizations and individuals within your own organization with regards to this project?
3. How can we access information/data they may collect or know of?

It was later decided that an internet survey should be developed to further understand Cooksville and what organizations are doing in terms of walking and cycling. The objective of the survey was to identify gaps and gather information on the perceived importance of walking and cycling within the organizations.

Some attributes of the survey included:

- Key Survey, and electronic survey system was used
- Survey had 18 open- and closed- ended questions
- Purpose of the survey was to learn more about walking and cycling at the neighbourhood level in Mississauga
- To create an inventory using the following headings: physical supports, programs, education and awareness, policy and advocacy in the community related to walking and cycling

The survey was disseminated to schools, community agencies, government, faith based organizations, police, hospitals, and businesses. Respondents had one month in which they were able to complete the survey. Once the survey was completed a summary was created by the community development team (Survey Summary Results found in the next section).

Results

The results are broken down into two sections:

- The results of the Community Survey
- The maps of Cooksville

Community Survey Questions

A walking and cycling survey was disseminated throughout the Region of Peel vicinity in March 2012. A total of 33 organizational responses were received. There were a total of 18 questions asked. The questions were:

1. Which organization or business do you represent?
2. What is your first name?
3. What is your job title?
4. What is work address including postal code?
5. What is your contact phone number?
6. What is your contact email address?
7. Do you perceive WALKING as valued in your organization or business?
8. Do you perceive CYCLING as valued in your organization
9. Does your organization or business promote walking and/or cycling safety for injury prevention in the following areas? Please check all that apply.
    a. Employees
    b. Individuals/Groups Served
    c. General Public
    d. Not Applicable
    e. I Don't Know
10. How does your organization or business promote walking and/or cycling safety for injury prevention?

11. In which ways does your organization or business support walking and/or cycling for EMPLOYEES? Check all that apply.
    a. Physical Supports
    b. Programs
    c. Awareness
    d. Policy
    e. Advocacy
    f. Sale of Walking and Cycling Goods and Services
    g. None of the Above
    h. I Don't Know
    i. Other
12. As Cooksville has been chosen as our pilot neighbourhood, does your organization or business provide any of the above for employees at a site in Cooksville, Mississauga? (Cooksville boundaries are St.Lawrence and Hudson Railway – Go Train Tracks, Cawthra Road, QEW, and Mavis Road).
13. Please list all site addresses in Cooksville including postal codes.
14. In which ways does your organization or business support walking and/or cycling for the INDIVIDUALS/GROUPS SERVED?
    a. Physical Supports
    b. Programs
    c. Awareness
    d. Policy
    e. Advocacy
    f. Sale of Walking and Cycling Goods and Services
    g. None of the Above
    h. I Don't Know
    i. Other

15. As Cooksville has been chosen as our pilot neighbourhood, does your organization or business provide any of the above for individuals/groups served at a site in Cooksville, Mississauga? (Cooksville boundaries are St.Lawrence and Hudson Railway – Go Train Tracks, Cawthra Road, QEW, and Mavis Road).
16. Please list all site addresses in Cooksville including postal codes.
17. Please share any thoughts you have on walking and cycling in the Cooksville area in the space below.
18. Is there anyone else in your organization or business working on walking and/or cycling projects?

Community Survey Results Summary

The following are some key points derived from the survey questions:

- Approximately 80% (27/33) of respondents believe that walking is valued in their organizations
- Approximately 54% (18/33) of respondents believe that cycling is valued in their organizations
- There is more promotion for safety of walking than for cyclists
    - This could be because there are more walkers than cyclists
- Only one agency had a cycling program for employees
- Awareness and policies for walking and cycling seem to be low for employees
- In general walking and cycling are not as supported for employees as many boxes were left unchecked
- Walking and cycling not as supported for individuals/groups in the general community as compared to employees in organizations and businesses (such as physical supports, programs etc.)
- Employees of organizations are better served than the public for programming
- Individuals/groups served in the community tend have more advocacy in regards to walking and cycling
- Most respondents said that they did not know if others in their organization were working on walking/cycling or said that other people in their organizations do not work in the area of walking and cycling
    - May affect how organizations support walking and cycling
- 30% (10 /33) respondents said they were working in the area of walking
- 27% (9 /33) respondents said they were working in the area of cycling
- 9% (3/33) respondents are located in Cooksville

Areas to improve the survey in the future

- Ask respondents to list people in their organization who work on walking and cycling so that a comprehensive contact list can be developed.

- Provision of more examples of walking and cycling in the future as the answers seem to be skewed for questions # 11 and #14 based on the examples provided in the questions.
- When asking if any of their work is being conducted in this geographical location ask why or why not
    - Also ask for details of work they would or do provide in the geographical location.

Discussion and Maps

The maps are in the following pages with the results written directly underneath each map. A discussion piece is written directly before each section of maps detailing some research in the field and if any trends were found. The first two maps are base maps of the Cooksville area. They depict a conceptual picture of what is in Cooksville now and what is planned in the future. The base maps were an integral primary component to the spatial analysis and a great starting point for discussion.

There are a number of studies that investigate walking and cycling. Each of the studies focuses on a different aspect of walking and cycling coming from various disciplines such as: urban planning, transportation planning, and sport. In order to properly integrate walking and cycling policies and infrastructure it is important to note that multi-disciplinary approaches are being reviewed. For the purposes of this discussion the holistic approach of the Healthy Community Model will be broken down and discussed through health, walking and cycling. Areas of research are missing for some of the indicators our working team has selected. This indicates that more research is needed on walking and cycling for organizations, government, and private industry in order to make wise decisions regarding all aspects of walking and cycling.

The indicators selected according to the Healthy Community Model are in the following table. The table also links information from pages 19-21 on the format of data.

Pg. #	Map Title	Format of data (refer to format details table)	Contact for source of data (internal vs. external)	Contact for source of data (owner)	Format of data delivered	Map creation software
	QUALITY BUILT ENVIRONMENT					
35	Existing landuse and trails	1 & 2	City of Mississauga	Planning	DGN format	Microstation
36	Proposed Landuse and trails	1 & 2	City of Mississauga	Planning	DGN format	Microstation
37	Sidewalks	5	City of Mississauga	T&W	Hansen database	Geomedia
38	Stop lights, stop signs and crosswalks	5 & 6 (cross walks)	City of Mississauga	T&W	Hansen database	Geomedia
39	Sidewalk islands	2 (1z - planimet)	City of Mississauga	T&W	DGN format	Microstation
40	Existing and Proposed Cycling routes	2	City of Mississauga	Com Serv	maintained by Geomatics	Microstation
41	Transit Routes and Stops	4 & 5	City of Mississauga	T&W	Hansen database	Geomedia
42	Street Lighting	1 (2z - utilities)	City of Mississauga	T&W	DGN format	Microstation
	CULTURE					
45	Labour Force Transportation – Walked	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
46	Labour Force Transportation – Bicycle	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
47	Labour Force Transportation – Public Transit	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
48	Labour Force Transportation – Car Truck Van as Driver	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
49	Labour Force Transportation – Car Truck Van as Passenger	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
50	Visible Minority – Arab	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
51	Visible Minority – Black	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
52	Visible Minority – Chinese	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
53	Visible Minority – Filipino	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
54	Visible Minority – South Asian	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
55	Places of Birth Recent Immigrants – Africa	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
56	Places of Birth Recent Immigrants – Asia & Middle East	3	City of Mississauga	Planning	Excel - MPZ format	Microstation

57	Places of Birth Recent Immigrants – Caribbean & Bermuda	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
58	Places of Birth Recent Immigrants – Central America	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
59	Places of Birth Recent Immigrants – Europe	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
60	Places of Birth Recent Immigrants – South America	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
61	Places of Birth Recent Immigrants – USA	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
62	Home Language – Arabic	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
63	Home Language – English	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
64	Home Language – Polish	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
65	Home Language – Portuguese	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
66	Home Language – Tagalog	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
67	Home Language – Urdu	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
68	Home Language – Number of Languages per MPZ	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
69	Age Groups - Female 0-4 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
70	Age Groups - Female 5–14 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
71	Age Groups - Female 15-19 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
72	Age Groups - Female 20-29 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
73	Age Groups - Female 30-49 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
74	Age Groups - Female 50-54 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
75	Age Groups - Female 55-79 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
76	Age Groups - Female 80 yrs and over	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
77	Age Groups - Male 0-4 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
78	Age Groups - Male 5–14 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
79	Age Groups - Male 15-19 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
80	Age Groups - Male 20-29 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
81	Age Groups - Male 30-49 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
82	Age Groups - Male 50-54 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
83	Age Groups - Male 55-79 yrs	3	City of Mississauga	Planning	Excel - MPZ format	Microstation

84	Age Groups - Male 80 yrs and over	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
	CONVIVIAL COMMUNITY					
86	Fall Participants in City of Miss Recreational Pgms by Postal Code	3	City of Mississauga	Rec & Parks	Excel - Postal Code format	Microstation
87	March Break Participants in City of Miss Recreational Pgms by Postal Code	3	City of Mississauga	Rec & Parks	Excel - Postal Code format	Microstation
88	Spring Participants in City of Miss Recreational Pgms by Postal Code	3	City of Mississauga	Rec & Parks	Excel - Postal Code format	Microstation
89	Summer Participants in City of Miss Recreational Pgms by Postal Code	3	City of Mississauga	Rec & Parks	Excel - Postal Code format	Microstation
90	Winter Participants in City of Miss Recreational Pgms by Postal Code	3	City of Mississauga	Rec & Parks	Excel - Postal Code format	Microstation
91	Faith Centre & Art Piece Locations	6	City of Mississauga	Planning	Word document	Microstation
92	Crime – Auto Theft Occurrences March – April 2012	7	external	Peel Police website	NA	Microstation
93	Crime – Break & Enter Occurrences March – April 2012	7	external	Peel Police website	NA	Microstation
94	Crime – Mischief Occurrences March – April 2012	7	external	Peel Police website	NA	Microstation
95	Crime – Robbery Occurrences March – April 2012	7	external	Peel Police website	NA	Microstation
96	Crime – Theft from Vehicle Occurrences March – April 2012	7	external	Peel Police website	NA	Microstation
	NATURAL ENVIRONMENT					
98	Trees and Shaded Areas	1 (7z - vegetation)	City of Mississauga	T&W	Excel - MPZ format	Microstation
	PROSPEROUS ECONOMY					
100	Average Income	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
101	Median After Tax Household Income	3	City of Mississauga	Planning	Excel - MPZ format	Microstation
102	Median Income	3	City of Mississauga	Planning	Excel - MPZ format	Microstation

Built Environment

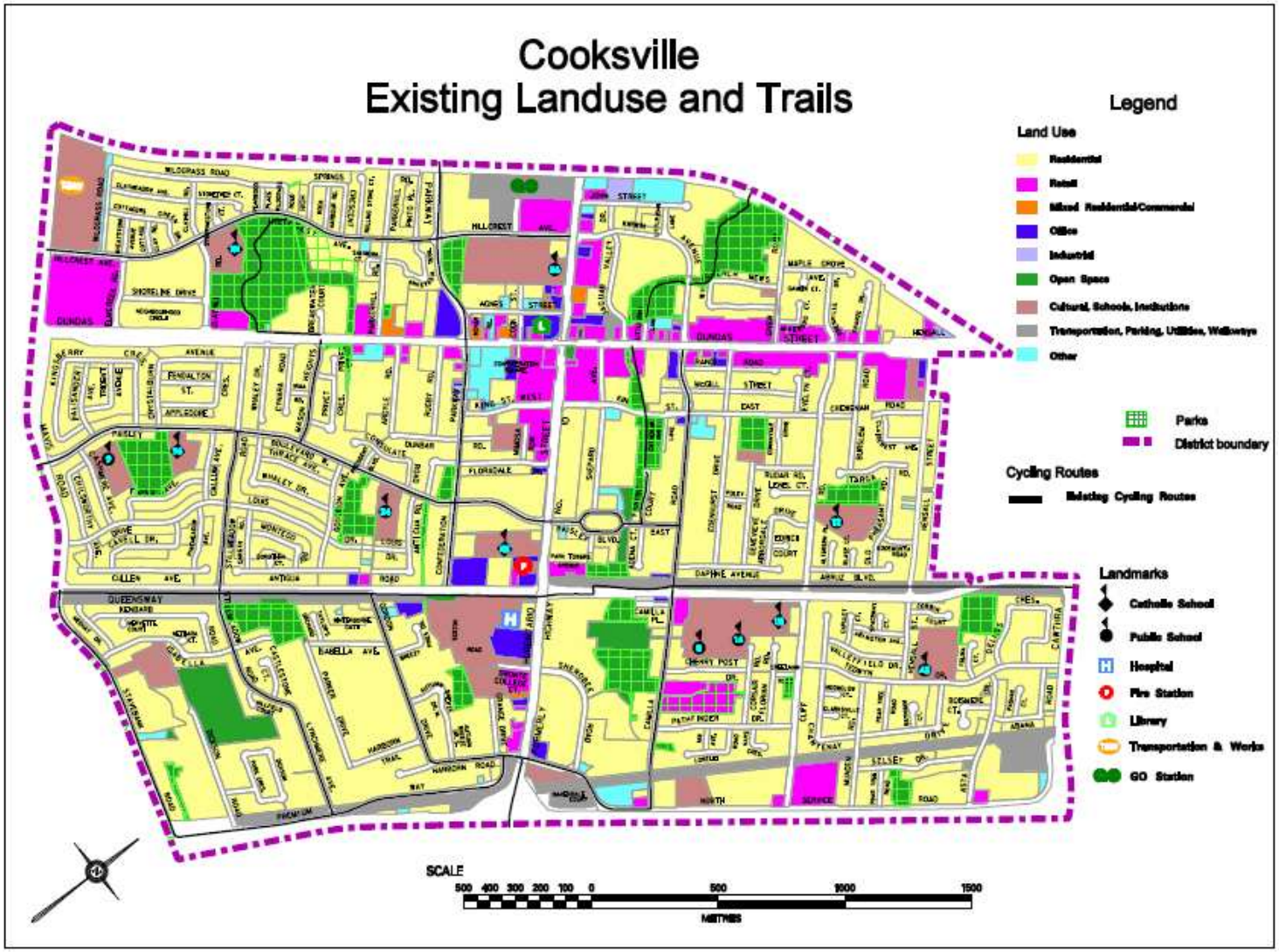
To begin, the built environment "comprises of urban design, land use, and the transportation system, and encompasses patterns of human activity within the physical environment" [11]. Important aspects of the built environment reviewed in this study include: land use mix, presence of sidewalks, walking for transport, cycling for transport, public transportation for transport, islands, and street lighting. As noted Cooksville has a fairly conservative land use mix which may hinder walking and cycling. It is known that "people living in better connected, more compact, mixed use neighbourhoods are more likely to be active enough to achieve health benefits…" [6]. Further, perceived access to sidewalks and shops tend to encourage residents to walk locally [8]. Cooksville has a great presence of sidewalks on either one side of the street or both. Two small pockets of Cooksville remain without sidewalks, but do have other significant features related to walking and cycling such as tree coverage and trails and paths. Sidewalks are an important factor to a neighbourhood; "Level sidewalks, sidewalks of good quality, accessible sidewalks, and attractive neighbourhood aesthetics has been linked with higher levels of walking." [22].

Walking and cycling are integral components of public transportation systems; "In most countries, public transport trips usually start and end with walks to and from bus or rail stops"[18]. In Cooksville, walking and cycling levels remain lower than that of the rest of Mississauga, but public transportation use is higher than the Mississauga rate. This may mean that more people are walking and cycling and it is not accounted for in the current statistics. In the US, 90% of all public transport trips begin or end with a walk trip and this may be true for Mississauga as well [18]. Further, "Bicycling supports public transport by extending the catchment area of transit stops far beyond walking range and at much lower cost than neighbourhood feeder buses and park-and-ride facilities for cars"[18]. Overall, walking and

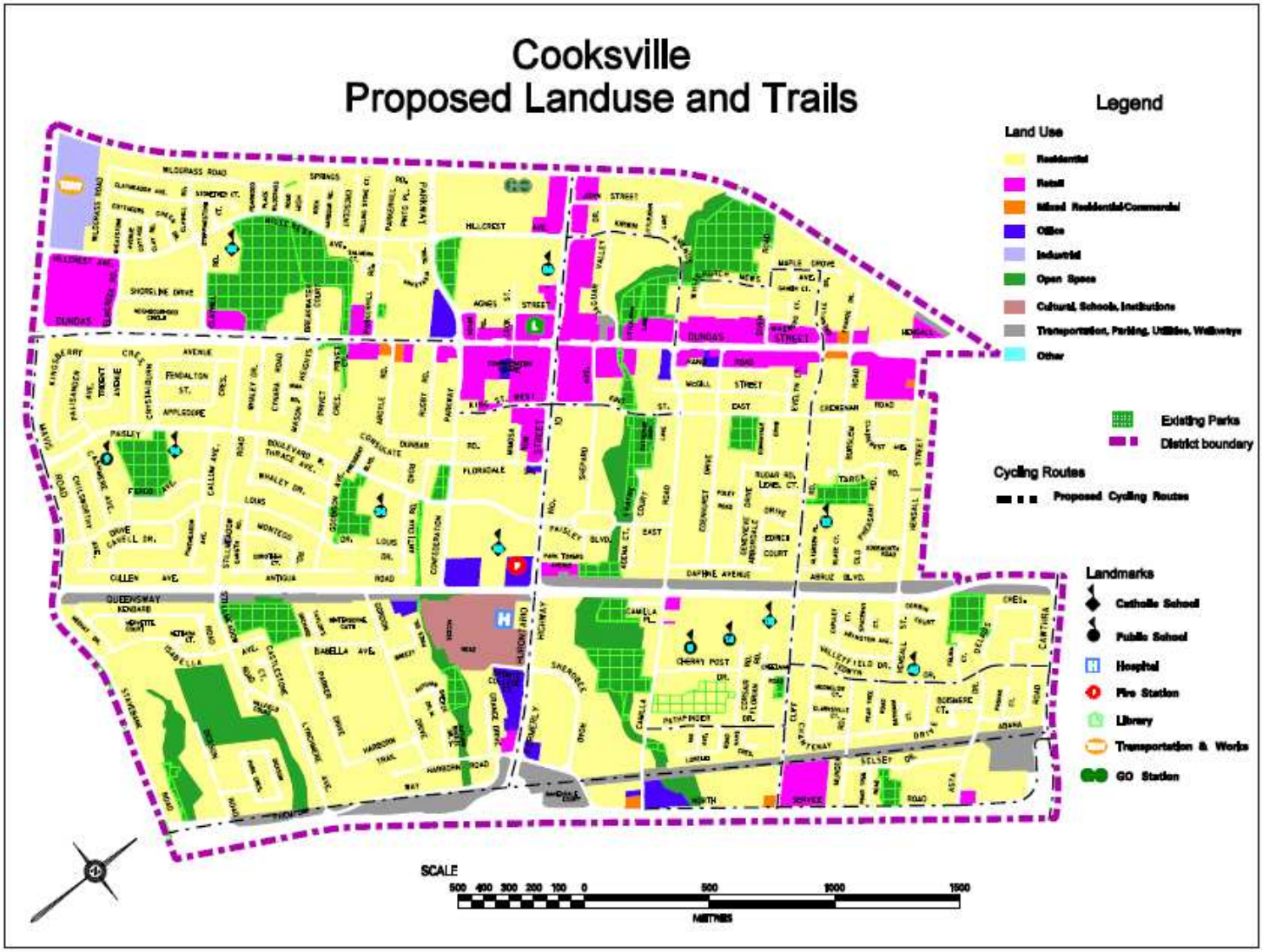
cycling are intrinsically tied to public transportation and with an increase in public transit ridership one might start to notice an increase in walking and cycling too.

Other components indicated in research as being important to walking and cycling safety are islands and street lighting. Cooksville has 91 sidewalk islands, but the width of the sidewalk islands were not determined and that may play a key role in whether people may stop safely. Cooksville has 3970 street lights that can be found on one side of the street or both in many areas. "One emphasis of Dutch, Danish, and German policy has been to improve transport infrastructure needed for walking and cycling…wide, well-lit sidewalks on both sides of every street; pedestrian refuge islands for crossing wide streets…" [18]. In one study [16], lighting is included as part of the physical environment for personal safety. More research is needed on street islands and lighting as they are related to walking and cycling and whether they increase or decrease walking and cycling.

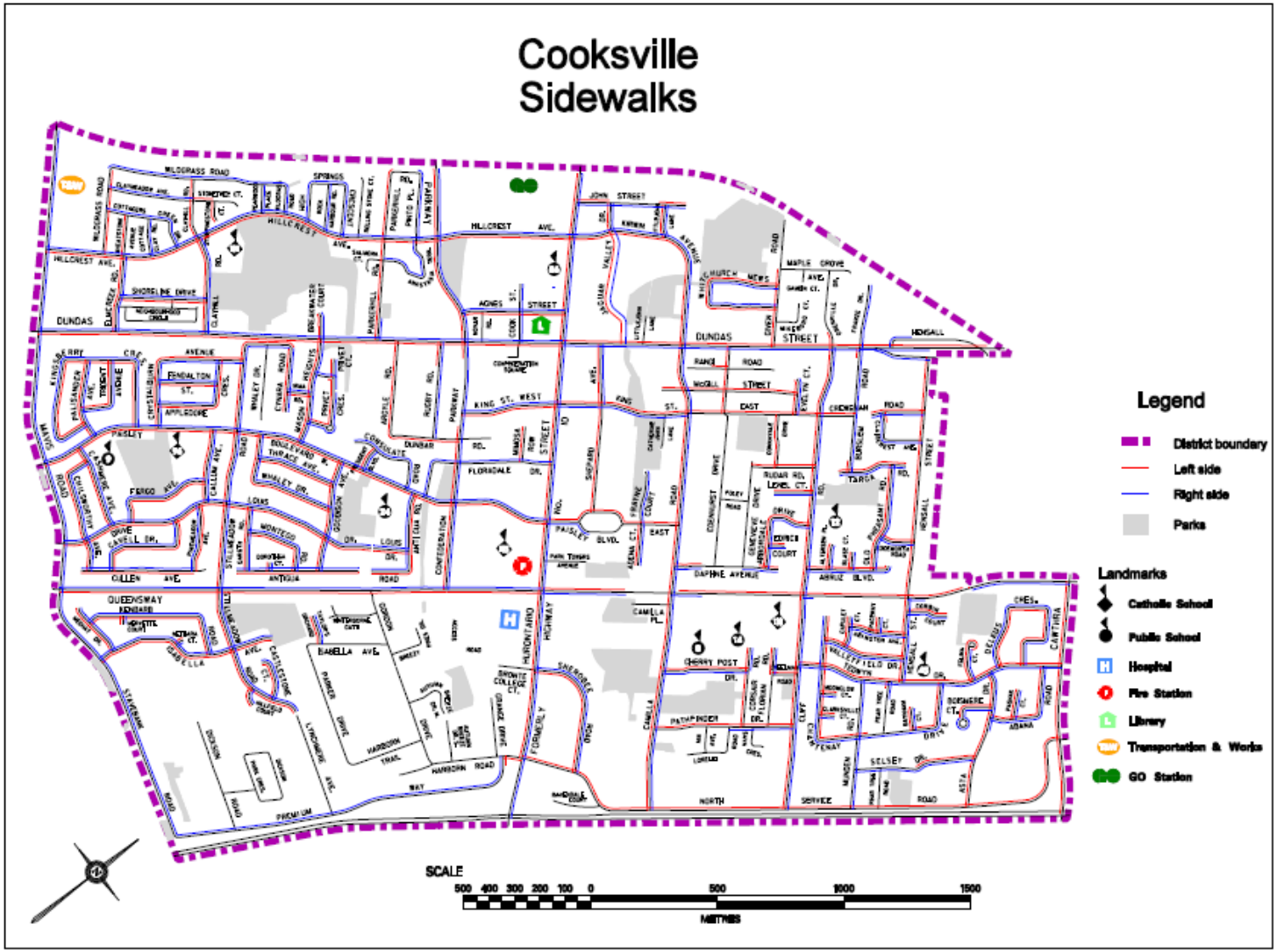
In Cooksville, as the maps display, most infrastructure is present. If it is not currently present it will be within the next 10 years as planned by the City of Mississauga. Infrastructure was one of the easiest categories to map and analyze as data was readily available through Mississauga Data and City of Mississauga Transportation and Works.



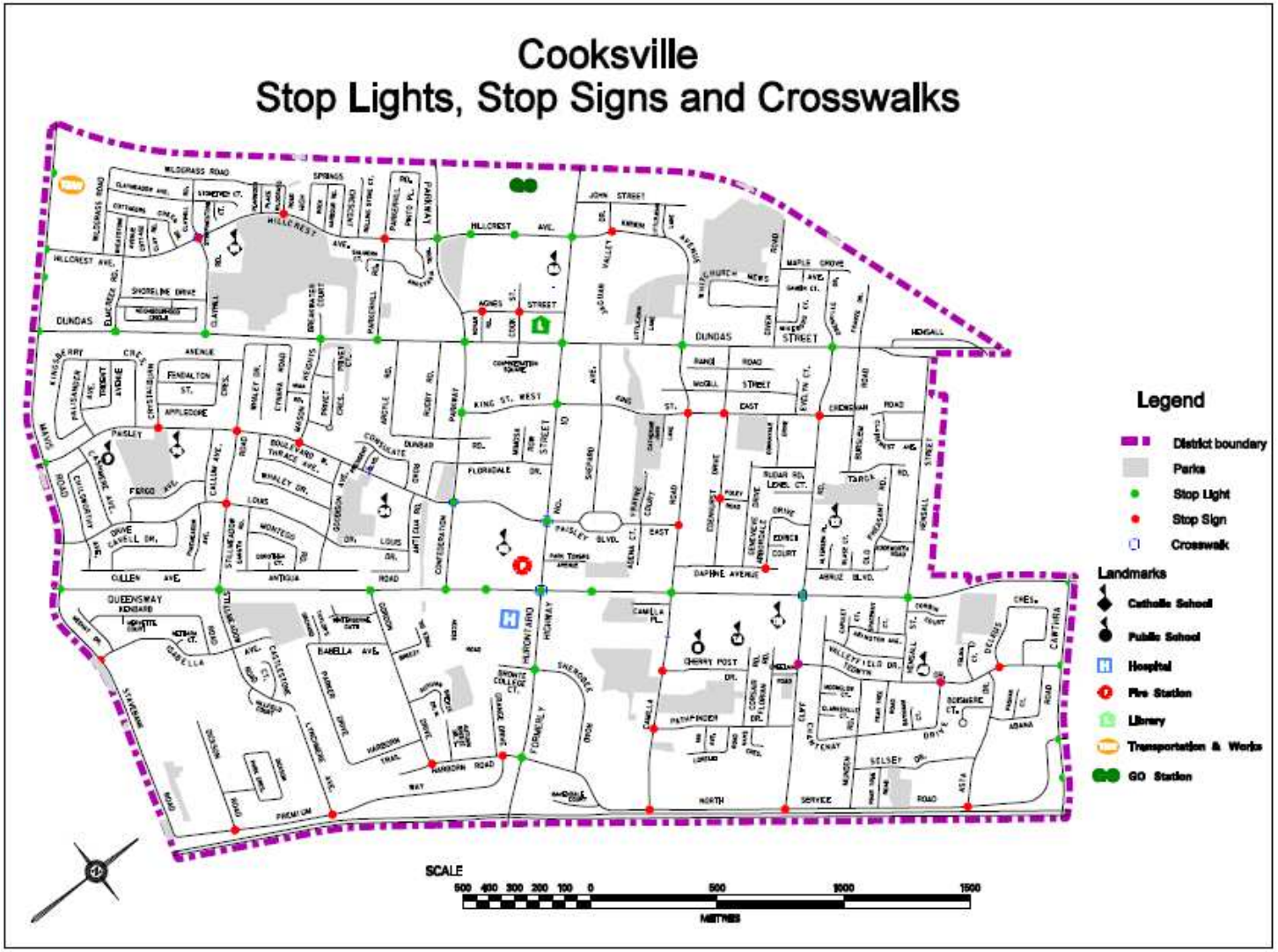
- Trails cover most of Cooksville
- Most retail/commercial is in one area in the NE corner



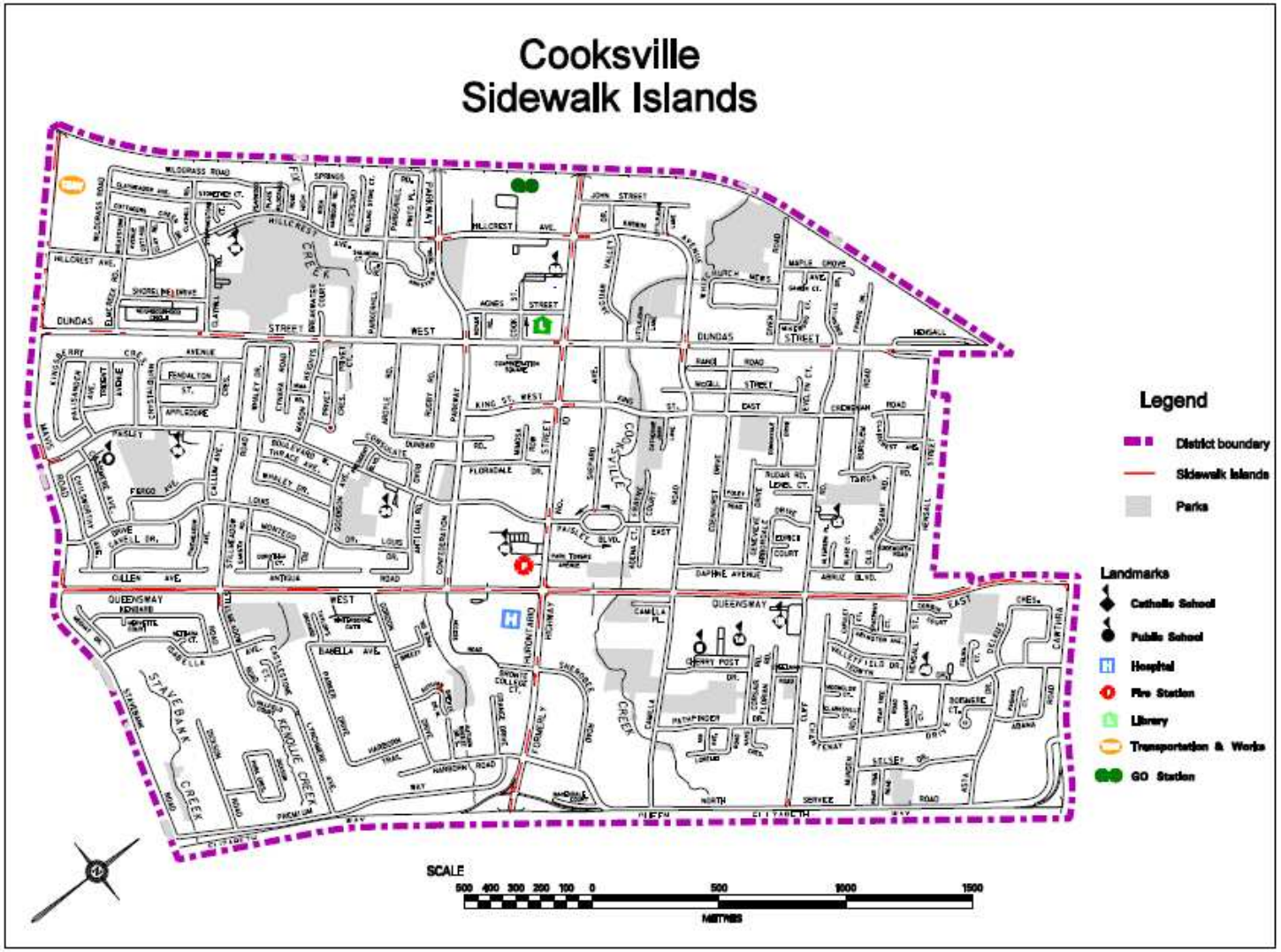
- Extensive proposed trail network
- Retail/Commercial does not expand too much

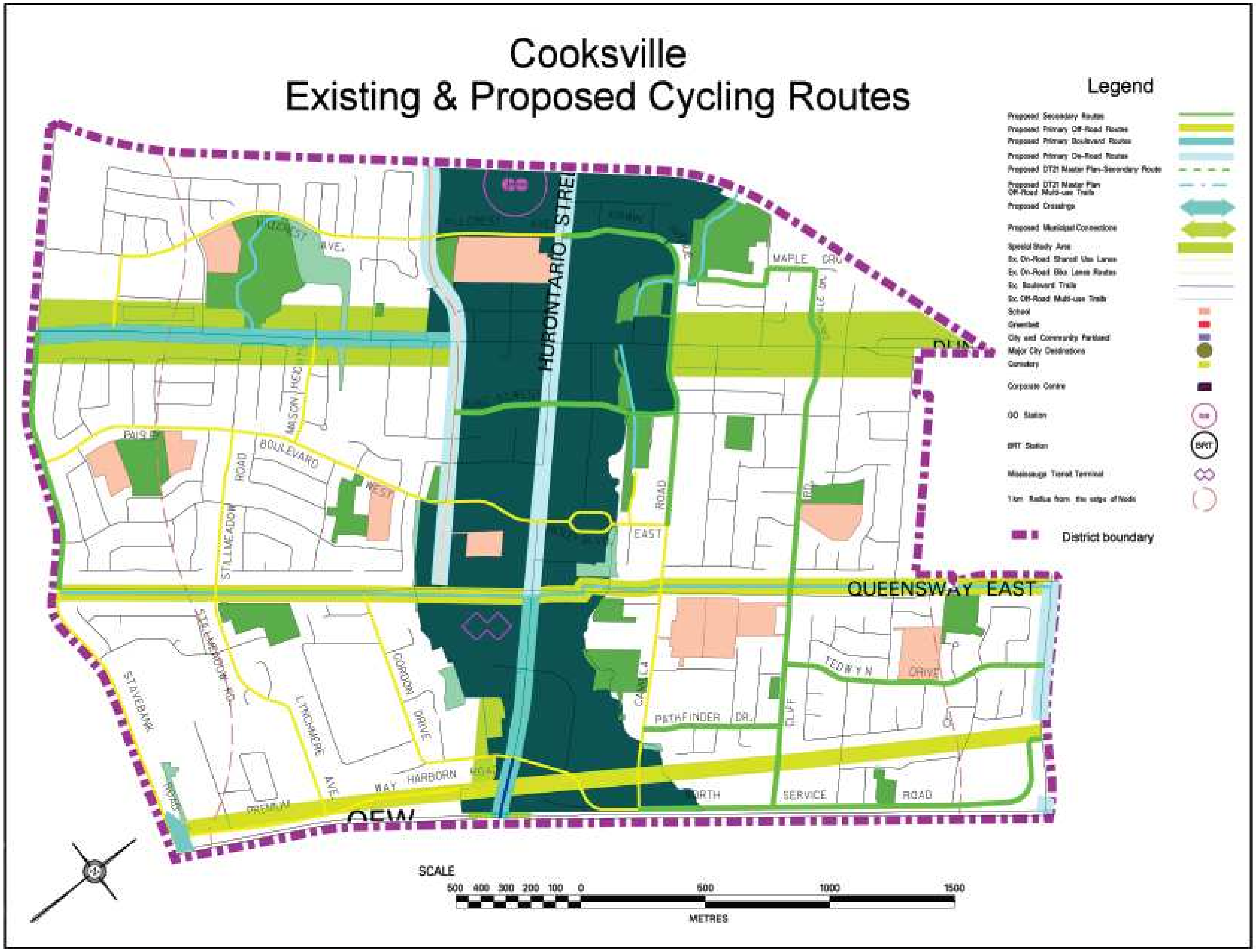


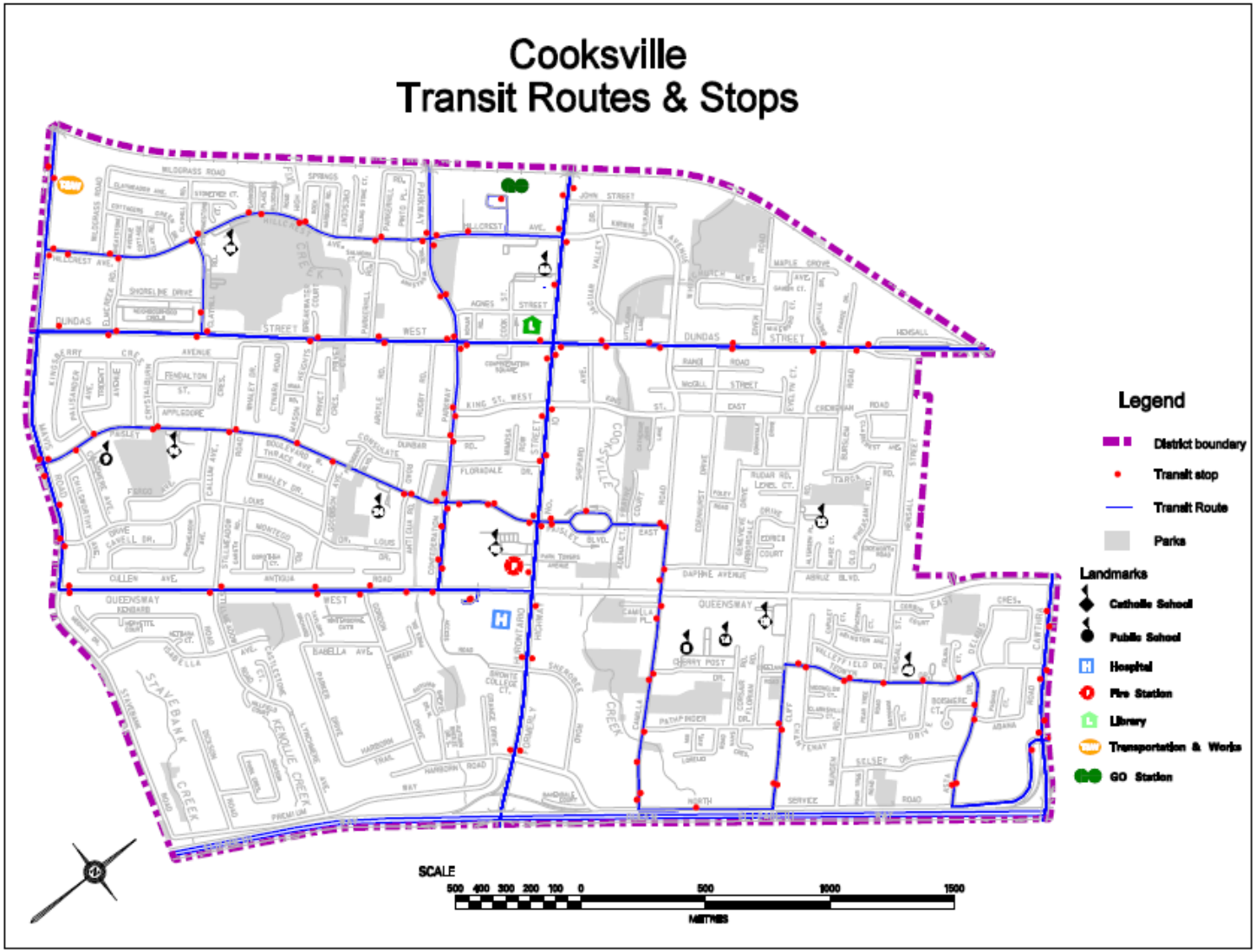
- There are sidewalks on both sides of the street throughout most of Cooksville
- SE and NW corners do not have sidewalks



