

# CityHousing Hamilton 2024 Asset Management Plan



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# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

## SUMMARY AND QUICK FACTS

### SERVICE PROFILE



CityHousing Hamilton (CHH) provides affordable housing that is safe, well maintained, cost effective and supports the diverse needs of our many communities. CHH is the largest social housing provider in Hamilton.

### ASSET SUMMARY



#### Replacement Value

**\$2.95B**

Average Age of 40 Years  
or 46% of life remaining.

### LEVEL OF SERVICE SUMMARY

#### Customer

- On average, survey respondents feel neutral on how satisfied they are with the overall condition of their home.
- On average, survey respondents feel CHH has performed Average in providing services tenants expect from a landlord.
- On average, survey respondents feel neutral on how satisfied they are with Pest Control services and Maintenance services.

#### Technical

- 5.8% overall vacancy rate – target is 2%.
- Buildings are on average in Fair condition.
- 100% of legislated maintenance inspections were completed in 2023.



### MAJOR ASSET HIGHLIGHTS

MAJOR ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION	STEWARDSHIP MEASURES
Facilities (including components)	448	\$2.94 B	Fair	Building Condition Assessments are completed every 5 years
Administrative Assets	303	\$752.5K	Poor	Vehicles are checked at least twice a year
Appliances*	10,806	\$7.5M	N/A*	Checked during the annual unit inspection

\*Appliances condition is not available for this iteration of the AM Plan.

### DATA CONFIDENCE



# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

## Key Demand Drivers



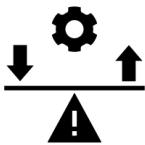
**POPULATION CHANGE:** Hamilton's population is projected to grow until 2051, leading to a potential increase in demand for affordable housing.



**LEGISLATION:** Potential new by-laws, such as adequate temperature by-laws, could change the level of service provided to tenants and can increase the operation and maintenance costs of CHH services.

### RISK

- Critical Assets identified for CHH are facilities components including mechanical and electrical systems, elevators, building envelope and foundation.



### CLIMATE CHANGE

#### Mitigation

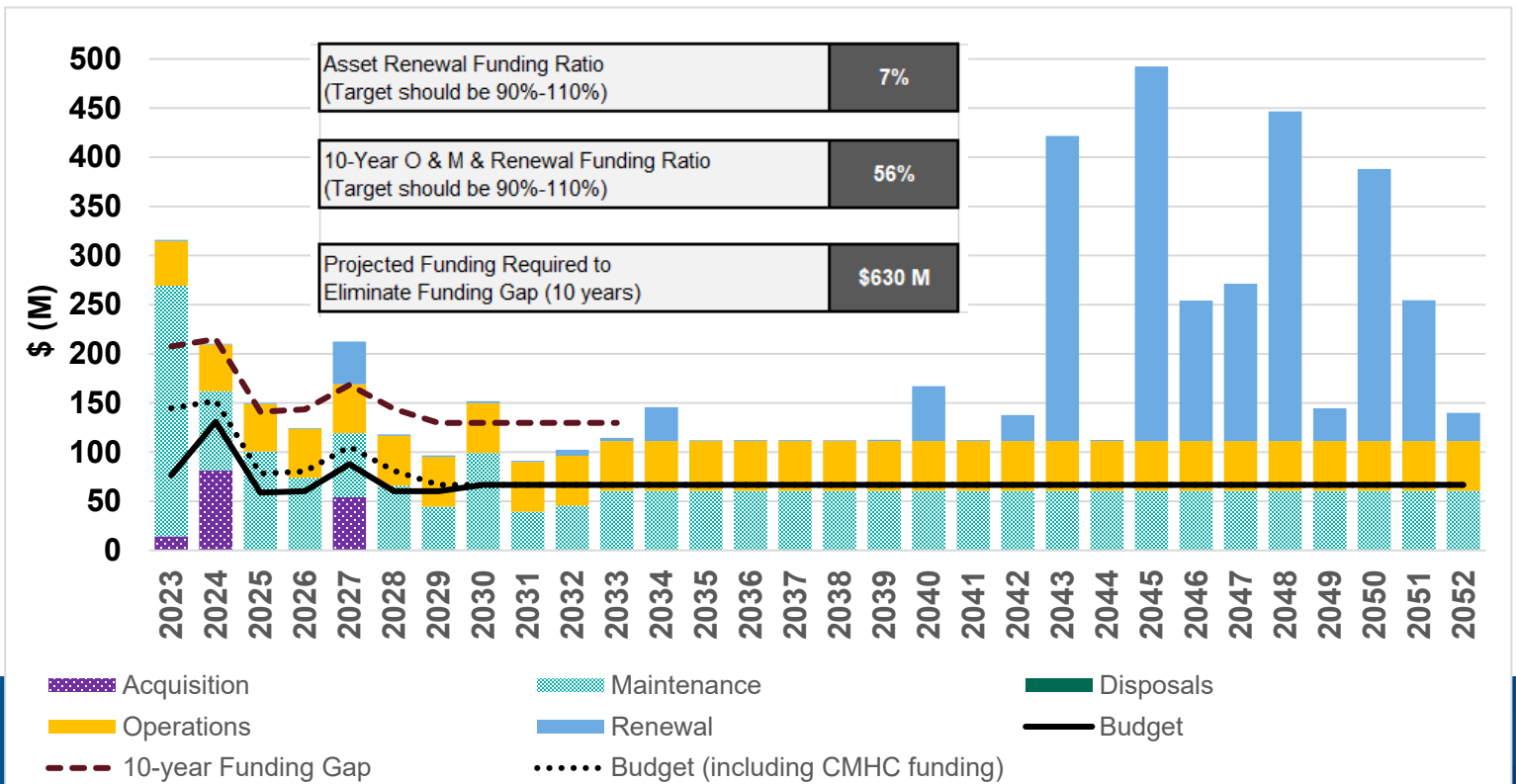
- Canada Mortgage Housing Corporation (CMHC) projects with energy efficiency, and accessibility targets to be met by 2028.
- All new developments after 2022 adhere to passive house standards. These new facilities are built to use 90% less energy than a conventional facility and are nearly net zero.



#### Adaptation

- No Adaptation Projects identified at this time.

## LIFECYCLE SUMMARY



## 1. INTRODUCTION

CityHousing Hamilton (CHH) is the largest social housing provider in the City of Hamilton and provides homes that are safe, well-maintained, and affordable for people who live and work in our diverse community. The purpose of this Asset Management Plan (AM Plan) is to ensure that CHH has the required assets to deliver on this goal.

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements (i.e., O. Reg 588/17<sup>1</sup>), and required funding which will provide the appropriate levels of service over the 2023-2052 planning period.

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<sup>1</sup> Government of Ontario, 2017



## 2. BACKGROUND

The information in this section is intended to provide background on the CHH service area by providing a service profile, outlining legislative requirements, defining the asset hierarchy used throughout the report, and a detailed summary and analysis of existing inventory information as of November 2023 including age profile, condition methodology, condition profile, and asset usage and performance for each of the asset classes. This section will provide the necessary background for the remainder of the plan.

### 2.1 SERVICE PROFILE

Listed below are related documents reviewed in preparation of the Asset Management Plan:

- Asset Management Plan Overview Document;
- 2022 City of Hamilton Housing Needs Assessment;
- 2022 Housing & Homelessness Action Plan in Hamilton;
- CityHousing Hamilton Renewal Plan 2021-2028; and,
- CityHousing Hamilton 2022 Annual Report.

Additional financial-related documents are identified in **Section 10.1** Plan Improvement and Monitoring.

#### 2.1.1 SERVICE HISTORY

In 2000, the Province of Ontario began the process of transferring ownership and responsibility for the operation of former provincially managed local housing authorities to newly created Local Housing Corporations (LHCs) to be owned by certain municipalities. At the same time, it began downloading responsibilities for oversight and funding of the housing system to the same municipalities and created the Consolidated Municipal Service Manager role (Service Manager) through the then Social Housing Reform Act, 2000 (SHRA).

Hamilton Housing Corporation (HHC) was created as Hamilton's LHC. Many municipalities, including Hamilton and pre-amalgamation municipalities, already operated municipal housing corporations including Municipal Non-Profit (Hamilton) Corporation and Dundas Valley Municipal Housing Corporation. HHC went through a process of amalgamating smaller social housing providers and municipal housing providers.

HHC changed its name to CityHousing Hamilton (CHH) Corporation in 2006 but remains the LHC for the City of Hamilton and is governed by: Part IV of the Housing Services Act, 2011; and the Ontario Business Corporations Act.

The Housing Services Act, 2011, which replaced the SHRA, prescribes certain rules for the operation of LHCs and allows for local rules to be established by the Service Manager (The

system oversight role is currently fulfilled by the Housing Service Division of the Healthy & Safe Communities Department City of Hamilton).

The Act expressly confirms that LHCs are not considered to be local boards of the municipality nor are they commercial enterprises. Unlike most local boards or municipal corporations, the Business Corporations Act is the defining legislation for corporate governance matters, not the Municipal Act.

Today, CHH is responsible for operating homes for households of all ages and compositions located throughout 12 of Hamilton's 15 wards. CHH is the third largest publicly owned housing provider in Ontario, behind Toronto Community Housing Corporation and Ottawa Community Housing Corporation.

CHH works collaboratively with the City of Hamilton, other housing providers, and the broader community to address homelessness and affordability. As a stakeholder, CHH is a leading champion participant in discussions and initiatives with other large housing providers to drive system-wide policy development and funding opportunities across the province. CHH participates in sector advocacy, benchmarking, sharing best practices and piloting concepts for efficiency with industry partners such as Housing Services Corporation, the Ontario Non-Profit Housing Association and the Canada Housing and Renewal Association. It is also a core member of Hamilton is Home, a local collaboration of affordable housing developers.

### 2.1.2 SERVICE FUNCTION

#### Housing Services:

The City of Hamilton's Housing Services Division is designated by the Province of Ontario as the Service Manager for Community Housing and Homelessness. In this capacity, the division is tasked with funding, overseeing compliance with relevant legislation, and strategizing for the long-term sustainability of Social and Community Housing within the City of Hamilton. Additionally, the division is responsible for planning and facilitating the development of new community housing initiatives. Their responsibilities as a Service Manager also include administering other forms of financial assistance such as rent supplements, housing allowances and the Canada Ontario Housing Benefit.

Housing Services secures funding for investments from all levels of government. Investment programs for social housing include the Community Entity for funding under Reaching Home, Canada's Homelessness Strategy, Affordable Housing Fund Program (AHFP), Canada-Ontario Community Housing Initiative (COCHI), Ontario Priorities Housing Initiative (OPHI), and Canada Mortgage Housing Corporation (CMHC). With these funds, the City offers various services to assist low-income residents in finding affordable homes. This involves allocating operating funds and capital repair dollars to maintain buildings, ensuring they are safe and healthy. Rent-gear-to-income (RGI) and rent subsidies (Housing Allowances, Rent Supplements, Canada Ontario Housing Benefit) help reduce rents in private market buildings to 30% of a household's income. In efforts to tackle the housing crisis and unaffordability in Hamilton, in August 2020 Hamilton City Council endorsed the review of the Housing and Homelessness Action Plan (HHAP). The

HHAP is a community-based, person-centred plan that sets a vision, clear targets, and goals to ensure everyone in Hamilton has a home. The plan is to be viewed as a living document that will be updated as required.

Housing Services plays a critical role in addressing housing challenges and ensuring that residents have access to affordable and suitable housing options. Housing Services collaborates with social housing providers, including CityHousing Hamilton, to align efforts with broader municipal and provincial housing goals.

While the City of Hamilton collaborates with different housing providers through Housing Services, including CityHousing Hamilton, the current Asset Management Plan (AM Plan) specifically focuses on reviewing the assets and housing portfolio of CityHousing Hamilton. The housing portfolios managed by third-party providers are not covered within this AM Plan.

### CityHousing Hamilton (CHH):

As the third-largest owner and operator of social housing in Ontario, CHH plays a pivotal role in managing the assets and housing portfolio within the City of Hamilton. Originally established in 2001 as the Hamilton Housing Corporation, CHH operates under the governance of the Ontario Business Corporations Act, with the City of Hamilton as its sole shareholder. The corporate mandate of CHH encompasses various aspects, which include, the maintenance, and operation of housing units and the development of new affordable housing by the Housing Services Act, of 2011. The mandate extends to the administration of programs providing Rent-Geared-to-Income (RGI) assistance, the provision of accommodation for individuals with special needs, and engagement in matters agreed upon with the Minister of Municipal Affairs and Housing.

As of February 2023, CHH actively manages a diverse portfolio comprised of 6,931 units, exclusive of 191 units which were sold or decommissioned to support new development. CHH has an obligation to replace these 191 units at a 1:1 ratio at minimum. 82% of these units are designated as RGI units, ensuring affordability for residents, while 18% of these units are designated as market rent. In total, approximately 13,000 individuals live in CHH units. This Asset Management Plan is specifically about CityHousing Hamilton.

### CHH Responsibilities:

CHH provides property management and tenant support services such as:

- **Operations:** Responsible for day-to-day coordination of on-site property management services, including meeting with tenants, vendor coordination, maintenance issue resolution, building coordination and emergency response.
- **Tenancy Administration:** Manages rent calculations, tenant selection, annual reviews, and reception services, ensuring smooth operation of the tenant-related processes.