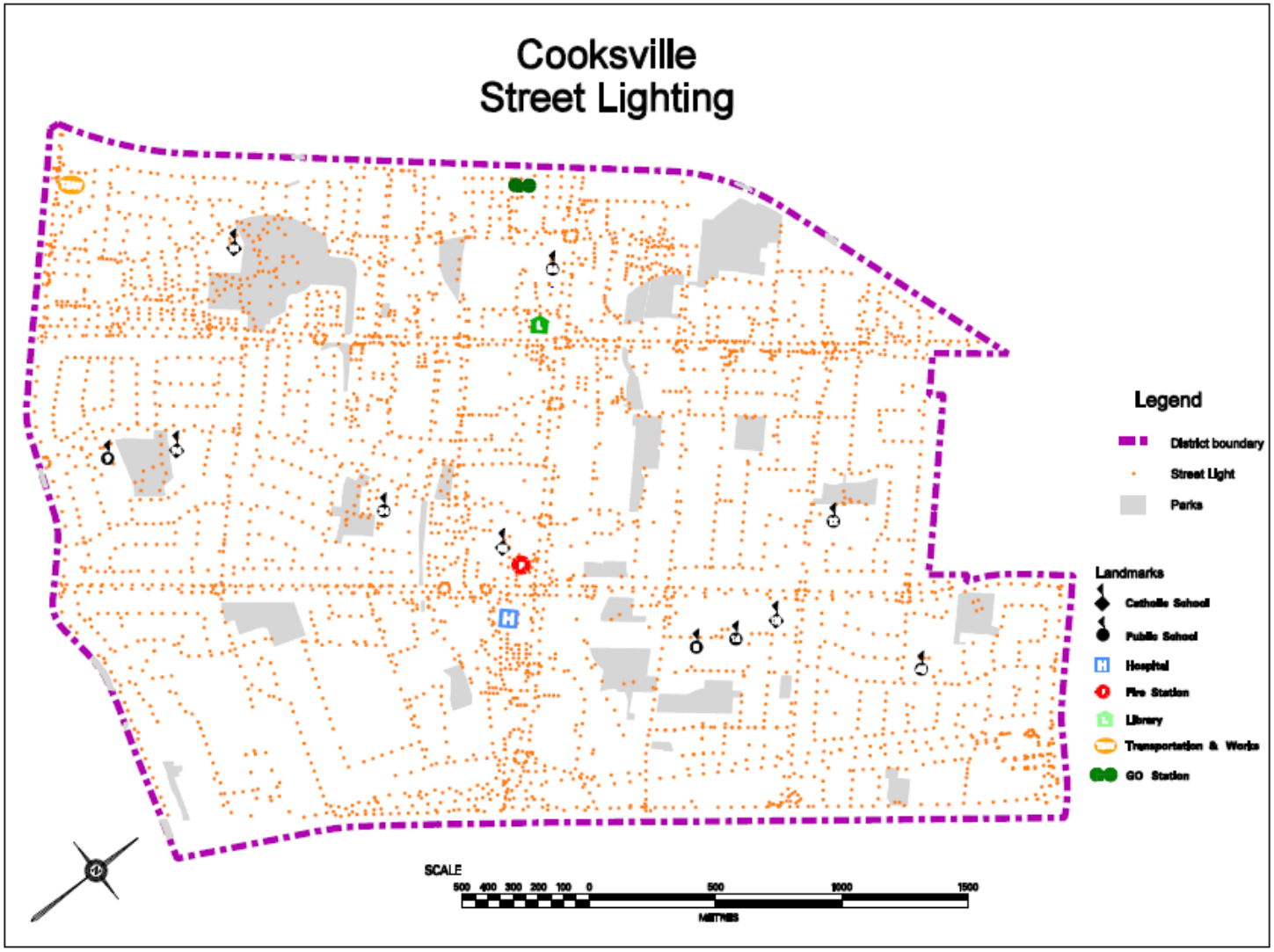
- There are a total of 26 stop signs
- There are a total of 27 stop lights mostly along major arterials
- There is a total of 4 cross walks


Cooksville
Sidewalk Islands
Legend
District boundary
Sidewalk Islands
Parks
Landmarks
Catholic School
Public School
Hospital
Fire Station
Library
Transportation & Works
GO Station
SCALE
500 400 300 200 100 0 500 1000 1500
METRES


Cooksville
Existing & Proposed Cycling Routes
Legend
Proposed Secondary Routes
Proposed Primary Off-Road Routes
Proposed Primary Boulevard Routes
Proposed Primary On-Road Routes
Proposed DT21 Master Plan-Secondary Route
Proposed DT21 Master Plan Off-Road Multi-use Trails
Proposed Crossings
Proposed Municipal Connections
Special Study Area
Ex. On-Road Shared Use Lanes
Ex. On-Road Bike Lanes Routes
Ex. Boulevard Trails
Ex. Off-Road Multi-use Trails
School
Greenbelt
City and Community Parkland
Major City Destinations
Cemetery
Corporate Centre
GO Station
BRT Station
Mississauga Transit Terminal
1km Radius from the edge of Node
District boundary
HURONTARIO STREET
QUEENSWAY EAST
QEW
MAPLE
BOULEVARD
WEST
EAST
ROAD
STILLMEADOW
STAVEBANK
LYNCHMERE AVE.
GORDON DRIVE
HARBORN ROAD
WAY
PREMIUM
CAWTHRA
PATHFINDER DR.
CLIFF
TEDWYN DRIVE
NORTH SERVICE ROAD
SCALE
500 400 300 200 100 0 500 1000 1500
METRES



- Transit is along the major corridors
- The east and south ends of Cooksville are without transit



- There is street lighting throughout Cooksville
- Street lighting is not in some park areas

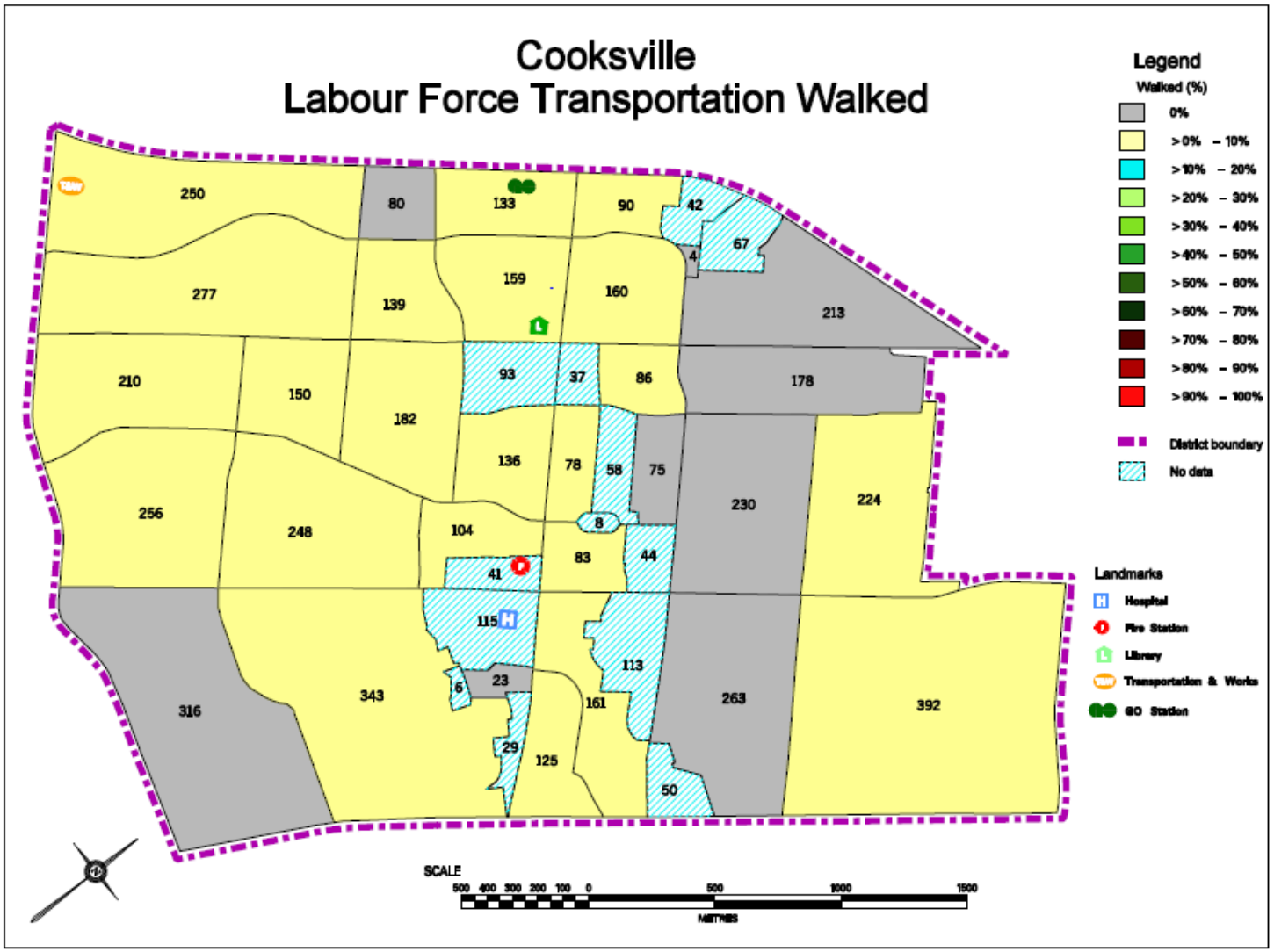
Culture

Culture is the behaviours and beliefs characteristic of a particular social, ethnic, or age group[10]. The sum total of ways of living built up by a group of human beings and transmitted from one generation to another[10]. In Mississauga, 52% of the population is foreign born[2]. Cooksville highlights the heterogeneous mix in Mississauga's population with over 30 different visible minorities and home languages; although the top 5 for both visible minority and home language were mapped trends associated with walking and cycling could not be identified. As well, there is no research that could be found on cultural links to walking and cycling. This is an area of research that needs to further developed.

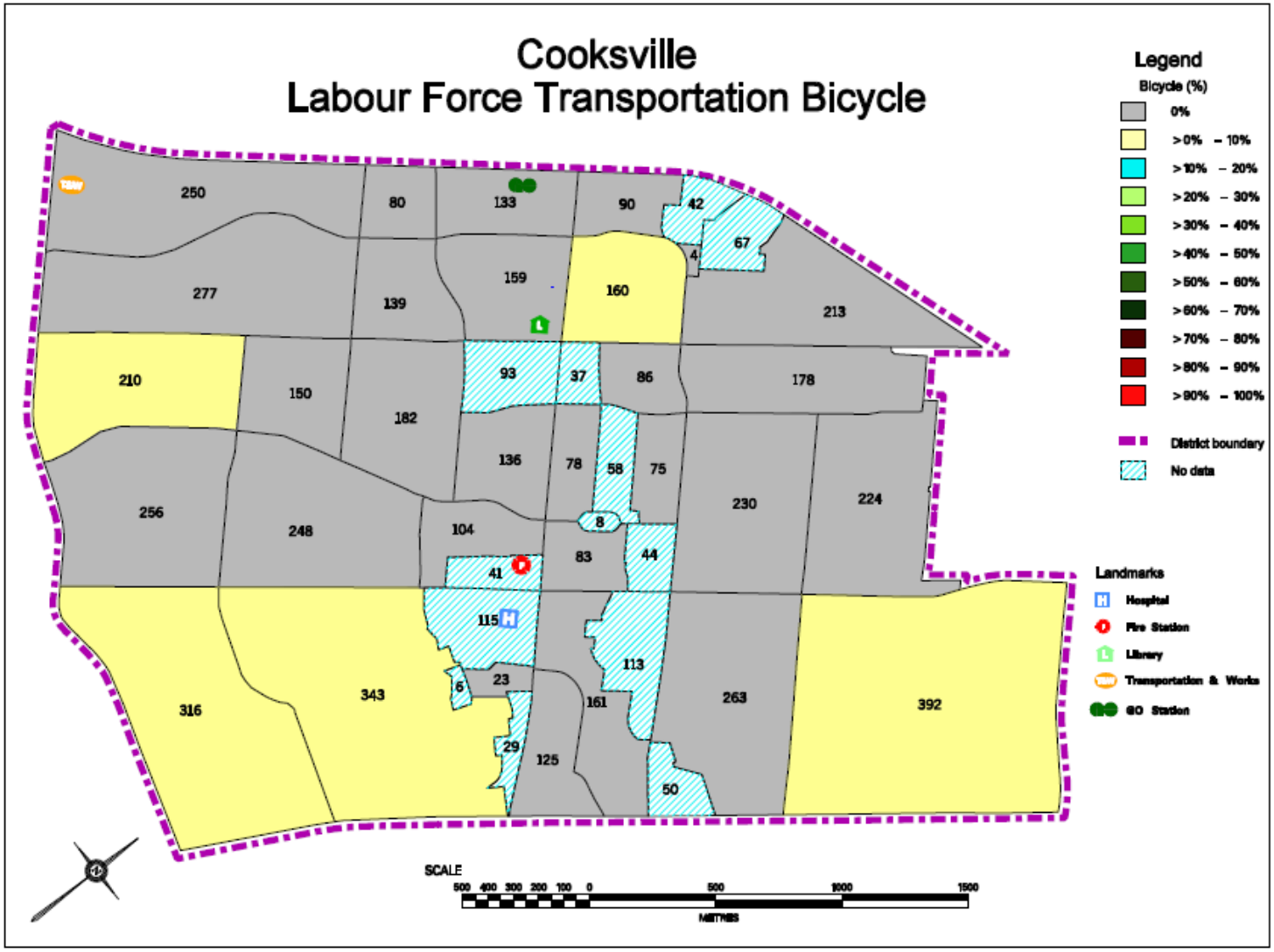
Age and gender populations are evenly dispersed throughout Cooksville, therefore relationships between age, gender and walking and cycling were not identified through this project. Studies do indicate that age and gender do play significant roles in walking and cycling. "Cycling rates are low for all age groups in the USA, but they also decline with age: from 3.2% among children 5-15 years old to only 0.4% of tips for those 40 and older"[17]. Elderly are sensitive to traffic danger and prefer separate facilities that provide protection from motor vehicle traffic[18]. Like the elderly, women prefer cycling infrastructure that protects them from motor vehicle traffic too[7, 18]. "…women are an 'indicator species' for cycling: where many women cycle, it means that cycling is safe and convenient for everyone, leading to a high overall bike share" [18]. In Denmark, Germany, and the Netherlands women are as likely to cycle as men are [17, 18]. However, in much of the industrialized world men are doing most of the cycling [16]. In summary, men tend to cycle more than women and the elderly in industrialized countries.

For this project, culture was defined by the indicators selected: Labour Force Transportation, Visible Minority, Places of Birth Recent Immigrants, Home Language, and Age Groups. Utilizing maps to describe culture was difficult at times as the information needed to be based on available empirical data. For example, there were so many different languages in Cooksville and most were so close in percentages spoken in Cooksville, that it is difficult to present just the top 5 languages alone; although one can note some important findings that the maps present such as most people who do not speak English live along Hurontario where the major transit corridor is. This may present an opportunity to promote transit use in different languages to these homes. What is more is Cooksville has a

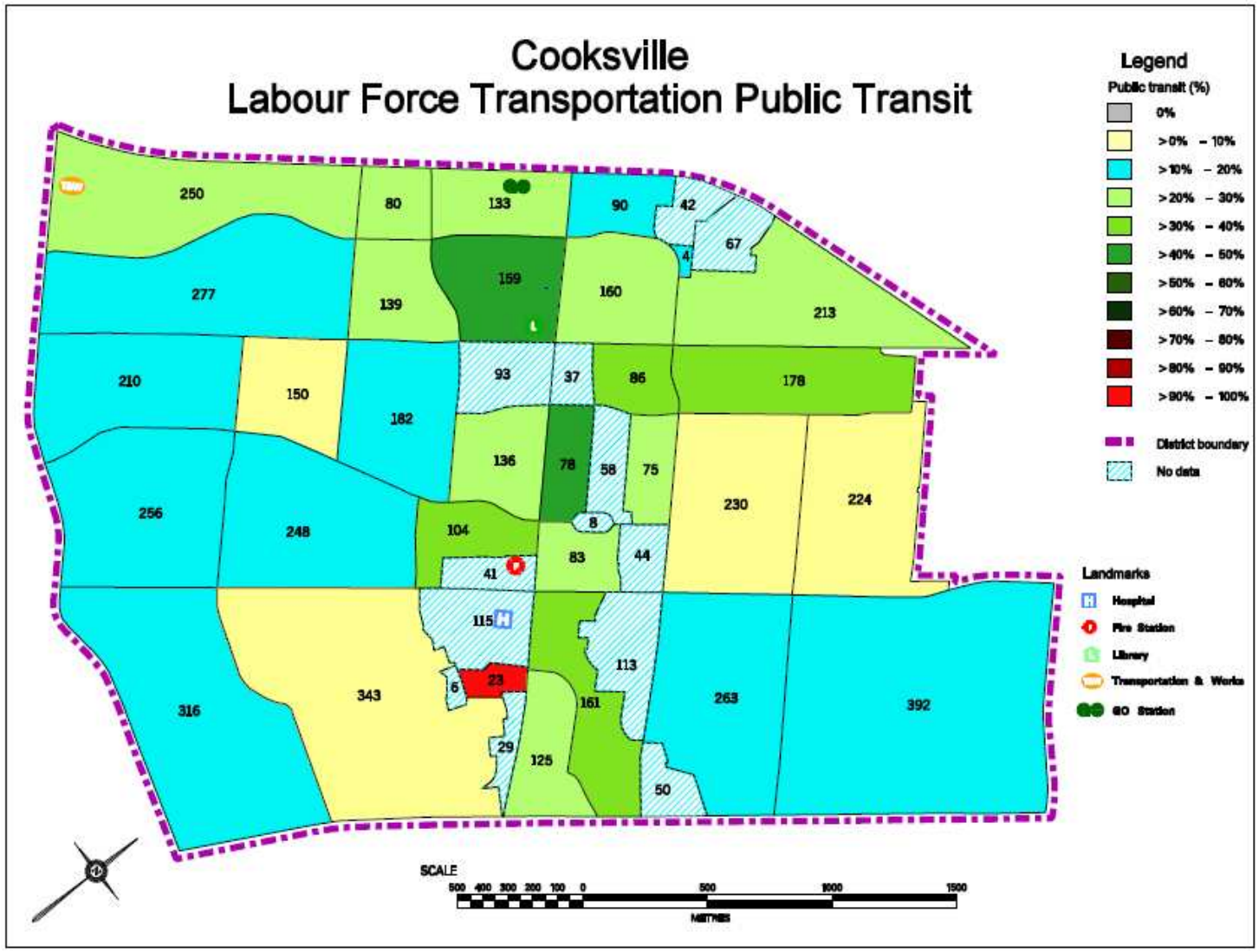
lower level of walking than the Mississauga rate, but higher public transit use and walking. Therefore, promoting public transit in Cooksville is a good way to increase both walking and cycling.



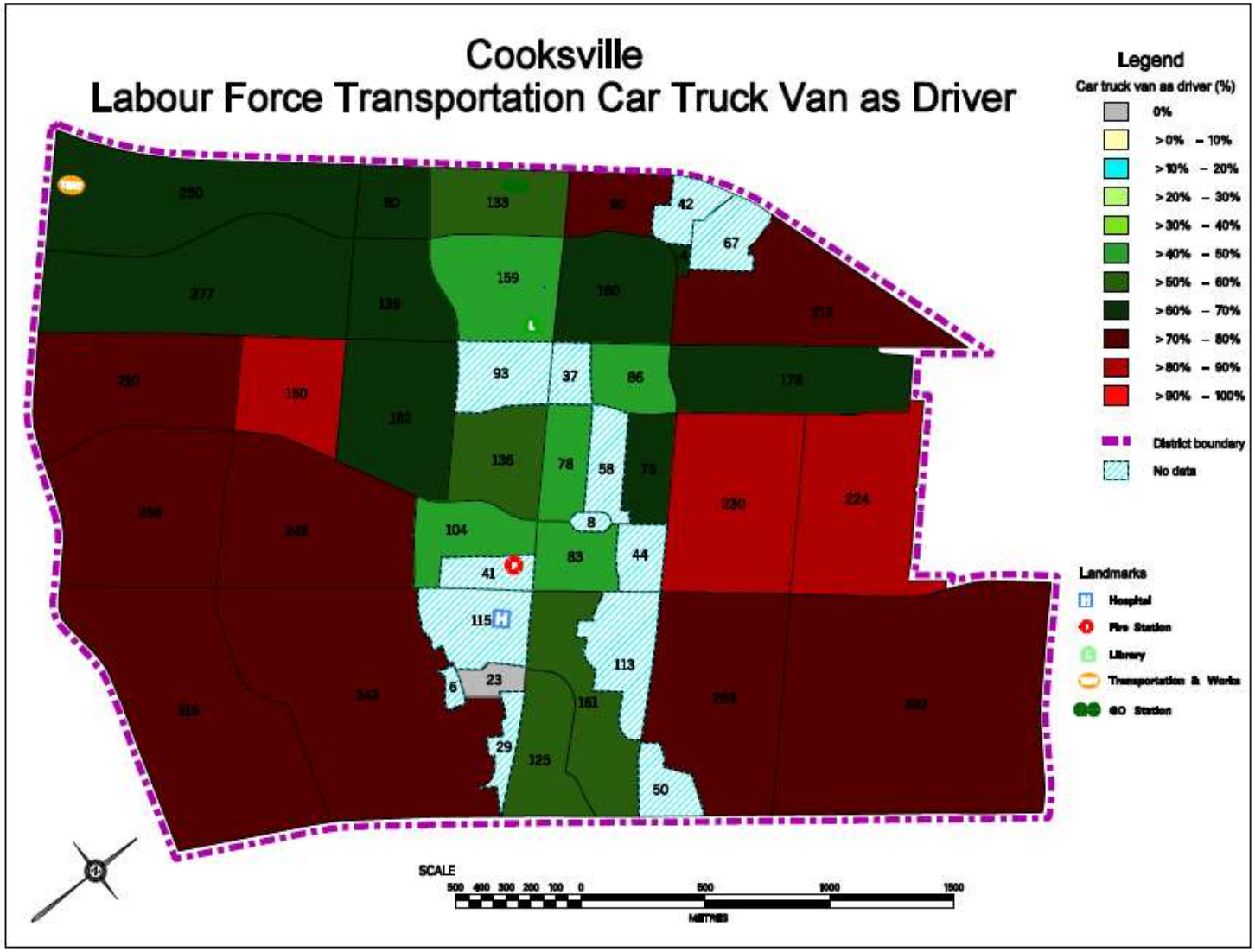
- The amount of people walking to work is low across Cooksville
- Highest concentration is 0-10%



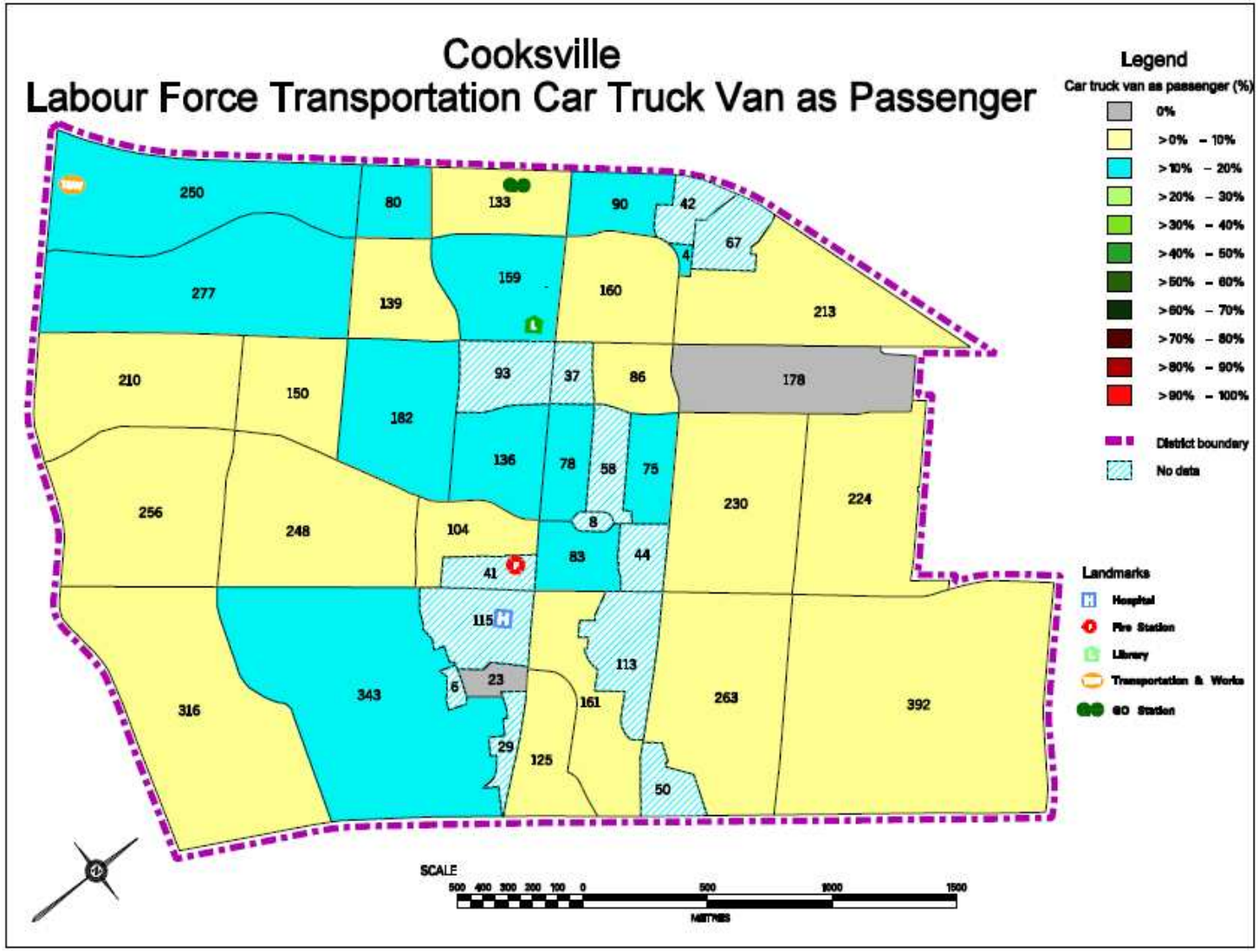
- Lowest concentration is 0%
- Highest concentration is 0-10%



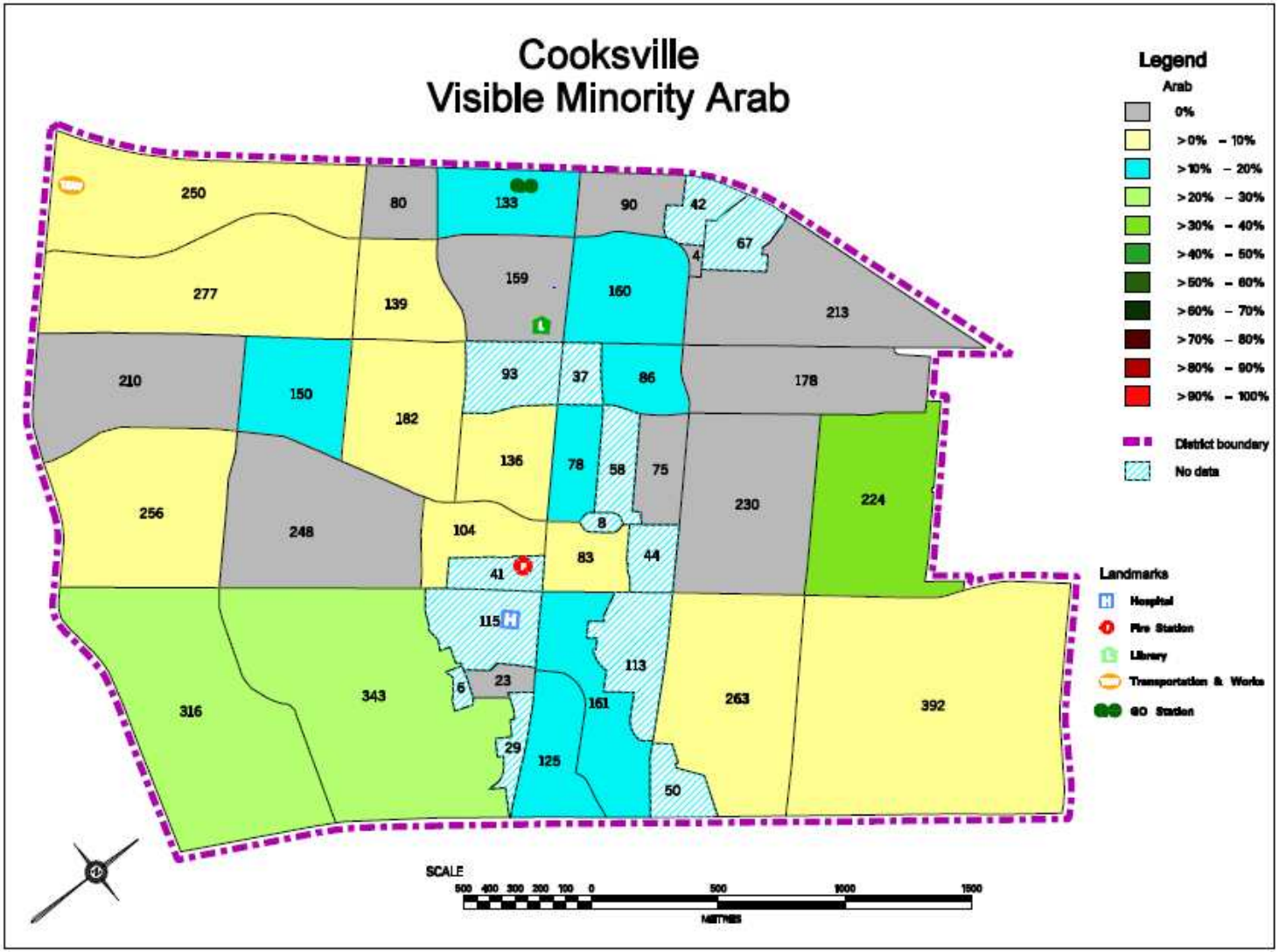
- Higher concentration along the Hurontario transportation corridor
- Lowest concentration is 0-10%
- Highest concentration is 90-100%



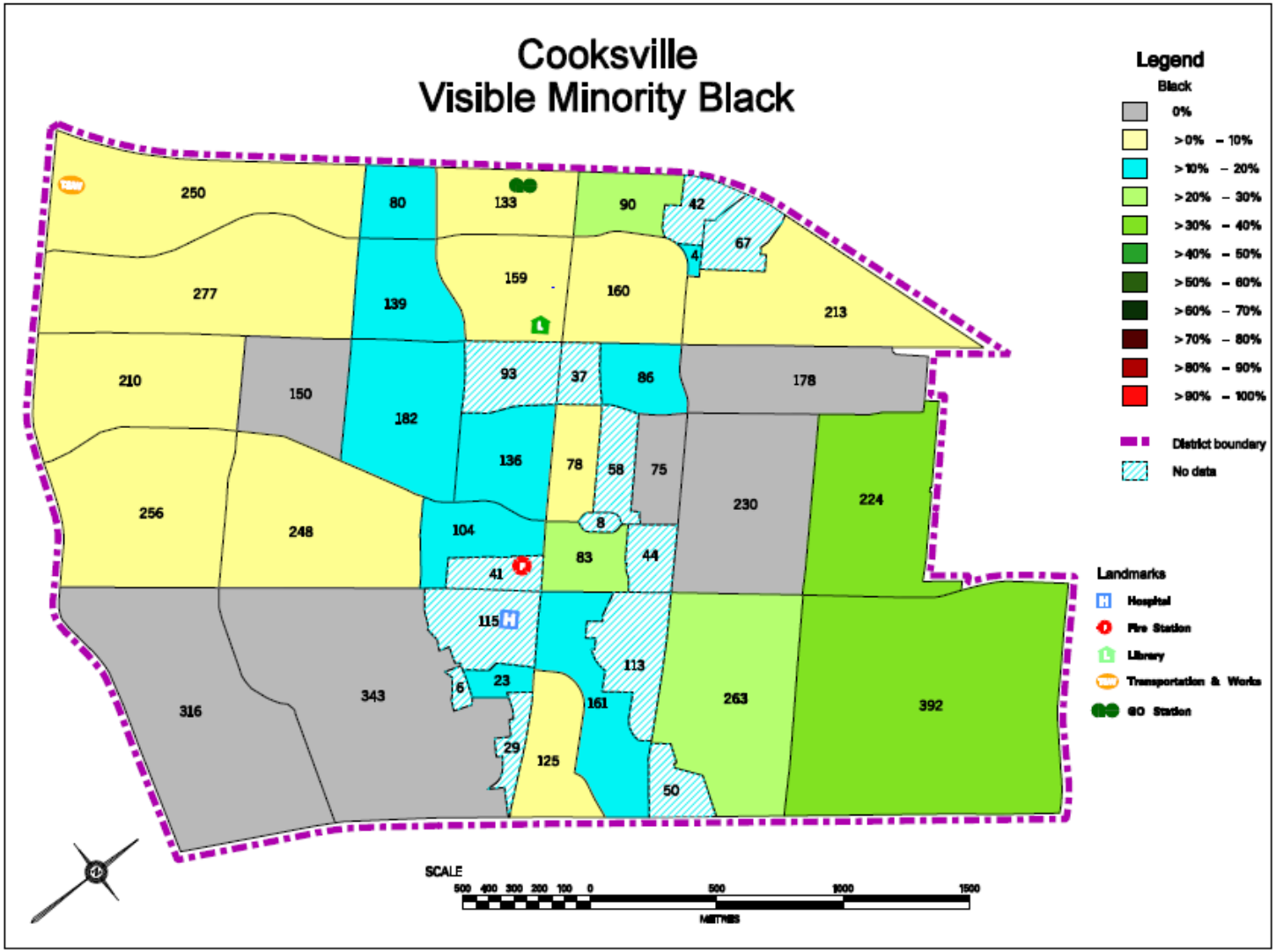
- Most people in Cooksville drive to work
- Lowest concentration is along Hurontario transportation corridor
- Lowest concentration is 0% and highest is 90-100%



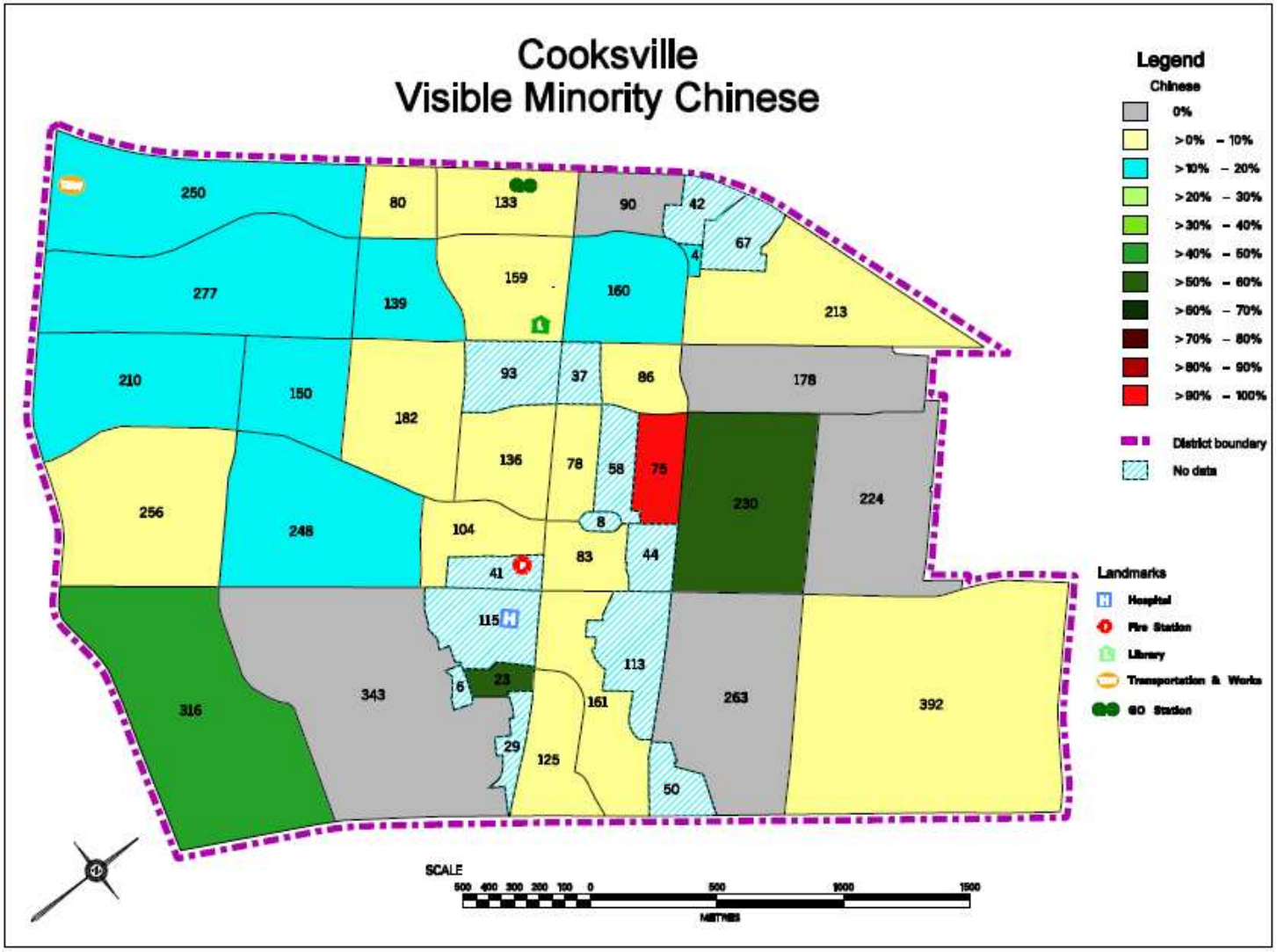
- Lowest concentration is 0%
- Highest concentration is 10-20%



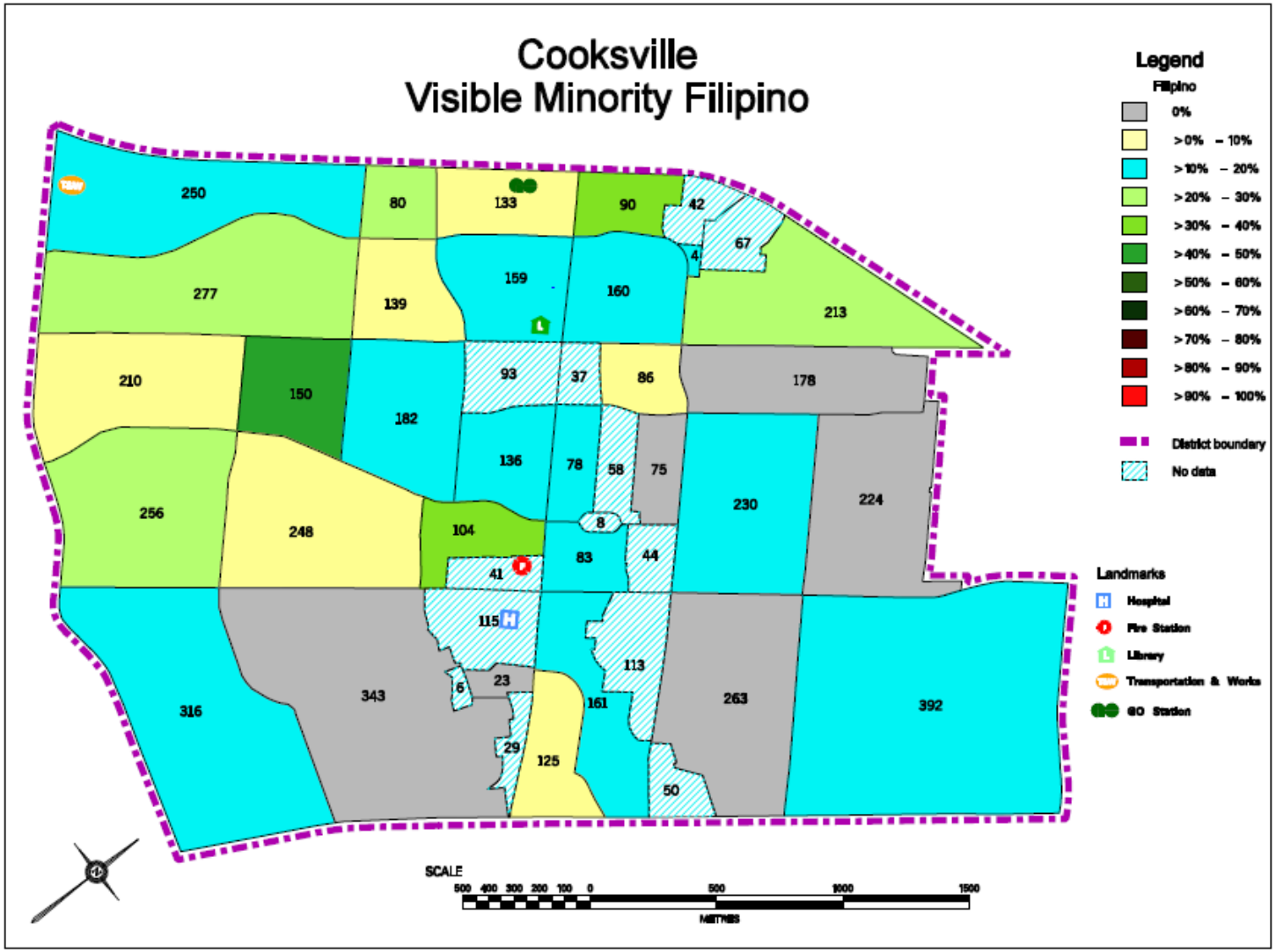
- Highest concentration is 30-40% on east side of Cooksville
- 0-20% along Hurontario Street



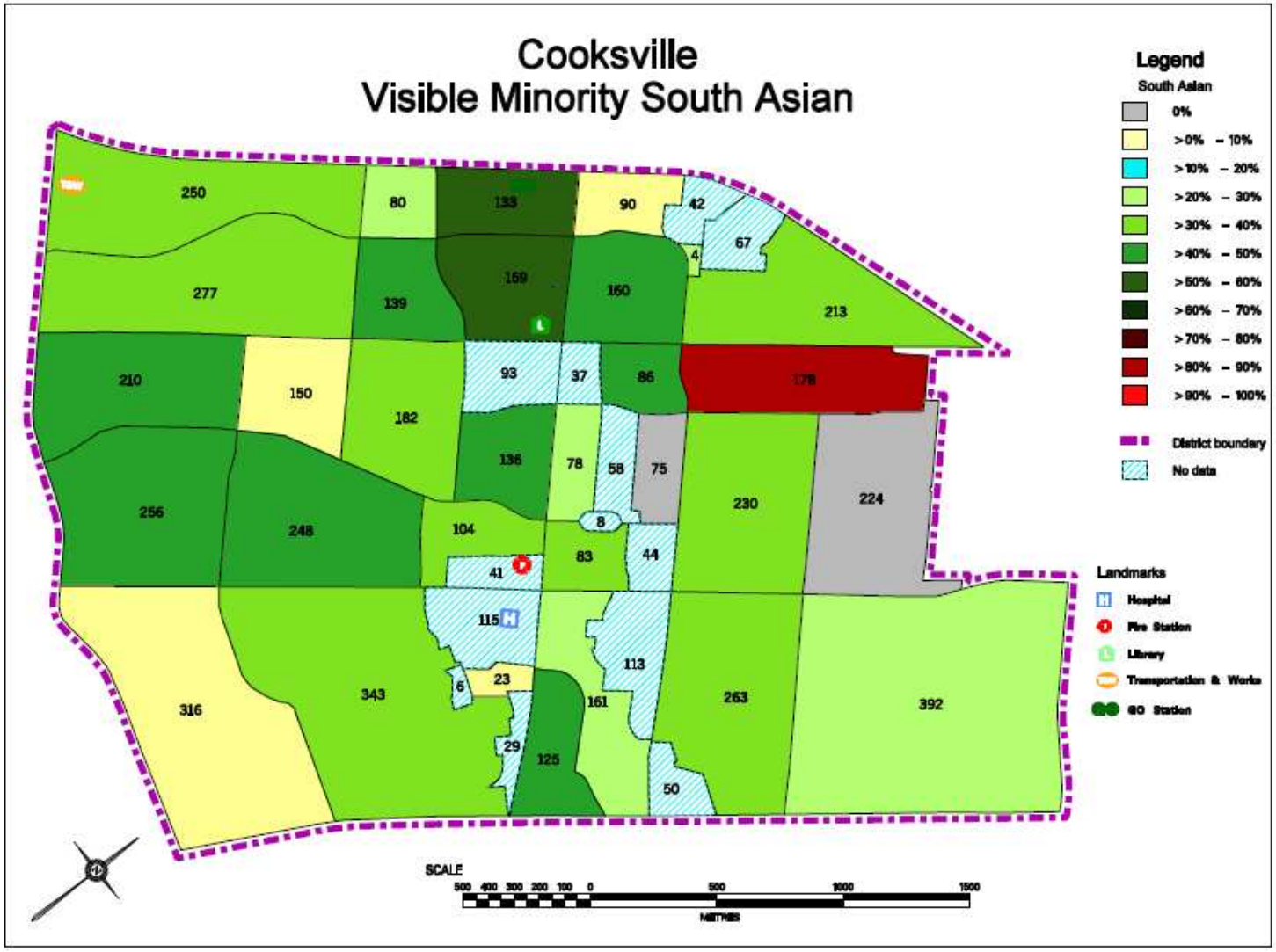
- Highest concentration is 30-40% in SE corner
- Higher concentrations along Hurontario Street



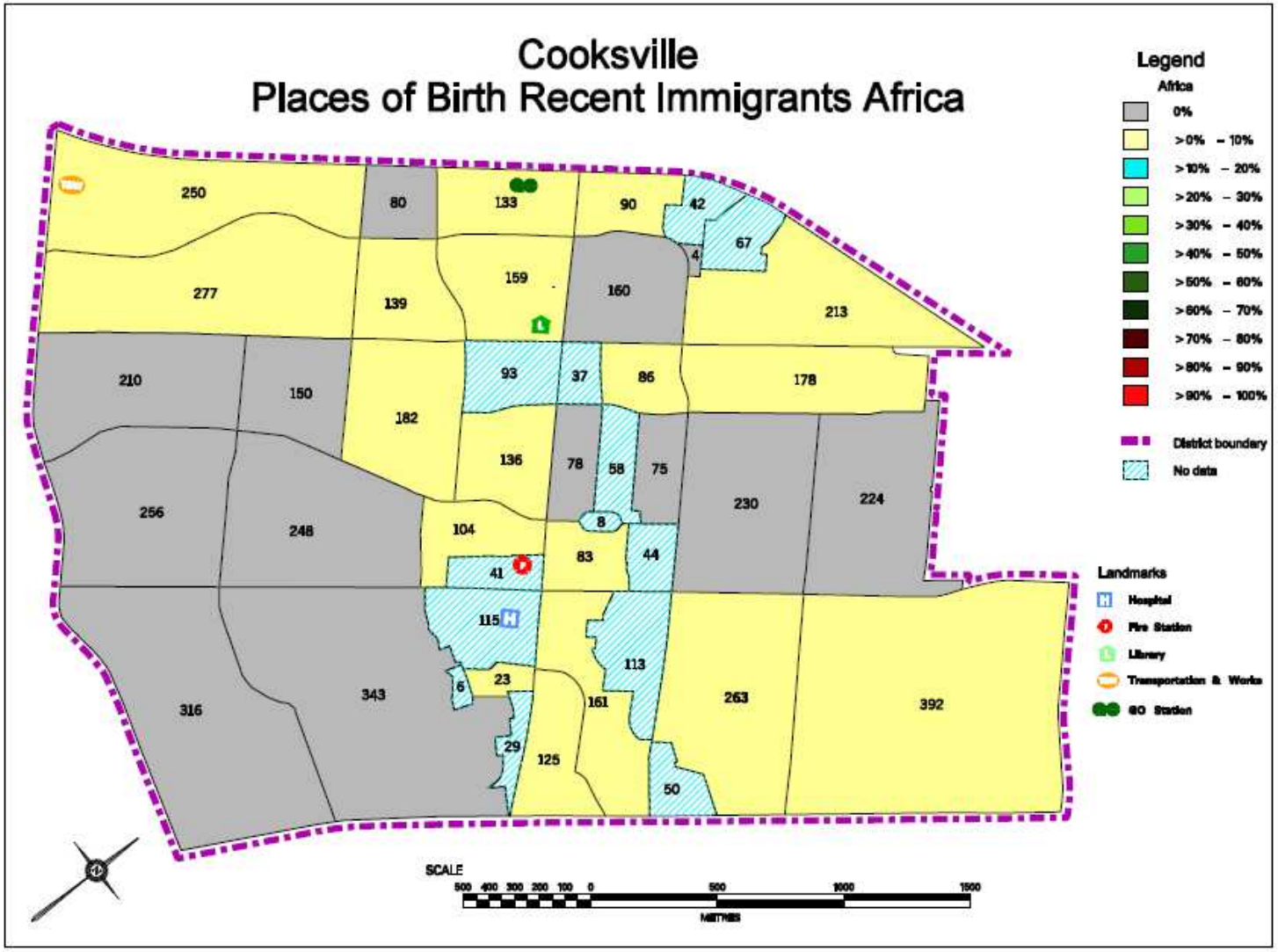
- 50-60% is highest concentration
- Concentrations dispersed throughout Cooksville



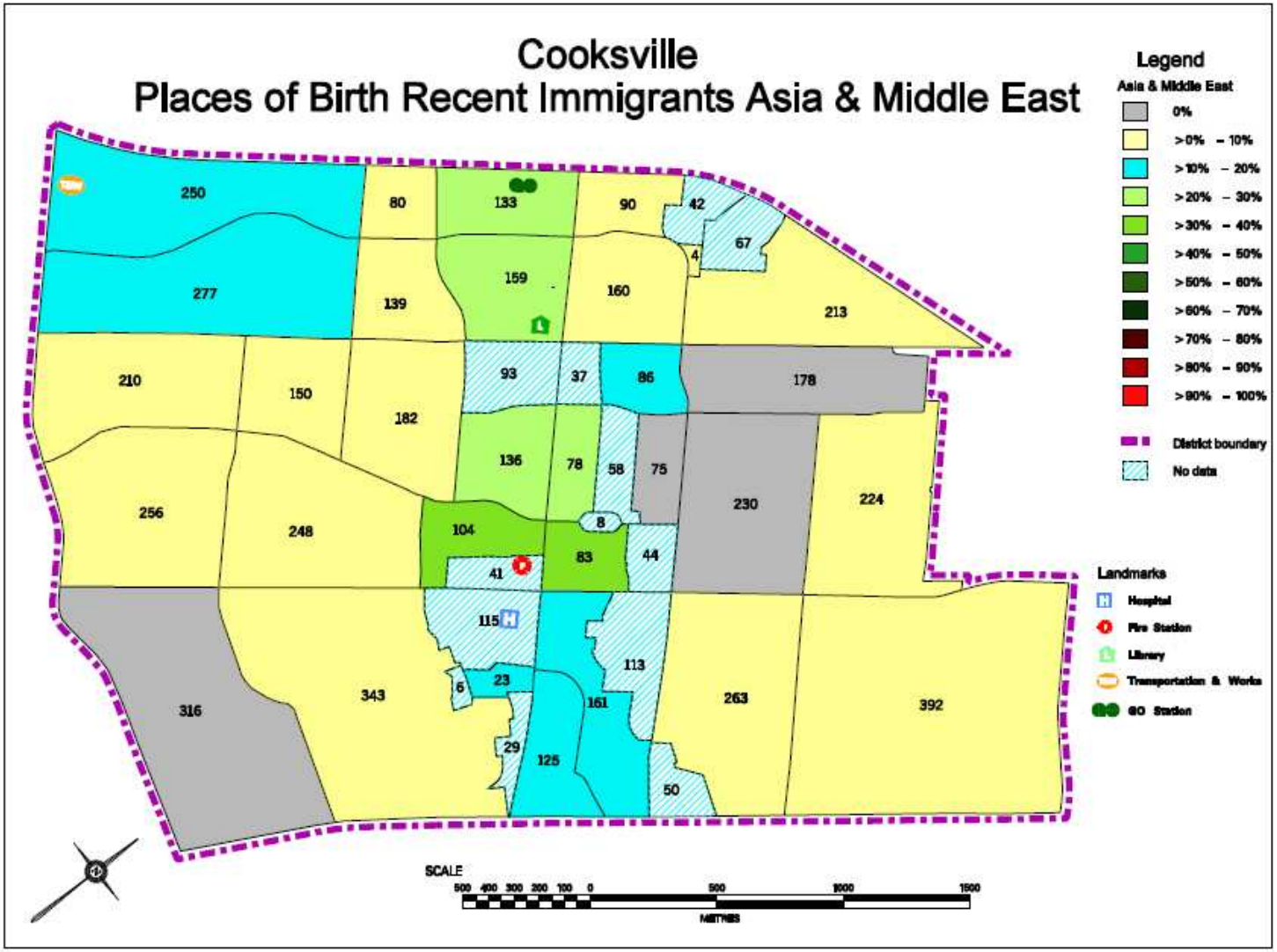
- Highest concentration is 50-60%
- Concentration found throughout most of Cooksville
- Heaviest concentrations found along west side of Cooksville



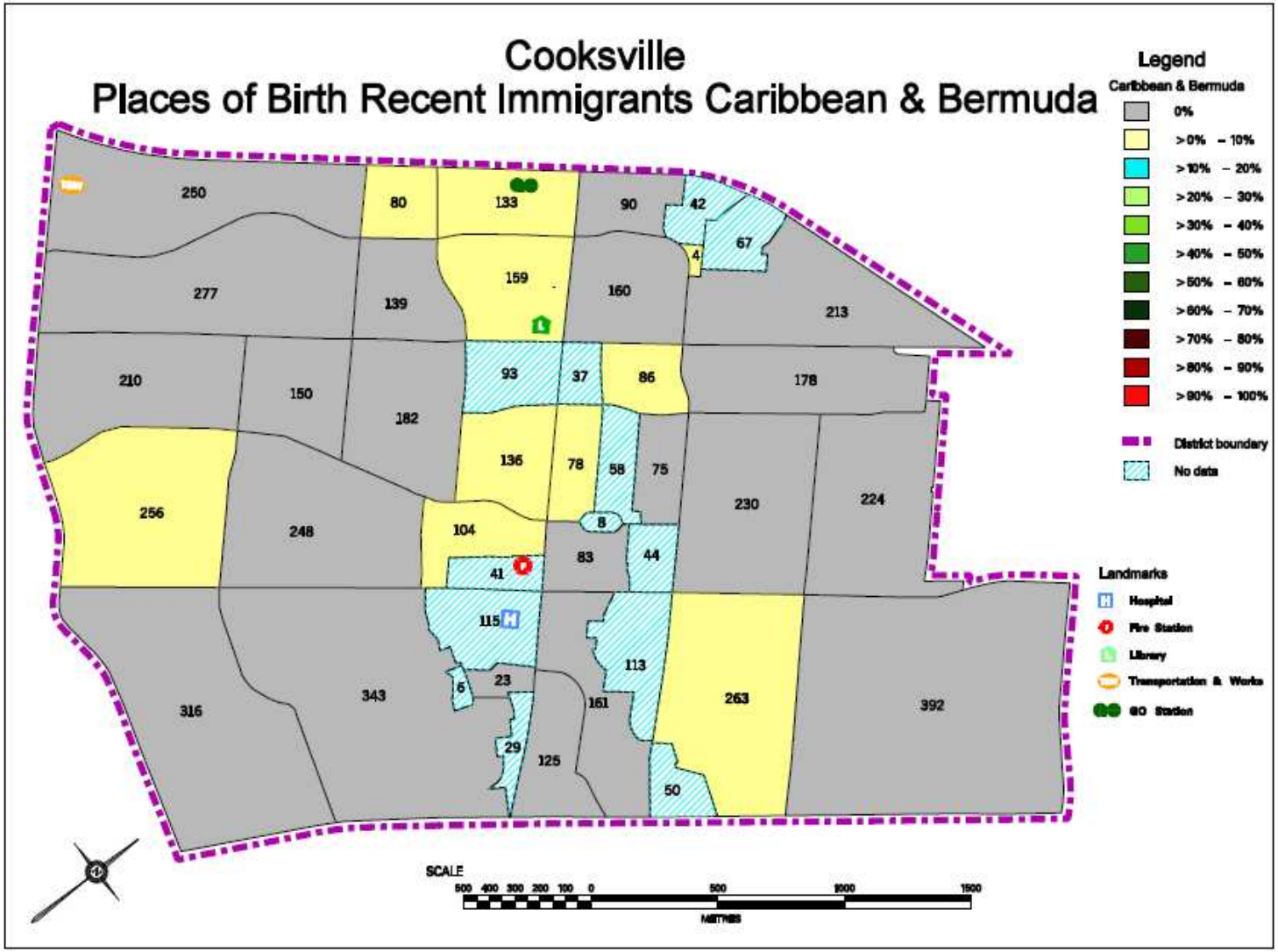
- 60-70% highest concentration found in the Northern part of Cooksville
- Heaviest concentration of all visible minority populations



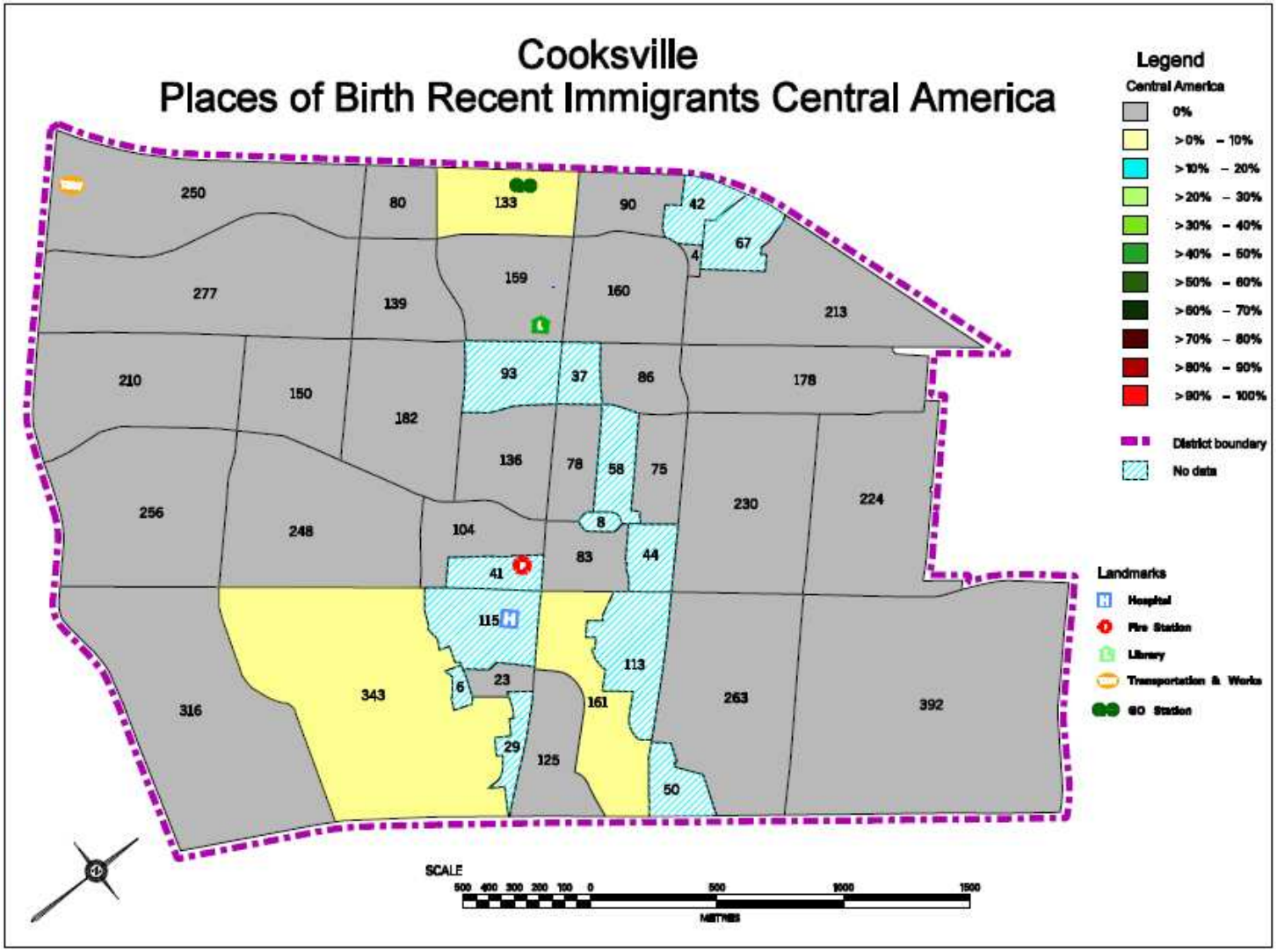
- 0-10% is highest concentration
- Concentrations found along Hurontario Street and the north and southeast



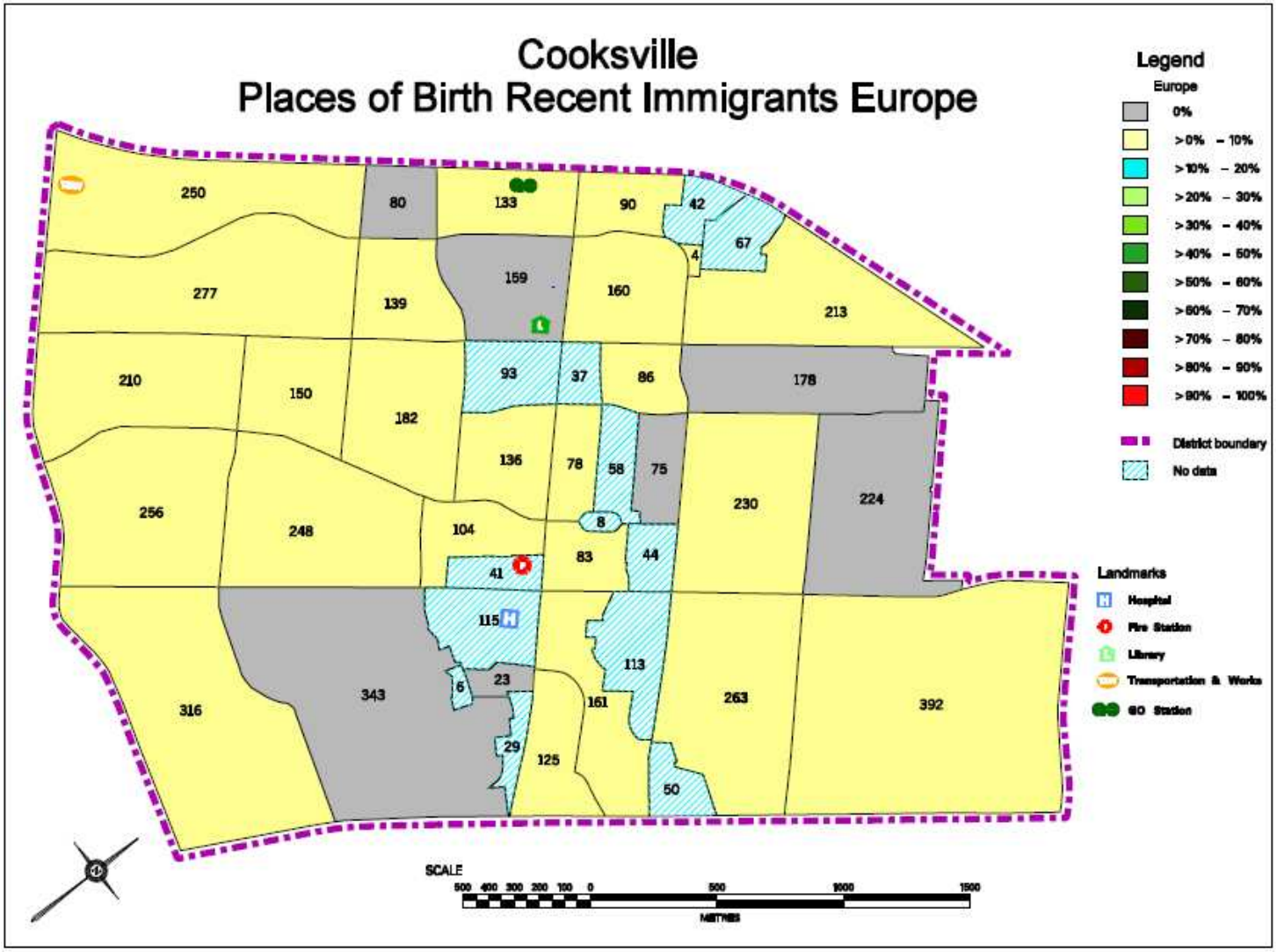
- 30-40% is highest concentration found in the NW and Southern part of Cooksville
- Highest concentrations found along Hurontario Street



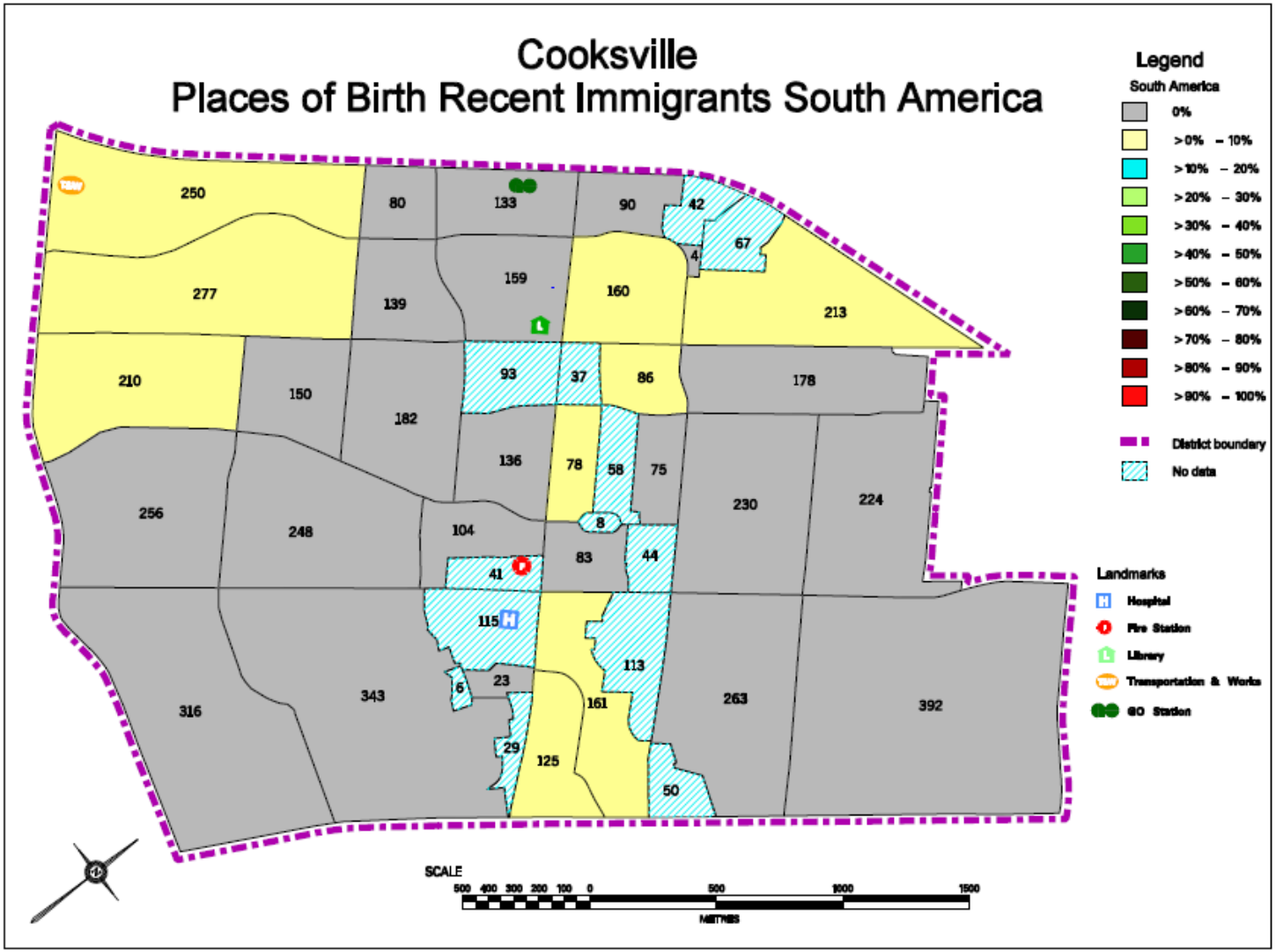
- Highest concentration is 0-10%
- Highest concentrations found along Hurontario Street