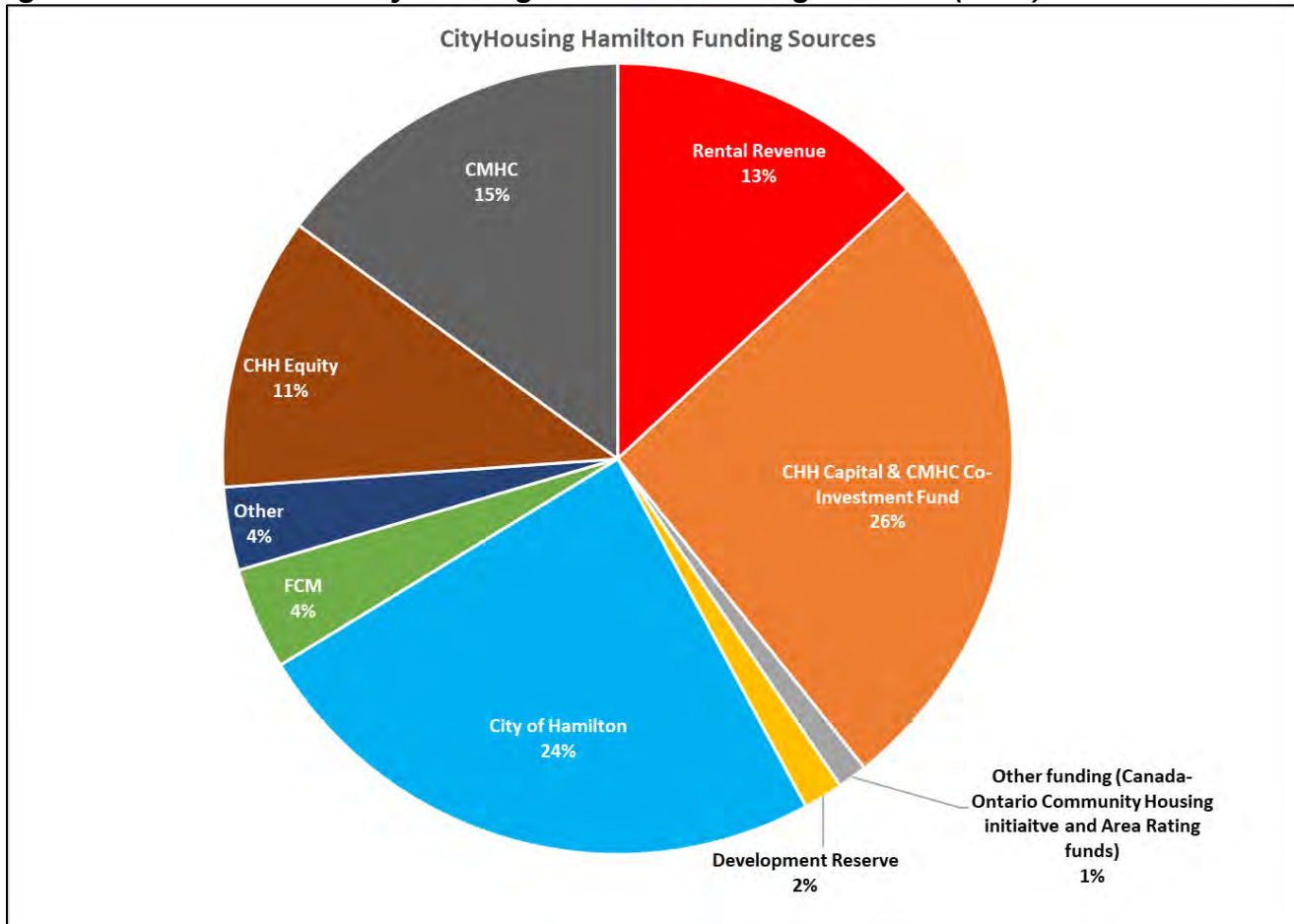
- **Partnership Development & Support Services:** Committed to enhancing the overall well-being of CHH tenants and communities. Tenant Support Workers (TSWs) address various tenant needs, including conflict resolution, crisis intervention, mental health support and eviction prevention. The Partnership Development side focuses on developing partnerships that offer social, educational and wellness programs for CHH tenants.
- **Maintenance:** Oversees the delivery of maintenance services, integrated pest control and HVAC maintenance and repairs. Maintenance Servicers manage routine maintenance requests, while specialized work may involve external vendors.
- **Asset Renewal:** Manages capital planning and project management for large-scale repairs and replacements. The team is dedicated to sustainability, participating in the City of Hamilton's Climate Change Action Strategy.
- **Development:** Responsible for project management related to redevelopment, revitalization, new builds and conversion or acquisition projects, aligning with the long-term growth and development plan for CHH.
- **Strategy & Quality Improvement:** Assists the entire organization in developing and monitoring CHH's Strategic Plan. This team leads policy and procedure development, service contract development and continuous improvement initiatives.
- **Finance:** Works closely with the City's Finance staff and Housing Services staff in developing annual budgets, overseeing financial controls, and managing departmental operating, reporting, capital, and project-specific budgets.

CHH plays a pivotal role in not only providing housing but also in the holistic well-being of its tenants and the sustainable development of housing in the City of Hamilton. The various operational components ensure a comprehensive approach to housing management and community support.

## CityHousing Funding Breakdown:

CityHousing relies on multiple funding sources, a breakdown of these sources is shown in **Figure 1** below.

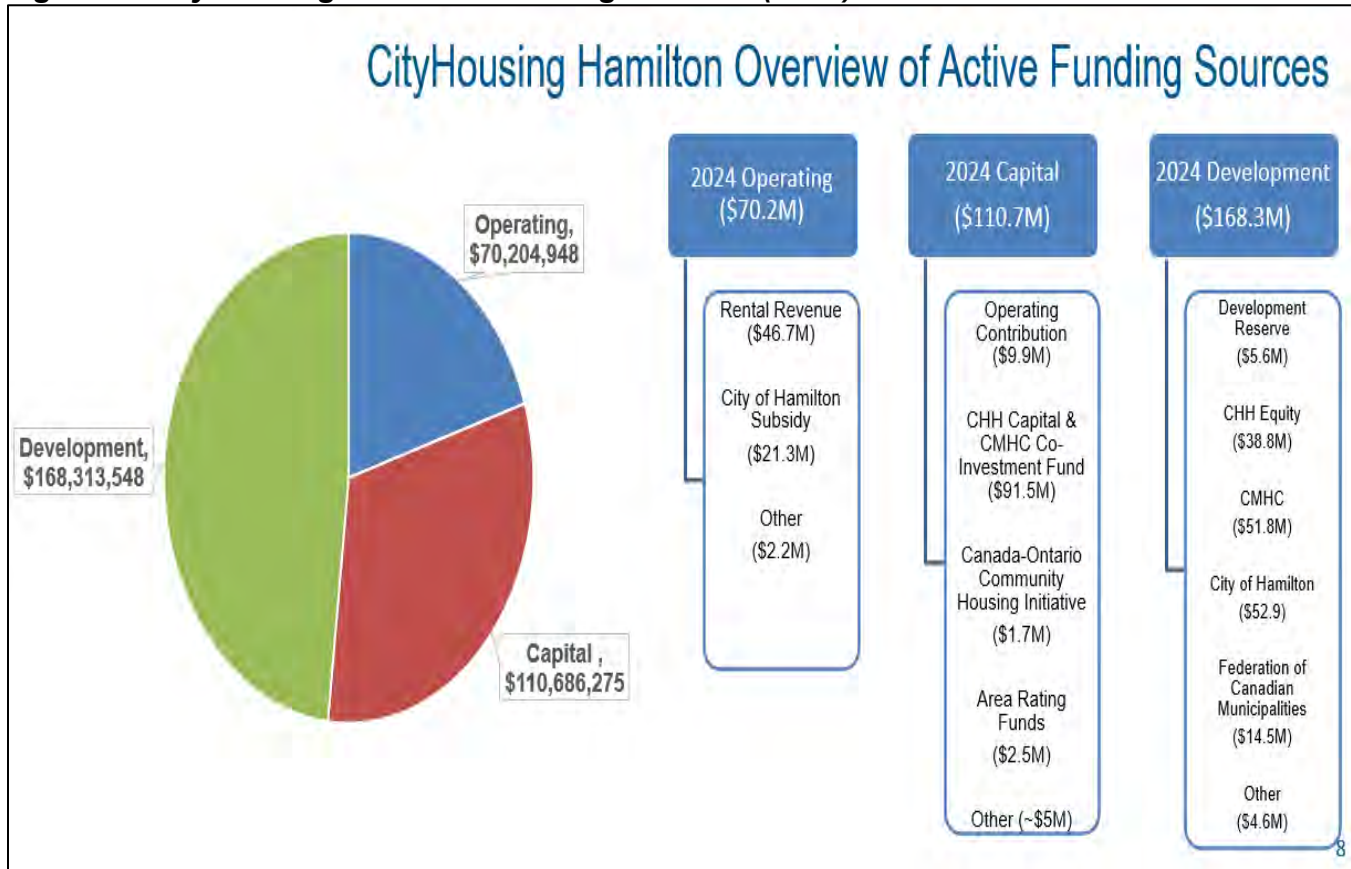
**Figure 1: Breakdown of CityHousing Hamilton Funding Sources (2024)**



Funding comes from rental revenue collected from tenants, rent subsidy and new development funding from the City of Hamilton, CMHC grant funding for development projects, CityHousing capital funds & Equity and CMHC Co-Investment funding, and other funding sources.

Funding sources can and do vary by year as funding can be highly dependent upon grants from other levels of government. **Figure 2** below is based on newer budget data and includes work-in-progress projects from the previous year that may be in progress but not yet completed.

**Figure 2: CityHousing Hamilton Funding Sources (2024)**



### 2.1.3 USERS OF THE SERVICE

CHH houses 13,000 tenants of diverse age, education, language, ability, religion, and ethnicity. CHH tenant records show that 43% of tenants are families, 47% are seniors and 10% are single.

The City of Hamilton supports a diverse population of almost 570,000 residents, with key demographic indicators reflecting its unique character. According to the 2021 Census results<sup>2</sup>, Hamilton's average age stands at 41.5 and median age 40.8 years, with an average size of census families at 2.9 persons per household. While English is the most commonly spoken language, 24% of the population's mother tongue is neither English nor French, and 27% identify as a visible minority. This diversity is reflected in the demographics of tenants served by CHH, with more than 30 different first languages spoken by tenants.

In 2022, Hamilton's household income averaged \$121,031, slightly lower than the Ontario average of \$129,159. This suggests a potential need for more affordable housing options in the City. The median house price in Hamilton was \$830,000 compared to \$500,000 in 2017<sup>3</sup> and average rent continues to increase. It appears that incomes have not kept pace with housing

<sup>2</sup> Census Profile, 2021 Census of Population, 2021

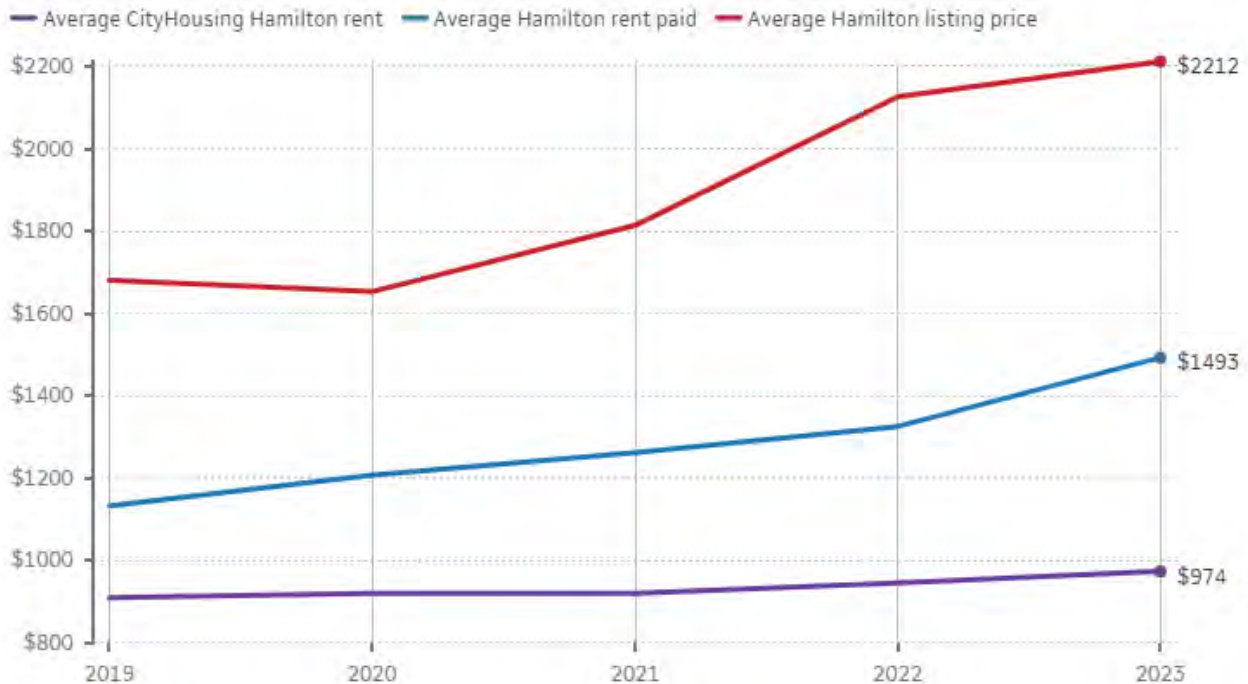
<sup>3</sup> Association, The Canadian Real Estate. 2024

prices. Not only are the costs of ownership increasing, as shown in **Figure 3** below, but rental costs have also increased significantly over the last few years. The combined effect is that fewer and fewer people can afford a home and may require additional support, such as Rent Geared to Income (RGI) programs.

**Figure 3: Rental Prices in Hamilton<sup>4</sup>**

**Rent prices in Hamilton growing at rapid pace**

The gap between rent listings and what renters across Hamilton are paying is growing.



Source: City of Hamilton, Canada Mortgage and Housing Corporation and Zumper (Bobby Hristova/CBC)

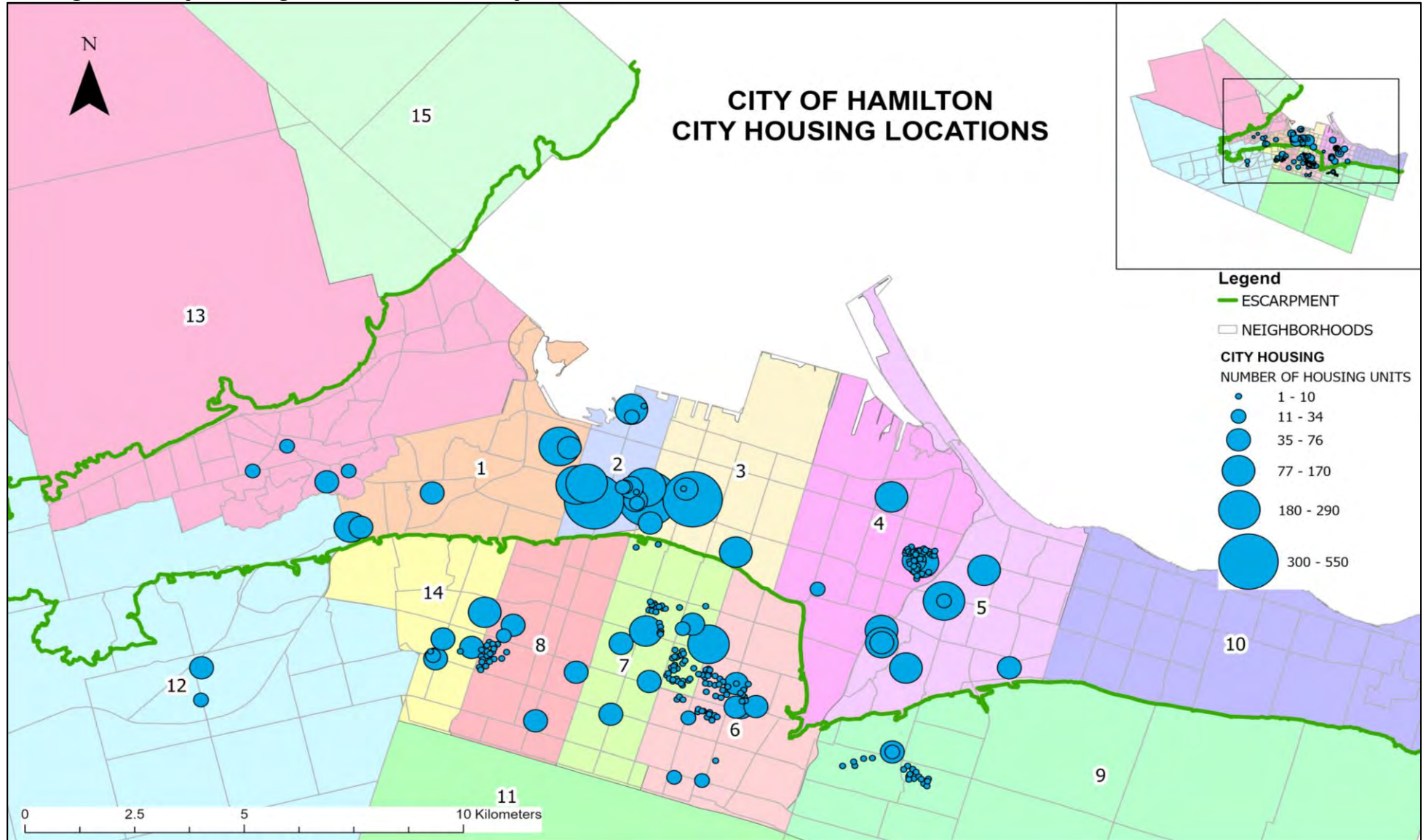
The increasing cost of home ownership and rising rental prices are contributing to growing unaffordability within the city. The situation may prompt individuals to move out of the city to seek housing in communities where they can still afford to rent or own a home. Similarly, individuals from higher-cost areas such as the Greater Toronto Area (GTA) may be migrating to Hamilton for better affordability.