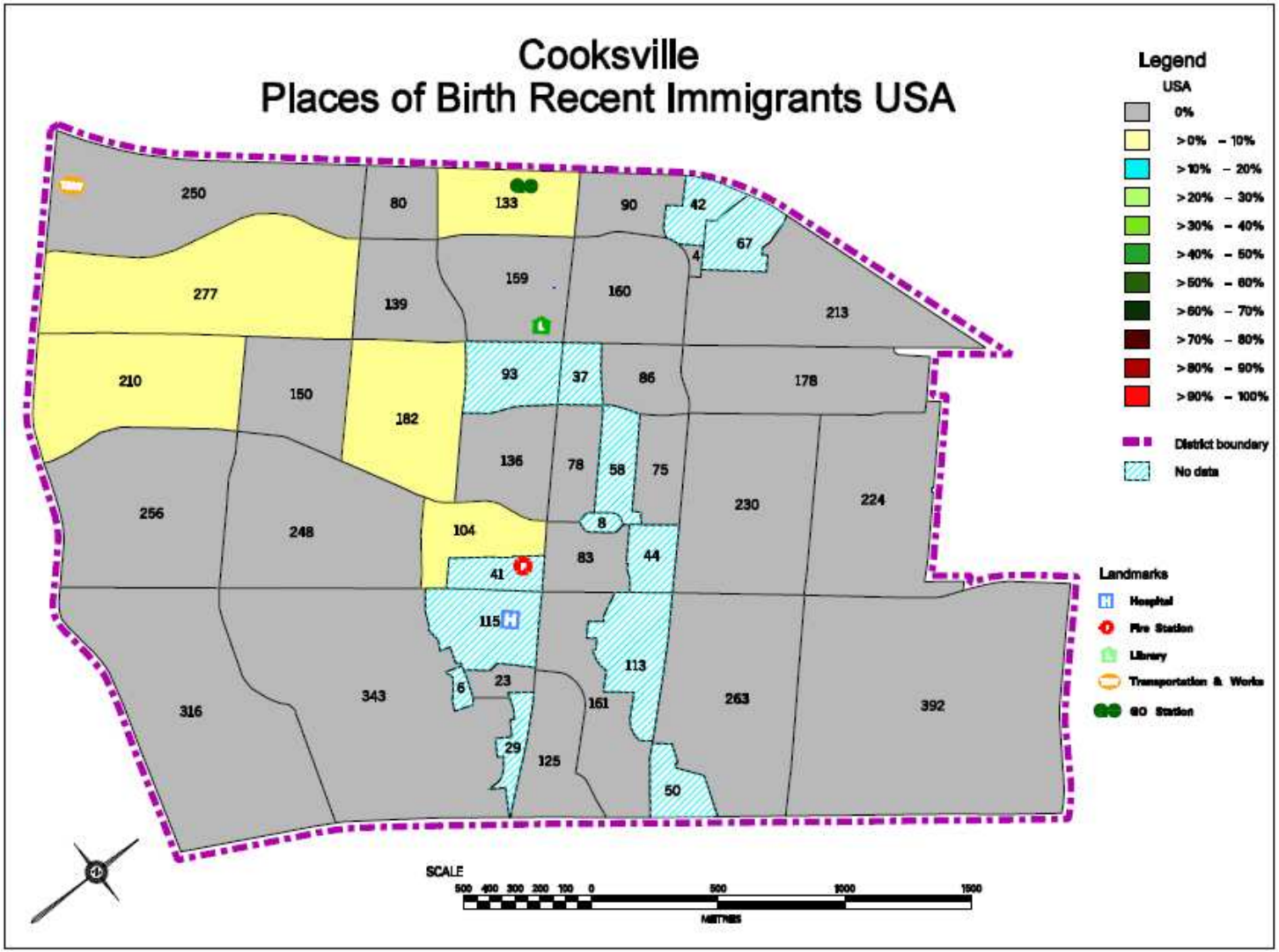
- Highest concentration is 0-10%



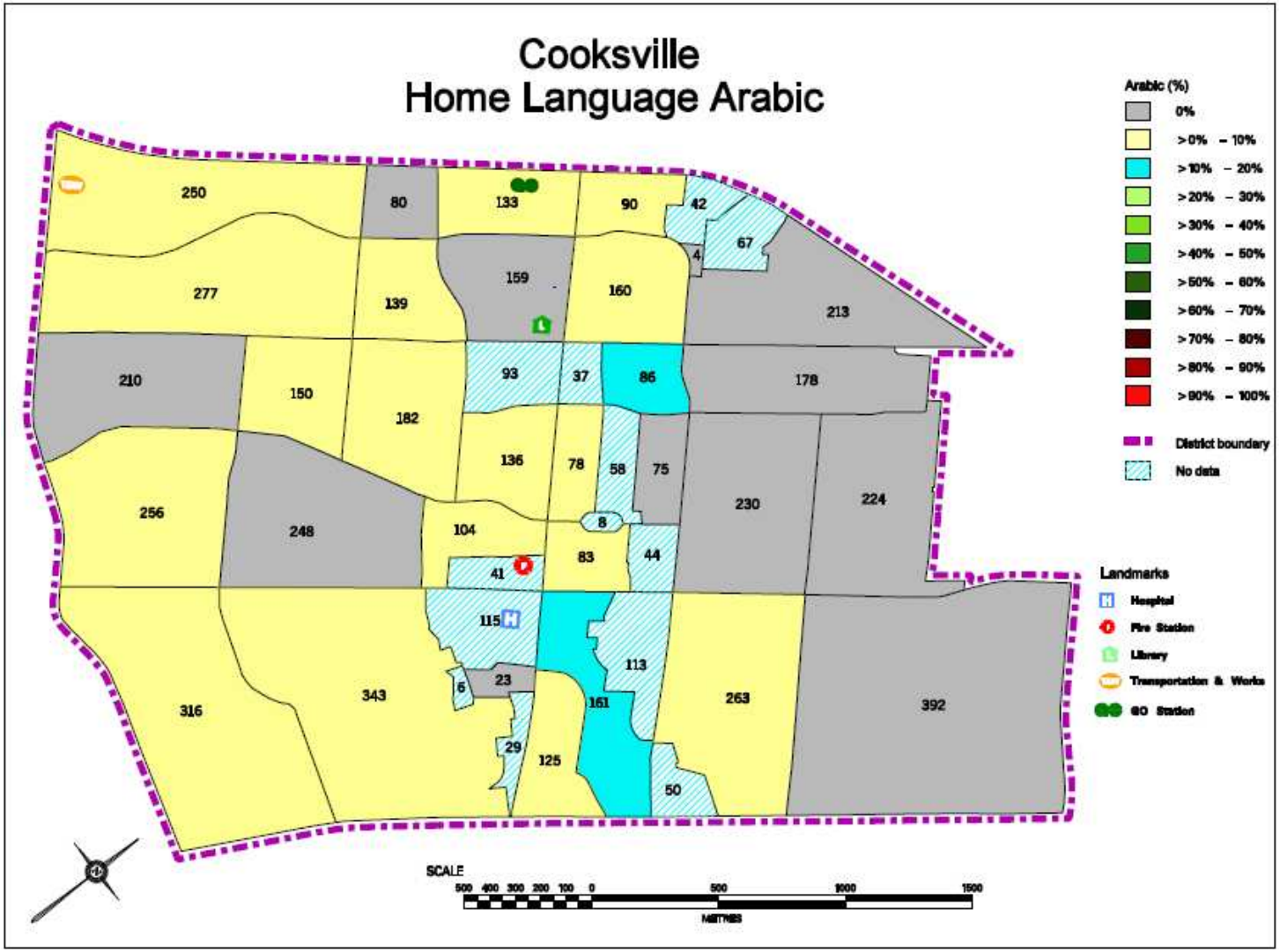
- Highest concentration of place of birth throughout Cooksville
- Highest concentration is 0-10%



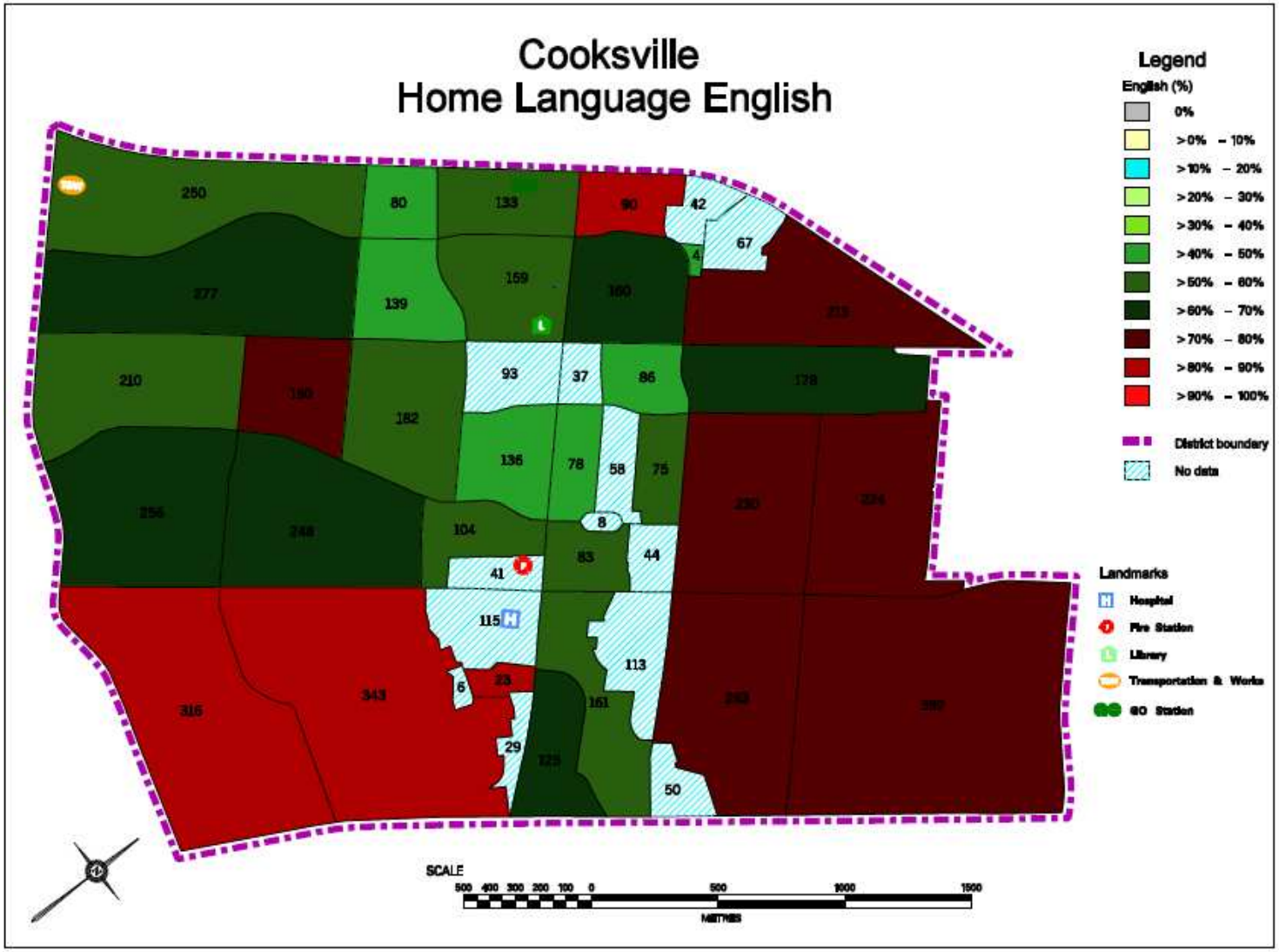
- Highest concentration is 0-10%



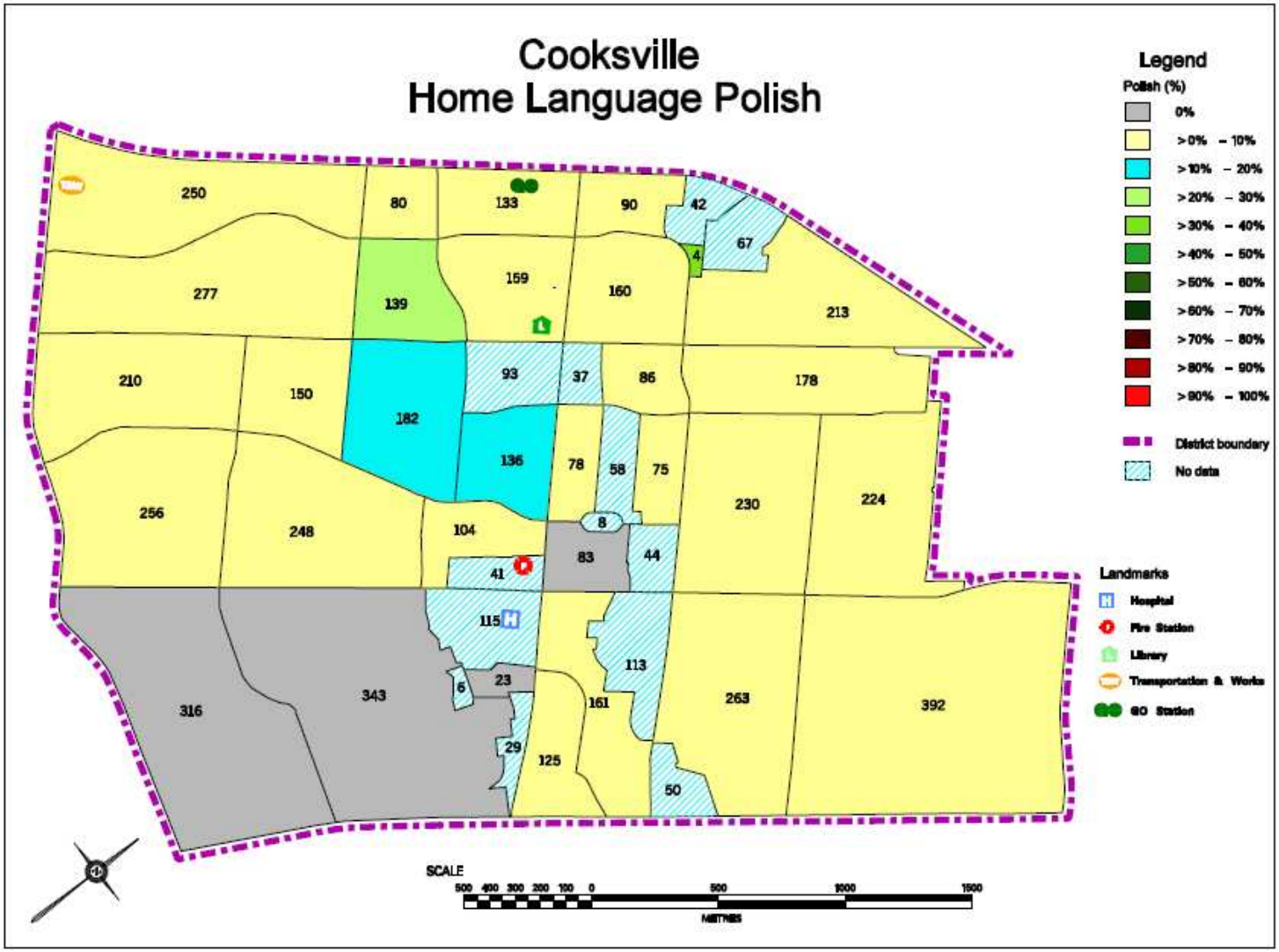
- Highest concentration is 0-10%



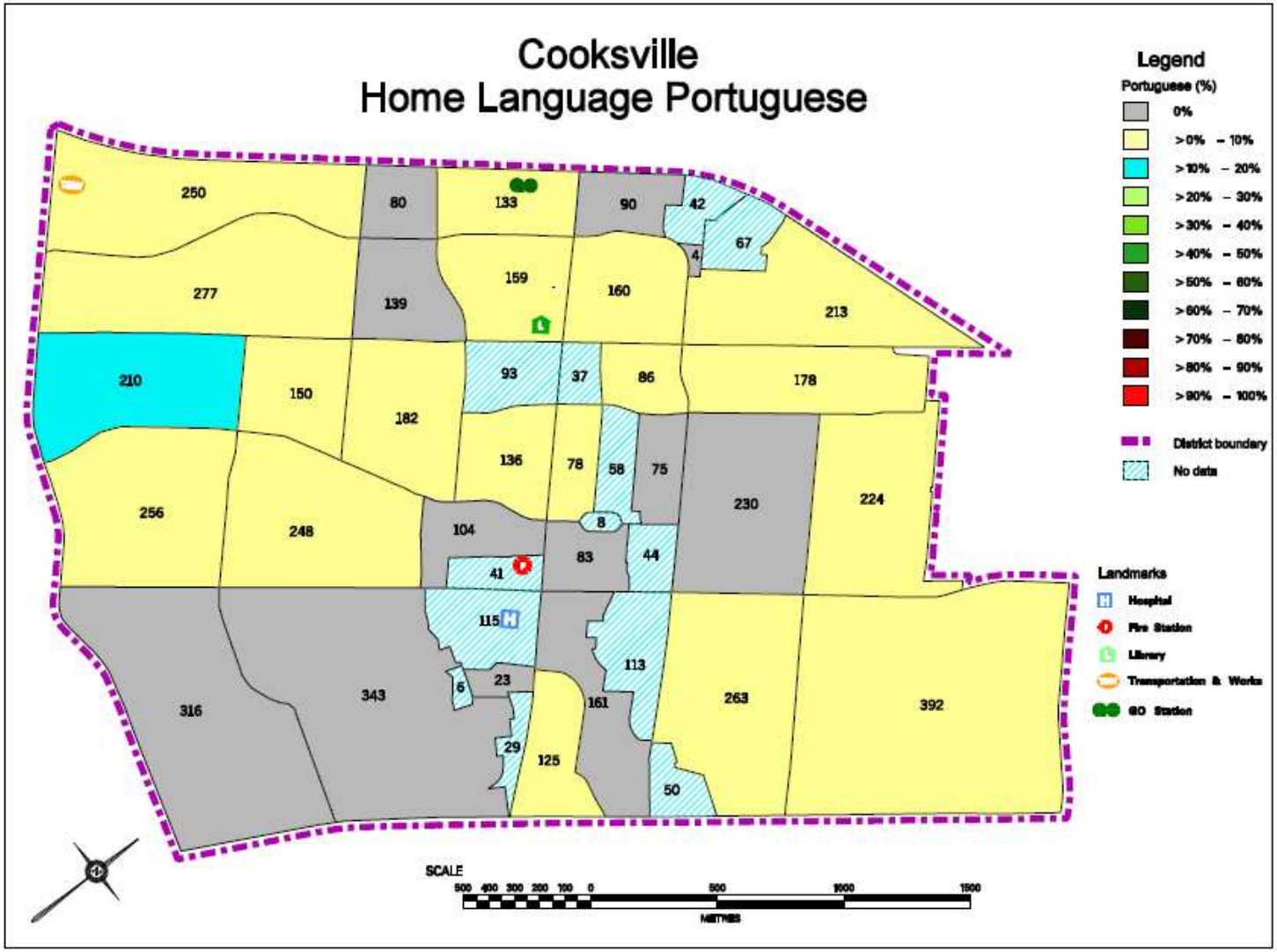
- Highest concentration is 10-20%
- Concentrations are mostly along Hurontario Street and western side of Cooksville



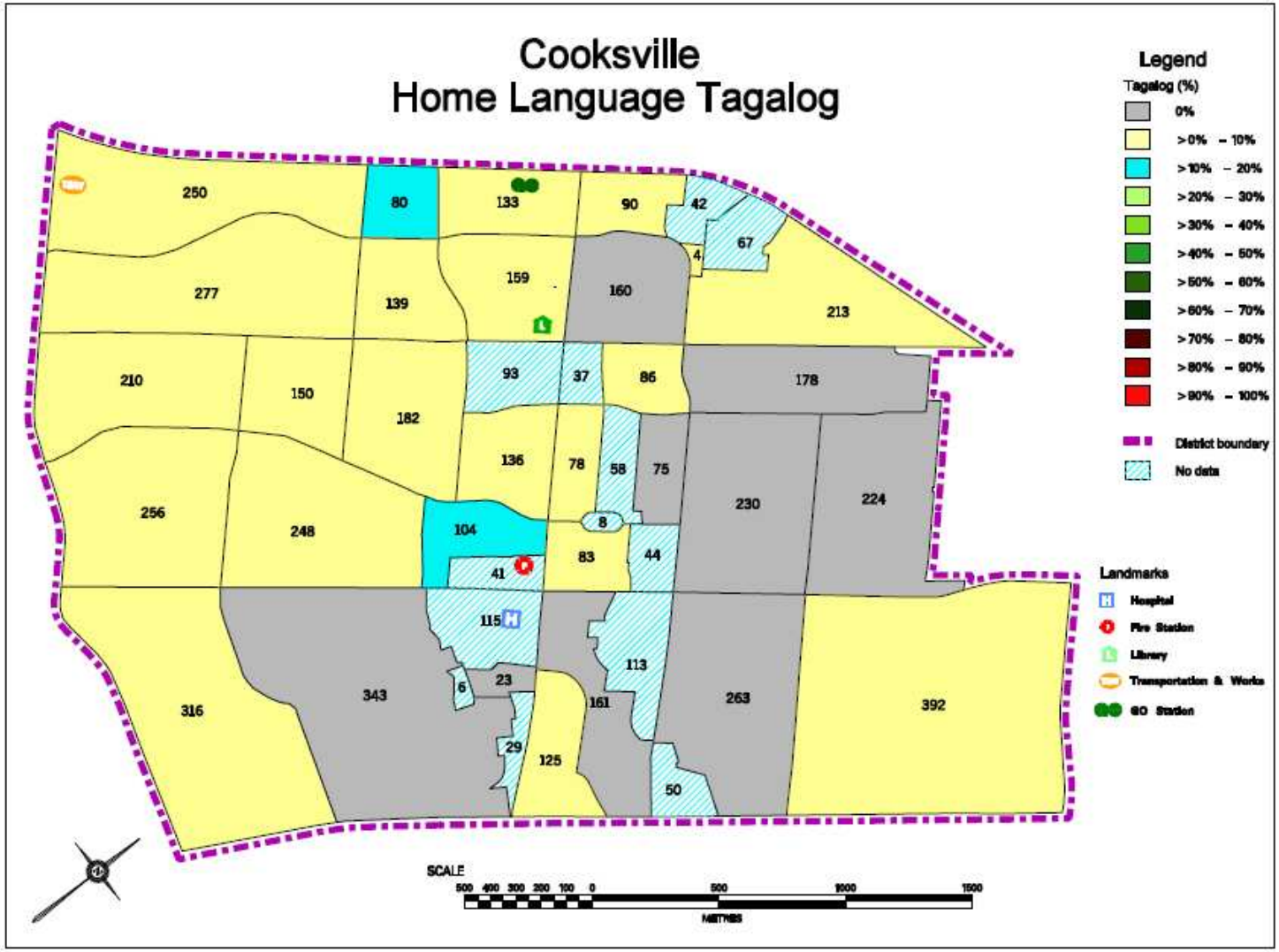
- Highest concentration is 90-100%
- English has high concentrations across Cooksville
- Lowest concentration is 40-50%



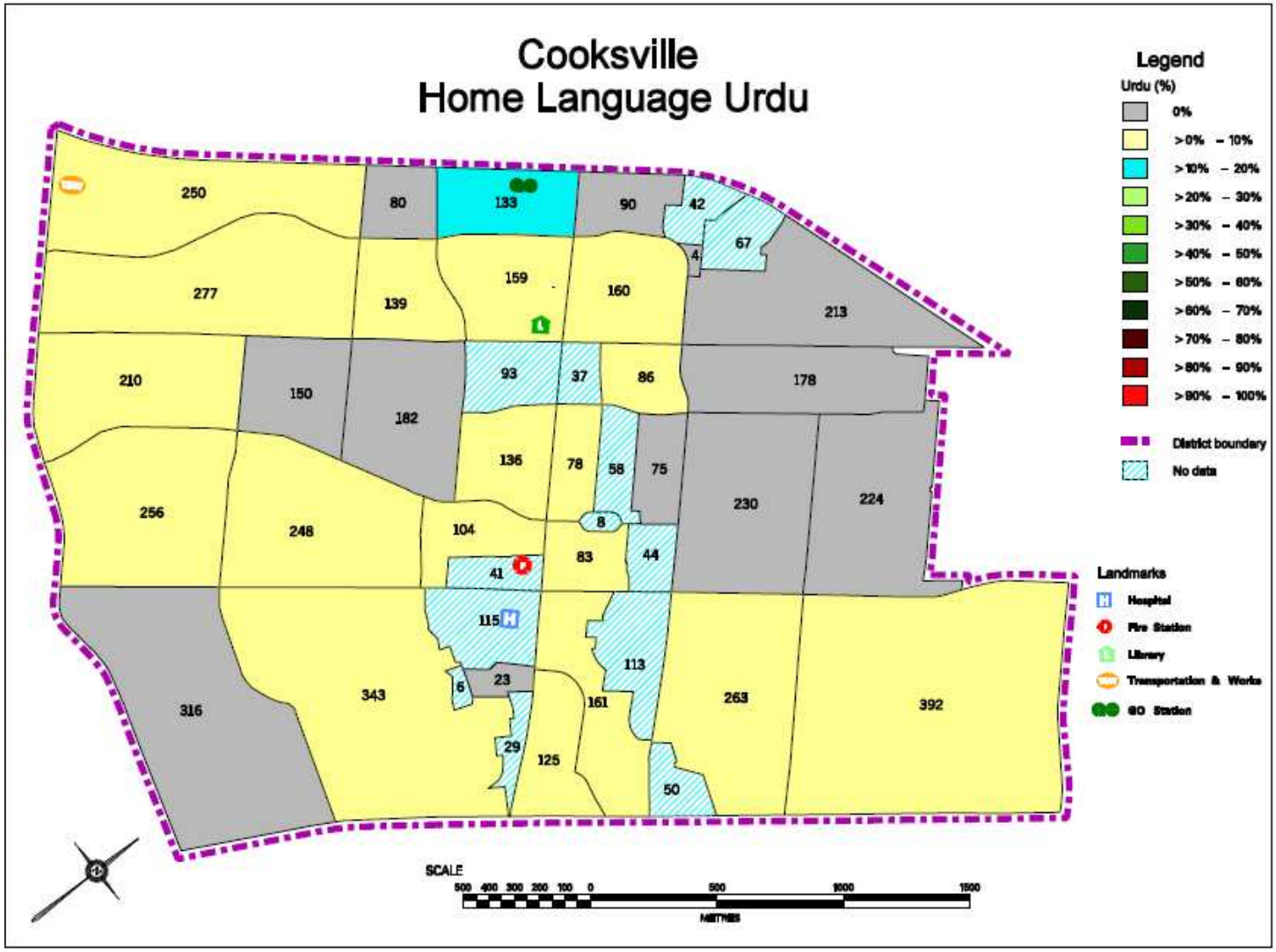
- Highest concentration is 20-30%
- Polish language concentrations can be found throughout Cooksville at 10-20%



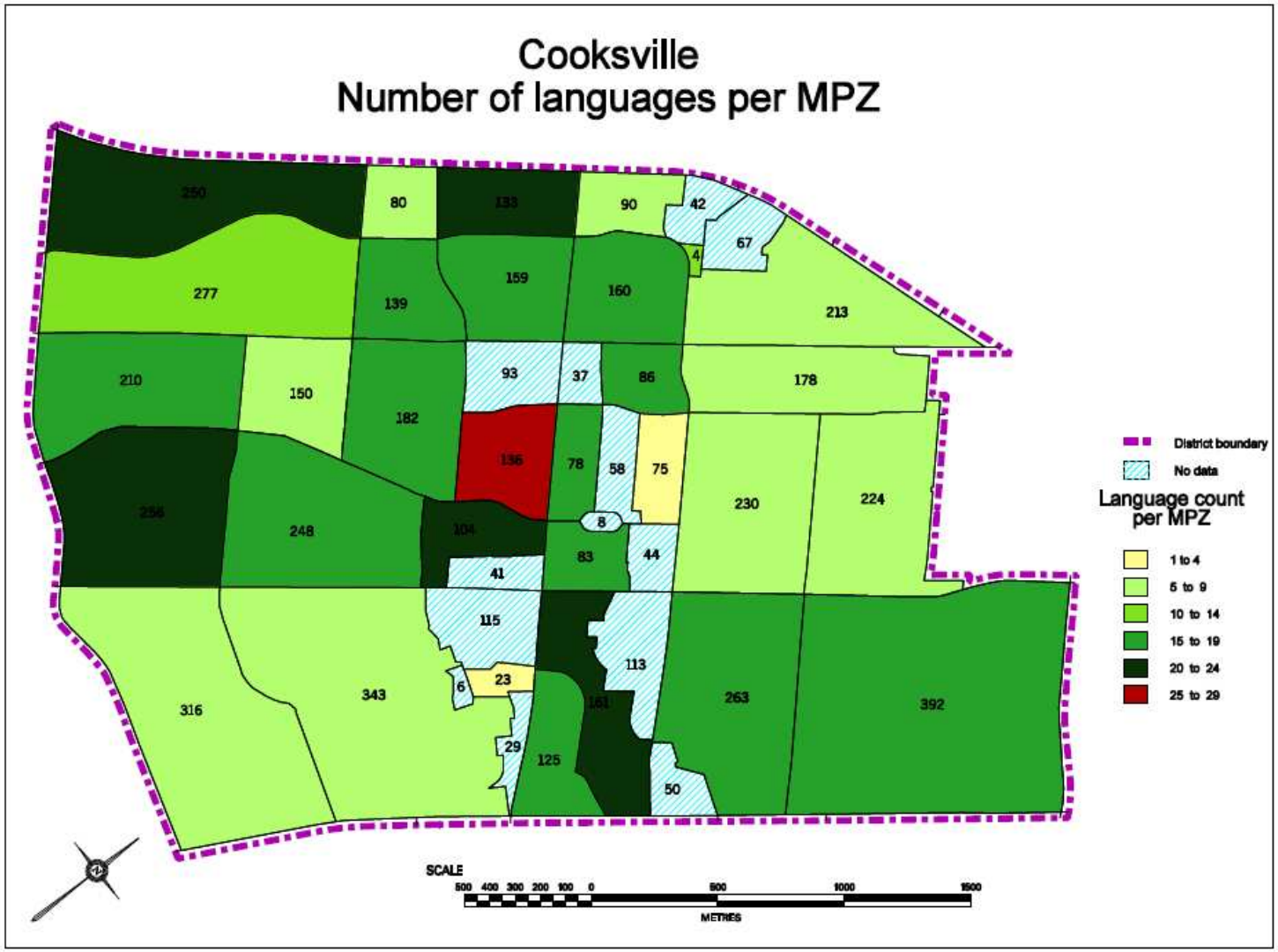
- Highest concentration is 10-20%
- Portuguese is spoken throughout Cooksville at 0-10%



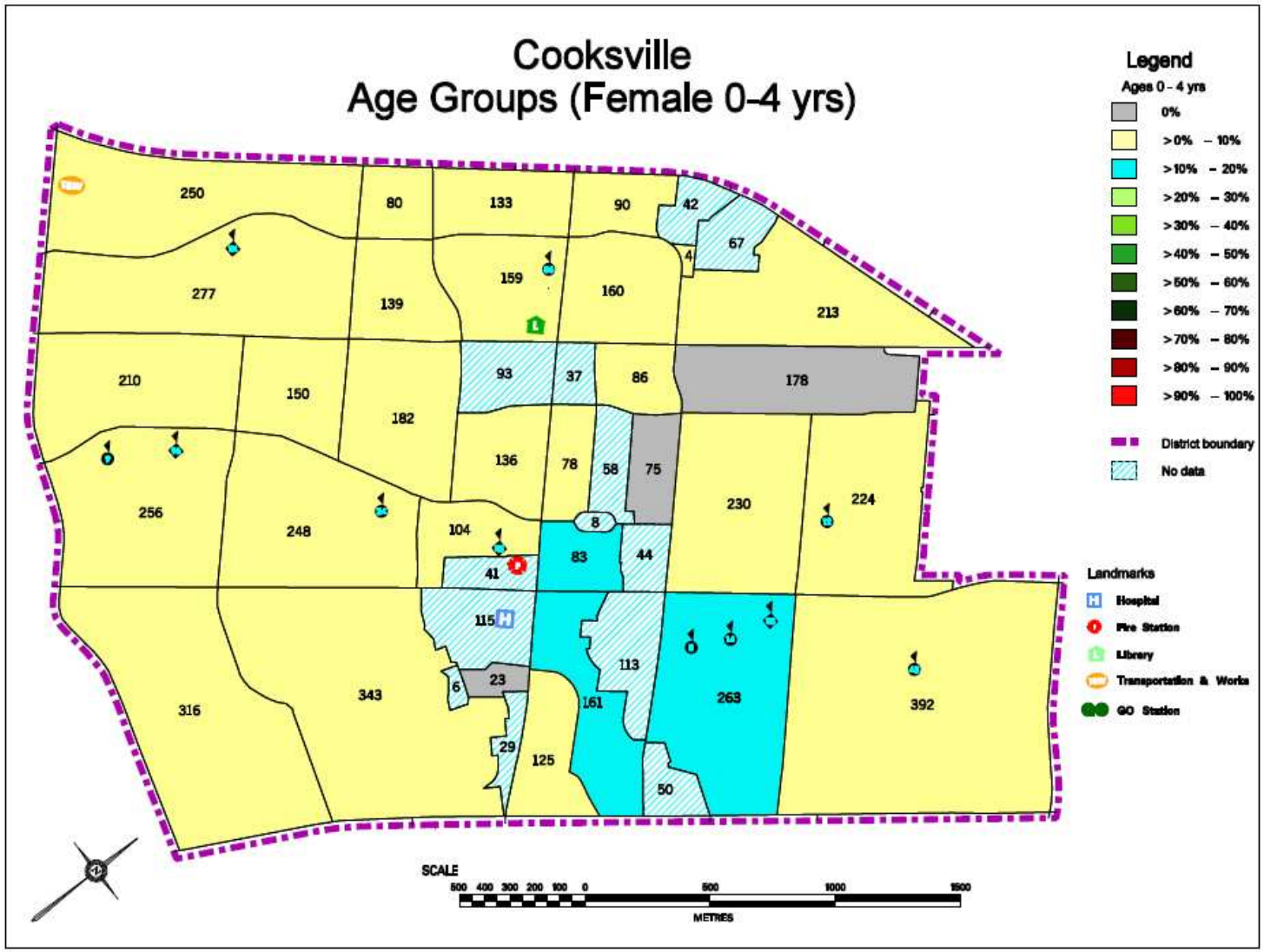
- Highest concentration is 10-20%
- Concentrations can mostly be found along western side of Cooksville



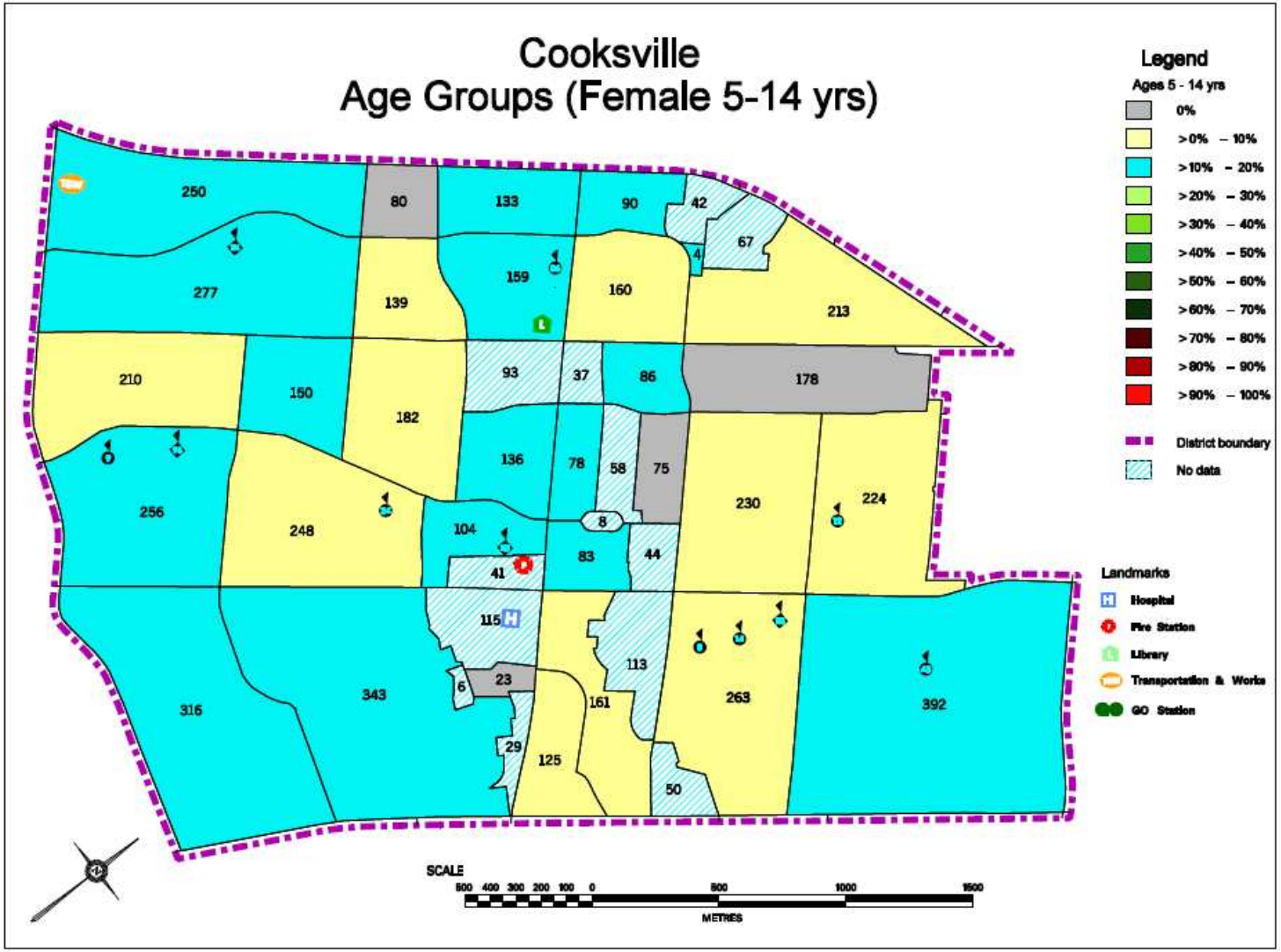
- Highest concentration is 10-20%
- Spoken throughout Cooksville at 0-10%



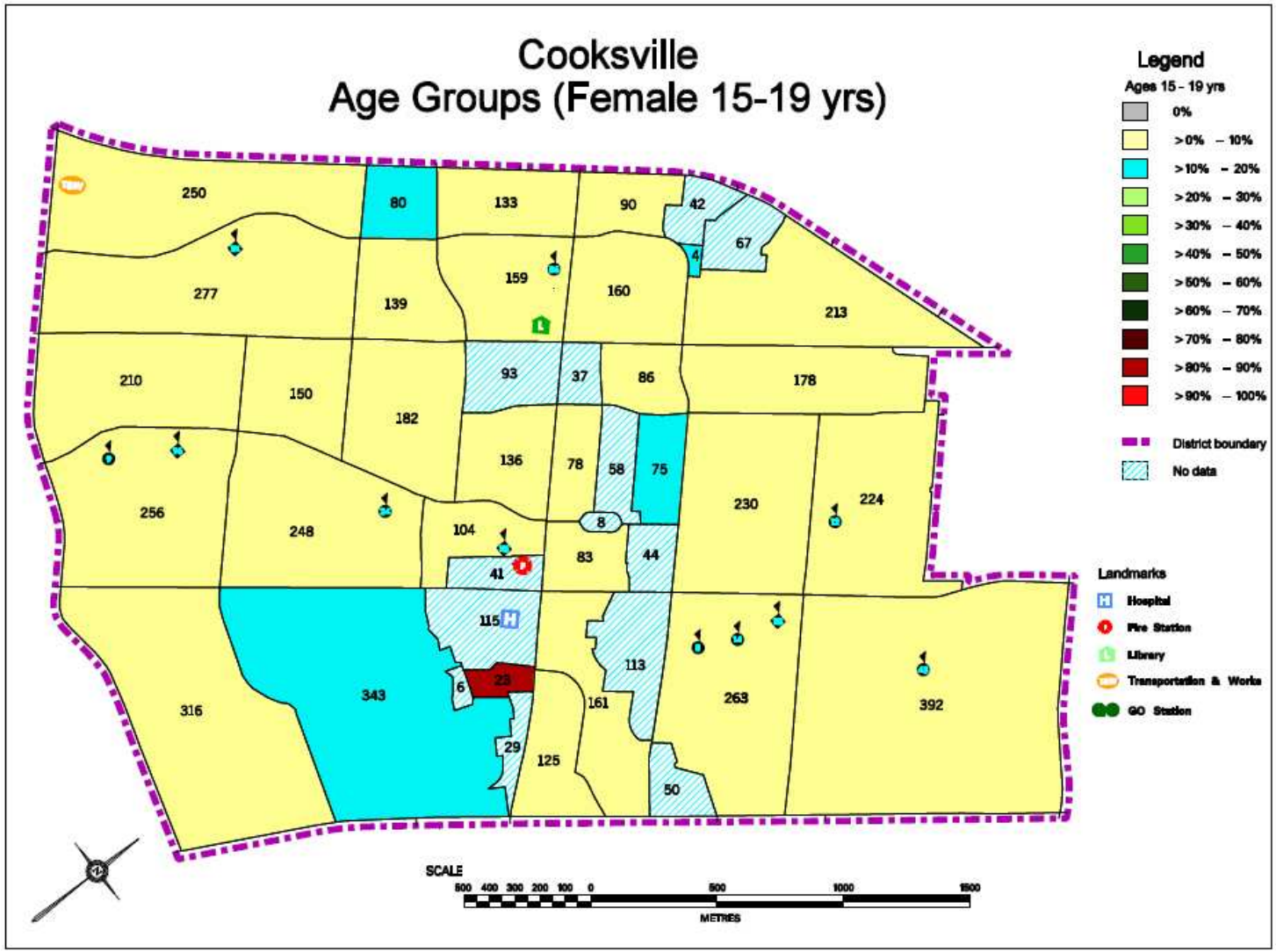
- Highest number of languages spoken is 25—29 along Hurontario
- 20-24 languages are spoken along Hurontario and on the west side of Cooksville



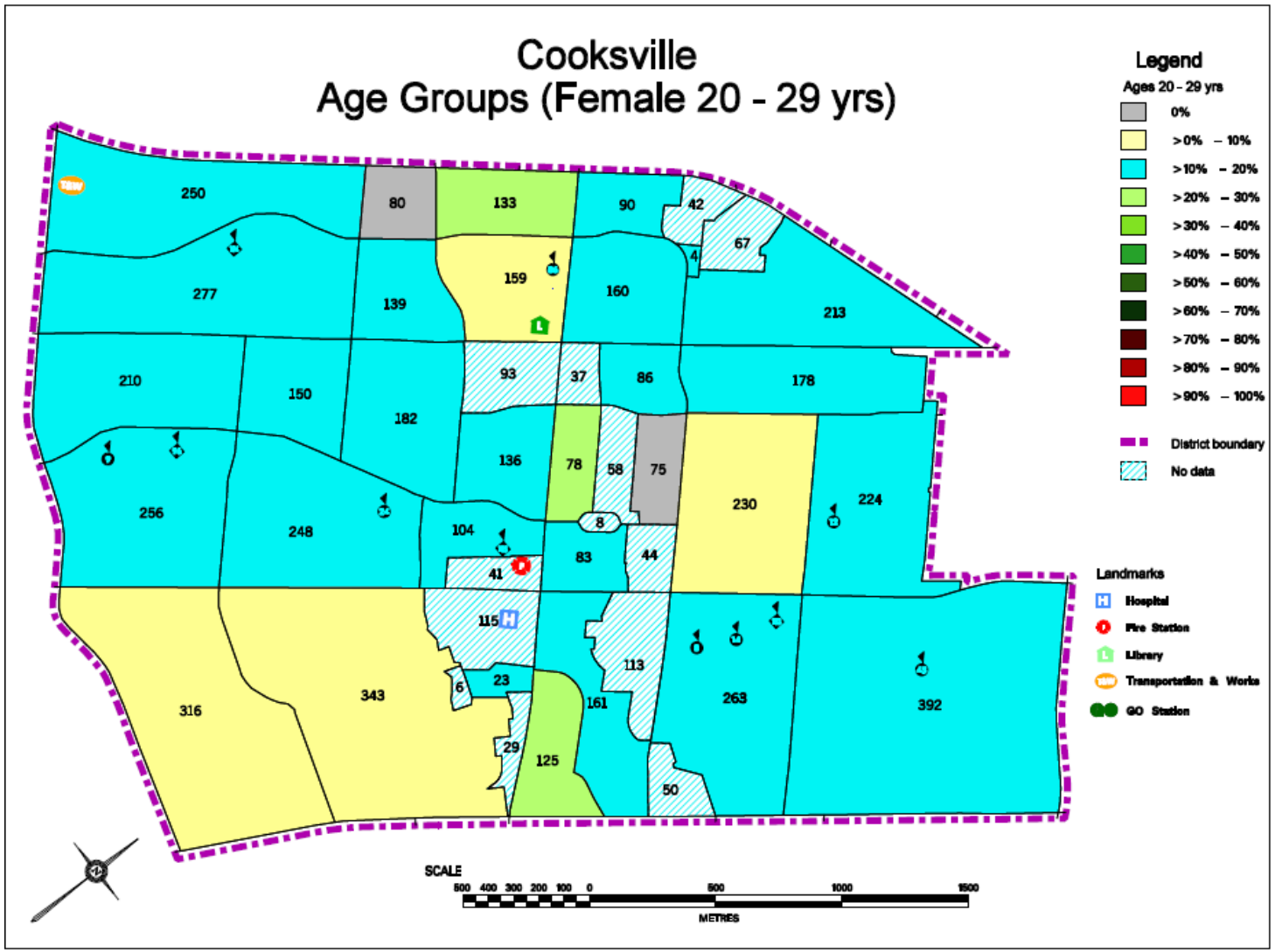
- Highest concentration is 10-20% in the southern end of Cooksville
- 0-10% is evenly distributed throughout Cooksville



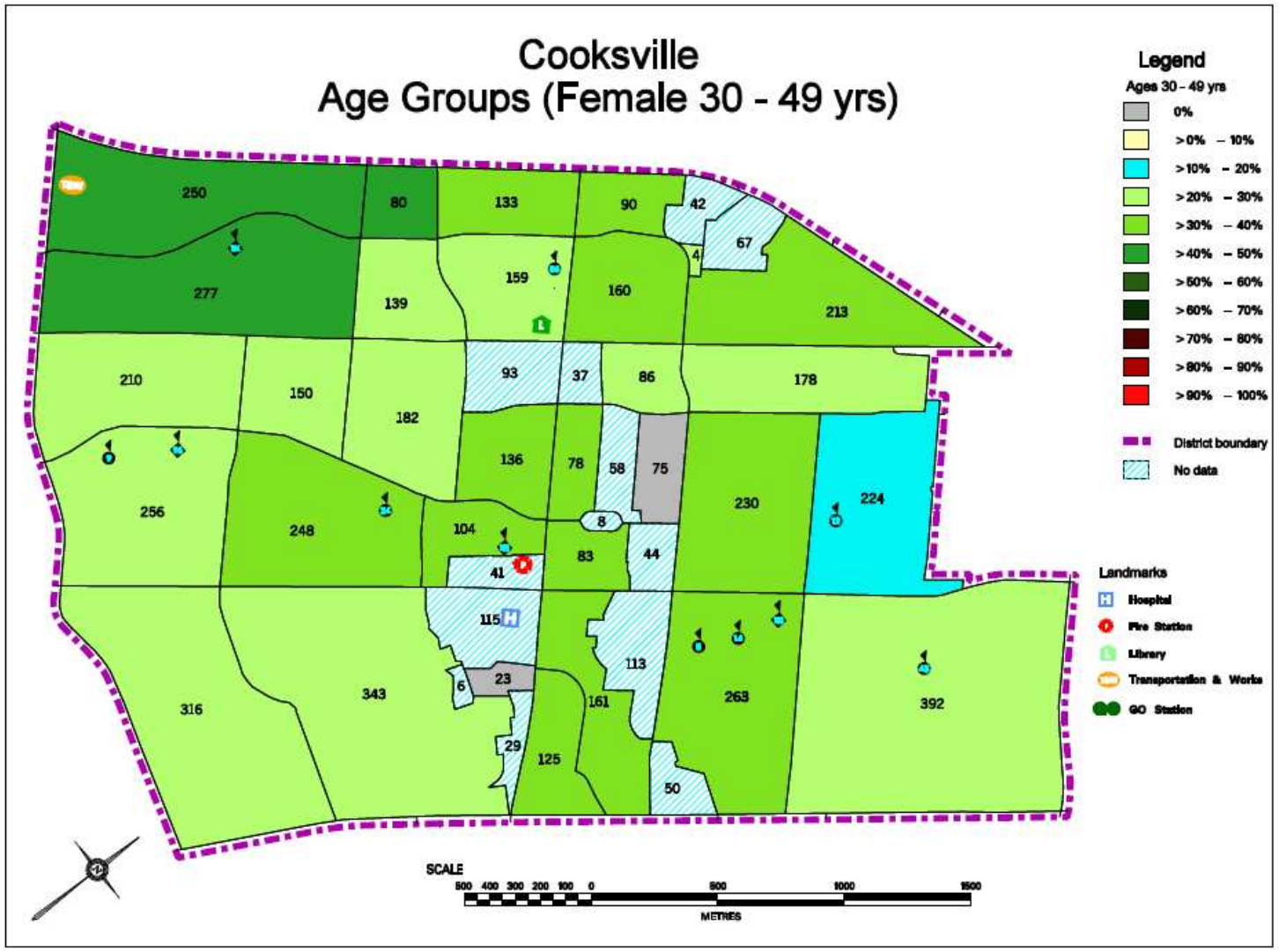
- Highest concentration is 10-20%
- 0-20% is evenly distributed throughout Cooksville



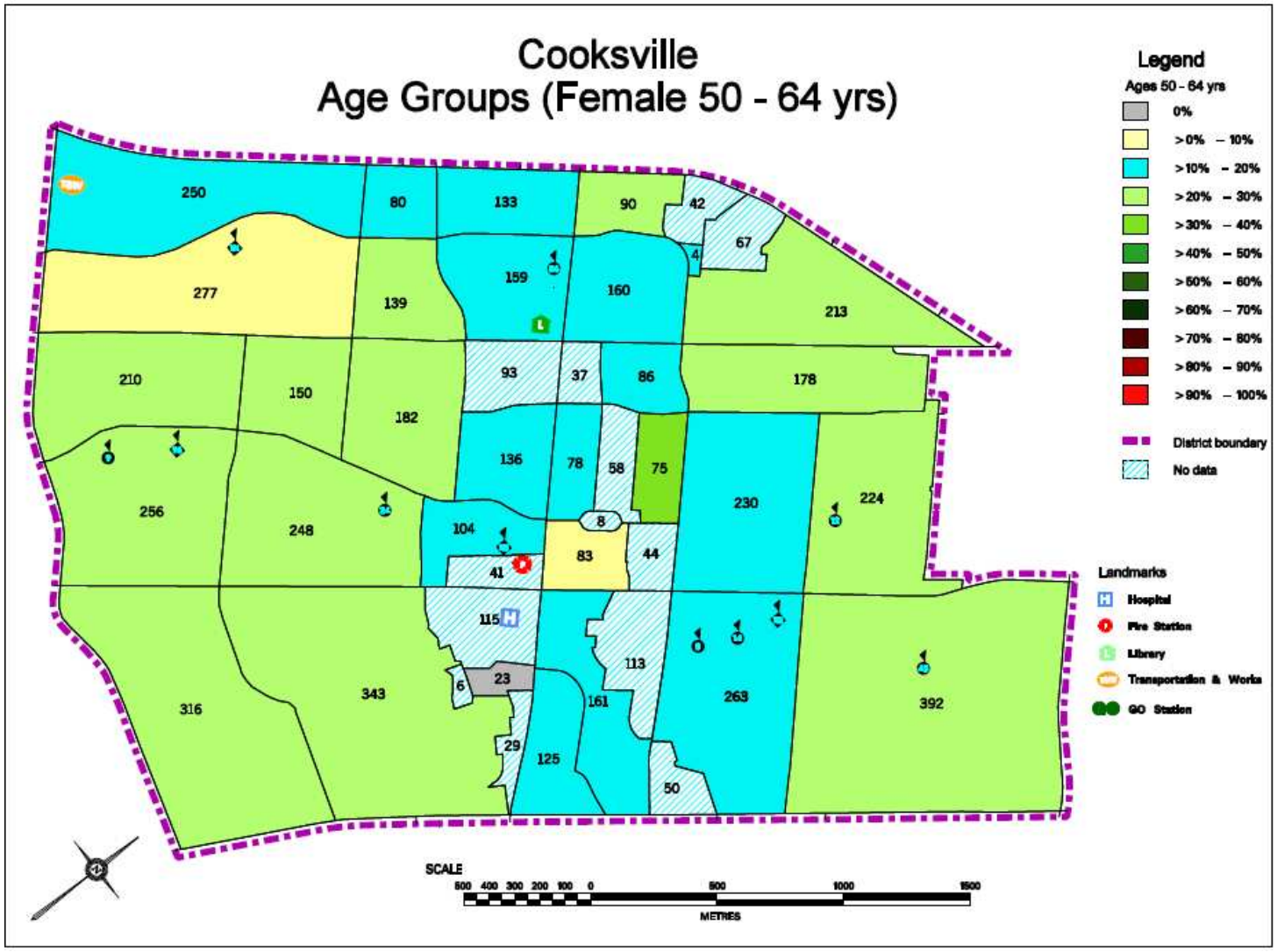
- Highest concentration is 80-90% where Bronte College is located (a boarding school)
- 0-20% is evenly distributed throughout Cooksville



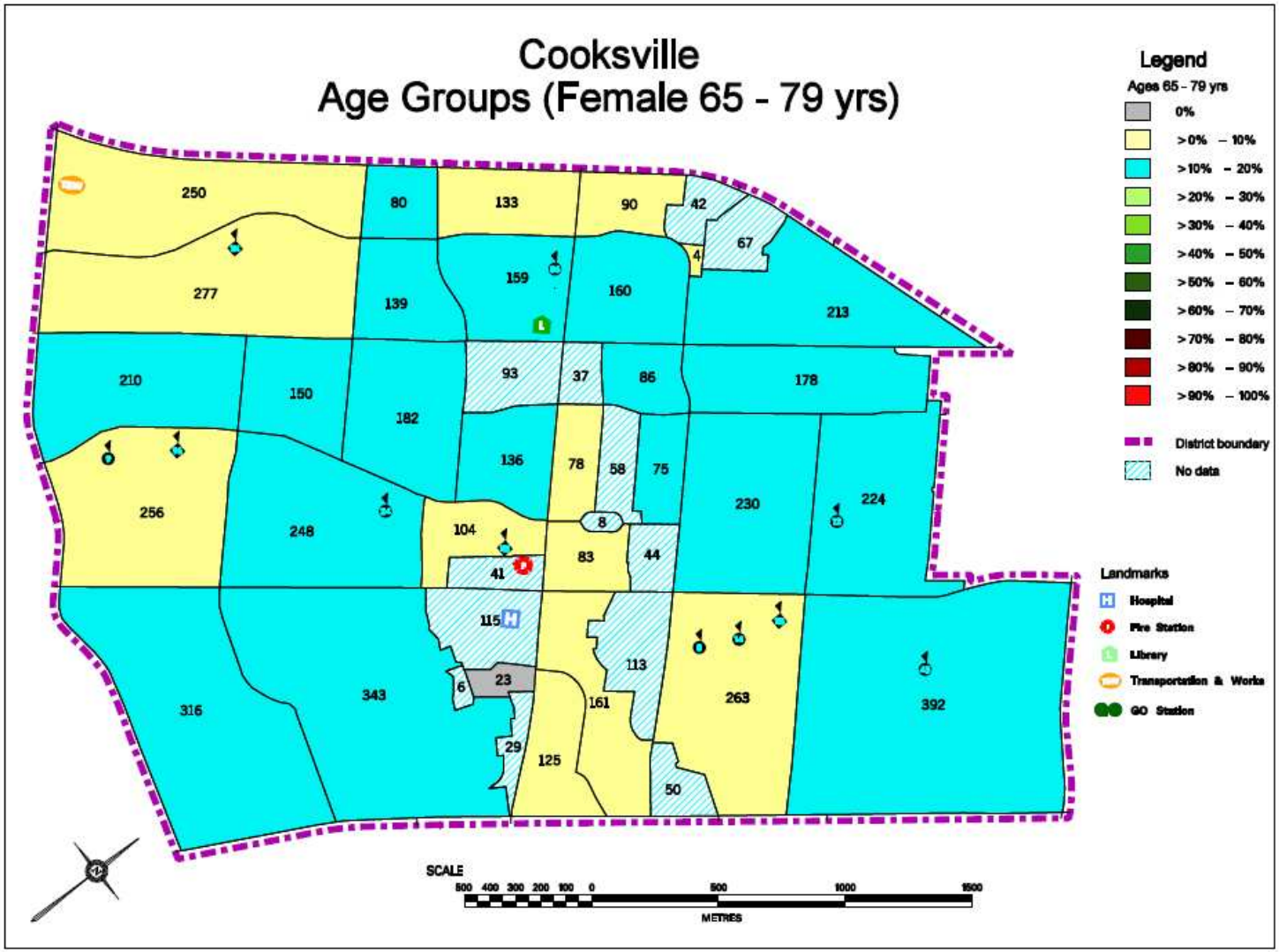
- Highest concentration is 20-30%
- 10-20% is mostly distributed throughout Cooksville



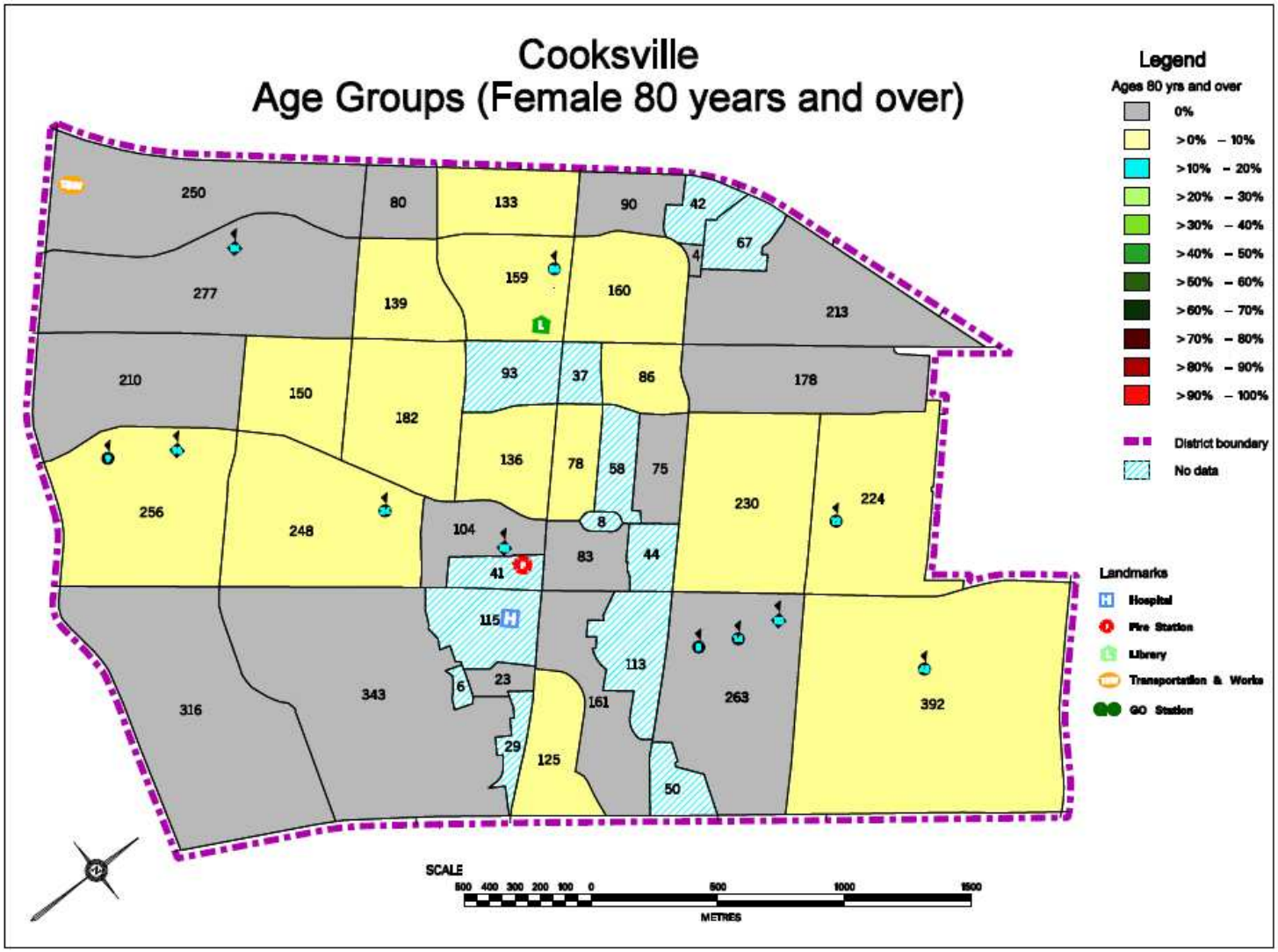
- Highest concentration is 40-50%
- 20-40% is evenly distributed throughout Cooksville



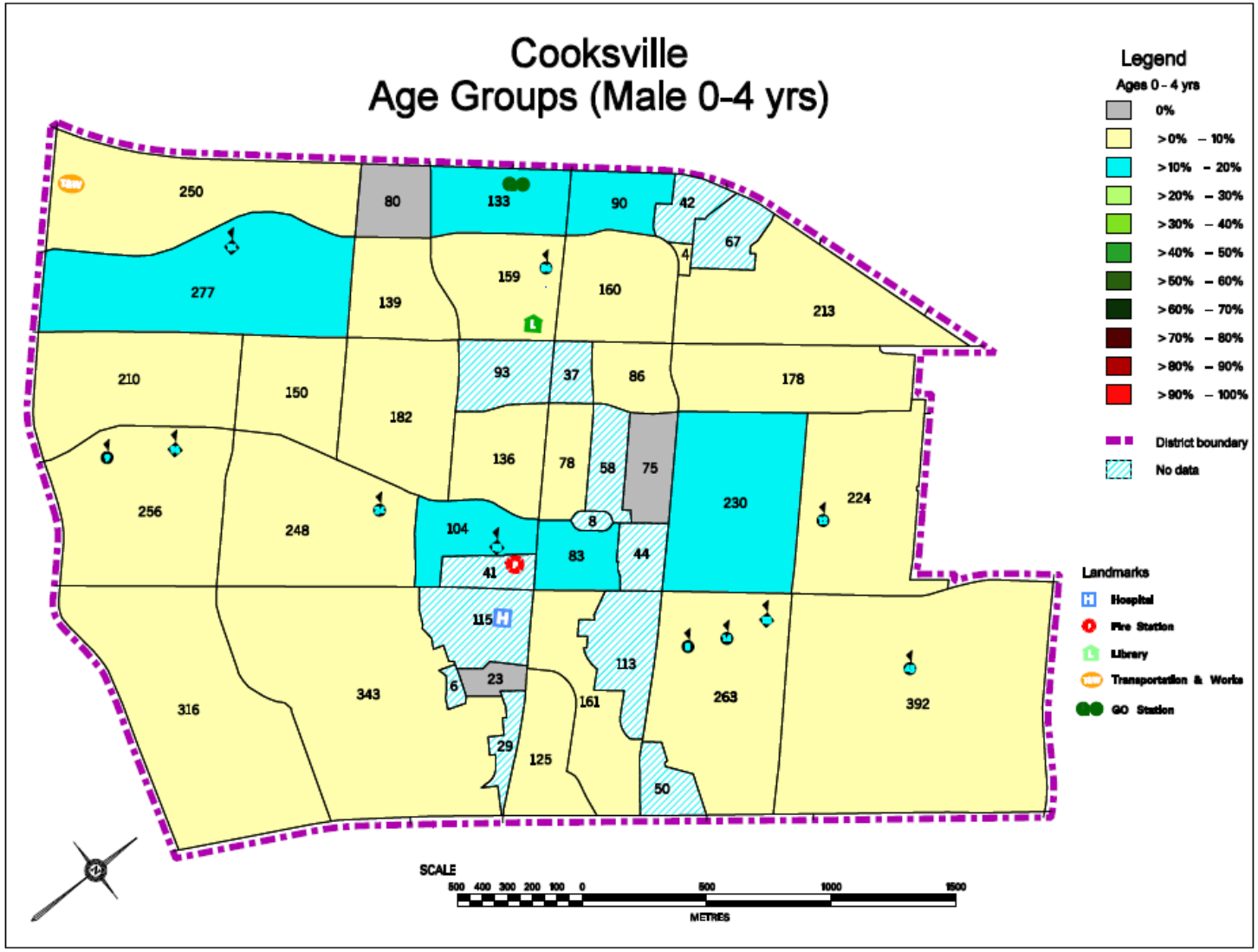
- Highest concentration is 30-40%
- 10-30% is distributed throughout Cooksville



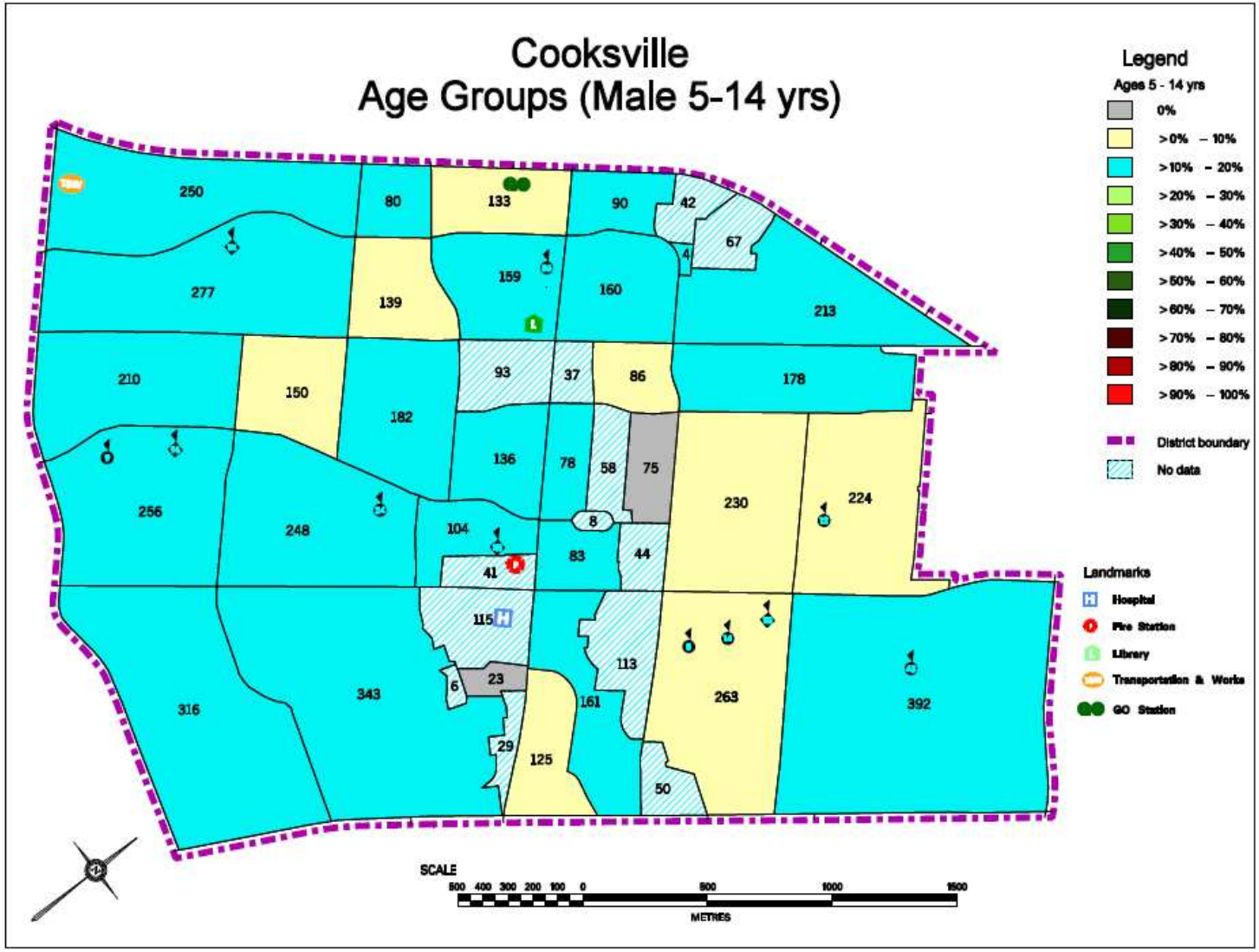
- Highest concentration is 10-20%
- 0-20% is distributed throughout Cooksville



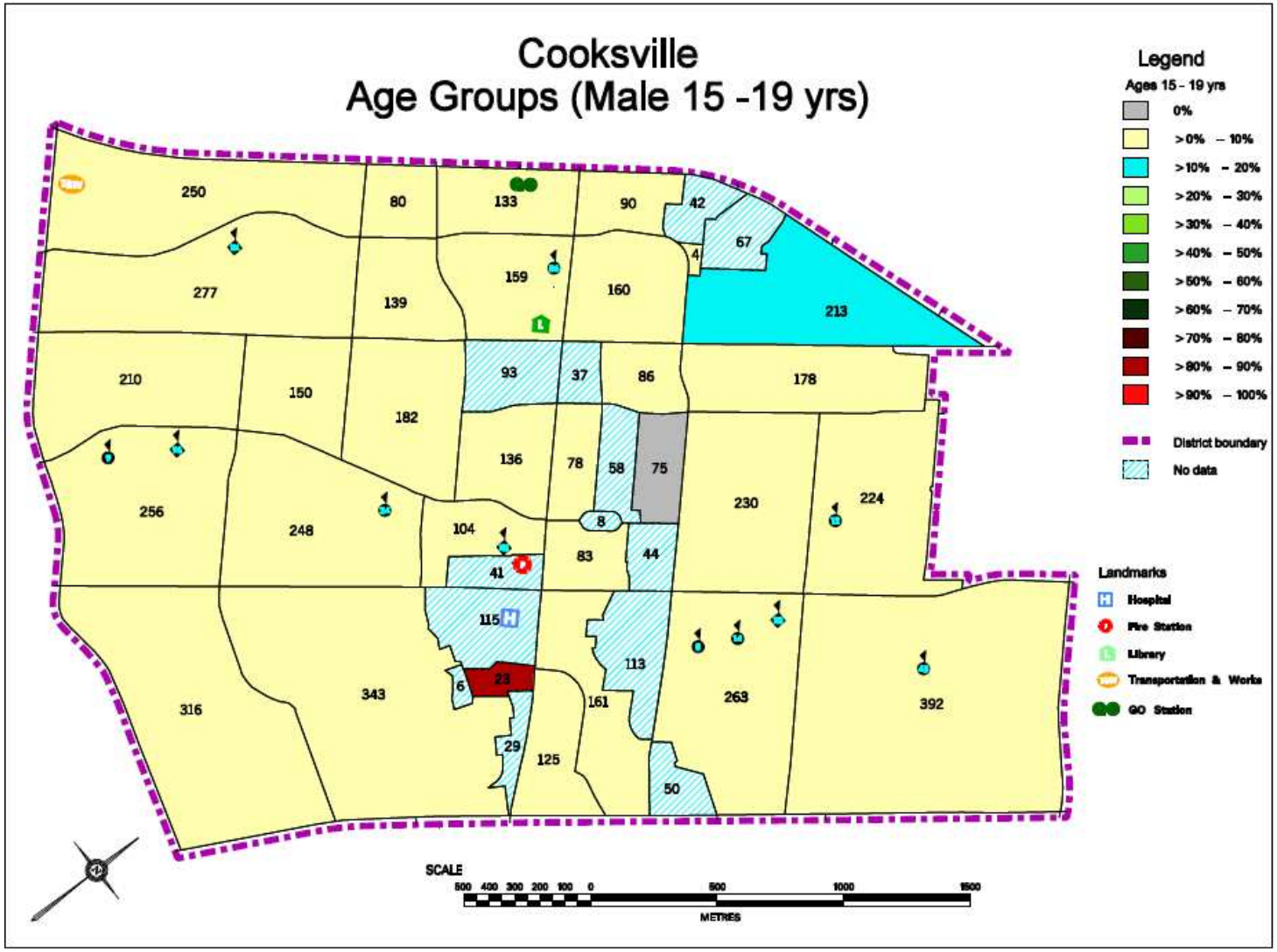
- Highest concentration is 0-10%
- Many areas with 0%



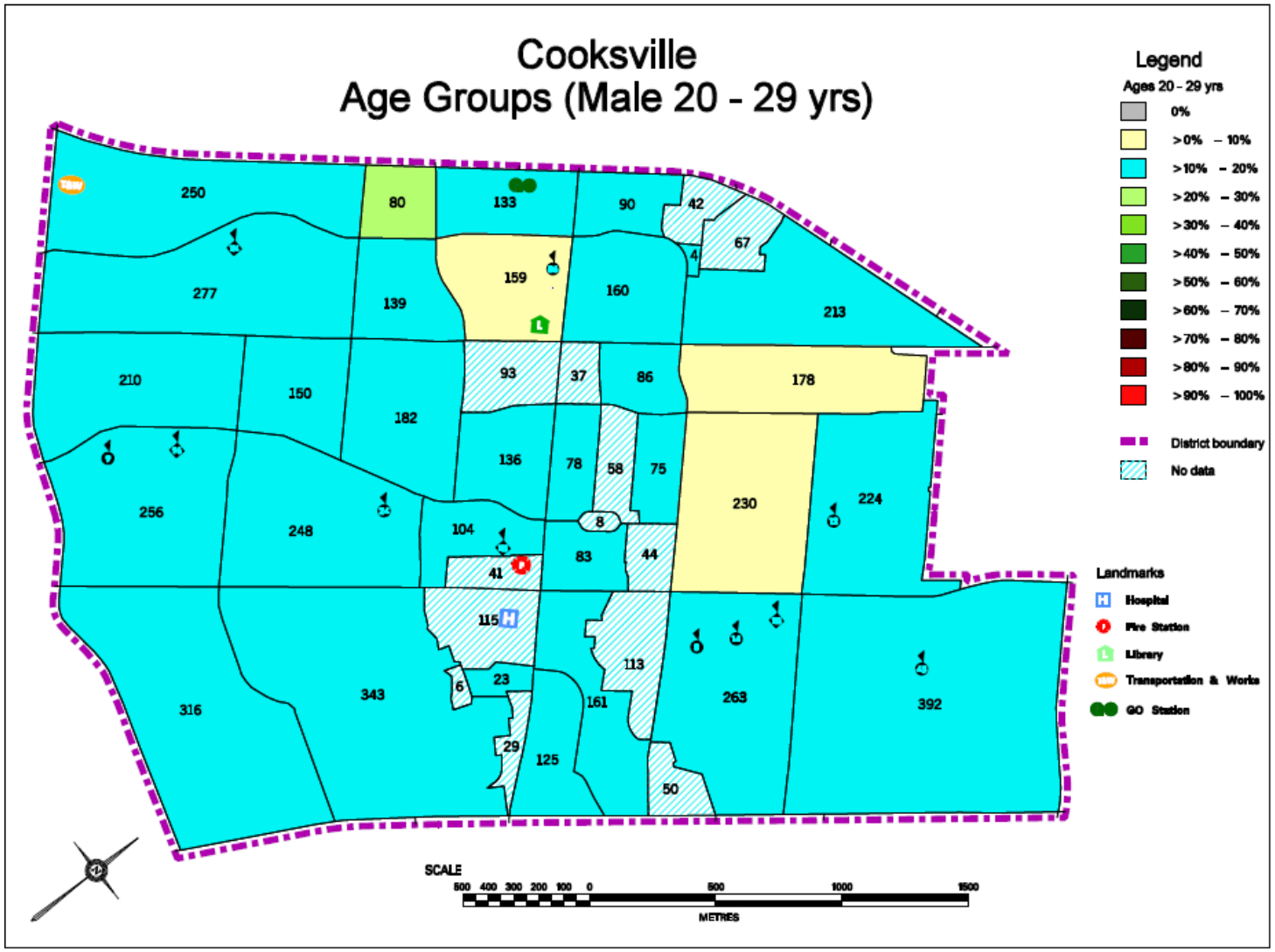
- Highest concentration is 10-20%
- 0-10% is evenly distributed throughout Cooksville