CityHousing Hamilton has housing units in 12 of 15 wards located throughout the City as shown in **Figure 4** below. The highest concentration of CHH housing units is in the downtown8po area.

<sup>4</sup> Hristova, B. 2024 February 10

# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

Figure 4: CityHousing Locations in the City of Hamilton





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## 2024 ASSET MANAGEMENT PLAN

### 2.1.4 UNIQUE SERVICE CHALLENGES

CityHousing Hamilton (CHH) faces many challenges that impact its operational efficiency and the condition of housing it provides. These challenges include the following:

- **Inadequate Funding:** CHH prioritizes crucial maintenance projects based on health, safety, and emergency and aligns these projects with limited available funding. However, inadequate funding has caused CHH to defer certain maintenance projects (as defined in **Section 8.2**) which is affecting the overall condition of its properties.
- **Aging Infrastructure and Maintenance Challenges:** Social housing properties often have aging infrastructure, resulting in ongoing maintenance challenges. Addressing repairs and upgrades to ensure the longevity and quality of housing units may be a continual challenge for CityHousing Hamilton.
- **Support Services and Partnerships:** CHH strives to connect tenants with a variety of services which improve housing stability and quality of life. It relies on many partnerships with different agencies and other community resources. The support needs of CHH tenants have increased significantly over the years, at a time when many outside agencies are struggling to meet the demands. This impacts individual tenants and the overall well-being of CHH communities and can manifest in many unintended outcomes - such as increased safety concerns, social isolation of tenants and even increased damage to property.
- **Preventative Maintenance and Funding Constraints:** Limited funding has caused CHH to make decisions to defer or not complete some preventative maintenance work at the recommended frequency at all CHH properties, resulting in a reactive rather than proactive maintenance approach. Rapidly accelerating costs for construction, materials and real estate are further affecting the ability to deliver projects within existing historical budgets.
- **Diverse Tenant Mix and Increased Administrative Costs:** The diverse mix of tenants with unique support needs, translates into increased time and costs related to tenant administration and tenant support services.
- **Geographically Dispersed Property Portfolio:** The portfolio comprises a significant number of single-home dwellings, including semis and detached houses, scattered across the city. Unlike high-rise or multi-unit buildings, where multiple service requests can be efficiently addressed in the same location, the dispersed nature of single-home dwellings necessitates more driving time for staff. This means that after servicing one unit, they may have to cover greater distances before reaching another single unit, potentially leading to delays in maintenance response times. This also means tenants who may be struggling and/or would otherwise need to be connected to CHH staff are not always identified as early.

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- **Budgeting Challenges For Renewals:** A significant portion of CHH's property portfolio was constructed around the same time, resulting in a synchronization of renewal needs indicating that a substantial number of assets will require renewal simultaneously. Coordinating the necessary resources and finances to address these clustered renewal demands becomes a crucial aspect of effective property management.
- **Regulatory Changes:** Many regulations and initiatives can impact the service delivery and capital costs of CHH. Some of these regulations are mentioned in **Section 2.2** and initiatives that apply to the Service Manager and CHH can be found in **Section 2.1.2**. Any new initiatives that will require significant upgrade work to properties to ensure compliance can increase service delivery costs for CHH.

### 2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of CityHousing Hamilton services are outlined in **Table 1**. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

**Table 1: Legislative Requirements**

LEGISLATION OR REGULATION	REQUIREMENT
Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c.11	The Accessibility for Ontarians with Disabilities Act, 2005 is a statute enacted in 2005 by the Legislative Assembly of Ontario in Canada. Its purpose is to improve accessibility standards for Ontarians with physical and mental disabilities to all public establishments by 2025.
Housing Services Act, 2011	The purpose of this Act is to provide for community-based planning and delivery of housing and homelessness services with general provincial oversight and policy direction.
Residential Tenancies Act, 2006	This Act outlines the roles and responsibilities of landlords and tenants. The act allows for the following: to provide protection for residential tenants from unlawful rent increases and unlawful evictions, to establish a framework for the regulation of residential rents, to balance the rights and responsibilities of residential landlords and tenants and to provide for the adjudication of disputes and for other processes to informally resolve disputes.
Business Corporations Act, 1990 and Municipal Freedom of Information and Protection of Privacy Act	The Ontario Business Corporations Act creates obligations for CHH in terms of filing, reporting and corporate governance activities. CHH is not subject to the provisions of the Municipal Act, 2006. However, the provisions of the Municipal Freedom of Information and Protection of Privacy Act do apply to CHH.

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LEGISLATION OR REGULATION	REQUIREMENT
Ontario Building Code Act	The Building Code Act is an Ontario regulation that describes the requirements for built facilities.
Ontario Fire Code	The Ontario Fire Code requires any landlord or commercial property owner to be responsible for carrying out the provisions for fire safety.
O. Reg. 278/05 Designated Substance	This regulates exposure to designated substances in the workplace and outlines different ways to control the hazards posed by those substances.
Planning Act	The Planning Act is a set of rules on how land use planning (such as approval of development sites) must be conducted in Ontario.
Electrical Safety Authority (ESA)	The Electrical Safety Authority (ESA) issues an electrical repair license to CHH and enforces the Ontario Electrical Code requirements in CHH buildings.
Backflow By-law 10-103	Ensures that the City of Hamilton drinking water quality and distribution system is protected from each: industrial, commercial, institutional, or multi-residential property. This by-law requires buildings with four or more stories high must have backflow preventers installed on the domestic and fire water supply lines. These must be inspected and reported to the water department annually.
Technical Safety and Standards Association (TSSA)	Technical Standards and Safety Authority (TSSA) is Ontario's public safety regulator for Elevating & Amusement Devices, Ski Lifts, Fuels, Boilers & Pressure Vessels, and Operating Engineers.

### 2.3 ALIGNMENT WITH CHH BOARD PRIORITIES

The CHH Board is comprised of nine members, five of which are City Councillors and four members from the community. Although the CHH Board has their own priorities and strategic direction, City Council priorities are considered in the development of these priorities.

# CITYHOUSING HAMILTON

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**Table 2: CityHousing Board of Directors Priorities**

PRIORITY	DESCRIPTION	ALIGNMENT WITH AM PLAN
<b>Flourishing Communities</b>	Empower tenants with the support and services they need to survive.	AM Plan incorporates the voice of the customer using Customer Values and Customer Levels of Service to understand what customers think is important, and how the customer feels about the service and links Customer and Technical Levels of Service to lifecycle costing.
<b>Pride in Homes</b>	Preserve and upgrade CHH's current housing stock.	AM Plan provides a lifecycle approach to all assets and services and assesses asset costs to ensure we are acquiring, operating, maintaining, renewing, and disposing of assets using a lifecycle approach.
<b>Neighbourhood Revitalization</b>	Develop new and inclusive affordable mixed housing while building strong and successful multi-generational communities.	AM Plan discusses demand and forecasts how growth could potentially affect CHH, where known.
<b>A Whole Team Approach</b>	Strengthen our people and our performance.	AM Plan assesses required resources to ensure that CHH continues to deliver agreed-upon levels of service.

### 2.4 ASSET HIERARCHY

CHH assets provide homes that are safe, well-maintained, and affordable for people who live and work in our diverse community. The CHH Service areas are broken down into three asset classes for the purpose of this AM Plan:

- **Facilities:** refers to any CHH-owned facilities necessary to deliver CHH services.
- **Administrative Assets:** includes assets required for CHH staff to deliver the service such as vehicles, computers, and mobiles.
- **Tools and Appliances:** refer to tools used for facility maintenance, pest control services and appliances such as CHH-owned fridges and stoves.

# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

**Table 3 : Asset Class Hierarchy**

SERVICE AREA	CITYHOUSING HAMILTON		
ASSET CLASS	FACILITIES	ADMINISTRATIVE ASSETS	TOOLS AND APPLIANCES
	<ul style="list-style-type: none"> <li>• High-rise</li> <li>• Mid-rise</li> <li>• Low-rise</li> <li>• Semis (Semi-detached)</li> <li>• Singles (Detached)</li> <li>• Townhouse</li> </ul>	<ul style="list-style-type: none"> <li>• Computers</li> <li>• Mobiles</li> <li>• Vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• Fridges</li> <li>• Stoves</li> <li>• Maintenance tools</li> <li>• Pest Control tools</li> </ul>

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

### 3. SUMMARY OF ASSETS

This section provides a detailed summary and analysis of existing inventory information as of November 2023 including age profile, condition methodology, condition profile, asset usage, and performance for each of the asset classes. **Table 4** displays the detailed summary of assets for the CHH service area. The sources for this data are a combination of data included in the City's and CHH's database information. Inventory information does change often, and this is a snapshot of the time of information available.

CHH owns approximately **\$2.95 billion** in assets which are on average in **Fair** condition as shown in **Table 4**. Assets are a weighted average by replacement cost of **40 years** in age which is **46%** of the average remaining service life (RSL). The majority of the weighting for these averages comes from the Facilities asset class. For most assets, this means the CHH should perform preventative maintenance activities identified in the inspection reports and by staff with subject matter expertise, along with the operating activities (e.g., inspection, cleaning) to prevent any premature failures.

Data confidence associated with asset information is also presented in **Table 4**. Data confidence descriptions are outlined on **page 31**, in the AM Plan Overview. The replacement costs below are typically a **Medium** data confidence level overall. For Facilities, these replacement costs are calculated by Subject Matter Experts (SME) using current market rates, building type and size, and were assigned a **Medium** confidence level. Administrative assets replacement costs were gathered from the most recent purchase price for similar assets and are typically **Medium** confidence. Tools and Appliances replacement value is based on an estimate provided by SMEs and is a **Low** data confidence. No asset registry data is available for appliances (stoves and fridges). A continuous improvement item in **Table 29** has been identified to collect this information going forward for all assets.

The Corporate Asset Management (CAM) Office acknowledges that some works and projects are being completed on an ongoing basis and that some of the noted deficiencies may already be completed at the time of publication. It is also important to note that AM Plans only include asset information related to assets that the CHH owns. Assets that are leased from other bodies (such as some leased vehicles) are incorporated into operational costs but are not incorporated into the total replacement cost for the service. Finally, the assets included below are assets that are assumed and in service at the time of writing.

# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

**Table 4 : Detailed Summary of Assets**  
\* Weighted Average based on Replacement Cost

FACILITIES					
ASSET CATEGORY	NUMBER OF ASSETS	NUMBER OF UNITS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
High-rise	27	4,527	\$1,836M	37 years (50%)	3-FAIR
<b>DATA CONFIDENCE</b>	High	High	Medium	High	High
Mid-rise	4	93	\$51.8M	42 years (44%)	3-FAIR
<b>DATA CONFIDENCE</b>	High	High	Medium	High	High
Low-rise	10	352	\$155.3M	43 years (43%)	3-FAIR
<b>DATA CONFIDENCE</b>	High	High	Medium	High	High
Singles	185	185	\$96.3M	56 years (25%)	4-POOR
<b>DATA CONFIDENCE</b>	High	High	Medium	Medium	Low
Semis	192	192	\$99.9M	60 years (20%)	5-VERY POOR
<b>DATA CONFIDENCE</b>	High	High	Medium	Medium	Low
Townhouse	30	1,582	\$703.5M	42 years (44%)	3-FAIR
<b>DATA CONFIDENCE</b>	High	High	Medium	High	High
<b>SUBTOTAL</b>	<b>448</b>	<b>6,931 units</b>	<b>\$2.943B</b>	<b>40 YEARS* (46%)*</b>	<b>3-FAIR*</b>
<b>DATA CONFIDENCE</b>	<b>HIGH</b>	<b>HIGH</b>	<b>MEDIUM</b>	<b>MEDIUM</b>	<b>MEDIUM</b>

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

ADMINISTRATIVE ASSETS				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Computers	173	\$305K	4 years (15%)	4-POOR
<b>DATA CONFIDENCE</b>	High	Medium	High	Low
Mobiles	115	\$42K	3 years (22%)	4-POOR
<b>DATA CONFIDENCE</b>	High	Medium	High	Low
Vehicles	15**	\$405K	12 years (5%)	5-VERY POOR
<b>DATA CONFIDENCE</b>	High	Medium	High	Low
<b>SUBTOTAL</b>	<b>\$752K</b>		<b>8 years* (22%)*</b>	<b>4-POOR*</b>
<b>DATA CONFIDENCE</b>	<b>MEDIUM</b>		<b>MEDIUM</b>	<b>LOW</b>

\*\*CHH also operates an additional 6 leased vehicles which are not shown in this table.