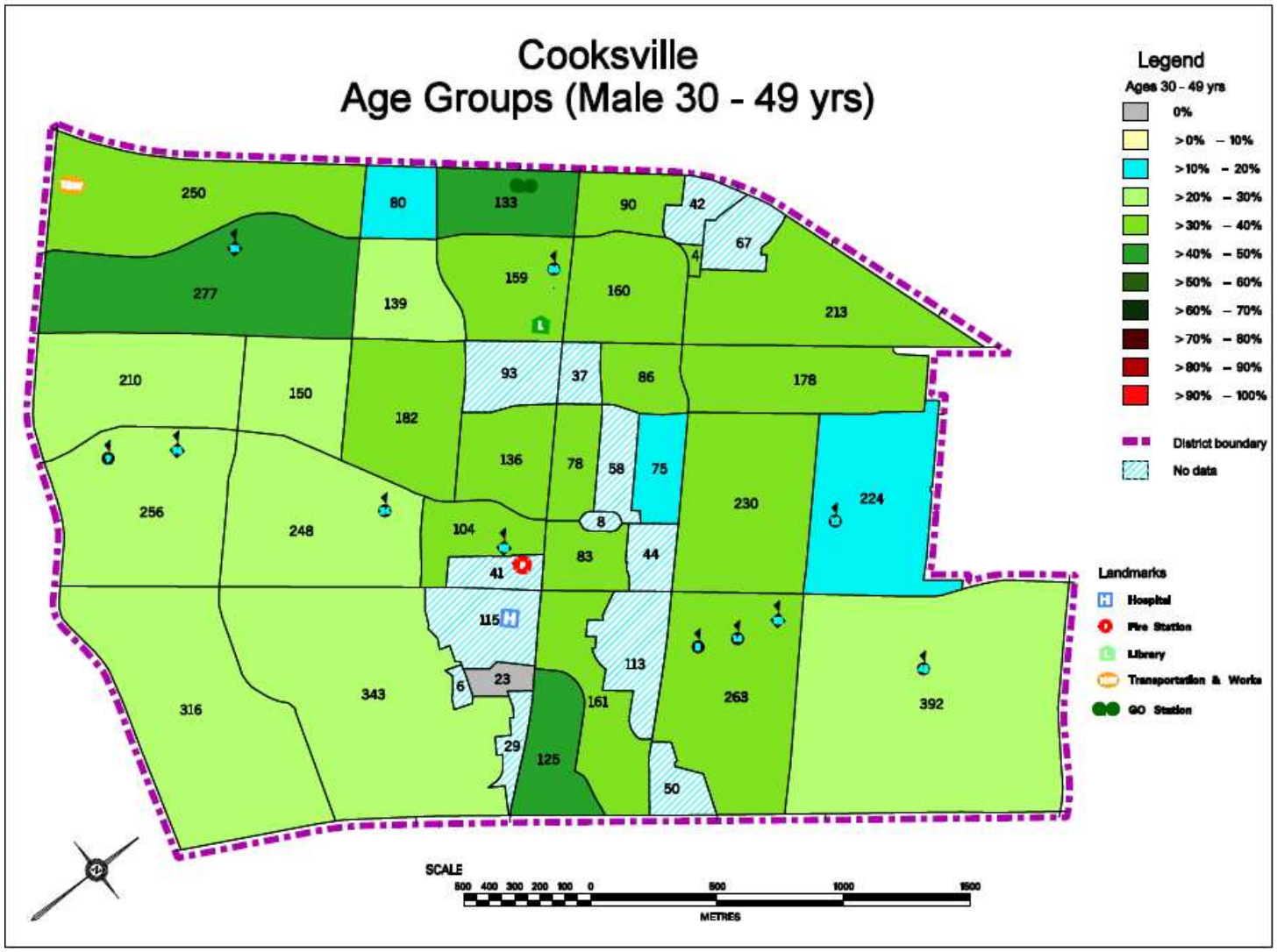
- Highest concentration is 10-20%
- 0-20% is evenly distributed throughout Cooksville



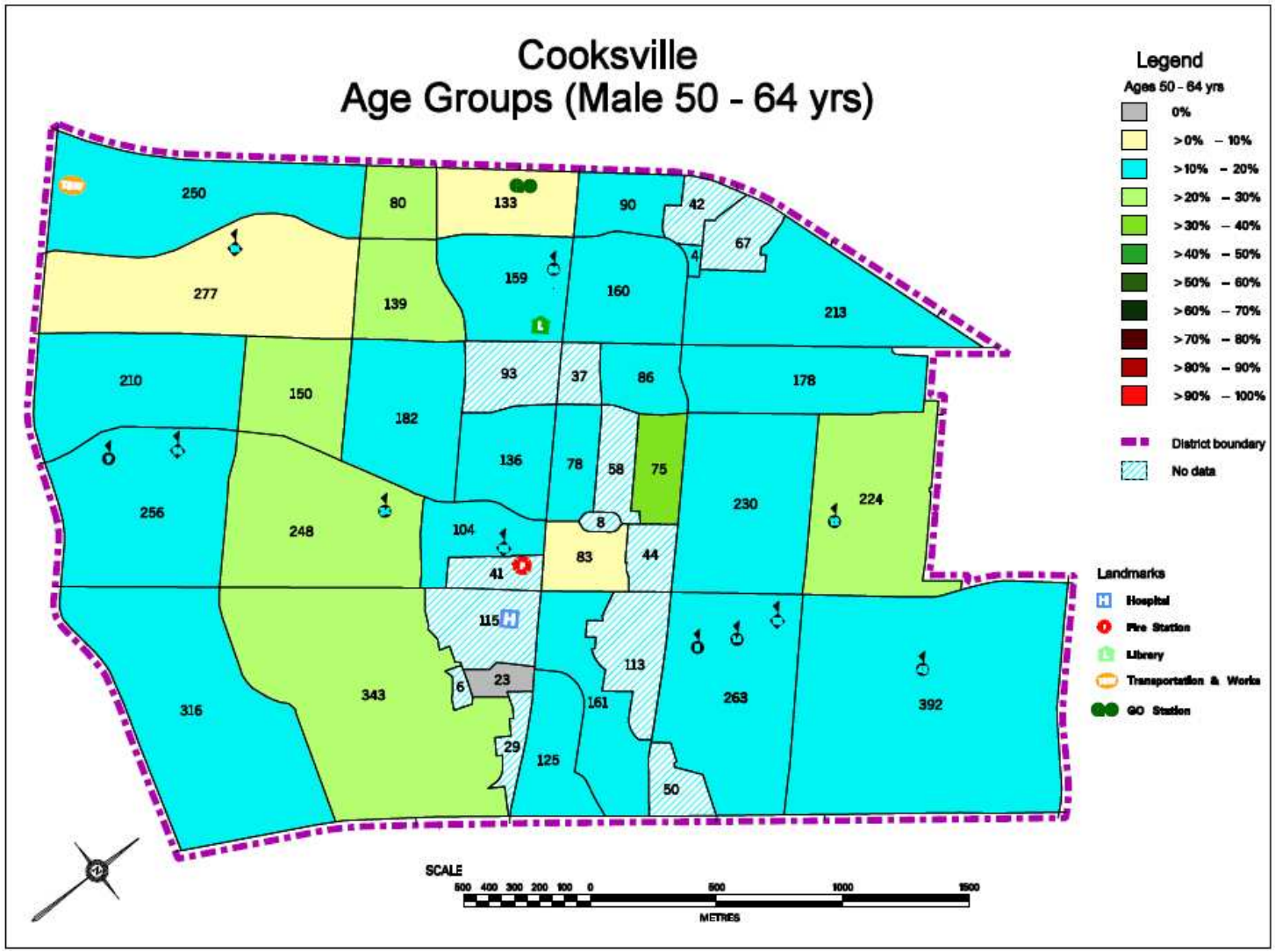
- Highest concentration is 80-90% at Bronte College (a boarding school)
- 0-10% is evenly distributed throughout Cooksville



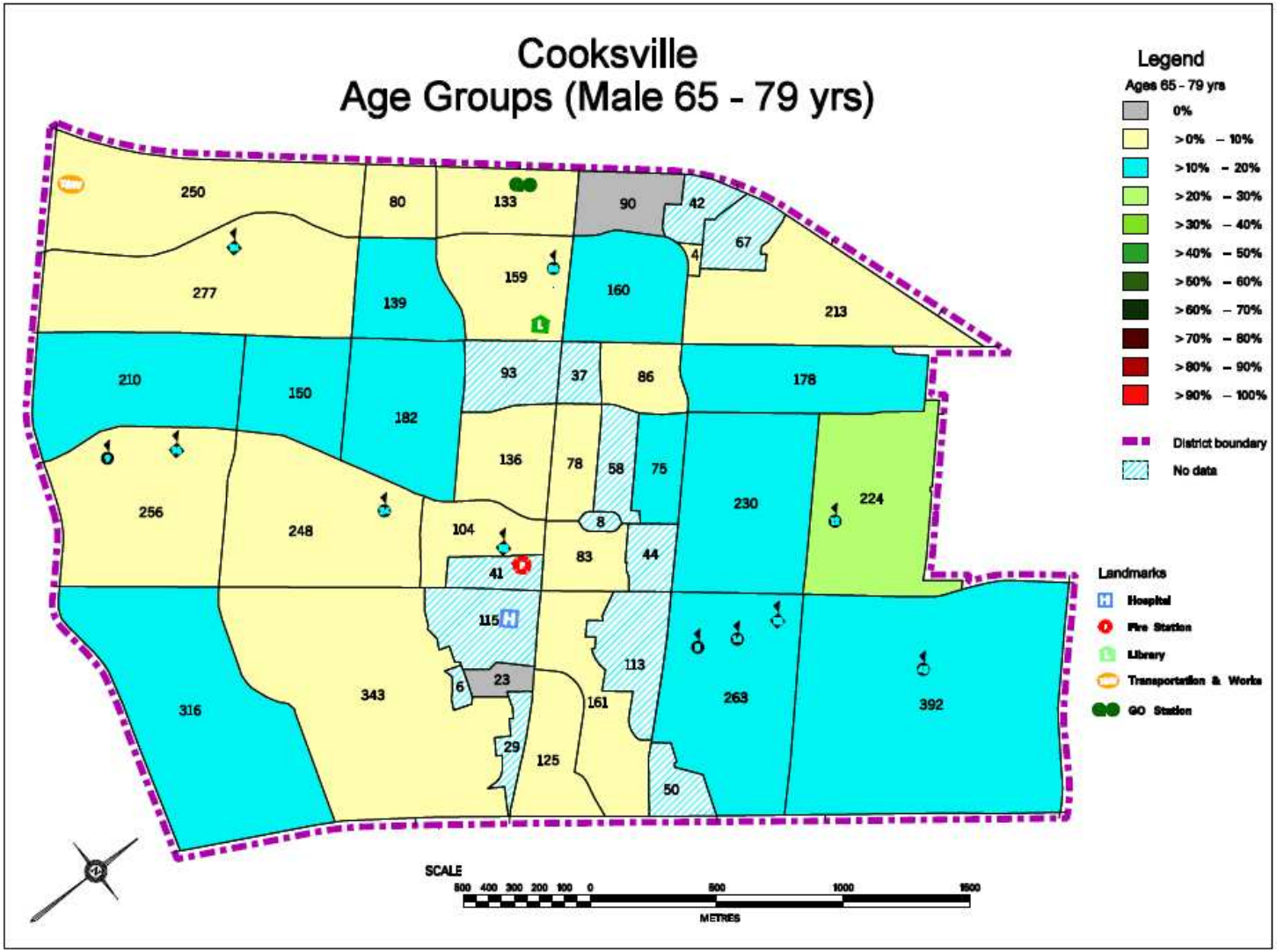
- Highest concentration is 20-30%
- 10-20% is evenly distributed throughout Cooksville



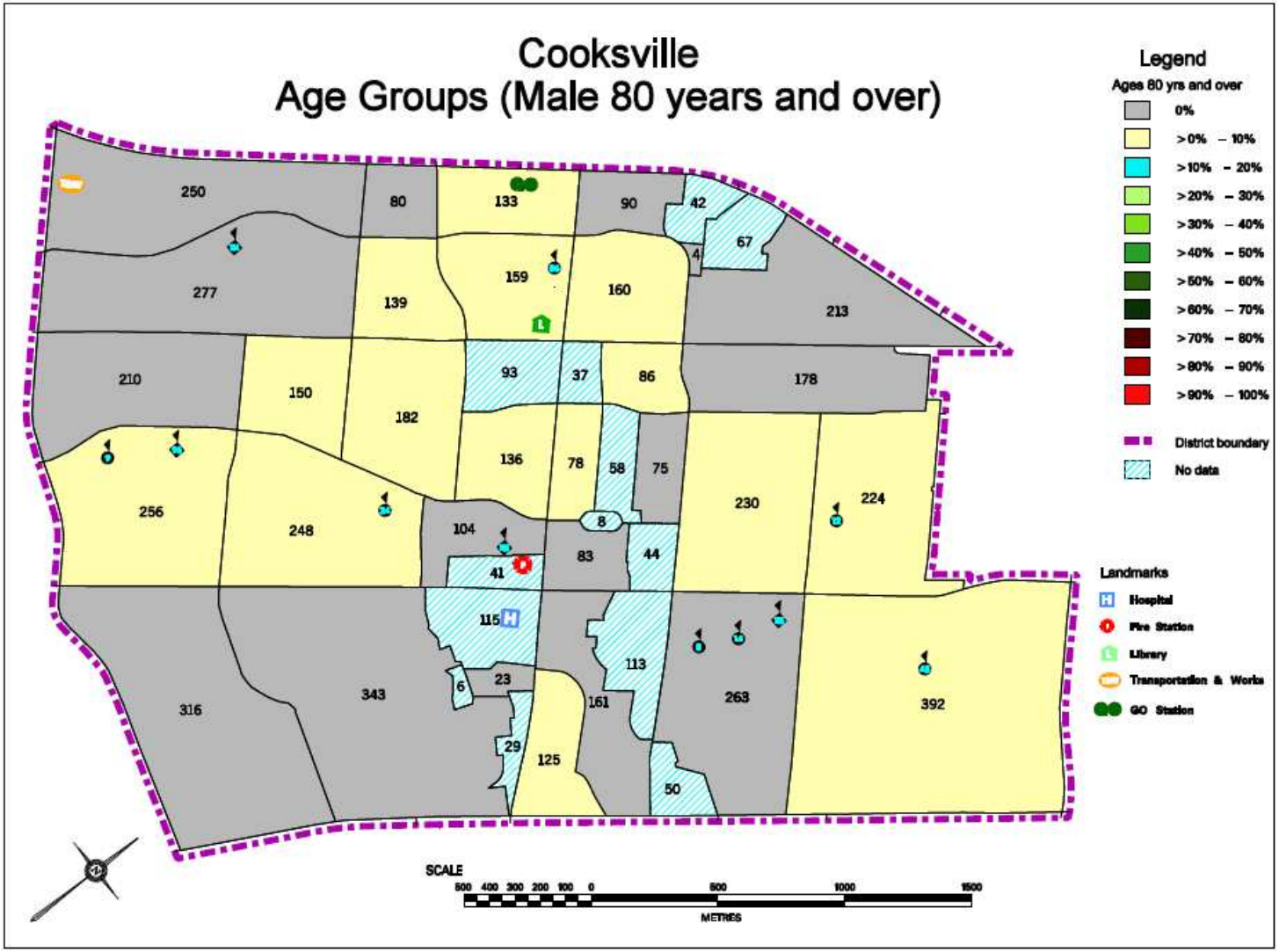
- Highest concentration is 40-50%
- 20-40% is evenly distributed throughout Cooksville



- Highest concentration is 30-40%
- 10-30% is evenly distributed throughout Cooksville



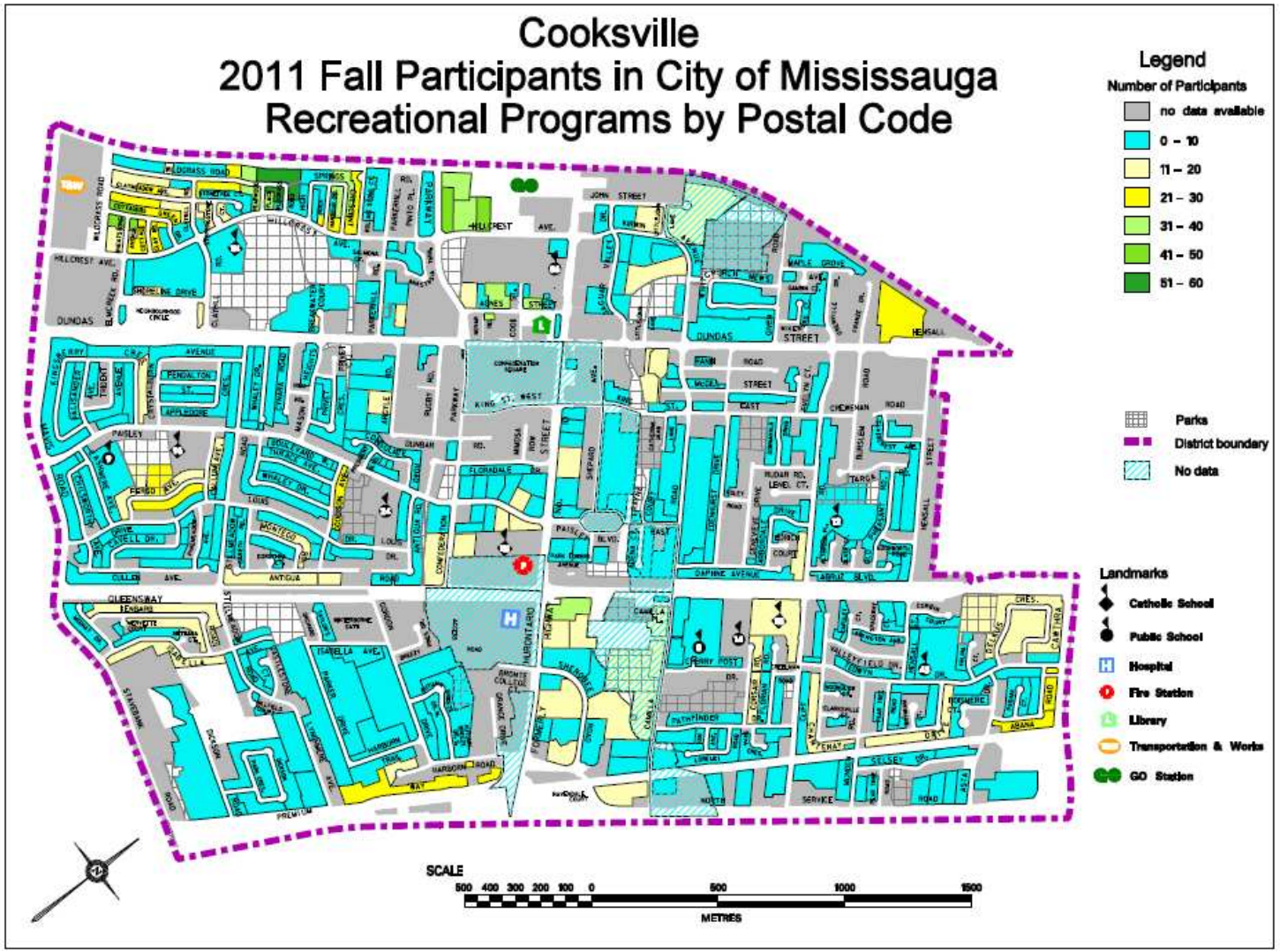
- Highest concentration is 20-30%
- 0-20% is evenly distributed throughout Cooksville



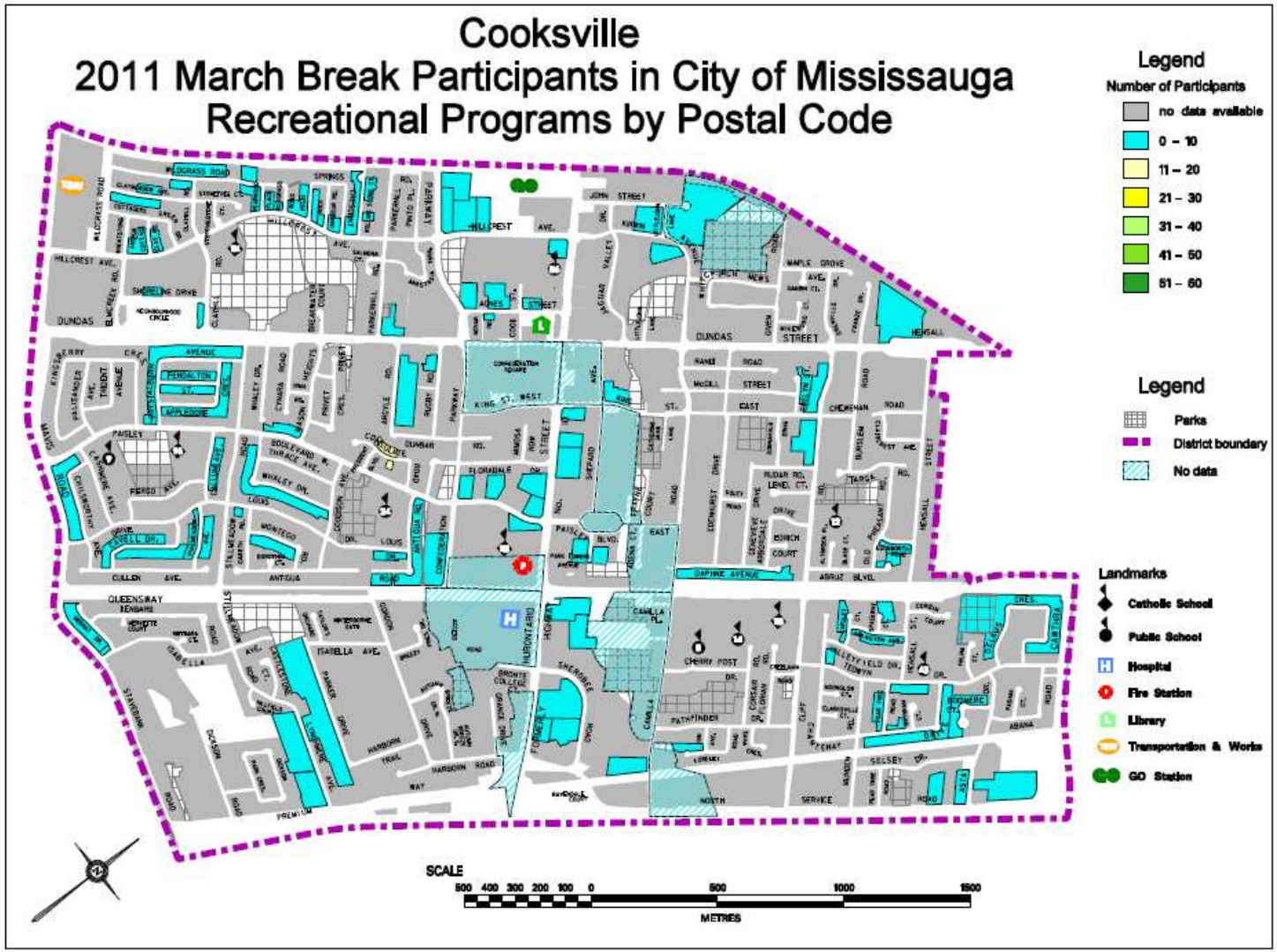
- Highest concentration is 0-10%
- 0-10% is distributed throughout Cooksville

Convivial Community

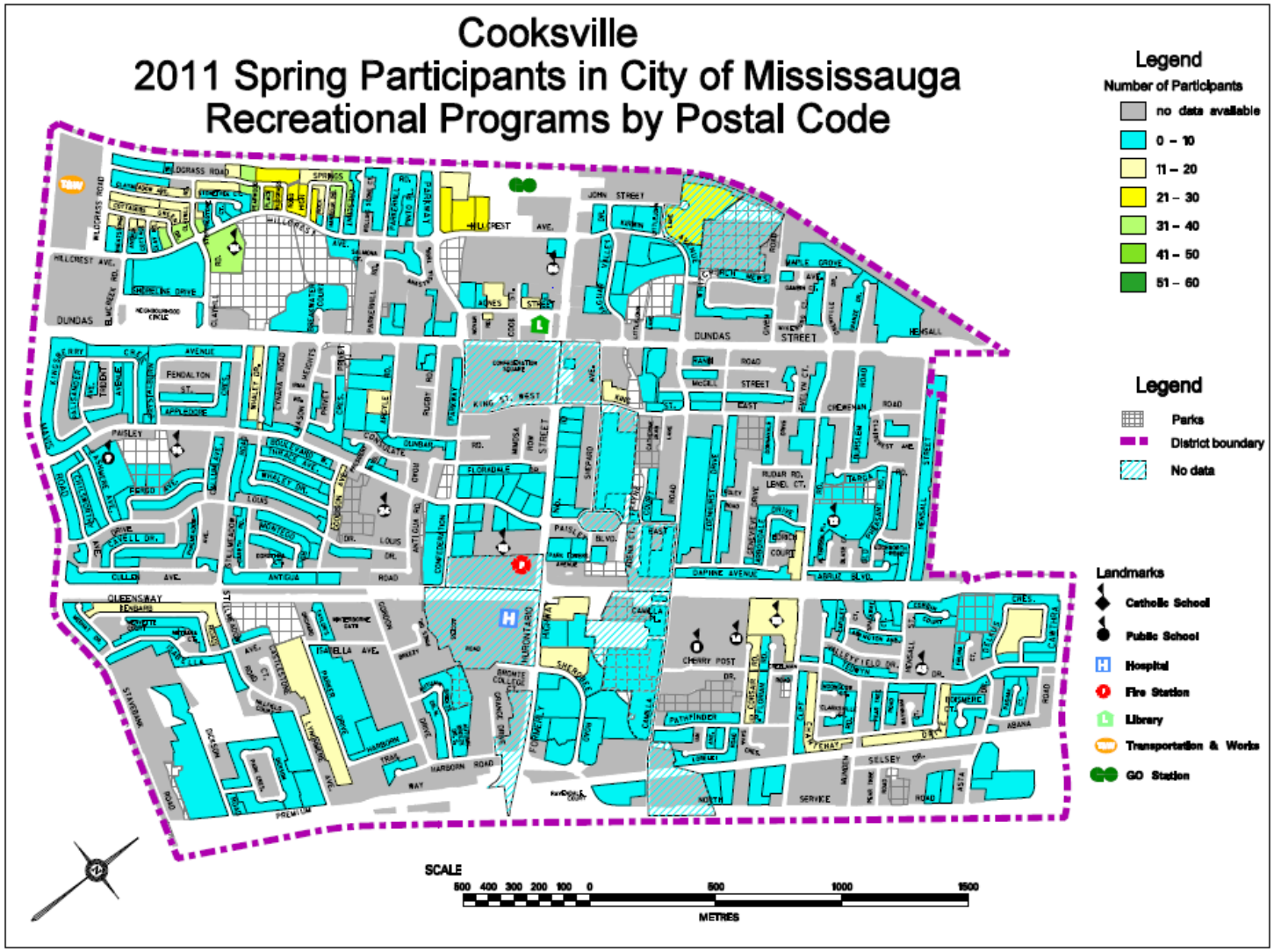
Convivial Community is concerned with the web of social relations and social cohesion[10]. It can also be described as the civic community and social solidarity[10]. For this section the project indicators were program participants at community centre locations close to Cooksville, art piece locations, and crime occurrences in Cooksville. Once again, no relationship was found to walking and cycling based on the maps reviewed. Cooksville does not have a recreation facility located directly inside of it, but two lie right outside of its boundary. Cooksville also has 2 art pieces. Studies indicate that "…pedestrian friendly environments help create a sense of community, 'a feeling that members have belonging and being important to each and a shared faith that members' needs will be met by the commitment to be together'"[23]. Understanding links between a convivial community and walking and cycling still needs further investigation as data alone does not help to realize the trends that could present themselves. Perhaps, consulting with community members to see how programs and festivals may increase walking and cycling in their neighbourhood may be beneficial.



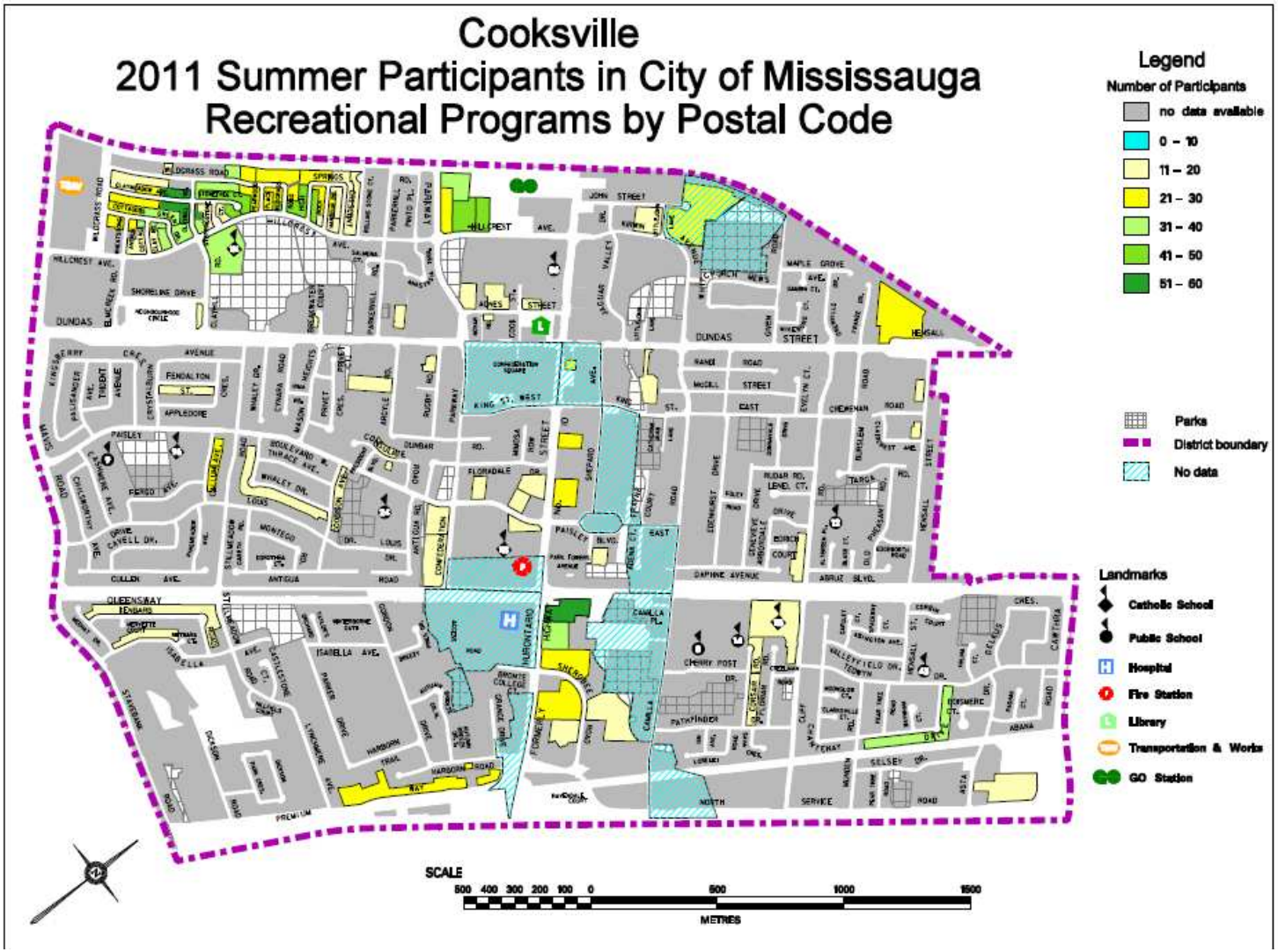
- 0-10 participants in most areas
- NW corner goes as high as 51-60 participants



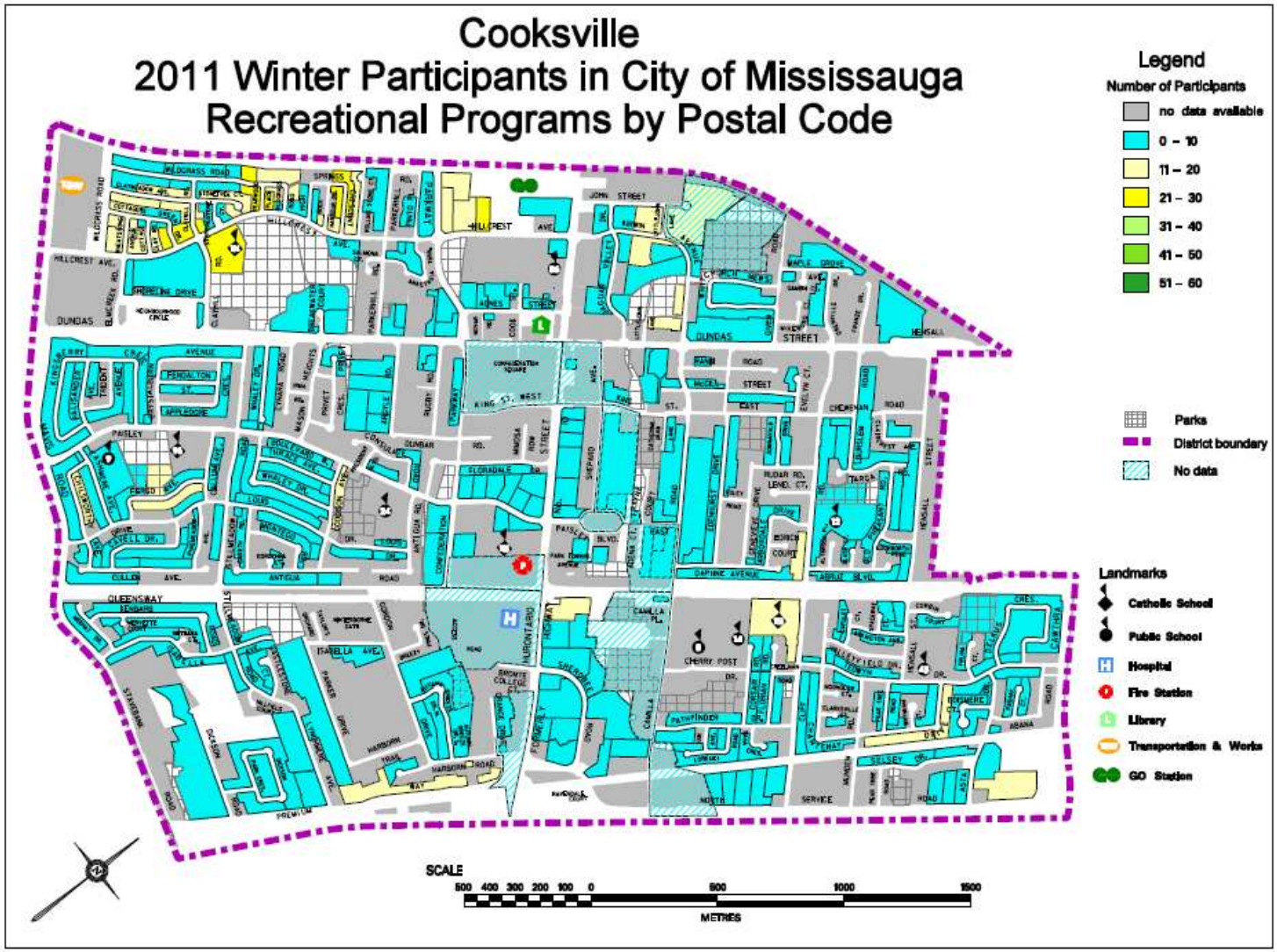
- Low participation across Cooksville
- Highest number of participants is 0-10



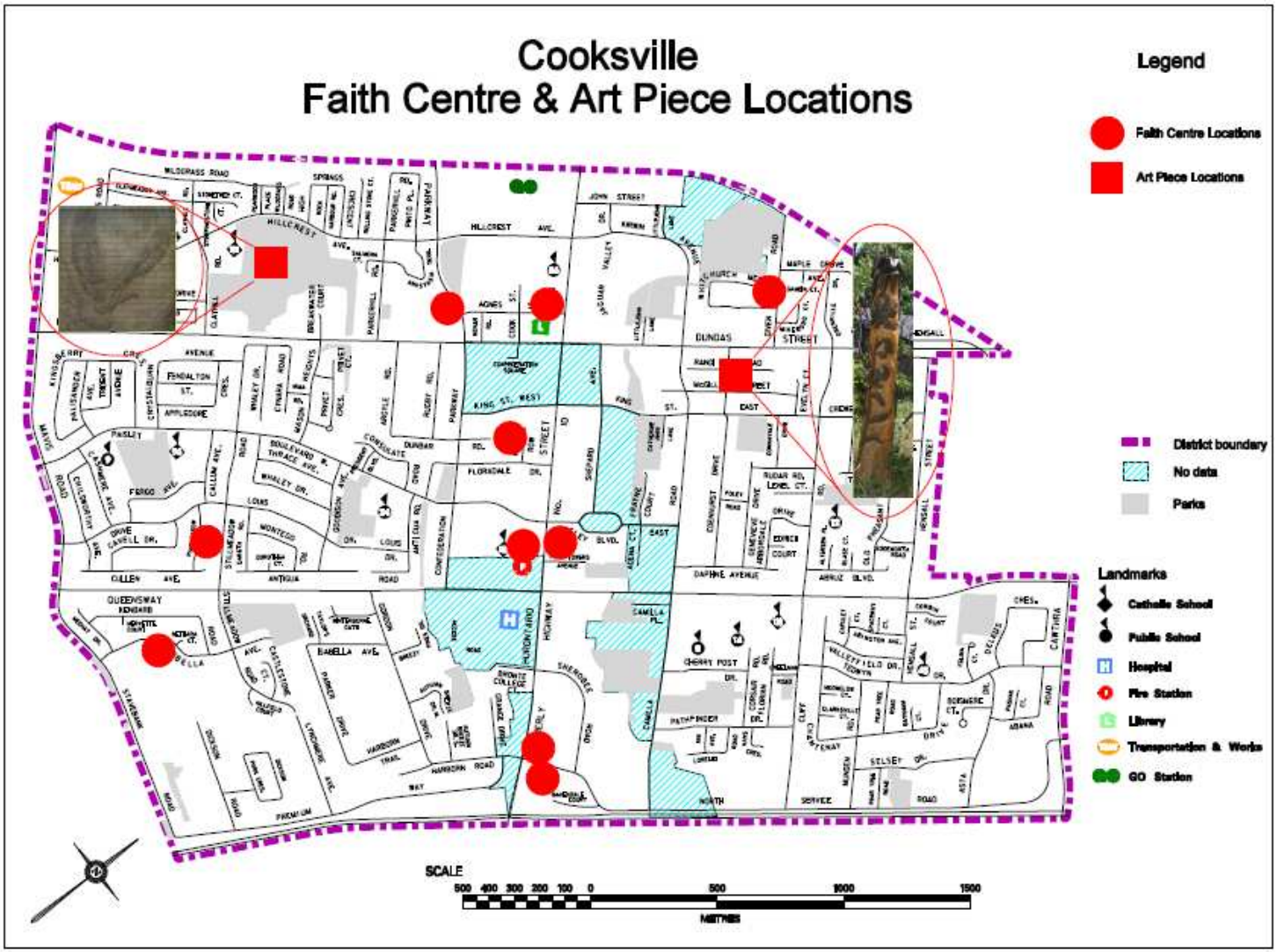
- Highest participation is in the NW corner with 31-40 participants



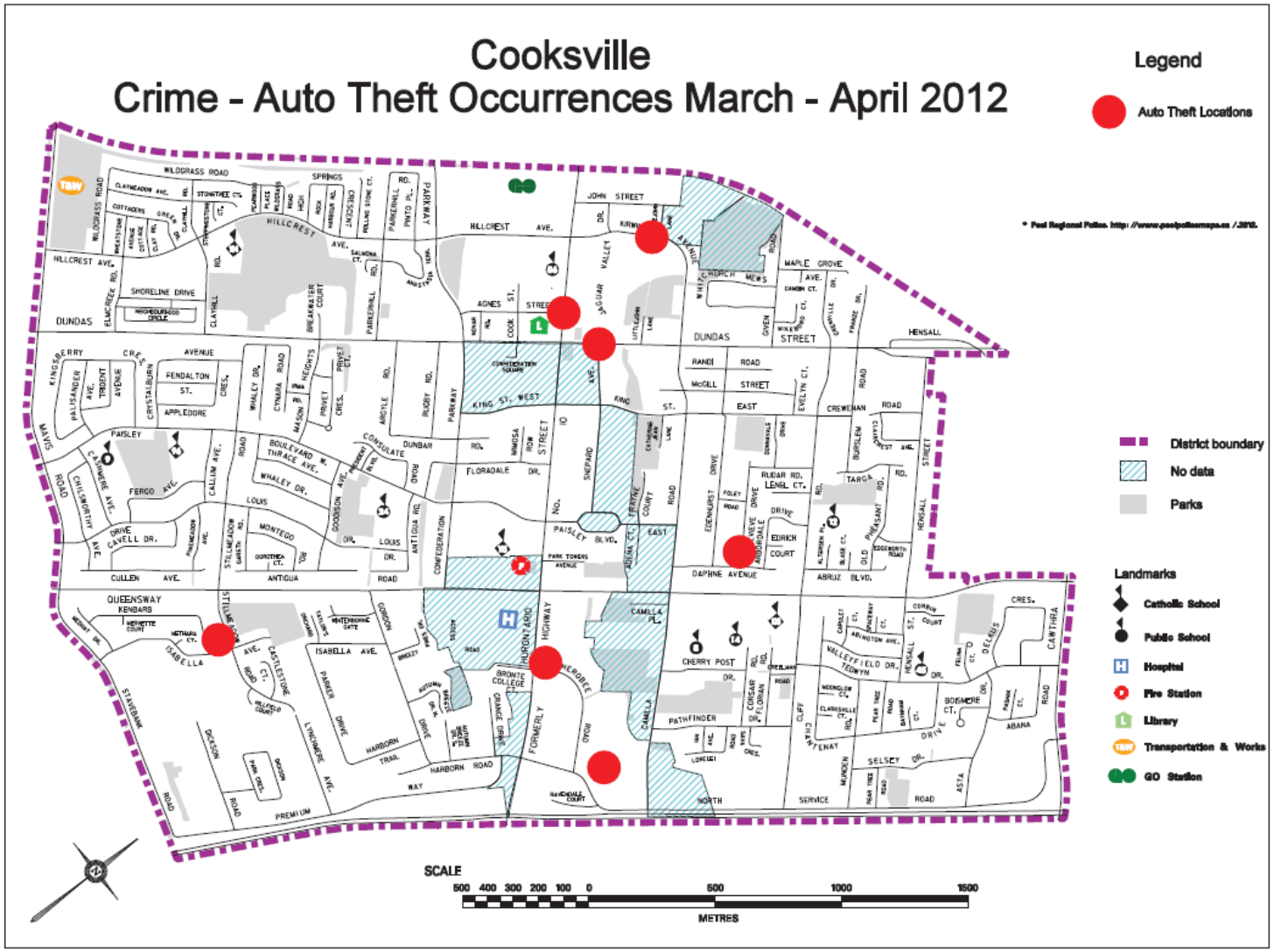
- Highest participation is in Southern area with 51-60 participants
- NW corner also has a high participation rate



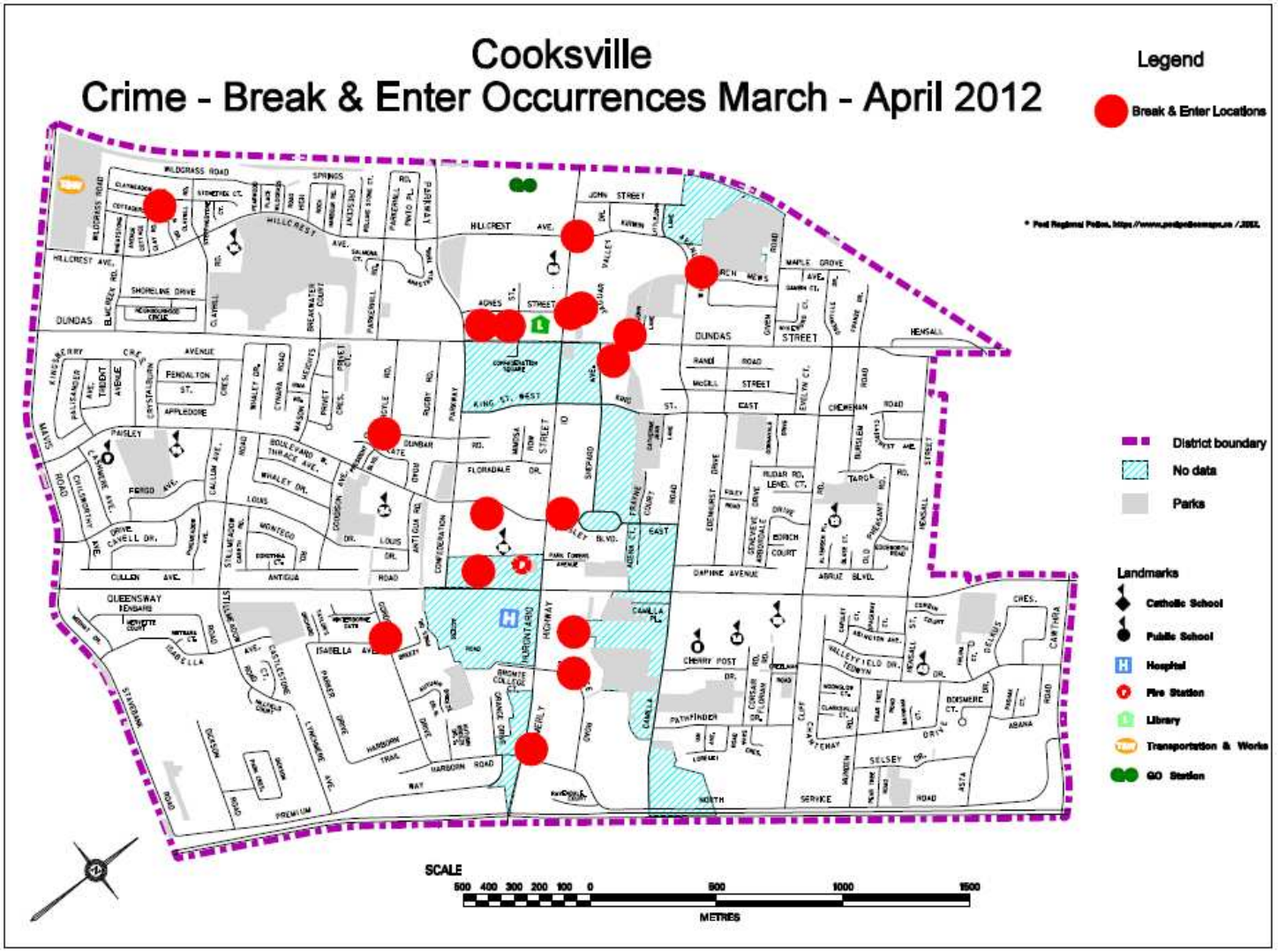
- Highest participation is in the NW corner with 21-30 participants



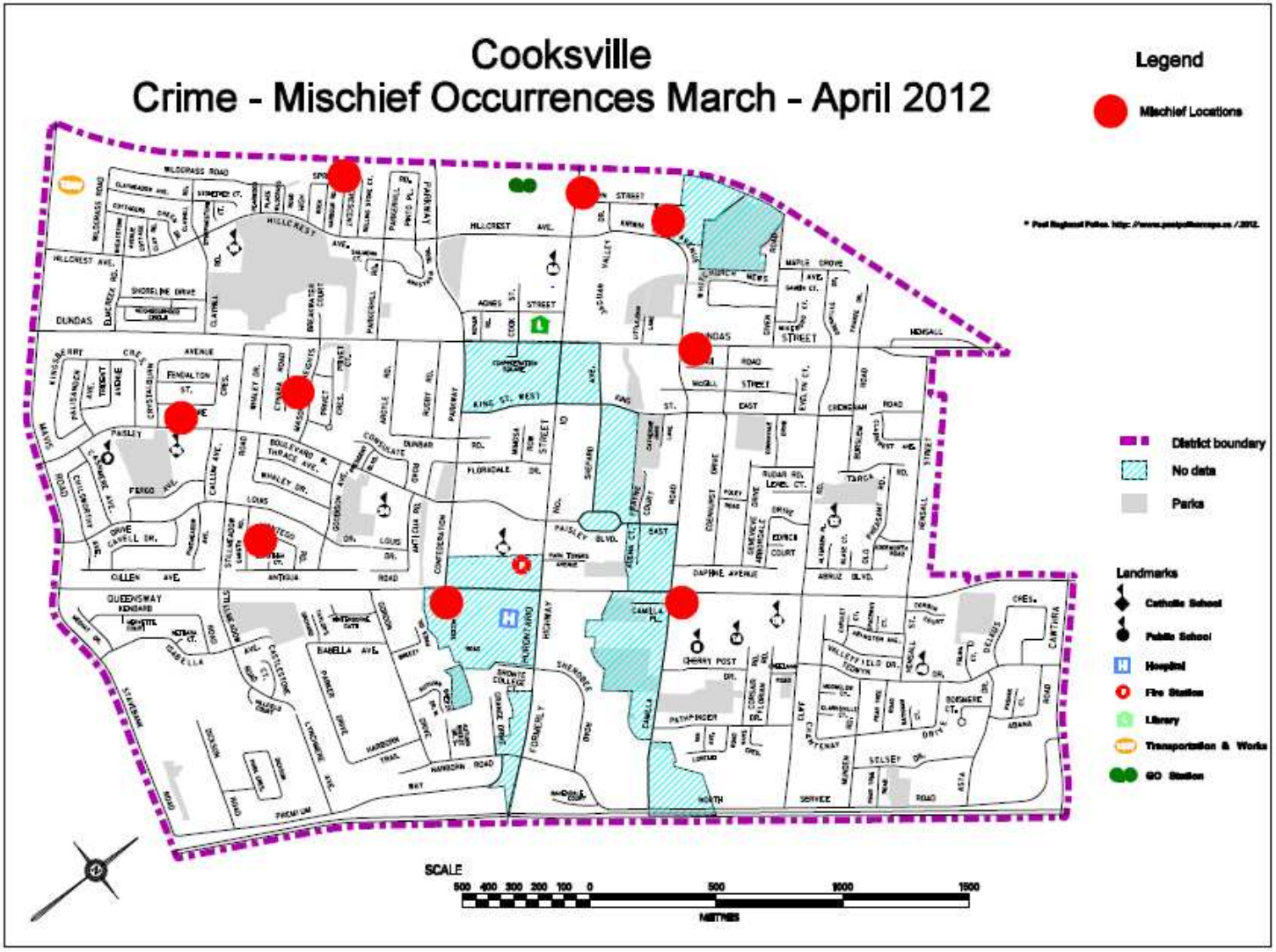
- There are 10 faith centres in Cooksville most are along Hurontario Street
- There are 2 art pieces in Cooksville. One is at Brickyard Park and the other is located in a neighbourhood



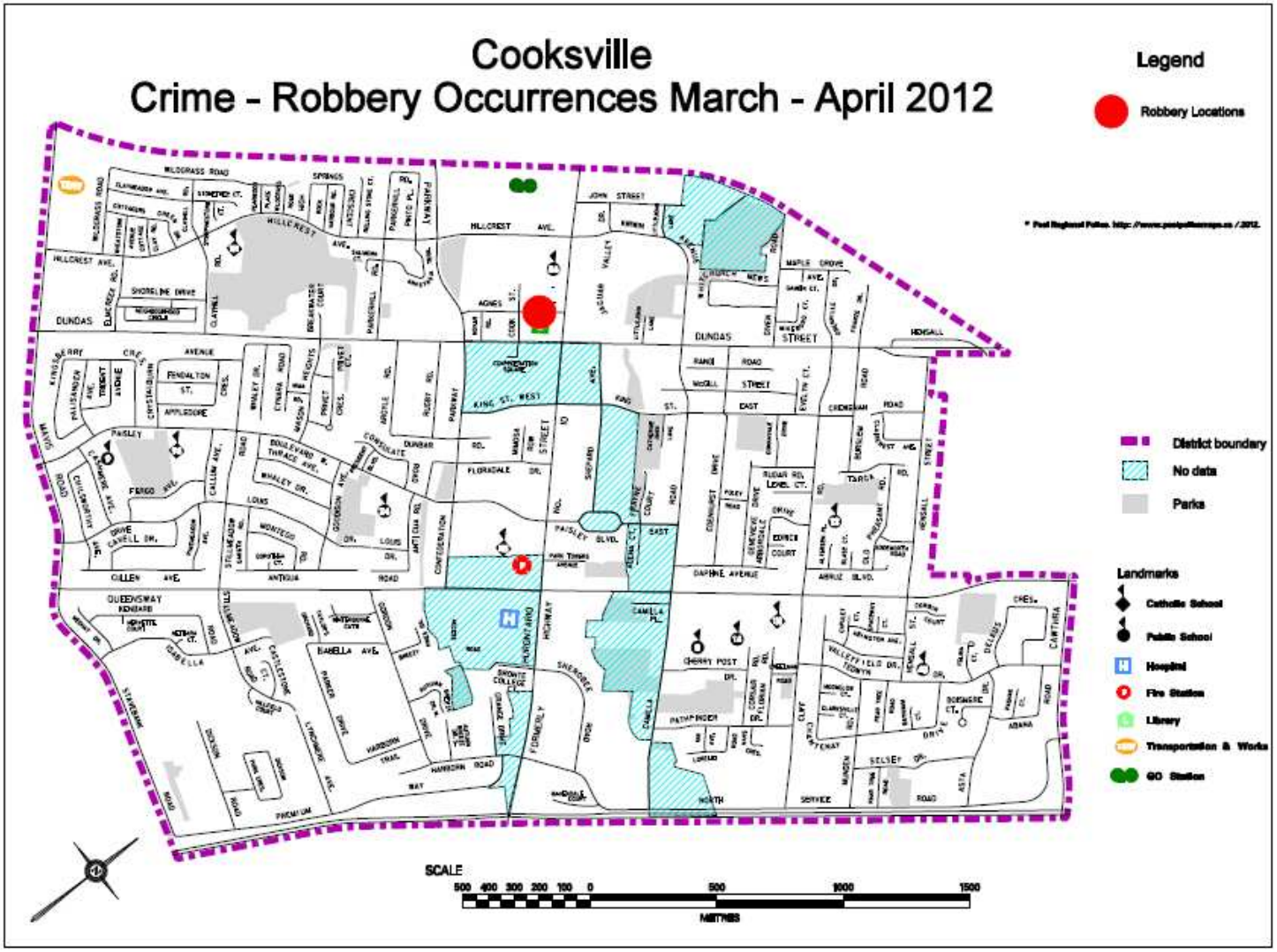
- There is a total of 7 auto thefts mainly along Hurontario Street



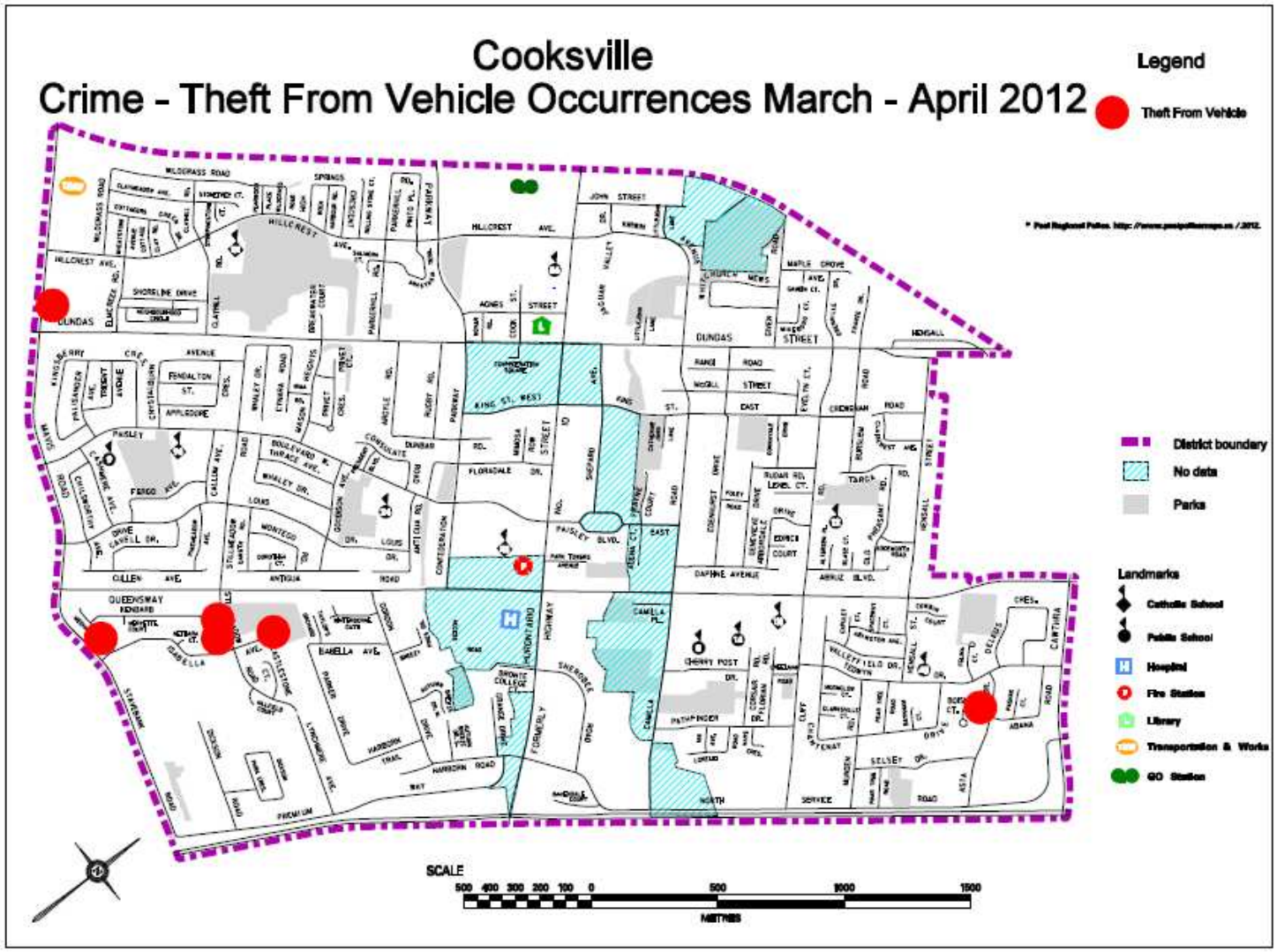
- There are a total of 17 break and enters mainly along Hurontario Street



- There are a total of 9 mischief occurrences located throughout Cooksville



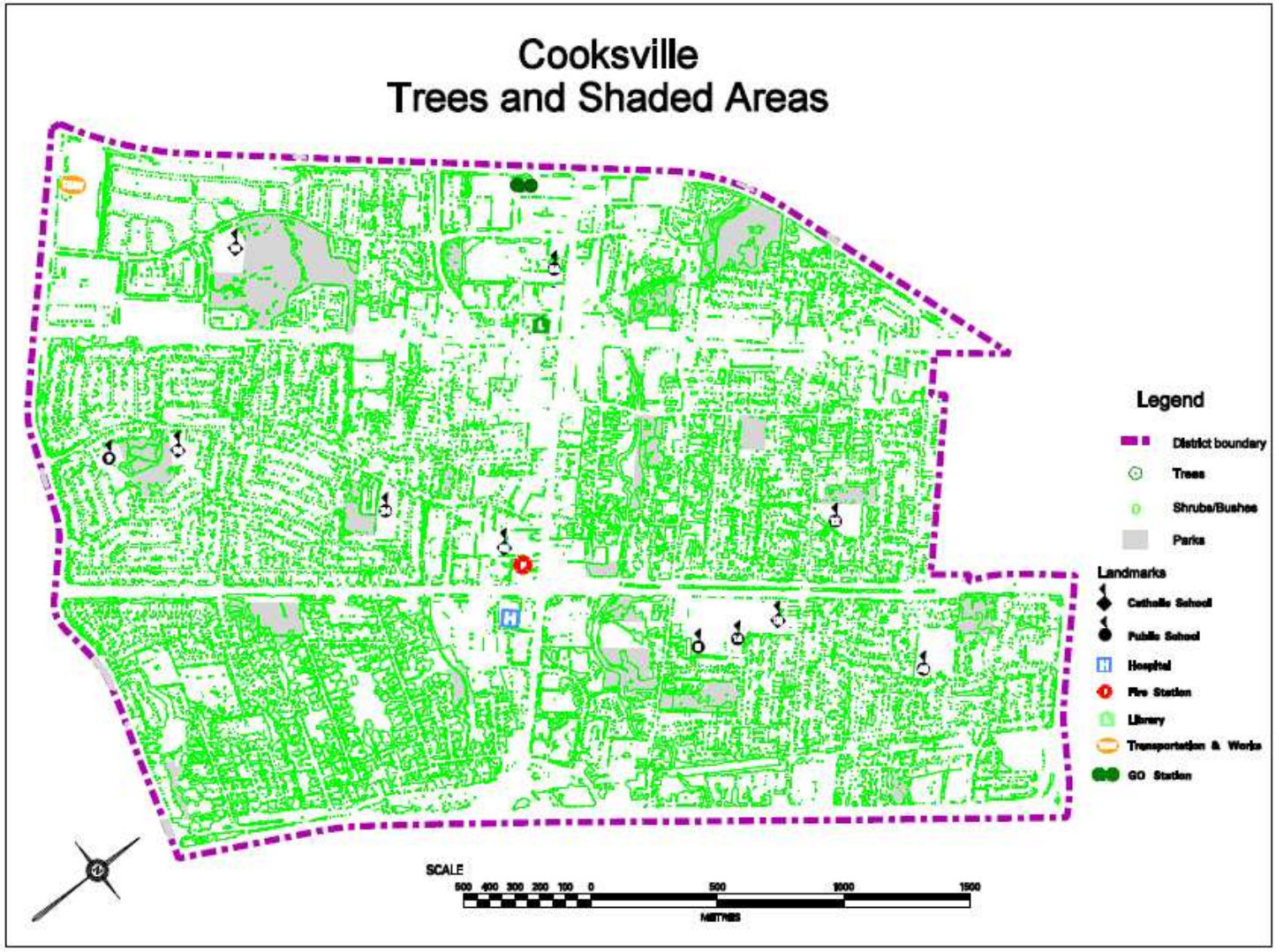
- There is a total of 1 robbery located close to Hurontario Street



- There is a total of 6 thefts from vehicle located along the outer perimeter of Cooksville

Natural Environment

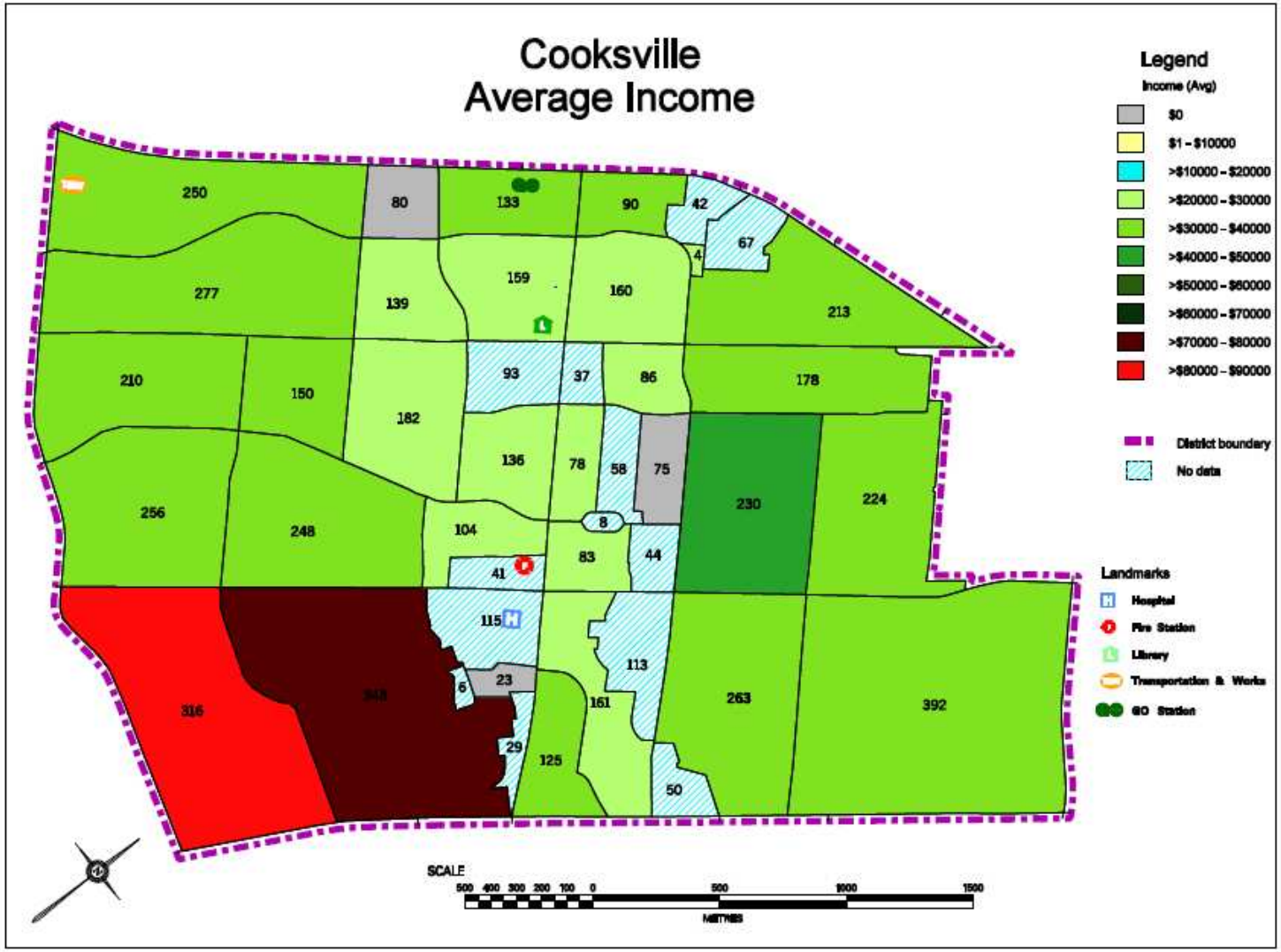
Natural environment refers to the quality of the community's local environment including air, water, soil and the food chain[10]. Two pieces of the natural environment that were mapped for this project were trees and parks. Cooksville has 42 031 trees and 26 parks equalling 81.82 ha of parkland. It is known that perceptions of attractiveness, aesthetics or greenery are positively associated with walking [23]; "Trees lining the streets can make sidewalks more comfortable and neighbourhoods desirable as well as offer environmental benefits such as cooling, surface water management and carbon absorption"[5]. Overall, trees are linked to increases in walking and cycling, but parkland has yet to be researched in depth. It known that walking trails enhance walking and cycling and may increase walking and cycling, but parkland isn't identified in detail in research [8].



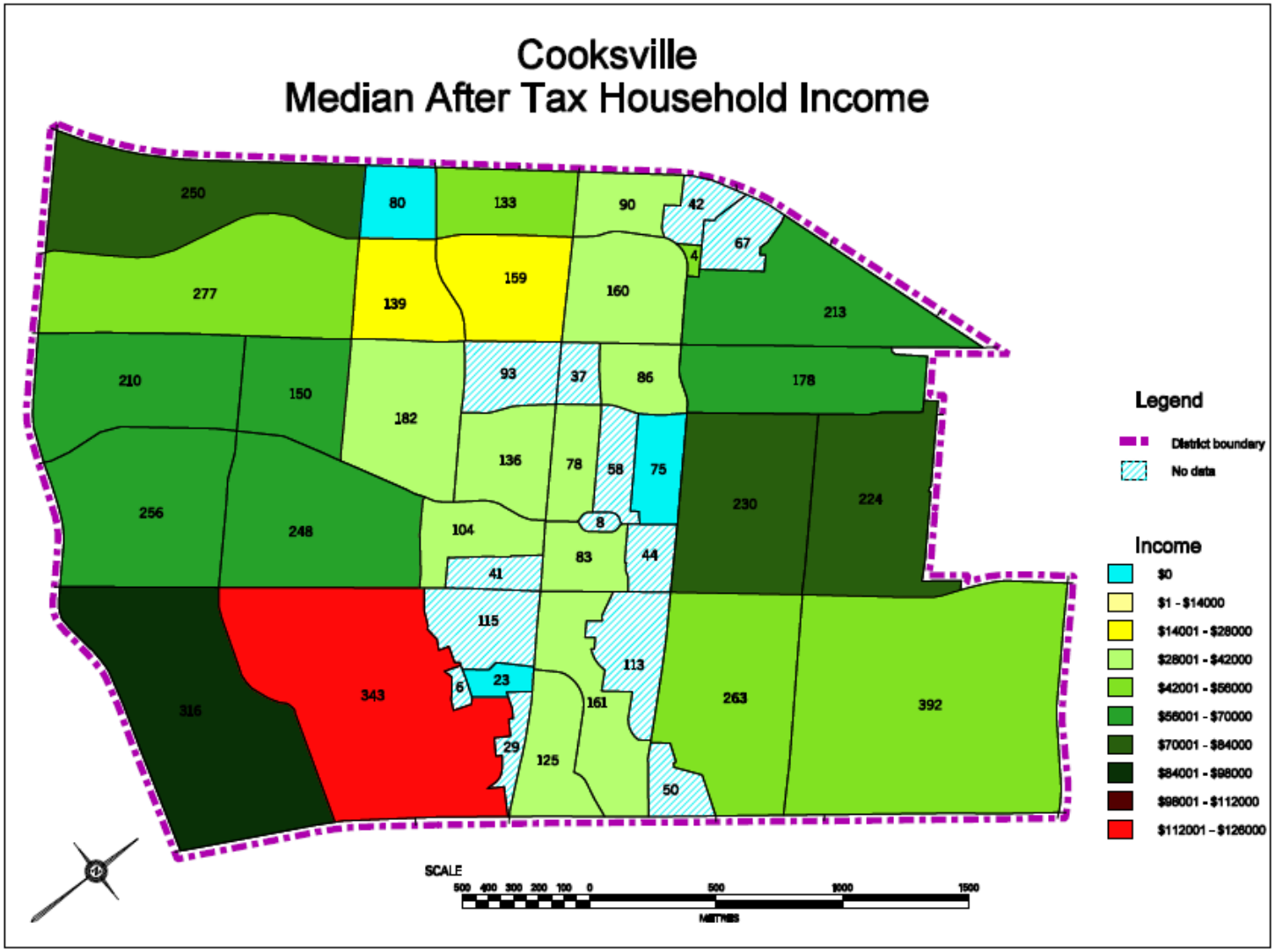
- Trees line most streets in Cooksville
- Age and height of trees is unknown

Prosperous Economy

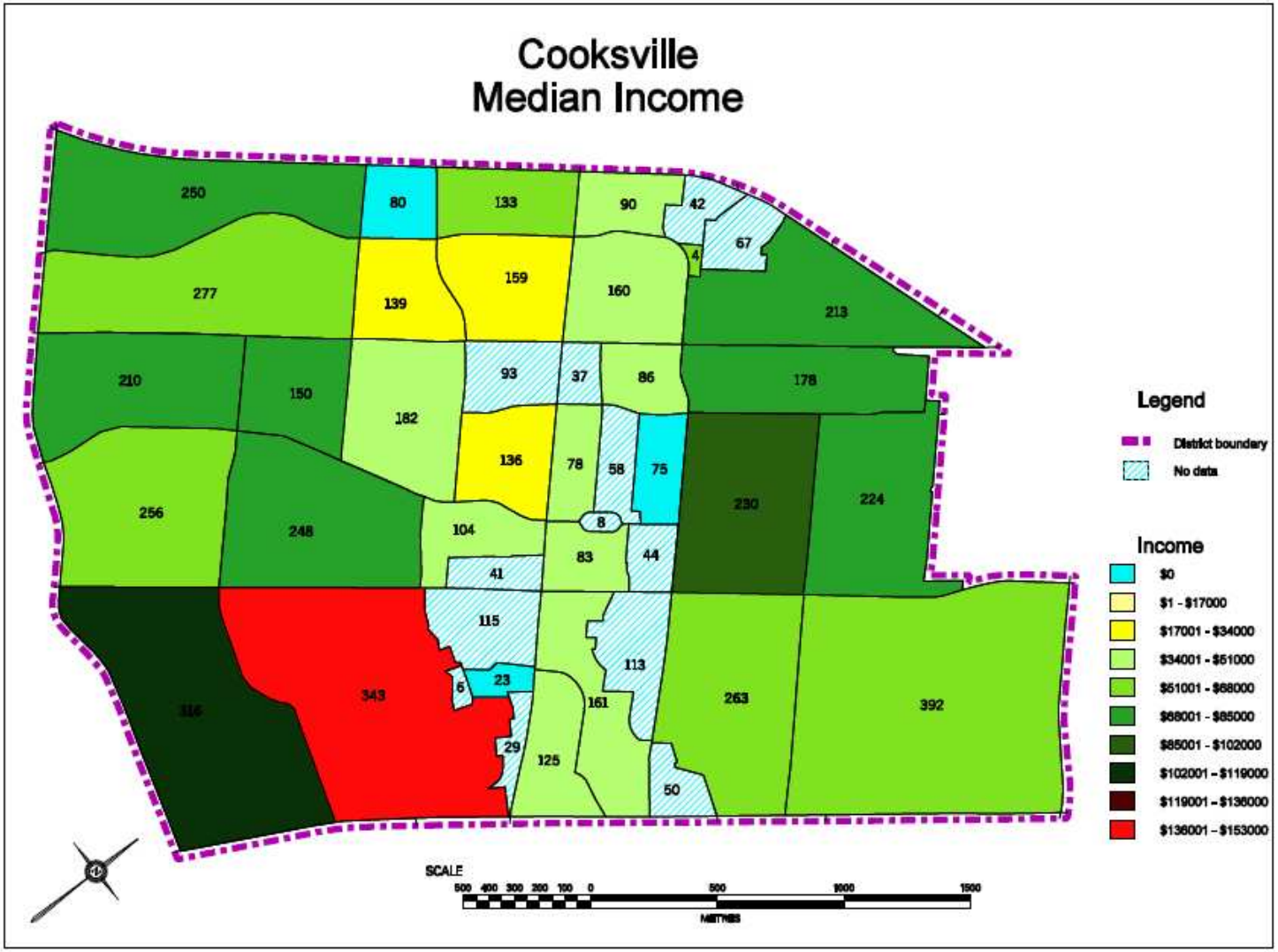
A prosperous economy is having a sufficient level of economic activity to ensure that basic needs for all are met[10]. In Cooksville, the indicators representing a prosperous economy were average income and median income. Cooksville's average income is $31, 616 and Cooksville's median income is $ 51 896 . There are a few pockets where income levels drop and they are located directly along a major transit lines known as the Hurontario transit corridor. It is known that people living in low socioeconomic status (SES) neighbourhoods are more likely to walk for transport and most likely to take public transit as well [8]; "Walking and cycling are probably the most equitable of all transport modes" [8], "…they are affordable by virtually everyone" [8]. "Rates of cycling are similar across different income classes, not only in the Netherlands, Denmark and Germany, but also in the UK and the USA" [17]. This means that cycling is quite affordable by people in different income classes and quite equitable; "Walking and cycling are economical, costing far less than the private car and public transport, both in direct user outlay and public infrastructure investment" [18].