TOOLS AND APPLIANCES				
ASSET CATEGORY	NUMBER OF ASSETS	REPLACEMENT VALUE	AVERAGE AGE (% RSL)	AVERAGE EQUIVALENT CONDITION
Fridges	5,403	\$4.1M		NA
<b>DATA CONFIDENCE</b>	Medium	Low		
Stoves	5,403	\$3.4M		NA
<b>DATA CONFIDENCE</b>	Medium	Low		
Maintenance Tools	1,281	\$102K		NA
<b>DATA CONFIDENCE</b>	High	Medium		
Pest Control Tools	32	\$18K		NA
<b>DATA CONFIDENCE</b>	High	Medium		
<b>SUBTOTAL</b>	<b>\$7.6M</b>			<b>NA</b>
<b>DATA CONFIDENCE</b>	<b>LOW</b>			
<b>TOTAL</b>	<b>\$2.951B</b>		<b>40 years* (46%*)</b>	<b>3-FAIR*</b>
<b>DATA CONFIDENCE</b>	<b>MEDIUM</b>		<b>MEDIUM</b>	<b>MEDIUM</b>



# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

### 3.1 ASSET CONDITION GRADING

Condition refers to the physical state of the CityHousing Hamilton assets and is a measure of the physical integrity of these assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Since condition scores are reported using different scales and ranges depending on the asset, **Table 5** below shows how each rating was converted to a standardized 5-point condition category so that the condition could be reported consistently across the AM Plan. A continuous improvement item identified in **Table 29** is to review existing internal condition assessments and ensure they are revised to report on the same 5-point scale with equivalent descriptions.

**Table 5: Equivalent Condition Conversion Table**

EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	FACILITIES CONDITION INDEX (FCI)*
<b>1 Very Good</b>	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance is required only.	>79.5%	N/A
<b>2 Good</b>	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on the asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	< 5% Unplanned component failure is highly unlikely. Operations and maintenance costs are predictable. The building will provide a clean and functional environment.
<b>3 Fair</b>	The asset is sound but has minor defects. Deterioration has some impact on asset usage. Minor to significant maintenance is required.	39.5% - 69.4%	>= 5% to < 10% Unplanned building component failure is unlikely. There may be some variability in operations and maintenance costs. The building will meet most operational needs with minor complaints.
<b>4 Poor</b>	The asset has significant defects and deterioration. Deterioration has an impact on asset usage. Rehabilitation or major maintenance is required in the next year.	19.5% -39.4%	>= 10% to <30% Unplanned building component failure is likely. Unplanned repairs will likely occur, and operations and maintenance costs will be high. The facility will look worn with serious signs of deterioration.
<b>5 Very Poor</b>	The asset may have serious defects and deterioration.	<19.4%	>= 30% Unplanned component failure will occur. Emergency repairs will likely occur, and operations and maintenance costs will be high. The facility will look worn with serious signs of deterioration. The functionality of the entire building will be compromised.

\*All facilities are actively maintained to ensure habitability through legislative and preventative maintenance on all units. FCI is a financial indicator of condition.

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

The following conversion assumptions were made:

- For Administrative assets, a condition assessment was not completed, but where age information was known, the condition was based on the percent of remaining service life (%RSL);
- Facilities Condition Index was based on ranges provided by a consultant who has completed Building Condition Assessments (BCA) for the City, which corresponds to a 4-point scale; therefore, facilities will not be able to attain a score of 1-Very Good. FCI is a financial indicator of condition;
- Semis and singles-type facilities, condition assessment data is not available, but age information was approximated from historical engineering data records on site servicing, the condition was based on the %RSL; and,
- Tools and Appliances asset age and condition were unknown, and their condition was not included in the AM Plan.

### 3.2 ASSET CLASS PROFILE ANALYSIS

This section outlines the Age Profile, Condition Methodology, Condition Profile, and Performance Issues for each of the asset classes.

- The age of an asset is an important consideration in the asset management process as it can be used for planning purposes as typically assets have an estimated service life (ESL) where they can be planned for replacement. Some lower-cost or lower criticality assets can be planned for renewal based on age as a proxy for condition or until other condition methodologies are established. It should be noted that if an asset's condition is based on age, it is typically considered to be of a low confidence level. Typically, age is used when projecting replacements beyond the 10-year forecast to predict degradation.
- Condition refers to the physical state of assets and is a measure of the physical integrity of assets or components and is the preferred measurement for planning lifecycle activities to ensure assets reach their expected useful life. Assets are inspected/assessed at different frequencies and using different methodologies to determine their condition which are noted in this section.
- Finally, there are often insufficient resources to address all known asset deficiencies, and so performance issues may arise which must be noted and prioritized.

#### 3.2.1 FACILITIES PROFILE

##### 3.2.1.1 AGE PROFILE

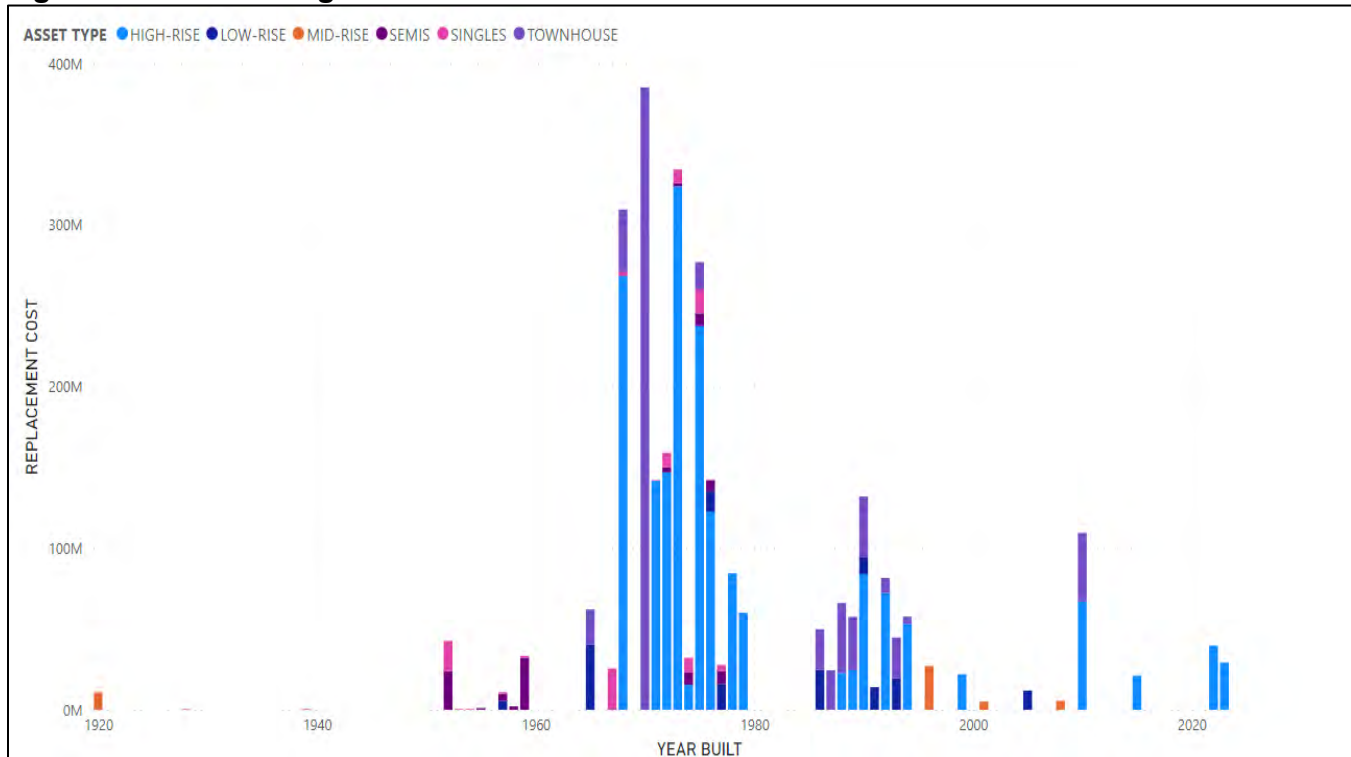
The age profile of the CHH Facilities assets is shown in **Figure 5**. The data confidence for age is typically High as this information was recorded during the construction of the facilities. Age data for semis and single facility type was not readily available and was estimated based on sewer construction dates to the lots from an engineering drawing database and was assigned a low confidence level.

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

There are a total of 448 buildings in the CHH portfolio, out of which 243 (54%) were built between 1960-1980 as shown by the concentration of properties in **Figure 5** below. This clustering becomes significant in the later stages of the lifecycle model as these properties will be due for renewal around the same time. The pattern observed in the construction years will be reflected in the lifecycle model as these properties approach the end of their estimated service life.

**Figure 5: Facilities Age Profile**



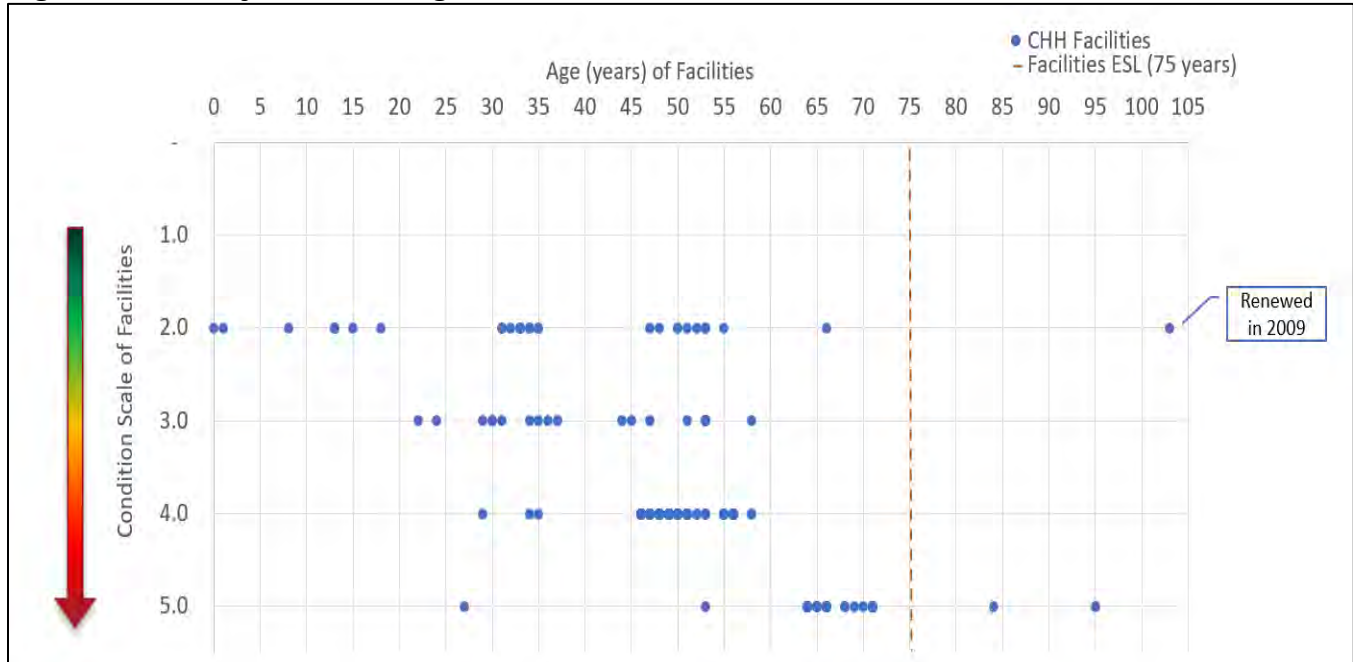
CHH has established an estimated service life (ESL) of 75 years for its facilities. This ESL is intended for the overall shell of the building and does not include the service life of building components, detailed discussion in **Section 8.2**. As stated in the AM Plan Overview document, an estimated service life is defined as the duration during which the City of Hamilton anticipates an asset to be available for use. It represents the expected timeframe between placing the asset into service and the eventual removal of the asset from active service.

**Figure 6** below shows the current CHH housing portfolio and compares the age of the facilities with the condition of the facilities. CHH complies with all building codes and by-laws to ensure tenant safety. Facilities shown were operational and occupied by CHH tenants. Based on **Figure 6**, it can be seen that most of the CHH facilities are less than 75 years of age with the exception of three facilities. Among these three older facilities, one mid-rise facility underwent a full renewal in 2009 and the other two are singles (detached homes). The BCA condition score corresponds to a 4-point scale; therefore, facilities will not be able to attain a score of 1- Very Good, with 2 Good being the highest attainable condition rating.

Based on this analysis it appears that a 75-year ESL is an appropriate assumption for CHH's current housing portfolio.

# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

**Figure 6: Facility Portfolio Age versus Condition**



With aging facilities, CHH has been making significant efforts to maintain and repair these units and uses different funding sources to fund these repair projects. In 2021, the CMHC's National Housing Co-Investment Fund (NHCF) approved a comprehensive eight-year plan, allocating \$145.6M to support \$194.2M in facility repair and renewal. This ongoing initiative aims to enhance tenant experience and positively impact 6,290 CHH units. A primary goal of NHCF is to fund projects that will achieve improved outcomes related to affordability, energy efficiency and accessibility. CHH remains committed to meeting these targets and has been diligently implementing the necessary measures. The progress on these targets can be seen in **Table 15**. As this funding has a defined scope, money cannot be used to address all types of repair needs. The funding from the NHCF will help to extend the lifespan of some, but not all, of CHH's housing stock.

### 3.2.1.2 CONDITION METHODOLOGY & PROFILE

Condition assessments for CHH facilities are determined based on the results of a Building Condition Assessment (BCA). BCAs are completed on CityHousing Hamilton's multi-unit facilities, such as high-rise, mid-rise, low-rise and townhouses, every five years and output a score called a Facility Condition Index (FCI) which is considered to be a high confidence level data source. The FCI is a financial indicator of condition and is calculated based on a ratio of the cost of work required on the facility to the total replacement cost of the facility. The condition conversion from FCI to the standardized 5-point scale used in this AM Plan is shown in **Table 5**. The condition of semis and singles is based on the percentage of remaining service life (%RSL) conversion with lower data confidence due to a lack of BCA data.

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

**Table 6: Inspection and Condition Information**

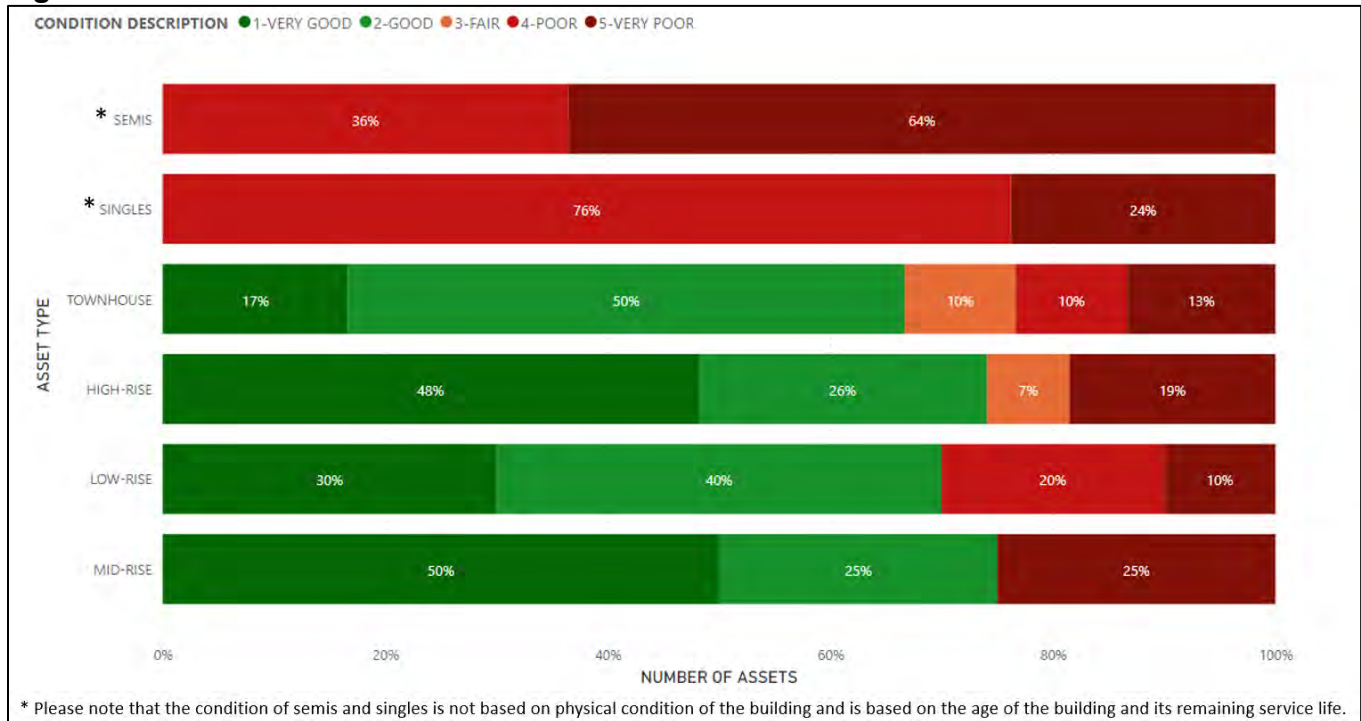
ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
<b>High-rise, Mid-rise, and Low-rise buildings</b>	Every 5 years	2018, WalterFedy	Facility Condition Index (0% - 100%)
<b>All Facilities</b>	Annual unit inspection on all units	2022	Formalized and prioritized based on health and safety concerns

According to the BCAs, the overall condition of multi-unit facilities was rated to be **Fair** condition, though these BCA assessments were a visual, surface-level inspection and lacked detailed analysis such as cutting into walls or removing mechanical panels. Therefore, occasionally additional findings might emerge during detailed analysis which can result in modifications to the facility condition score. In contrast, the semis and singles were shown as **Poor** condition, but the condition is based **only** on %RSL calculations. While BCA's are not completed for these units, an annual inspection was completed on every unit during which any health and safety concerns were observed and noted by the staff. A continuous improvement item has been identified in **Table 29** to design and develop a condition process for all major asset types which includes semis and single facilities.

CHH is an important service; it is essential that facilities are kept in a state of good repair. CHH has ensured that facilities are kept in a safe, working, and liveable condition but acknowledges that a significant amount of facility maintenance needs will be required in the next 10 years as shown in **Section 8.2**. If certain items are not completed, it could result in a further decline in the facility's condition. Building Condition Assessments were completed in 2018, and while the forecasted works have been updated in the CHH database, a future Building Condition Assessment will be completed in 2024-2025 and therefore these condition ratings may change in the next year.

# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

**Figure 7: Facilities Condition Distribution**



Semis and Singles asset condition as shown above was based solely on the age of the facility and their %RSL and converted to condition based on **Table 5**. This has been identified in **Table 29** to design and develop a condition process for all major assets. **It's crucial to note that all facilities discussed in this AM Plan are functional and safe to be occupied by tenants and are actively maintained to ensure habitability through legislative and preventative maintenance on all units. FCI is a financial indicator of condition.**

### 3.2.1.3 ASSET USAGE AND PERFORMANCE

Assets are generally provided to meet design standards where available. However, there are often insufficient resources to address all known deficiencies.

Most performance issues with CityHousing Hamilton facility assets involve the poor condition of asset components at or near the end of their estimated service life. Some of the known service performance deficiencies are shown in **Table 7** which were identified using information from the 2018 Building Condition Assessment (BCA). As stated in **Section 3.2.1**, the BCAs are only conducted on multi-unit facilities, the semis and singles are not part of this assessment.

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

**Table 7: Known Service Performance Deficiencies**

ASSET	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Facilities (Various)	Mechanical Upgrades Required	Some facilities have equipment where components are beyond their expected service life.  To meet the upcoming energy and GHG targets there is a requirement to upgrade the majority of mechanical systems.
	Electrical Servicing Components in Poor Condition	Buildings that are approximately 40 years old with original electrical systems, will require extensive capital dollars to upgrade.
	Buildings' Exterior Shell Condition Varies	The condition of exterior walls, roofs, windows, doors, and overhead doors varies from good to poor across the portfolio.
	Appliances in Fair Condition	Some facilities have fridges and stoves provided in the unit with some appliances observed to be in fair condition.
	Elevators	Some of the high-rise and mid-rise facilities have elevators that are beyond their expected service life. Currently, CHH is conducting an audit to prioritize elevator upgrades across the portfolio.
	Parking Lots Surface and Underground Lots In Poor Condition	Parking lots of some facilities appeared in poor condition. An ongoing program is in place to upgrade the parking lots. Due to funding restraints, there is a backlog on these upgrades.
	Cooling Systems in Poor Condition	Some systems that provide cooling to individual units are beyond their expected service life. Where there is no cooling provided to individual units, there is often cooling provided in community rooms.  If a new by-law for maximum summer temperature goes into effect, this would create extensive capital and ongoing operational budget requirements.
	Foundation Walls in Poor Condition	The foundation walls of multiple facilities were found to be in poor condition. It is recommended that the foundation walls be repaired along with the weeping tiles and waterproofing.

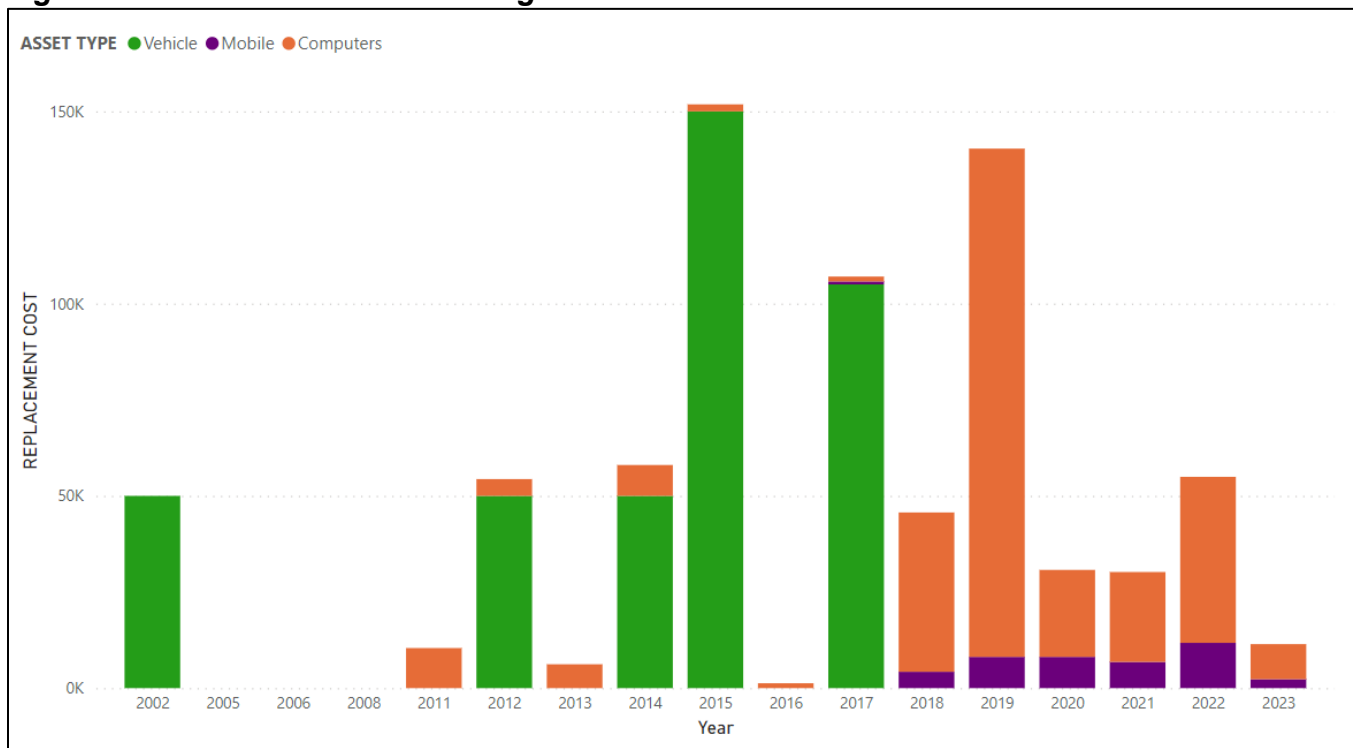
# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

## 3.2.2 ADMINISTRATIVE ASSETS PROFILE

### 3.2.2.1 AGE PROFILE

The age profile of the Administrative Assets is shown in **Figure 8**. For vehicles, computers and mobile assets, the data confidence for age is typically High because asset age is formally tracked, and many assets are replaced based on age. Vehicles that exceed eight years of age, which is the entirety of the CHH-owned fleet, generally exceed the estimated service life. CHH is only able to access vehicles from the City of Hamilton once they have been declared surplus to the City of Hamilton's needs.

**Figure 8: Administrative Assets Age Profile**





# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

### 3.2.2.2 CONDITION METHODOLOGY & PROFILE

Vehicles are inspected and maintenance activities are conducted at specific intervals throughout the asset's lifecycle as shown in **Table 8**. Computer assets do not have a formal inspection program which has been identified as a continuous improvement item in **Table 29**.

**Table 8: Inspection and Condition Information**

ASSET	INSPECTION TYPE	DESCRIPTION	FREQUENCY	CONDITION SCORE OUTPUT
Computers	Ad Hoc	None	Ad Hoc	None
Vehicles	Annual	Safety Checks and Regular Maintenance as needed	Twice a year at minimum	None

The condition profile of the administrative assets is shown in **Figure 9**. The condition of administrative assets was estimated based on %RSL as no formal condition rating is assigned to each asset at this time. Due to the condition methodology, a significant amount of assets are showing poor or very poor condition because they are approaching or are beyond their estimated service life.

Currently, the average condition of Computer and Mobile assets is Poor, and Vehicles are Very Poor.

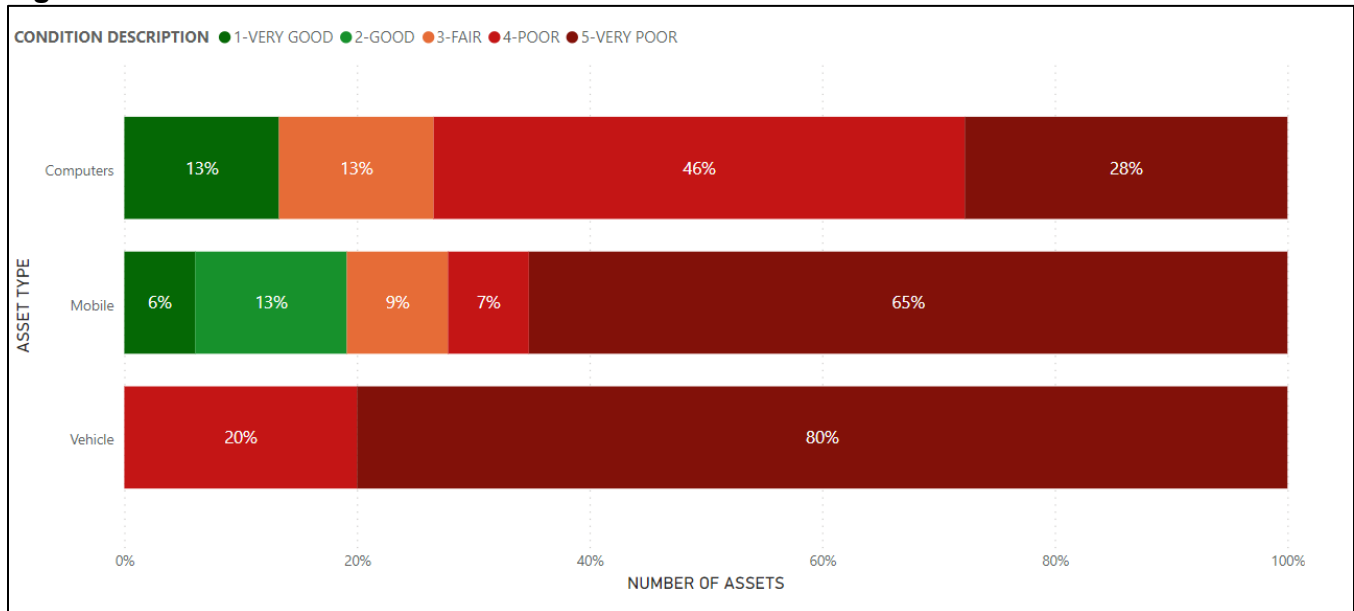
The total effective size of the fleet operated by CHH is 21 Vehicles:

- Eight vehicles are owned directly by CHH;
- Seven vehicles are provided by the City of Hamilton Fleet Services. Six of the seven Fleet Services provided vehicles are extended-use vehicles which have been included in the age and condition details in the figures below. These extended-use vehicles contribute to the increased percentage of Very Poor vehicles.
- Six vehicles are leased by CHH which are not included in the asset list (**Table 4**). The leasing fees are incorporated into the lifecycle model as an operational cost.

The condition of fleet assets is likely impacting the delivery of services. A continuous improvement item in **Table 29** is to develop and implement a fleet strategy.

# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

**Figure 9: Administrative Assets Condition Profile**



### 3.2.2.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with administrative assets involve assets exceeding their ESL. The known service performance deficiencies in **Table 9** were identified using staff input.

**Table 9: Known Service Performance Deficiencies**

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Vehicle	Various	CHH vehicles used beyond the expected replacement interval	Inadequate funding and extensive procurement processes have created a backlog in vehicle acquisitions. CHH is experiencing more frequent maintenance needs.

### 3.2.3 TOOLS AND APPLIANCES PROFILE

#### 3.2.3.1 AGE PROFILE AND CONDITION

The age profile of the Tools and Appliances assets is unknown. The quantity and replacement value of Tools and Appliances is estimated based on subject matter expertise. Developing a detailed asset register with an accurate number of assets, age, replacement costs and condition assessment has been identified as a continuous improvement item in **Table 29**.