- Highest income is $80 000—$90 000
- The income along Hurontario Street is $20 000—$30 000
- The income along the perimeter of Cooksville is $30 000—$ 40 000



- Highest income is $112 000—$126 000
- Income along Hurontario Street is $28 000—$ 42 000
- Income level where Bronte College is located is $0 (due to the all student population)



- Highest income is$136 000—$153 000
- Along Hurontario Street income levels are $17 000—$51 000

Opportunities and Barriers

As the project came to a close many opportunities and barriers presented themselves through the project itself and the Project Coordinator's reading of relevant research. The opportunities and barriers to walking and cycling were project related, research focused, process changes, promotion, and policy changes. Below are tables with a list of suggestions for both the opportunities and barriers.

Opportunities

Project Related	Research Focused	Process Changes	Promotion	Policy Changes
Pilot completed and makes it easier to replicate	Some researchers have examined construction projects that improve walkability, allowing a before-and-after comparison of the association between walking travel and public works projects such as sidewalks or traffic control devices [1]	Planners' day-to day interactions with public works officials can create opportunities to place elements such as benches and street trees along sidewalks during a street repair project. Although sidewalk repairs, benches or trees increase project costs, they do so marginally, if undertaken at the same time as other street improvements [5]	Promotion to females and the elderly of pathways and trails and walking programs offered Information on walking and cycling in different languages could be provided according to the top 5 languages	Walking strategy or plan for walking as transport
City staff knowledgeable on process for mapping and statistic gathering	Survey of recreational walking and cycling conducted at the neighbourhood level	Public transport stations with safe, convenient, and comfortable pedestrian cycling facilities, both in the stations themselves and on routes[18]	Promote walking to transit stops as the City will have them within 500m of people's homes	Multi-level government support for a walking strategy

Connections to different stakeholders based on current information (Building partnerships between professionals in urban transport, land use, health, environment and social issues, is a key element in developing the necessary methods and promoting innovation) [19]	The development of standardized instruments to measure bicycling would facilitate data collection for resource-strapped agencies and organizations. Ideally, these groups should work with academic researchers in designing and carrying out the evaluation, including data collection and analysis, and would publish the results through the peer-review process[18]	Continued Recreation work to grow walking clubs, information, scans; Get Active groups	Promote Walking School Bus	Tax breaks to purchase a bike [17]
	Regular surveys of cyclists to assess their satisfaction with cycling facilities and programmes and to gather specific suggestions for improvement [17]		Cycling Day/Ciclovia in Cooksville[18]	Cycling part of regular school curriculum[17]

Barriers

Barrier	Project Outcome	Mitigation Actions for Next Time
Unable to include injury prevention	• Difficult to find data, didn't know where to access data	• Look into hospital and police statistics more thoroughly
Time for mapping	• Took over 600 hours • Sometimes maps were unnecessary • Could have used photos instead • Site reconnaissance was quite useful • Created too many maps	• Ensure a site reconnaissance is completed with photos • Use maps created from this project as an outline of maps to create in future in order to save time
Mapping capabilities	• Need formalized GIS team to create maps	• Ensure you have appropriate technology and expertise, if not partner with organization who does
Costs	• Approximately $50 000 for the project described • In-kind time was also part of the project scope	• Now that indicators and survey have been created the length of project will decrease and in turn both in-kind time and funding will decrease • Funding can be obtained through grants
Project Coordination	• One coordinator and three working teams were utilized; community development, mapping and research and evaluation	• Next time the coordinator can be someone already working in the field or be hired on for a shorter period of time • All that is needed out of the working teams is mapping time as the coordinator can hold working team meetings to ensure the other parts of the project are taken care of
Time commitment from people from different organizations to meet	• Everyone was given project time commitments prior to the start of the project and can be found in Appendix C	• All participants kept their time commitment or found someone to take their place • Be sure to schedule meetings at least 1-3 months in advance
Lack of information on recreational walking and cycling	• Data is not collected, except for some trail counts in various parts of the city • Had to focus on transportation to and from work	• Focus on transportation to and from work as long as the Canadian Census Permits • Look into the Transportation Tomorrow Survey for statistics

Fragmentation of people working on walking and cycling	• Difficult to connect with organizations working on walking and cycling or to find out organizational interest in walking and cycling	• Need to create a network of networks to obtain information
Ensure stop lights are long enough for pedestrians and cyclists to cross	• This was a concern of an organization in Cooksville mentioned during a community meeting	• Identify exact crossing and report to City of Mississauga Transportation Department
Proximity to recreational centres	• A recreation centre does not exist in Cooksville, but two lie directly outside its boundaries	• Take a deeper look into the community to see if services are offered by social service agencies in the area
No BIA in Cooksville	• Could not find out what businesses in Cooksville are doing around walking and cycling	• Look into the creation of a BIA • In another neighbourhood one may be established and will be easier to gather information
Awareness of parents of safety and ages to walk and cycle	• Was brought up during a community meeting	• Need to find resources and people to see if a promotional campaign around this issue is needed

Conclusion

Cooksville is a community close to downtown Mississauga which will undergo transformation when a major public transit system is built. Cooksville has one of the largest community populations in Mississauga and is very culturally diverse. Examining walking and cycling in Cooksville through the lens of the Healthy Community Model has been beneficial as agencies have come together to decide on indicators that are representative of walking and cycling; coupled with a survey to community organizations gathering information and providing a base inventory. The process of following the Healthy Community Model was beneficial to the community agencies as it allowed for community involvement in the form of participating community agencies, intersectoral partnerships, political commitment through the HCSC, and a chance to enhance healthy public policy through opportunities and barriers[9].

This process involved 3 teams: Mapping, Research and Evaluation, and Community Development, which potentially, in the future could be made smaller if the project is to be replicated. The Mapping Team which consisted of City of Mississauga GIS staff, now understands the information to be mapped so the process could most definitely be expedited. One person could coordinate the process in less time now that the groundwork has been laid out.

Mapping is the key part of this project as it brings a visual of the community to the forefront to examine. Statistics alone would not allow someone to make some of the connections that were found in the results section of this report; for example, knowing that most cultures tend to live near Hurontario Street which is a major transportation corridor may illicit promotion of walking and cycling to be targeted to homes in that area in different languages.

In the next few years it would be advantageous if an agency or university student could conduct similar research in another neighbourhood in Mississauga for comparison. As well, Cooksville should be revisited in a few years to see if there are any shifts in the data presented in this report. In addition, regarding public policy, a multi-level government walking and cycling strategy is needed. The City of Mississauga may want to begin developing a walking strategy as they already have a cycling strategy. Lastly, but most importantly, this report and information contained within it should be shared with other organizations locally and otherwise.

Overall, the process has allowed for fruitful discussion and a new way to view walking and cycling using the Healthy Community Model.

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Appendix A – Project Charter

PROJECT BACKGROUND:
The Healthy City Stewardship Centre received a Healthy Communities Fund (HCF) grant from the Ministry of Health Promotion and Sport in 2010 in the amount of $50k + in-kind resources. The City of Mississauga is the lead organization for the grant and is working in partnership with Peel Public Health, University of Toronto Mississauga, United Way of Peel Region and the Multi Inter-Agency Group of Peel (MIAG), and Peel Newcomer Strategy Group. Project Timeline: February 2011 – August 2012
HCSC VISION & STAKEHOLDER ALIGNMENT:
HCSC VISION: Mississauga will be a Healthy City of people with optimal physical, mental and spiritual health. Each partner organization of the HCSC is committed to the HCSC vision and shares in the HCSC vision through their own visions, missions, and strategic objectives.
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MAJOR PROJECT DELIVERABLES:
• Indicators for cycling and walking • Maps • Policy Review • Tool-Kit for Strategy Implementation in other neighbourhoods

PROJECT STAKEHOLDERS:

All HCSC members are stakeholders in the HCSC Walk Mississauga, Cycle Mississauga Strategy Development. Primary Stakeholders are able to participate on both the Advisory Council and Working Teams whereas the Secondary Stakeholders will be able to only participate on the Working Teams.

Primary Stakeholders:

- City of Mississauga
- University of Toronto Mississauga
- United Way of Peel Region
- Peel Health
- Multi-Cultural Inter-Agency Group
- Peel Newcomer Strategy Group

Secondary Stakeholders:

- Peel Police
- Sheridan College Institute of Technology and Advanced Learning
- Trillium Health Centre
- Credit Valley Hospital
- Mayor's Youth Advisory Committee
- Dixie Bloor Neighbourhood Centre
- Mississauga Halton LHIN
- Peel District School Board
- Mississauga Board of Trade
- Dufferin-Peel Catholic District School Board
- AstraZeneca Canada Inc.
- Other community organizations as needed

PROJECT GOVERNANCE

HCSC Members

Organizations will act as key decision makers at end of all phases of Strategy development

(Full Membership - includes 15 organizations)

HCSC Advisory Council

Provides advice, direction and oversight through Strategy development

Key Partners: UTM, UWP, PNSG, City, Peel Health, MIAG

Project Working Team

City Lead, HCSC Project Coordinator

Coordinates all logistical details relevant to Strategy development. Ensure consistent communication of project details to and from HCSC Members, HCSC Advisory Council, and Other Working Teams

- Community Development and Engagement Working Team
- Research and Evaluation Working Team
- Mapping Working Team

PROJECT PHASES AND MAJOR MILESTONES

There are seven main phases in the strategy development:

1. **Clarify and Confirm Project Details (February 2011 – May 2011)**:
    - Advisory Council will approve project charter
    - Advisory Council will be formed
    - Project Working Teams will be created
2. **Development of Evaluation Tools (April 2011 – September 2011):** What is needed to evaluate the project's progress and how to evaluate the overall strategy.
    - Advisory Council will work with Towards Evidence Informed Practice to develop process evaluation and strategy evaluation
3. **Identify Key Information Sources (May 2011 – September 2011)**:
    - Research relevant literature on health, newcomers, and walking and cycling
    - Research current indicators, prioritize indicators according to the Healthy Community Model
    - Identify relevant community organizations in the Cooksville neighbourhood
    - Research policies, select relevant policies according to project need
    - Development and dissemination of community asset mapping surveys
4. **Development of Tools for Mapping Process (May 2011 – March 2012):** Understanding how to map, where to store data and information for partner consumption.
    - Identify and select mapping applications
    - Identify appropriate storage of information
    - Begin mapping indicators
5. **Analysis and Mapping of Policy and Indicators (September 2011 – June 2012):**

- Creation of maps and reports
- Creation of indicators relevant to walking and cycling
- Review relevant policies and provide recommendations on adjustments or additions to current policy

6. **Creation of a Replicable Strategy (January 2012 – August 2012)**: Compilation of work ready for organizational dissemination.
    - Advisory committee will approve rough draft of working documents in June 2012
7. **Next Steps (January 2012 – August 2012):** Resourcing and Preparation for Implementation.

ROLES AND RESPONSIBILITIES	
Role	**Responsibility or Accountability**

Project Advisory Council:
 	
Provides advice, direction and oversight through strategy development.
	• Project Approvals
	  ○ Project Charter
	  ○ Project Work Plan
	  ○ Indicator Selection
	  ○ Policies to be reviewed
	  ○ Final Policy Review
	  ○ Final Indicator Analysis
	  ○ Final Project Recommendations
	  ○ Final Project Tool Kit
	• Will oversee and participate in evaluation process

Project Working Team: Coordinates all logistical details relevant to Strategy development. Ensures consistent communication of project details to and from HCSC Members, HCSC Advisory Council, and Working Teams.	• Directs day to day operation of the project • Develops and maintains project plan and schedule • Chairs & documents meetings

Community Development and Engagement Working Team: Will identify and contact relevant organizations in the Cooksville neighbourhood utilizing the community asset mapping process, and will create a community communication toolkit.	• Community Asset Mapping Survey Development and Administration • Policy Review • Community Communication Plan and Strategy
Research and Evaluation Working Team: Will research, discuss, identify and analyze key indicators that fit within the Healthy Community Model for walking and cycling at the community level.	• Collection and Organization of Indicators • Prioritization of Indicators • Indicator Analysis and Report
Mapping Working Team: Will map indicators relevant to walking and cycling in the Cooksville neighbourhood and ensure smooth transition for public consumption of maps.	• Collect and Store Data • Identification of Mapping Applications • Map Creation

CRITICAL SUCCESS FACTORS

Critical success factors include, but are not limited to the following:

- Funding from Ministry of Health Promotion and Sport, City of Mississauga
- Continuous communication between Project Coordinator, Advisory Council, and Working Team
- Enthusiasm and willingness of all stakeholders to participate in the strategy development in innovative ways
- Development, participation and commitment of an Advisory Council dedicated to the project with related expertise
- Development, participation and commitment of working teams to gather and align relevant information and present the information in the completed strategy development document
- Commitment from community organizations/agencies to provide resources and staff time to develop and evaluate the project processes
- Ability to identify key and critical organizations for participation in community asset mapping process

- Ability to identify resource locations and obtain information in a timely manner
- Develop and sustain readable maps that can be utilized by various stakeholders
- Ability to successfully store and update data and share with all stakeholders
- Strategy developed with clear concepts of the implementation process imbedded
- Indicators chosen reflect current and future community measurements
- Mappability of information gathered

PROJECT SCOPE INCLUDES

- Development of Advisory Council and Working Teams
- Strategy Development
- Evaluation of the strategy development
- Mid and Final reports to the Ministry of Health as per grant guidelines
- Indicator Development for the identified local neighbourhood in Mississauga
- Understanding the influences of injuries and ethnicity related to walking and cycling through a population health lens
- Organization/Classification of indicators according to the Healthy Community Model
- Mapping of relevant organizations in Cooksville neighbourhood
- Mapping of relevant indicators

PROJECT SCOPE DOES NOT INCLUDE

- Strategy Implementation
- Direct Community Engagement other than via Community Organizations
- Geographical areas other than the Cooksville Neighbourhood in Mississauga
- Population Health Influences other than injury prevention or ethnicity

LIMITATIONS/CONSTRAINTS
• Ministry of Health Promotion and Sport Guidelines • Time to accomplish all the given deliverables with high quality results • Champions to move strategy forward into implementation • Level of partner engagement/time-constraints • Smooth integration of data from several different organizations as well as the ability to share and transfer data • Ability to communicate efficiently and effectively between agencies • Understanding the asset mapping process • Availability and affordability of data transfer • Ability to transition data into readable information for public consumption
PROJECT BUDGET
Attached
FINANCIAL MANAGEMENT OF THE PROJECT
HCSC Project Coordinator
TEAM OPERATING AGREEMENT:
• We will respect every member of the team. • HCSC Project Coordinator will prepare an agenda for each meeting. • Each team member will be punctual, prepared for, and participate in group meetings. • Each team member will communicate relentlessly. • We will strive to make meetings efficient, stay on topic and work to reach effective conclusions. • Action items will be assigned to individuals with an expected completion date. • We will explicitly define the criteria we intend to use to make each decision. • Decisions will be made on the basis of explicitly stated facts. • Evaluation of options will be done in a structured and constructive manner.

- Teams will operate according to concensus model.

TEAM OPERATING AGREEMENT - CONSENSUS MODEL

Consensus Model

The simplest and most basic definition of consensus is “general agreement” ….collective opinion (The Canadian Oxford Dictionary)

In this approach, people are not simply for or against a decision, but have the option to situate themselves on a scale that lets them express their individual opinion more clearly. This model is usually used with a round, so that everyone in the meeting is given the opportunity to state where they are according to the following six levels:

1. Fully support
2. Support with reservations
3. Acceptable
4. Will not block it, can live with it
5. Need more information or more discussion
6. No; cannot accept it.

If everyone is at level #4 or above, consensus has been reached.

If someone is at level 2, 3 or 4, they have the option of explaining their reservations. These can be addressed by the meeting, if the group wishes to. This is not absolutely necessary for achieving consensus if everyone is already at 4 or higher, but it usually improves the recommendation or suggestions being discussed.

If someone is at level 5, they have the obligation to explain what information or discussion they require from the group. If someone is at level 6, it is important for them to try to offer a solution that can accommodate their needs and the needs of the rest of the group.

In addressing someone's reservation, it is important to:

a) ask everyone for possible solutions (the person expressing the concern and the rest of the group both have a responsibility to find solutions), and
b) ask people to suggest improvements or alternatives that meet the objectives of the entire group.

SIGN OFF – ADVISORY COUNCIL (representative of partner organizations)

	SIGNATURE	DATE

SIGN OFF – Community Development Working Team

	SIGNATURE	DATE

SIGN OFF – Research and Evaluation Working Team		
	SIGNATURE	DATE

SIGN OFF – Mapping Working Team		
	SIGNATURE	DATE

Appendix B – HCSC One Page Overview

Healthy Communities Fund Grant (HCF): 'Walk Mississauga, Cycle Mississauga - Strategy'

HCF GRANT OVERVIEW:

HCF grants provide funding to eligible organizations that are taking a holistic and integrated approach to improving health and wellness at the local level. Community partnerships are an essential element within an application. The application must support the core Ministry priorities and target populations – our grant combined the following from the Ministry's list:

- Physical activity, sport and recreation & Injury Prevention
- Ethnic communities

THE NEED FOR THIS GRANT:

- Newcomers to Canada arrive very healthy, but within in ten years their collective health is often greatly diminished
- The new Cycling Master Plan charts a progressive plan to develop 900+ kms. of cycling routes over the next 20 years and focuses on cycling as a way of life
- There is research-based evidence showing that there exist cultural barriers to daily physical fitness which affects the health of various communities – especially in young females.

PROJECT STATEMENT:

The project would involve be to deeply analyze one community within Mississauga, with a significant immigrant newcomer demographic, to determine assets and barriers within the local community that influence the participation in walking and cycling (a 'community asset mapping' exercise). The intention is to then make specific recommendations and develop a replicable 'Strategy' and tools, to mitigate barriers that are identified. (Note – the community of Cooksville has been chosen and the grant work ends with the Strategy development – it does not include implementation of the Strategy in the community)

- Phases of the Project:
    - Clarify and confirm project details

- Identify key information sources
- Develop tools for mapping process
- Mapping and analyzing
- Replicable strategy
- Evaluation
- Next steps

Appendix C – Team Recruitment Overview

	Advisory Council	Research and Evaluation Working Team	Community Development Working Team	Mapping Working Team
Team Objective	Provides Advice, direction and oversight through strategy development	To research, discuss, identify and analyze key indicators that fit within the Healthy Community Model for walking and cycling at the community level	To identify and contact relevant organizations in the Cooksville neighbourhood utilizing the community asset mapping process, and to create a community communication toolkit	To map indicators relevant to walking and cycling in the Cooksvilled neighbourhood and to ensure muli-organizational use of maps
Deliverables	Project Approvals (April 2011, May 2011 - February 2012 - June 2012)	Collection and Organization of Indicators (April 2011 - June 2011)	Community Asset Mapping Surveys (April 2011 - January 2012)	Collect and Store Data (June 2011 - January 2012)
	Process Evaluation (April 2011 - August 2011)	Prioritization of Indicators (July 2011 - September 2011)	Policy Review (April 2011 - June 2012)	Identification of Mapping Applications (April 2011 - August 2011)
		Indicator Analysis and Report (September 2011 - August 2012)	Commuity Communication Plan/Strategy (January 2012 - June 2012)	Create Maps (May 2011 - July 2012)
Commitment Level	One meeting per month	One meeting per month	One meeting per month	One meeting per month
	Approximately 1/2 day per month	1.5 days outside of team meetings to complete assigned tasks	1.5 days outside of team meetings to complete assigned tasks	1.5 days outside of team meetings to complete assigned tasks
City of Mississauga	City Manager, Janice Baker or	Business Planning, and/or	Get Active Mississauga, or	Mapping Expert and/or
	Planning Department Representative or	Information Planning, and/or	Community Developer	Information Planning and/or
	Community Services, Business Planning	Planning Department Representative		IT Specialist
Region of Peel	Medical Officer of Health, or	Peel Data Centre Representative and/or	Healthy Community Partnership	Peel Data Centre
	Director, Chronic Disease and Injury Prevention	Epidemiologist		

	Manager, Chronic Disease and Injury Prevention			
University of Toronto Mississauga	Vice President and Principal, and/or	Geography Department Chair, and/or	Geography Department, Environment Programs Student	Geography Department, Relevant Professor
	Director of Research, and/or	Geography Department Professor,	Communications Department Student	Mapping Student
	Geography Department Chair,	Geogrphy Department Student		
United Way of Peel Region	CEO United Way of Peel, and/or	Success by 6 Representative	Community Investment Representative	Success by 6 Representative
	Director, Community Investment and/or			
	Success by 6 Representative			
MIAG	MIAG Executive Director,		TBD	
PNSG	Steering Committee Member			
School Boards	N/A	Transportation Representative or	Community Liaison Coordinator/Representative	
		Planning Representative		
Hospitals	N/A	Data Representative Injuries and Other Data	Community Specialist	
AstraZeneca Canada Inc.	N/A		Community Specialist	
MYAC	N/A	Chairperson	Director of Government Relations or	
			Director of Communications or	
			Director of Community Projects	
Peel Police	N/A	Regional Traffic Unit Analyst	Community Liaison Officer or	
			Public Affairs Bureau or	
			Peel Children's Safety Village	

			Staff	
Mississauga Board of Trade	N/A		Policy and Research Coordinator	
Mississauga Halton LHIN	N/A	Data Representative	Community Liaison	
Sheridan College Institute of Technology and Advanced Learning	N/A			
DBNC	N/A	Director	TBD	

Appendix D – Email

To :

As an identified stakeholder in the Healthy Communities Fund grant application we successfully received a grant in the amount of $50K (+ in-kind resources) from the Ministry of Health Promotion and Sport. The overall project timeline will be from February 2011 – August 2012.

As outlined in the grant application human resources will be required from each partner organization in the form of participation on the Advisory Council and associated Working Teams.

The Working Teams require the following representatives from the school boards:

- One representative for the Community Development Working Team
- One representative for the Research and Evaluation Working Team

Team objectives, deliverables, commitment level and potential team member suggestions are outlined in the attached document: TEAM MEMBER RECRUITMENT. Please do not feel limited to the potential team member suggestions as they are only suggestions.

Please send the HCSC Project Coordinator, Lisa Limarzi, the key individuals you have selected to participate and their contact information by: WEDNESDAY, MARCH 16, 2011.

A meeting invitation and further meeting information for an Introductory Meeting scheduled on MONDAY, APRIL 4, 2011, will be sent out to the selected individuals from your organization.

A one-page project overview and a preliminary project charter have been attached with further project details.

If you have any questions or comments regarding the project or the team member recruitment process please do not hesitate to contact me.

Thank you for your continued support of the HCSC,

Appendix E –Introductory Meeting Agenda

HCSC Walk Mississauga, Cycle Mississauga Introductory Meeting
Monday, April 04, 2011 – 1:00 – 3:30 pm
Mississauga Civic Centre, Committee Room A (300 City Centre Drive)

The purpose of the Introductory Meeting is to understand the role of each organization as it relates to walking and cycling, newcomers and injury prevention and participation in the strategy development.

AGENDA

1:00 pm	Welcome	Lisa Limarzi – HCSC*
1:05 pm	Healthy City Stewardship Centre Overview	Shelley White – HCSC Chair*
1:15 pm	Understanding Healthy Communities • Overview of the Healthy Community Model	Lisa Tolentino – OHCC*
1:30 pm	Understanding the Facts • Review statistics on walking cycling, newcomers, and injury prevention	Lisa Limarzi - HCSC
1:40 pm	BREAK	
1:55 pm	Project Charter Review and Discussion • A quick overview of the Project Charter and working team roles • Questions and discussion on Project Charter	Lisa Limarzi – HCSC
2:30 pm	Discussion – Short- and Long-Term Goals	Brenda Callaghan – GAM*

- Discussion time to brainstorm walking and cycling goals in the Cooksville area in Mississauga through the lens of newcomers and injury prevention

3:00	Discussion – Measuring Walking and Cycling • Review measurements in current literature • Provide input on additional measurements	Lisa Limarzi – HCSC
3:20	Closing Remarks and Next Meeting Agenda and Date	Lisa Limarzi – HCSC

*HCSC: Healthy City Stewardship Centre, OHCC: Ontario Healthy Communities Coalition, GAM: Get Active Mississauga

Appendix F – Evaluation

Research and Evaluation Working Team Meeting: Facilitated Session

Friday, June 24, 2011

Content	**Disagree**				**Agree**
Organized	1	2	3	4	5
Clear	1	2	3	4	5
Interesting	1	2	3	4	5
Useful	1	2	3	4	5

Process

Did the session meet your needs and expectations? YES NO

Do you feel that we have we adequately addressed community cultural needs? YES NO

Do you feel that we have we adequately addressed injury prevention? YES NO

Any other comments/feedback _____

_____

_____

_____

_____

_____

_____

The things I liked best about this session _____

_____

_____

Things that could be improved _____

_____

_____

THANK YOU ☺

Appendix G – Summary Report

HCSC Walk Mississauga, Cycle Mississauga Strategy Development
Facilitated Session Summary Report: June 27, 2011

Introduction

Part of the HCSC Walk Mississauga, Cycle Mississauga Strategy Development is to identify and organize indicators to be mapped in order to identify associations linked to walking and cycling in Cooksville, Mississauga. Various stakeholders participated in a facilitated session to craft a vision and agree upon indicators. The facilitated session was full of vibrant conversation and thoughtful suggestions on how to move this strategy forward. Evaluations stated that the facilitated session met our project needs, but that further discussion will be required in order to thoroughly incorporate cultural and injury prevention components of the strategy development. While reading through this report, please consider areas where measurements can be added in order to enhance the cultural and injury prevention components.

The 4 hour session was devised into 2 main sections:

1. Craft a vision statement – The group's vision for healthy walking and cycling in the city
2. Agree on indicators – Determine the state of walking and cycling: Cooksville now and transferable into the future

The ground rules for the session were:

1. State views and ask genuine questions
2. Test assumptions and inferences
3. Focus on interests, not positions

Visioning

During this session, visioning was accomplished by working in small groups that were instructed to brainstorm words and ideas related to healthy walking and cycling. These words and ideas were compiled and categorized as a large group. The group then determined category titles

that could only be one word. Below are the lists of words with their agreed upon titles. The titles were used to help formulate the vision statements.

Safe: safety; winter maintenance; separate 'pathways' for cycling and pedestrian; safety – perceived and maintained.

Attract: trees – shade, beauty, separation; supportive streetscapes- benches, canopies, bike racks, trees, garbage cans, water fountains, washrooms; supportive urban form – buildings to the street line, front doors opening on to street, high-quality architecture, smaller vibrant intersections (more shared spaces).

Facilitate: public bicycle rental system; organized walking groups, Nordic pole walking rental, public/private/community partnership for affordable bike rentals with supporting infrastructure.

Engage: winter maintenance and amenities – shelter, snowshoe rentals, small ice rinks, hot chocolate, more community hubs with structured and non-structured activities (farmers markets, walkable downtowns – Port Credit and Streetsville, parks and schools); a variety of activities and amenity areas – benches, sculptures, exercise areas, shelter, fountains; playgrounds and gathering places – playgrounds for adults as well, games (shuffle board, large checkers, etc.); end of trip entertainment; outside – spaces, green roofs, bike sharing programs, public friendly spaces, walking school buses, road blocks of events.

Connect: linked nodes/hubs; connections – destination, nature, people, transit streets; connectivity – continuous system (not chopped up or broken).

Shift: people – safety, healthier, productive, diversity, accessible, happier; age-friendly; embracing all modes of transportation – i.e. thinking about walking, rollerblading, not just your car; organizational support through action and supports.

Vision Statements

Even though a vision statement was not agreed upon during this session due to time constraints, a theme emerged throughout the session – connect people to places. It is a simple and clear statement about the ease and functionality individuals expect when it comes to any form of transportation. Below are 4 vision statements crafted during the session. As the strategy development moves forward working teams will re-

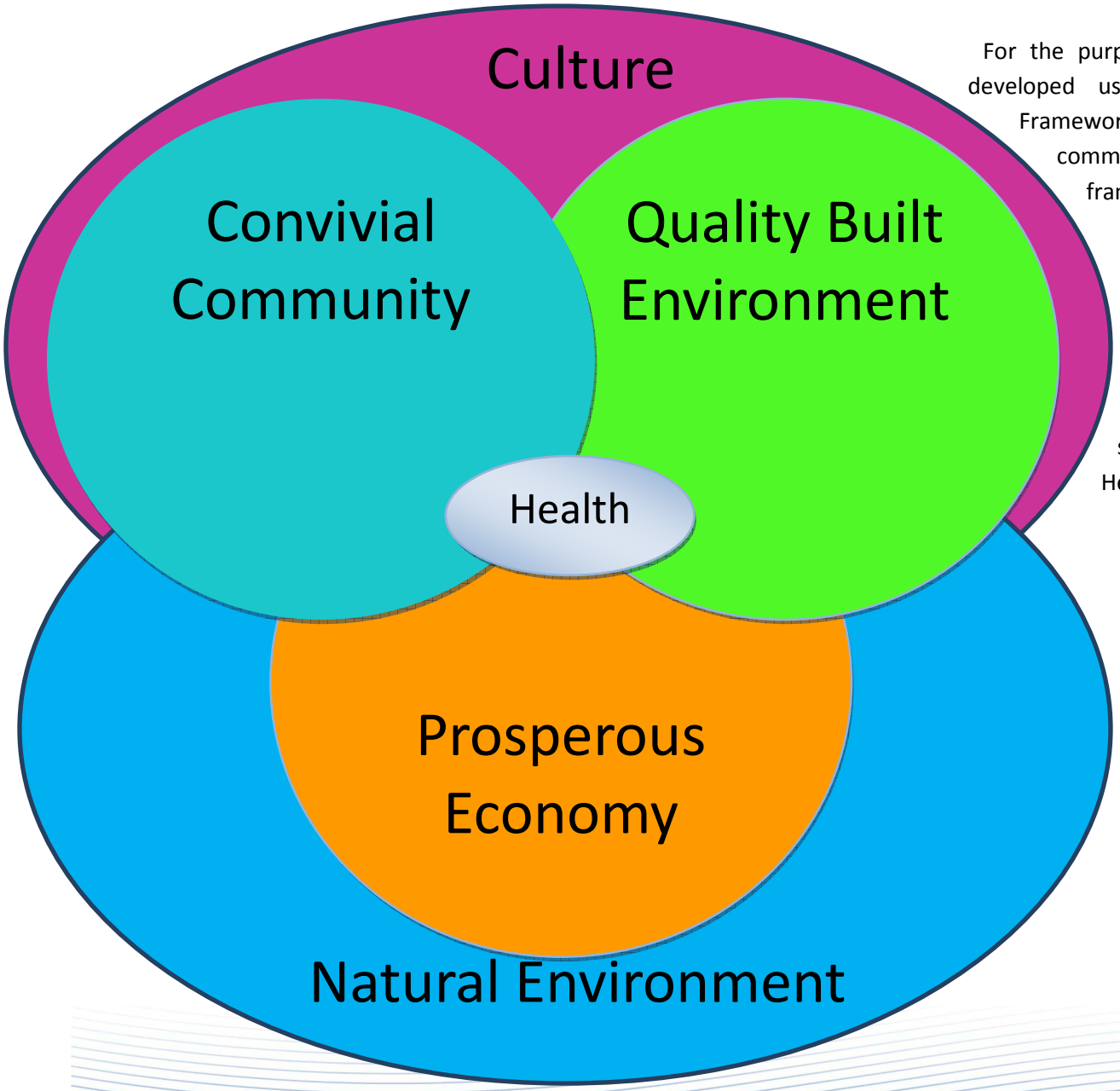
visit the vision statements and determine if one statement, whether it is one of the statements below or an edited version of one of the statements can be crafted and deemed the strategy's vision.

1. Connecting people and places by facilitating the shift to a walking and cycling community
2. Get moving to connect people to places!
3. Connecting people and places
4. Connecting people and places by shifting to increased active transportation

Indicator Development

There is an increasing need and demand for indicators and measurements at the local level, from agencies and practitioners to help support and monitor policy on health at all levels – from the local to international.

An indicator can be defined as the measurement of an objective to be met, a resource mobilized, an effect obtained, a gauge of quality or a context variable. An indicator produces quantified information with a view to helping actors concerned with public interventions to communicate, negotiate or make decisions.



For the purpose of this project, indicators will be developed using the Healthy Community Model Framework, created by Trevor Hancock. Optimal community health is at the centre of this framework.

Below is the first stage of indicator development, with lists of potential subject matter to be converted into measurements. All subject matter is categorized into the Healthy Community Model Framework.

Value		Adequate Prosperous Economy	
		Ability to Measure	
		Easy	Difficult
	High	❖ Income ❖ Labour force ❖ Affordability of housing ❖ Transport reliability ❖ Education ❖ Affordability of transport ❖ Income ❖ Transport costs ❖ Commute costs ❖ Transit usage	❖ Service proximity and employment ❖ Mobility options ❖ Infrastructure costs ❖ Service proximity and transit
	Low	❖ Transport policy and planning – pricing efficiency ❖ Child care	

		Community Conviviality	
		Ability to Measure	
		Easy	Difficult
Value	High	❖ Access and linkages ❖ Sociability ❖ Uses and activities ❖ Basic Demographics: Age, education, language, culture and income level ❖ Mental health ❖ Equity: affordability of transit and housing ❖ Auto travel behaviour ❖ Voluntary organization participation ❖ Support services	❖ Comfort and image ❖ Travel behaviour: walking and cycling
	Low		

		Quality Built Environment	
		Ability to Measure	
		Easy	Difficult
Value	High	❖ Motor vehicle accidents ❖ Air pollution ❖ Dwelling characteristics ❖ Traffic risk: crashes, causalities and costs ❖ Land use mix ❖ Ecological footprint ❖ Noise pollution: traffic and aircraft noise	❖ Land use impacts: accessibility, sprawl, transport land consumption, ecological and cultural degradation ❖ Streetscape Characteristics: sidewalk, cycling amenities, lighting, wayfinding, etc. ❖ Urban planning ❖ Air pollution emissions ❖ Travel activity: vehicles, mobility and modal split ❖ Driving and safety
	Low	❖ Parking: automobile and bicycle parking ❖ Density	❖ Street connectivity

Value		Culture	
		Ability to Measure	
		Easy	Difficult
	High	❖ Dwelling characteristics ❖ Languages ❖ Families vs. singles and couples ❖ Age ❖ Population density ❖ Education ❖ Labour force ❖ Income	❖ Essential services ❖ Education of bike laws and safety ❖ Food choices ❖ Physical activity level ❖ Recreational choices/leisure ❖ Socio-demographic characteristics ❖ Chronic conditions
	Low		❖ Preferred modes of transport

		Natural Environment	
		Ability to Measure	
		Easy	Difficult
Value	High	❖ Air pollution emissions ❖ Noise pollution ❖ Multi-use trails/paths: connections, natural vs. paved ❖ Weather patterns/geography ❖ Track indigenous uses for placemaking ❖ Land use impacts ❖ Land use accessibility ❖ Respiratory illness: number diagnosed, number of hospital visits ❖ Land use patterns and changes ❖ Land beautification projects: trees on sidewalks, flowers, planter etc.	❖ I saw plants, trees, gardens on my walk/bike ❖ Ecological footprint ❖ Density
	Low	❖ Could you use sidewalks trails or paths ❖ Number of community gardens: active vs. inactive	❖ Fruit and vegetable consumption

The development of a good holistic health indicator is nevertheless challenging. To be effective indicators must satisfy a number of different criteria. In order to meet the needs of their users, who are often not experts in the subject matter or the idiosyncrasies of the data, they must provide a relevant and meaningful summary of the conditions of interest. In order to satisfy the wider community – including those who might wish to challenge the message they give – they must be transparent, testable and scientifically sound. If they are to detect variation or change in the world they describe, they must be sensitive to real changes in the conditions they measure, yet robust enough not to be swamped by noise in – or minor difference in the source of the data used. If they are actually to be developed and used, they must be cost-effective to compile and apply.

Moving Forward

Moving forward with the successes of this facilitated session, the Research and Evaluation Working Team will further develop indicators and ensure that each indicator can be easily measured and mapped. Thank you to everyone that participated in the session, your contributions were innovative and thoughtful.