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

### 3.2.3.2 ASSET USAGE AND PERFORMANCE

Due to a lack of information on Tools and Appliances assets, this was not identified. The asset usage deficiencies for Tools and Appliances will be identified in future iterations of the AM Plan, this has been identified as a continuous improvement item in **Table 29**.

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

### 4. MUNICIPALLY DEFINED LEVELS OF SERVICE

Levels of service are measures of what CHH provides to its customers, residents, and visitors, and are best described as the link between providing the outcomes the community desires, and the way that CHH provides those services.

O.Reg 588/17 does not define levels of service for CHH assets and therefore the City, along with CHH, has developed municipally defined levels of service. Levels of service are defined in three ways, customer values, customer levels of service and technical levels of service which are outlined in this section. An explanation for how these were developed is provided in **Section 6.5** of the AMP Overview.

#### 4.1 SURVEY METHODOLOGY

To develop customer values and customer levels of service, a Customer Engagement Survey entitled *Let's Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton* was released on **September 5, 2023**, on the Engage Hamilton platform and closed on **October 10, 2023**. The survey results can be found in Appendix "A".

The survey was structured in two parts to align with CHH's service delivery approach.

The first part focused on CHH tenants and consisted of 13 questions specifically tailored to evaluate CHH's service delivery to tenants. This part of the survey received responses from seven participants. Due to the exceptionally low response rate and the resulting very low data confidence grade, as seen in **Table 11**, the results from this section of the survey were not incorporated into developing customer levels of service.

The second part of the survey was open to all respondents, including CHH tenants and the general public (external customers). It was comprised of 11 questions focusing on CHH service delivery based on external customers' perceptions. A total of 54 participants responded to this section.

CHH also conducts its own internal tenant survey periodically. The most recent survey was completed in 2022. This survey had 100 responses and a high data confidence grade. This data was also used to develop Customer Values and levels of service.

For the purposes of this report, data has been evaluated and assigned a grade from a confidence level perspective (margin of error at 95% confidence in sample size) and a data consistency (standard deviation) perspective per **Table 10** below.

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

**Table 10: Data Confidence Levels**

Grade	Data Consistency (Standard Deviation)	Confidence Level (Margin of Error at 95% Confidence in Sample Size)
<b>Very High</b>	0 to 0.5 – results are tightly grouped with little to no variance in response	0% to 5% - minimal to no error in results, can generally be interpreted as is
<b>High</b>	0.5 to 1.0 – results are tightly grouped but with slightly more variance in response	5% to 10% - error has become noticeable, but results are still trustworthy
<b>Medium</b>	1.0 to 1.5 – results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - error is a significant amount and will cause uncertainty in the final results
<b>Low</b>	1.5 to 2.0 – results show a high variance with a fair amount of disparity in responses	20% to 30% - error has reached a detrimental level and results are difficult to trust
<b>Very Low</b>	2.0+ - results are highly variant with little to no grouping	30%+ - significant error in results, hard to interpret data in a meaningful way

The specific data confidence level and data grade for each of the surveys are detailed in **Table 11**, on the next page.

# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

**Table 11: Survey Results – Confidence Level, Margin of Error, and Data Usage.**

SURVEY	SURVEY RESPONSE RATE	ESTIMATED POPULATION	CONFIDENCE LEVEL (MARGIN OF ERROR AT 95% CONFIDENCE IN SAMPLE SIZE)	GRADE	DATA USAGE
2023 <i>Let's Connect, Hamilton</i> – City Services & Assets Review: <i>CityHousing Hamilton Survey</i> Part 1 – Tenant Questions	7	13,000	37% - significant error in results, hard to interpret data in a meaningful way.	<b>Very Low</b>	Due to very low confidence levels, results were not used in customer values and customer levels of service discussion.
2023 <i>Let's Connect, Hamilton</i> – City Services & Assets Review: <i>CityHousing Hamilton Survey</i> Part 2 – All respondents' questions	54	570,000	13% - error is a significant amount and will cause uncertainty in the final results.	<b>Medium</b>	Due to the medium confidence level and the lack of direct experience from external customers with CHH services, results were used to inform customer values and customer levels of service but should be interpreted with discretion.
2022 CHH Tenant Survey	100	13,000	10% - error is becoming noticeable, but results are still trustworthy.	<b>High</b>	Due to the high confidence level, results were used to develop customer values and customer LOS.

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High data consistency means that more often respondents came to the same conclusion for a question, whereas a low data consistency means that there is a split in respondent's opinions. Therefore, while CAM may be able to improve survey confidence levels over time by increasing the survey sample size, it may not be possible to improve data consistency over time as this depends on the opinions of the respondents and may require additional insight into why respondents' opinions are split. A low consistency of data does not mean the data is "bad," but it does mean that it is difficult to make decisions using that information.

It is also important to note that these surveys are based on customers' sentiments and opinions about the service CHH is providing. It is crucial to recognize that the surveys reflecting customers' sentiments and opinions toward CHH's services serve as potential indicators. However, it is equally important to acknowledge that managing customer expectations is essential, particularly in light of budgetary constraints. In addition, approximately 87% of survey respondents may not have direct experience with CHH services, so many of the performance-based responses are not based on CHH's actual performance but rather on the customers' sentiment.

### Limitations to Survey Methodology:

The *Let's Connect* survey methodology has several limitations which may also reduce the confidence level in the survey data. The survey was released using an online platform and did not include telephone surveys and consequently, there is no way to confirm the identity information provided in the survey. In addition, the survey did not control for IP addresses, and therefore it is possible that respondents could complete the survey more than once and skew the survey results. Paper copies of the survey were also made available in public libraries and to CHH residents in common areas of multi-unit buildings.

However, it is crucial to acknowledge that even though the survey results offer some insight into customer sentiments toward the services provided by CHH, **decisions should not be made based on this survey alone**. The limitations in methodology raise concerns about the reliability and representativeness of the data. Therefore, it is advisable to complement these findings with other sources of information or conduct further research to ensure a comprehensive understanding of customer perceptions and needs.

The future intent is to release this survey on a regular basis to measure the trends in customer satisfaction over time and ensure that CHH is providing the agreed level of service, as well as to improve the marketing strategy by both incorporating telephone surveys and/or IP controls to improve confidence levels in the survey responses. This has been noted in **Table 29** in the continuous improvement section.

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### 4.2 CUSTOMER VALUES

Customer values are what the customer can expect from their tax dollar in “customer speak” which outlines what is important to the customer, whether they see value in the service, and the expected trend based on the 10-year budget. These values are used to develop the level of service statements.

**Customer Values** indicate:

- What aspects of the service are important to the customer;
- Whether they see value in what is currently provided; and,
- The likely trend over time based on the current budget provision.

As previously mentioned, the customer values below were determined and informed using the results from the *Let’s Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton and the 2022 CHH Tenant Survey*.

**Table 12: Customer Values**

SERVICE OBJECTIVE				
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	DATA CONSISTENCY GRADE (as per Table 15)	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
<b>Waste Management and Resolving Safety Concerns Are Very Important Services.</b>	2023 CHH City Services & Assets Review Survey <sup>5</sup>	Based on survey responses, on average, these are considered very important services.	High	Maintain
<b>Exterior Care Of The Building And Landscaping Around The CHH Properties Are Important Services.</b>		Based on survey responses, on average, these are considered very important services for CHH to be responsible for providing.	High	Maintain

<sup>5</sup> The 2023 CHH City Services & Assets Review Survey gauges public sentiment towards CHH services, but the public may lack direct experience with CHH services. Data Confidence Grade is Medium



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SERVICE OBJECTIVE				
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	DATA CONSISTENCY GRADE (as per Table 15)	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
<b>Increasing Access to Equitable, Affordable, and Inclusive Housing Across Hamilton is Important.</b>		Based on survey responses, on average it is important to increase access to equitable, affordable, and inclusive housing in Hamilton.	Medium	Maintain
<b>Redevelopment, Revitalization, And Renewal of The Housing Supply are Important Responsibilities Of CHH.</b>		Based on survey responses, it is important for CHH to be responsible for the redevelopment, revitalization, and renewal of the housing supply.	Medium	Maintain
<b>CHH Buildings Should Be Maintained in Good Condition and Should Be Welcoming, Safe and Accessible.</b>		Based on survey responses CHH buildings should be accessible, safe, equitable, inclusive, clean, in good repair, comfortable, energy efficient, and inviting.	High	Maintain
<b>Rate Level Change May Be Considered to Increase the Level of Service.</b>		Based on survey responses, customers may prefer service level changes.	Medium	Maintain

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SERVICE OBJECTIVE				
CUSTOMER VALUES	CUSTOMER SATISFACTION MEASURE	CURRENT FEEDBACK	DATA CONSISTENCY GRADE (as per Table 15)	EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)
Outdoor Green Spaces and Community Spaces in CHH Buildings (Such as Meeting Rooms/Lounges) are Very Important.	2022 CHH Tenant Survey	Based on survey responses, on average, these are considered very important services for CHH tenants.	High	Maintain
Outdoor Playgrounds are Not Important for Customers.		Based on survey responses, on average, these are considered not important services for CHH tenants.	High	Maintain
Access To Community Agencies Located Within the CHH Building is Important.		Based on survey responses, on average, these are considered important services for CHH tenants.	High	Maintain

### 4.3 CUSTOMER LEVELS OF SERVICE

Ultimately customer performance measures are the measures that the City and CHH will use to assess whether it is delivering the level of service the customers desire. Customer level of service measurements relate to how the customer feels about CityHousing Hamilton's service in terms of their quality, reliability, accessibility, responsiveness, sustainability and of course, their cost. The City and CHH will continue to measure these customer levels of service to ensure a clear understanding of how the customers feel about the services and the value of their tax dollars.

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The Customer Levels of Service are considered in terms of:

<b>Condition</b>	How good is the service? What is the condition or quality of the service?
<b>Function</b>	Is it suitable for its intended purpose? Is it the right service?
<b>Capacity/Use</b>	Is the service over or underused? Do we need more or less of these assets?

In **Table 13** under each of the service measure types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current allocation.

**Table 13: Customer Levels of Service**

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
Quality/ Condition	Ensure that CHH assets are functional and well-maintained.	2023 CHH City Services & Assets Review Survey <sup>6</sup>	Average survey respondent opinion on how CHH has performed overall in the last 24 months.	Below average	Increase
		<b>Confidence Level</b>		Medium	
		<b>Data Consistency</b>		Medium	
		2022 CHH Tenant Survey	Average survey respondent opinion on how satisfied they are with the overall condition of their home.	Average Performance (Neither satisfied nor dissatisfied)	Increase
		<b>Confidence Level</b>		High	
		<b>Data Consistency</b>		High	

<sup>6</sup> The 2023 CHH City Services & Assets Review Survey gauges public sentiment towards CHH services, but the public may lack direct experience with CHH services. Data Confidence Grade is Medium

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TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
	Be fiscally responsible when delivering services.	2023 CHH City Services & Assets Review Survey <sup>7</sup>	Average survey respondents on whether CHH is providing good value for money when providing infrastructure and services.	Below Performance	Maintain
		<b>Confidence Level</b>		Medium	
		<b>Data Consistency</b>		Medium	
Function	Provide prompt, efficient, and effective property management services.	2022 CHH Tenant Survey	Average survey respondents on if they agree that CHH is providing the services they expect from a landlord.	Average Performance (Customers neither agree nor disagree)	Increase
		<b>Confidence Level</b>		High	
		<b>Data Consistency</b>		High	
		2022 CHH Tenant Survey	Average survey respondents on whether they are satisfied with Pest Control Services.	Average Performance (Customers neither satisfied nor dissatisfied)	Maintain
		<b>Confidence Level</b>		High	
		<b>Data Consistency</b>		High	
		2022 CHH Tenant Survey	Average survey respondents on whether they are satisfied with Maintenance Services.	Average Performance (Customers neither satisfied nor dissatisfied)	Increase
		<b>Confidence Level</b>		High	
		<b>Data Consistency</b>		High	

<sup>7</sup> The 2023 CHH City Services & Assets Review Survey gauges public sentiment towards CHH services, but the public may lack direct experience with CHH services. Data Confidence Grade is Medium

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TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
		2022 CHH Tenant Survey	Average survey respondents on whether they are satisfied with Tenant Support Services.	Average Performance (Customer neither satisfied nor dissatisfied)	Increase
		<b>Confidence Level</b>		High	
		<b>Data Consistency</b>		High	
	Provide safe core social housing services that support well-being and quality of life.	2023 CHH City Services & Assets Review Survey	Average respondent response on whether CHH fosters equitable, diverse, and inclusive communities.	Average response	Increase
		<b>Confidence Level</b>		Medium	
		<b>Data Consistency</b>		Medium	

### 4.3.1 CUSTOMER INDICES

The three indices calculated to assess how customer expectations for a service align with the perceived performance from the *Let's Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton Survey* are listed below in **Table 14**. These indices are explained and analyzed in detail in the sections below and will eventually be included for all assets (when available) in the overall measures in the AM Plan Overview.

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**Table 14: Customer Indices**

CUSTOMER INDICES	AVERAGE RESULT
Service Importance Versus Performance Net Differential <sup>8</sup>	-47
Net Promoter Score (%) <sup>9</sup>	-68.97%
Service Rates Versus Value for Money Net Differential	-24

As the CHH survey results appear to be overall divided into many issues, it is difficult to make any conclusive decisions based on this survey alone. Therefore, the information below is intended to provide context around the survey results to assist CHH with areas to further investigate before proposing any new levels of service. Approximately 87% of survey respondents had not used any aspect of CHH service, meaning that many of the results are based on public perception of the service and not a customer's direct experience of CHH performance. Therefore, it is difficult to make any conclusive decisions based on this survey alone.

### SERVICE IMPORTANCE VERSUS PERFORMANCE INDICE

The Service Importance versus Performance indices is used to determine if a service's importance correlates with the perceived performance. Service areas where the average importance rating exceeds the average performance rating by 20 points are indicative of a mismatch between expectations and service levels, equal to one point on the Likert<sup>10</sup> scale.

Per **Figure 10** below, the net differential exceeds 20 points for all service areas. This indicates that although customers generally consider these services to be between Very Important to Important on the Likert scale, they also perceive that CHH only performed Average to Below Average for these services over the last 24 months. The data consistency on both questions showed an overall medium consistency.

To reduce the net differential, CHH would have to increase their performance to between Good and Very Good, which they would accomplish by altering their Technical Levels of Service and closely monitoring and developing more relevant metrics to improve customer satisfaction. However, due to low response from tenants, an average of 87% of respondents may not have

<sup>8</sup> For these indices, a value close to 0 is considered a match, and a value exceeding 20 points indicates a mismatch between customer expectations, and perception or service levels.

<sup>9</sup> A positive net promotor score indicates that customers would recommend the service to others, a negative score indicates they would not, and a value close to 0 indicates a neutral feeling about the service.

<sup>10</sup> A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g., Very Good to Very Poor, Very Satisfied to Very Unsatisfied)

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used most aspects of CHH services. These results primarily reflect how customers perceive CHH's performance based on their expectations and impressions, rather than firsthand experiences with the services provided.

Q18-Importance question asked if these services were important as a responsibility for CHH, as such, it is unclear if some of these answers are regarding the importance of the service or the importance of CHH being responsible for that service. Future surveys will clarify verbiage to ensure the question is clear and this has been included as a Continuous Improvement Item in **Table 29**.

**Figure 10: Importance versus Performance Index Score**

Service Area	Importance (index score)	Performance (index score)	Net Differential	Opt Out %
Total	90	46	-44	21%
Resolving Safety Concerns	99	40	-59	23%
Redevelopment, Revitalization And Renewal Of The Housing Supply	88	36	-52	15%
Exterior Care / Condition Of Building	88	47	-41	18%
Waste Management	95	54	-41	22%
Tenant Services At Properties	85	49	-37	28%
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	86	54	-32	19%

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### NET PROMOTER SCORE INDICE

The Net Promoter Score indices outline how likely an individual is to recommend a service to another person and measure customer loyalty. For municipal services, this score is difficult to interpret because oftentimes individuals do not have many alternatives for utilizing different services and also there may be internal biases for certain service areas, however, this score does provide valuable information for if customers would recommend using the service or whether they may seek alternatives or avoid using the service altogether.

Likert<sup>11</sup> choices less than a score of 4 are considered 'Detractors' meaning that they would not recommend the service, while scores of 5 are considered 'Promoters' who would recommend the service, and scores of 4 are considered 'Passive' which means they do not have strong feelings about the service. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Promoters) and (% Detractors). The Standard Deviation ( $\sigma$ ) is calculated in percent, the same units as the Net Promoter Score.

Per **Figure 11** below, most external customers/public perception is to not recommend the services provided by CHH to another person. CHH received negative promoter values (>20%) for all services discussed in the figure below, which indicates that CHH may need to investigate the public perception of why customers would not recommend using these services.

**Figure 11: Net Promoter Score**

Service Area	$\sigma$	NPS	Detractors	Passives	Promoter	
All Service Areas	1.41		-61.98	139	33	20
Resolving Safety Concerns	1.42		-66.67	23	4	3
Tenant Services At Properties	1.35		-65.52	21	6	2
Redevelopment, Revitalization And Renewal Of The Housing Supply	1.48		-64.52	24	3	4
Exterior Care / Condition Of Building	1.36		-63.89	26	7	3
Landscaping (E.G. Grass Cutting, Snow Clearing, Etc)	1.35		-57.58	23	6	4
Waste Management	1.39		-54.55	22	7	4

The above Net Promoter Score was from external customers (i.e., the general public). As discussed in **Section 4.1**, due to low survey response on the tenant section of the **Let's Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton Survey**, the Net promoter score from the tenant section cannot be used. To provide a general idea of whether the tenants would recommend living in their neighbourhood to others which is likely a more important metric from individuals actively experiencing the service, provided below are

<sup>11</sup> A Likert scale is a rating scale used to measure opinions, attitudes, or behaviours. It consists of a series of five answer statements which are consistently written the same way (e.g., Very Good to Very Poor, Very Satisfied to Very Unsatisfied)

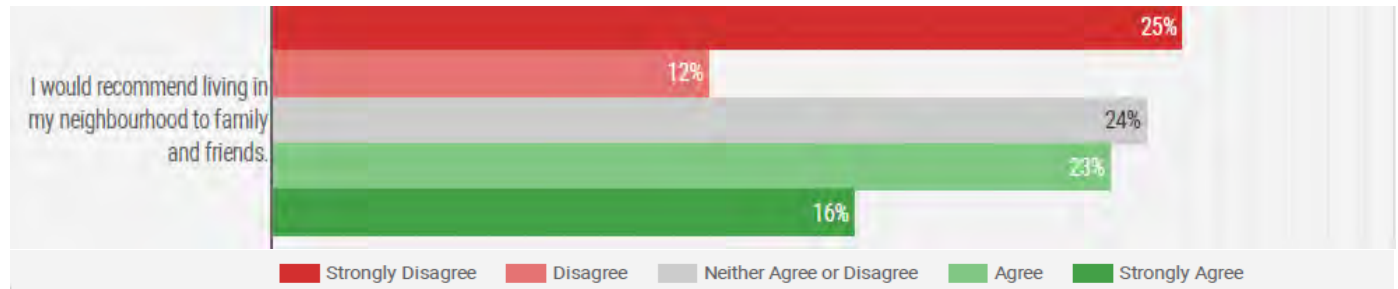


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results from the 2022 CHH Tenant Survey. According to the results, on average, tenants are "Passive" and divided about the neighbourhoods their homes are located in. The net promoter score, based on these results, is -45 which is a net negative promoter.

**Figure 12: Net Promoter Neighbourhood Score, CHH 2022 Survey**



### SERVICE RATES VERSUS VALUE FOR MONEY INDICE

The Service Rates versus Value for Money indices are used to determine if the rate an individual is paying for a service correlates with the perceived value for money. Service areas where rate level ratings exceed value-for-money ratings by 20 points are indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale. Positive Net Differential values indicate that 'Value for Money' was greater than willingness for 'Rates'. Low index scores in 'Rates' indicate that respondents are not willing to pay increased rates for the service area. All values were calculated and then rounded to the nearest whole number.

These results are derived from the *Let's Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton Survey*. Per **Figure 13** below, the net differential exceeds twenty (20) for most services, survey respondents believe that the value for money did not align with the current rates. However, the data consistency was rated as medium-low for both value for money and rate level as there are differing opinions on this matter. This is based on sentiments of the public who may not have direct experience with CHH services.

**Figure 13: Rates Versus Value for Money Index Score**

Service Area	Rates (index score)	Value for Money (index score)	Net Differential	Opt Out %
<b>Total</b>	71	50	-21	29%
Redevelopment, Revitalization And Renewal Of The Housing Supply	76	42	-35	24%
Resolving Safety Concerns	76	48	-27	33%
Exterior Care / Condition Of Building	69	50	-19	27%
Tenant Services At Properties	68	50	-18	36%
Waste Management	71	56	-15	29%
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	65	52	-13	28%

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### 4.3.2 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how CHH plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how CHH delivers its services in alignment with its customer values; and should be viewed as possible levers to impact and influence the Customer Levels of Service. CHH will measure specific lifecycle activities to demonstrate how CHH is performing in delivering the desired level of service as well as to influence how customers perceive the services they receive from the assets.

Technical service measures are linked to the activities and annual budgets covering Acquisition, Operation, Maintenance, and Renewal. Asset owners and managers create, implement and control technical service levels to influence the service outcomes.<sup>12</sup>

**Table 15** shows the activities expected to be provided under the current 10-year Planned Budget allocation and the forecast activity requirements being recommended in this AM Plan.

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<sup>12</sup> IPWEA, 2015, IIMM, p 2|28.

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**Table 15 : Technical Levels of Service**

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE	CURRENT TARGET PERFORMANCE	PROPOSED 10-YEAR PERFORMANCE
Acquisition	Ensure sufficient CHH housing supply is offered across Hamilton.	New units will be added to the housing supply by the end of 2024.	-	161 units (2024)	To be determined based on the Long-term Development Strategy
		<b>Budget</b>	-	<b>\$95.6M</b>	<b>Not yet quantified</b>
Operation	Provide safe, well-maintained, affordable, core social housing services.	Overall Vacancy rate as of 2023.	5.8%	2%	2%
		<b>Budget</b>	<b>\$4.7M</b>	<b>Not yet defined</b>	<b>Not yet defined</b>
	Ensure CHH facilities are energy efficient.	Energy savings (%) achieved in 2022*.	13% (2022)	14% (2022)	25% (2028)
	Ensure CHH facilities are environmentally sustainable.	Greenhouse gas reductions (%) achieved in 2022*.	14% (2022)	16% (2022)	25% (2028)
	Provide safe core social housing services that support well-being and quality of life.	% of units with added accessibility *	3%	4%	20% (2028)
		<b>Budget</b> (Including CMHC funding and CHH contributions)	-	-	<b>\$194.2M (2029)</b>
Maintenance	Ensure that CHH assets are functional and well-maintained.	Average Facility Condition Index for Facilities **.	9.2 %	< 10 %	< 10 %
	Provide effective and adequate, property management services.	% of Legislated Maintenance Inspections completed in 2023.	100%	100%	100%
	<b>Budget</b>	<b>\$911K</b>	<b>\$911K</b>	-	
Renewal	Ensure that CHH vehicle assets are functional and well-maintained.	% vehicles replaced before the end of estimated service life.	0%	100%	100%
		<b>Budget</b>	<b>\$0</b>	<b>\$405K</b>	<b>Not yet quantified</b>

\*These activity measures are established as part of the CMHC funding requirement. More details for this project can be found in **Section 3.2.1.1**.

\*\*FCI is not available for semis and singles facility types, and they are not included in these calculations.

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It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

These metrics were created specifically for this 2024 AM Plan with available data. Many of these metrics should be improved to include a target to be in line with SMART objectives identified on **Page 43** of the AMP Overview. In addition, performance measure data should be both easy to extract and measured over time, and a data collection process may likely need to be created. CHH tracks and reports on several KPIs deemed necessary to deliver on strategic directions or Board-directed priorities. As a result, the dataset and available KPIs could change or improve for the next iteration of the plan. These have been identified as continuous improvement items in **Table 29**.

### 4.3.3 PROPOSED LEVELS OF SERVICE DISCUSSION

At this time, technical metrics for the CHH service area were largely based on operational metrics and asset conditions. Operational metrics include metrics monitored by CHH as part of CMHC funding requirements and CHH's reported vacancy rate to Council. However, customer preferences and expectations do not always match internal technical targets. Due to the low response rate, the *Let's Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton Survey* has a medium confidence level, and as all survey respondents were not direct users of the service, it is difficult to make any conclusive decisions based on this initial survey. The 2022 CHH Tenant Survey was used to create some customer levels of service and values based on tenants' sentiments, but it did not assess the proposed service level. Therefore, CHH will need to collect more customer data before proposing any new levels of service.

In the interim, it has been assumed that the current levels of service will be the proposed levels of service moving forward past 2025 in accordance with O. Reg 588/17. Therefore, the information below is intended to provide context to CHH to areas for further investigation before proposing any new Levels of Service for the future.

### CONDITION / QUALITY

As shown in the Customer Level of Service **Table 13**, tenant respondents provided ratings that indicate neither satisfaction nor dissatisfaction with the overall condition of their homes. In **Table 4**, CHH's Facility Condition Index (FCI) target indicates an average facility condition of Fair. FCI measures the condition of the entire facility and is not an individual measurement for each unit. Moreover, FCI data is not available for semi and single units. Finally, FCI is a financial-based condition metric but is generally accepted in the industry to evaluate conditions. Despite this limitation, there is alignment between the technical measure and customers' responses regarding the condition of their homes.

There seems to be a difference between how external customers (the public) rated the importance of all services discussed in **Figure 10** and the corresponding performance level.

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Additionally, these services received negative scores on the Net Promoter Score. However, considering the low response rate on the survey and the medium confidence level of the data, it is advisable to approach the indices of Service Rates versus Value for money with caution. As a result, it is difficult to determine the willingness of external customers to pay for improved services.

### FUNCTION

2022 CHH Tenant Survey respondents thought that CHH performed average on Pest Control Services, Maintenance Services, Tenant Support Services, and general services the tenants expect from CHH as a landlord. CHH is currently in the process of developing technical metrics for these services that can be shared in the next iteration of the AM Plan. It is worth noting that the 2022 CHH Tenant Survey was not designed by the Corporate Asset Management (CAM) team, leading to some inconsistencies in the structure and types of questions asked. Particularly, questions regarding 'good value for money and rates' were not included for these services.

### CAPACITY

The 2022 CHH Tenant Survey did not include questions related to capacity. Additionally, the tenant-focused questions in the *Let's Connect, Hamilton – City Services & Assets Review: CityHousing Hamilton Survey* are not being considered in the discussion due to very low data confidence. However, based on external customers' opinions on question 23, which indicated that adding more subsidized housing across Hamilton and more affordable mixed housing was rated as important city-wide services, it suggests that there is a perceived need for more social housing across Hamilton.

CHH is preparing a Long-term Development Strategy that will serve as a blueprint for the organization's long-term development initiatives. This strategy will encompass various aspects, including potential dispositions and acquisitions, to guide CHH's growth and evolution in the future.

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### 5. FUTURE DEMAND

Demand is defined as the desire customers have for assets or services that they are willing to pay for. These desires are for either new assets/services or current assets.

The ability of the CHH to be able to predict future demand for services enables CHH to plan and identify the best way of meeting the current demand while being responsive to inevitable changes in demand. Demand will inevitably change over time and will impact the needs and desires of the community in terms of the quantity of services and types of services required.

#### 5.1 DEMAND DRIVERS

For the CHH service area, the key drivers are population change and regulatory obligations/changes.

- Population change – Per **Page 45** in the AMP Overview, it is evident that Hamilton's population will continue to grow until 2051. With a growing population, the demand for affordable housing will increase.
- Regulatory obligations/changes – changes to provincial legislation, and municipal regulation (including local service manager rules and potential new by-laws, such as the Adequate Temperature By-law) could require an increase or change to the level of service provided to tenants and could increase acquisition, operation, maintenance, and future renewal costs of CHH services.

#### 5.2 DEMAND FORECASTS

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Table 16**. Growth projections have been shown on **Page 45** of the AM Plan Overview document.

Where costs are known, these additional demands, as well as anticipated operations and maintenance costs, have been encompassed in the Lifecycle Models in **Section 8.2**.

#### 5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets is shown in **Table 16**. Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

Opportunities identified to date for demand management are shown in **Table 16**. Climate change adaptation is included in **Table 22**.

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**Table 16: Demand Management Plan**

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
<b>Population Growth</b>	565,000 with 222,805 households.	625,000 with approximately 258,100 households.  (10-year projection)	Currently, CHH has 31 social housing units per 1000 households. To maintain this level of service, which is already deemed insufficient, CHH needs to add a minimum of 1,138 net new units in the next 10 years. With the increasing population, the demand for more social housing will increase. The current waitlist is managed by Housing Services and shows that demand already significantly exceeds supply.	CHH is currently developing a sustainable 20-year long-term housing growth and development strategy for Hamilton.
<b>Regulatory Obligations</b>  <b>Adequate Temperature By-law</b>	Air conditioning is provided to very few and an unknown number of individual units. Air-conditioned common areas are available in many buildings.	Air conditioning is to be provided for all 6,931 units	If an adequate temperature by-law comes into effect, then CHH will need to budget for the acquisition, operational, maintenance and eventual renewal costs of air conditioning systems in future years.	Develop capital and operating plans, assess impacts of legislated change and request additional funding to ensure compliance with by-laws.
<b>Customer expectations</b>  <b>State of good repair of buildings</b>	Maintenance and repairs are based on BCA and subject matter expertise and are funded by capital funding.	Tenants will increasingly request non-critical replacements of in-suite features or new facility components/enhancements , such as a new community room, which may not be currently budgeted.	As these items are not budgeted, a lack of funding based on full lifecycle costs for these new facility components can increase the funding shortfall for CHH.	Develop a streamlined lifecycle review process which reviews additional funding increases for each new facility component added to CHH facilities

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### 5.4 ASSET PROGRAMS TO MEET DEMAND

The new assets required to meet demand may be acquired, donated or constructed. For **CHH** typically assets are acquired or constructed.

At this time there are approximately **\$150.2 Million** in assets planned to be constructed over the next five years, and more are anticipated to be added over the 30-year planning period. Acquiring or constructing new assets will commit CHH to ongoing operations, maintenance and renewal costs for the amount of time that the service is required. These future costs have been estimated when possible, using available information in the Lifecycle Management Plans in **Section 8**, but should be quantified further for future iterations of the report for consideration in developing higher confidence forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan. There is also a need for CHH to reduce reliance on tax-supported subsidies by creating financially sustainable assets. This could be achieved through diversifying the income mix of the households CHH serves to increase rental revenue.



# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

### 6. RISK MANAGEMENT

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk<sup>13</sup>.

The City is developing and implementing a formalized risk assessment process to identify risks associated with service delivery and to implement proactive strategies to mitigate risk to tolerable levels. The risk assessment process identifies credible risks associated with service delivery and will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

The risk assessment process identifies credible risks, the likelihood of those risks occurring, and the consequences should the event occur. The City utilizes two risk assessment methods to determine risk along with subject matter expert opinion to inform the prioritization. Hamilton is further developing its risk assessment maturity with the inclusion of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable in the next iteration of the plan.

#### 6.1 CRITICAL ASSETS

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified along with their typical failure mode, and the impact on service delivery is summarized in **Table 17**. Failure modes may include physical failure, collapse or essential service interruption.

**Table 17: Critical Assets**

CRITICAL ASSET	FAILURE MODE	IMPACT
<b>Mechanical Systems</b>	Physical	Tenant housing may be impacted by failures, e.g., loss of water supply, fire suppression, and climate control systems.
<b>Electrical Systems</b>	Physical	Tenant housing may be impacted by loss of power and/or failure of electrical equipment. Water pumps and elevators might not run; backup power systems are limited in scope and duration.

<sup>13</sup> ISO 31000:2009, p 2

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

CRITICAL ASSET	FAILURE MODE	IMPACT
<b>Elevators</b>	Physical	Tenants and guests may not have access to their units.  Tenants with mobility issues may not be able to leave or access their units.  Emergency responders may have difficulty reaching some tenants' units.
<b>Foundation and Structural Integrity</b>	Physical	Unsafe for tenants to continue to live in the buildings based on the engineering studies/reports.
<b>Building Envelope</b>	Physical	Units are unusable while repair work is in progress, tenants may need to be relocated.

By identifying critical assets and failure modes an organization can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

### 6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, the evaluation of the risk and the development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan are shown in **Table 18**. It is essential that these critical risks and costs are reported to management. Additional risks will be developed in future iterations of the plan and are identified in **Table 29** in the continuous improvement section of the plan.

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

**Table 18: Risks and Treatment Plan**

SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
<b>Facilities</b>	Electrical Issues	High	Along with reactive maintenance, perform preventative maintenance activities.	Medium	Currently implemented: budgeted \$82,000 annually
	Plumbing Failures	High	Preventative maintenance to check for leaks.	Medium	TBD
			Address plumbing concerns promptly to limit significant water damage.		TBD
	Foundation/ Structural Issues	High	Planned inspections and timely repairs and maintenance of all facilities with known foundation concerns.	Medium	TBD
	Elevator Failures	High	Perform planned preventative maintenance and prompt elevator repairs and replacements to minimize service disruptions.	Medium	Currently implemented: budgeted \$307,000
	Water Leakage (Basement Flooding, Infiltration, Roof Leakage)	High	Inspect properties for exterior drainage issues, conduct preventative maintenance on downspouts and grading, and replace roofing materials before failure, as funding allows.	High	TBD
	Fuel Tank Leakage (Generators)	High	Complete annual inspection checks.	TBD	\$1000 - \$2000 / tank
Implement regular continuous leak detection.			Medium		
Eliminate fuel tanks and switch to natural gas.			Medium	TBD	

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SERVICE OR ASSET AT RISK	WHAT COULD HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK	TREATMENT COSTS
<b>Staff</b>	Safety Concern	Very high	CHH has issued mobile phones to all staff working on-site.	Medium	Currently implemented: annual cost \$300-\$500 / phone
			On-site security staff present at select locations for staff and tenant security.	Medium	Estimated \$35/hour
			CHH has implemented a disaster management plan which is regularly updated and distributed to employees so that they know what steps to take to help stay safe if an incident occurs.	Medium	N/A – already implemented
			Regularly review the staff alert list for buildings where there are known safety concerns and train staff on how to adequately respond to complex incidents.	Medium	TBD
<b>Tenants</b>	Safety Concerns	Very high	On-site security staff present at select locations for staff and tenant security on all properties.	Medium	Estimated \$35/hour
<b>Capital projects</b>	Legal/Contract Failures	High	A current measure is to use standard construction contracts and well-defined insurance and bonding requirements to mitigate loss and potential contractual risk.	Medium	N/A – already implemented
<b>External contractors</b>	Work Quality Assessment	High	In the process of formalizing and implementing an audit program of external contractors completed work to ensure quality services are being provided to tenants' standards.	Medium	TBD

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

### 6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions the City and CHH need to understand its capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service. We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

Resilience covers the capacity of the City and CHH to withstand any service disruptions, act appropriately and effectively in a crisis, absorb shocks and disturbances as well as adapting to ever-changing conditions. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change risk, assessment and crisis leadership.

### 6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective of achieving the optimum benefits from the available resources.

The following table outlines what activities CityHousing Hamilton cannot afford to do over the next 10 years with their existing budget and provides the associated service and risk tradeoffs.

**Table 19: Service and Risk Trade-offs**

WHAT WE CANNOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
Complete all recommended Preventative Maintenance tasks.	Currently unable to complete some preventative maintenance activities on the recommended scheduled frequency. This includes eavestrough cleaning, garbage chute cleaning, catch basin cleaning, sump pump testing, residential duct cleaning, commercial duct cleaning, window washing and sewer stack cleaning.	Risk of reactive maintenance and disruption of service to tenants occupying the facilities.
Replace End of Life building envelope(s).	Older Roofing materials are at greater risk of failure and can lead to water intrusion into the building.	Possible water intrusion into buildings and units, more extensive damage, and rehabilitation costs.

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## 2024 ASSET MANAGEMENT PLAN

WHAT WE CANNOT DO (What can we not afford over the next 10 years?)	SERVICE TRADE-OFF (How will not completing this affect our service?)	RISK TRADE-OFF (What risk consequences are we undertaking?)
Modernize and renew all high-rise building elevators at the end of estimated service life.	Service interruptions to tenants due to higher maintenance needs, longer timelines, and more expensive repairs.	Risk of reactive maintenance and disruption of service to tenants occupying the facilities.
Complete all recommended substructure/foundation repairs.	Concrete-poured foundation walls will continue to deteriorate. Weeping tiles and spalling in basements will continue to worsen and cause water ingress. Tenants may need to be relocated for any reactive foundation repairs which can impact the supply of available units.	Possible public safety risk. This may lead to relocation.
Renewing all buildings' windows, railings, and balconies at the needed rate.	The building will continue to deteriorate. Water membrane damage will weaken the concrete slabs and will require reapplication of waterproofing. The balcony railing will chip and will continue to corrode.	Possible public safety risks, and safety concerns.
Replace asphalt as needed. (Surface parking lots)	Surface lots will continue to deteriorate. Unable to improve lighting and mitigate localized flooding risk. Higher reactive maintenance costs.	Risk of injury to users from trips/falls. Reputational impacts, safety concerns.

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<b>WHAT WE CANNOT DO (What can we not afford over the next 10 years?)</b>	<b>SERVICE TRADE-OFF (How will not completing this affect our service?)</b>	<b>RISK TRADE-OFF (What risk consequences are we undertaking?)</b>
Replacing and updating security systems including card access security, and security cameras.	Intermittent or lack of security coverage.  Tenants are unable to access their homes if the system fails which could cause major service disruptions and reactive maintenance.	Possible risk to public safety. Possible service interruption and higher reactive maintenance costs to repair security systems.
Renewal of all interiors (including kitchens, bathrooms, flooring, wall finishes, door finishes, and common area refurbishments) before the end of service life or at the needed rate.	The interiors of the units continue to deteriorate and may be renovated upon unit turnover to a new tenant.	Discomfort to tenants occupying the buildings. Accelerated deterioration of interior finishes, and reputational risk.
Unable to keep up with housing demand due to capital and operation funding constraints.	Unable to diversify housing portfolio to meet tenants and public needs.	Increasing rate of housing unaffordability, and reputational risk.

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

### 7. CLIMATE CHANGE AND MITIGATION

Cities have a vital role to play in reducing the emission of greenhouse gases (mitigation), as well as preparing assets for the accelerating changes we have already begun to experience (adaptation). At a minimum, the City and CHH must consider how to manage our existing assets given the potential climate change impacts for our region.

Changes to Hamilton's climate will impact City and CHH assets in the following ways:

- Affect the asset lifecycle;
- Affect the levels of service that can be provided and the cost to maintain;
- Increase or change the demand on some of our systems; and,
- Increase or change the risks involved in delivering service.

To quantify the above asset/service impacts due to climate change in the Asset Management Plan, climate change is considered as both a future demand and a risk for both mitigation and adaptation efforts. These demands and risks should be quantified and incorporated into the lifecycle models as well as levels of service targets.

If climate change mitigation/adaptation projects have already been budgeted, these costs have been incorporated into the lifecycle models. However, many asset owners have not yet quantified the effects of the proposed demand management and risk adaptation plans described in this section, and so associated levels of service and costs will be addressed in future revisions of the plan.

#### 7.1 CLIMATE CHANGE MITIGATION

**Climate Mitigation** refers to human intervention to reduce GHG emissions or enhance GHG removals (e.g. electric vehicles, net-zero buildings). The City of Hamilton's Community Energy + Emissions Plan<sup>14</sup> (CEEP includes five Low-carbon Transformations necessary to achieve the City's target of net-zero GHG emissions by 2050:

- Innovating our industry;
- Transforming our buildings;
- Changing how we move;
- Revolutionizing renewables; and,
- Growing Green.

<sup>14</sup> Newbold, Skidmore, Chessman, Imhoff, & McDowell, 2022



# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

### Mitigation Demand Analysis

These transformations were incorporated into the climate mitigation demand analysis for this service area by:

- Identifying the City's modelled targets for the low carbon transformations that applied to the service/asset;
- Discussing the impact, the targets would have on the service/asset; and,
- Proposing a preliminary demand management plan for how this modelled target will be achieved by 2050 as shown in **Table 20** below.

As previously mentioned, due to the high level of uncertainty with the demand management plans, the cost of the demand impacts below have not been included in the lifecycle models or levels of service at this time. The demand management plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should incorporate GHG emissions reduction methods, and changes which will be incorporated into future iterations of the AM Plan.

Moving forward, the Climate Lens tool discussed in the AM Plan Overview will assess projects based on these targets and will assist with the prioritization of climate mitigation projects.

**Table 20: Climate Change Mitigation Transformation**

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
<b>Changing How We Move</b>	100% of new municipal small and light-duty vehicles will be electric by 2040.	Currently, this topic is under review. CHH will review electric fleet options upon the renewal of vehicles dependent on the availability.	Develop a business case for transition to electric fleet and installations of electric charging stations.
<b>Revolutionizing Renewables</b>	By 2050, 50% of municipal buildings will add rooftop solar PV, covering 30% of the building's electrical load.	As CHH buildings have multiple units, the electric load to meet the 30% target may be unachievable.	Assessment of the metric and how it applies to multiple units in the building.
<b>Transforming Our Buildings</b>	By 2050, all municipal buildings will be retrofitted to achieve 50% energy efficiency relative to 2016.	CHH's existing CMHC target includes achieving a 25% energy reduction by 2028.	Existing funding to 25% energy reduction. Develop a management plan to meet an additional 25% target by 2050.

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CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE OR ASSET	DEMAND MANAGEMENT PLAN
		CHH would require more funding to meet an additional 25% energy reduction.	
<b>Transforming Our Buildings</b>	By 2050, all new municipal buildings achieve net-zero emissions.	All new housing is passive standard.	Current procedures are in place to meet the net-zero target.
<b>Transforming Our Buildings</b>	Post-retrofits, switch buildings to heat pumps for space and water heating by 2050.	Currently planning to meet the target.	Develop a plan to distinguish the costs generated by heat pumps from tenant costs in current building projects. For new builds, specific plans are in place, with some heat pumps covered under existing CMHC funding.

### CURRENT MITIGATION PROJECTS

Mitigation projects CHH is currently pursuing are outlined below in **Table 21**. These projects may already be included in the budget and may be quantified in the lifecycle models.

**Table 21: Asset Climate Mitigation Projects**

PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
<b>Canada Mortgage Housing Corporation (CMHC) Energy Efficiency Project</b>	<b>Transforming Our Buildings</b>	Complete projects that will impact 6,290 units through improved outcomes related to affordability, energy efficiency and accessibility. CHH is committed to meeting the CMHC target by 2028. Targets are shown in Technical Levels of Service, <b>Table 15</b> .	Reduce GHG emissions and energy reduction associated with facility operation.

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## 2024 ASSET MANAGEMENT PLAN

PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
<p><b>All New Developments After 2022</b></p>	<p><b>Transforming Our Buildings</b></p>	<p>All new construction projects initiated after 2022 adhere to the Passive House high-performance standard, buildings consume up to 90 percent less heating and cooling energy than conventional buildings and incorporate solar.</p> <p>This makes these facilities nearly net-zero energy and already meet the City of Hamilton’s 2050 climate goals.</p>	<p>Reduce GHG emissions and energy reduction associated with facility operation.</p>

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

### 7.2 CLIMATE CHANGE ADAPTATION

**Climate Adaptation** refers to the process of adjusting to actual or expected climate and its effects (e.g. building facilities that can handle new climate loads).

The impacts of climate change may have a significant impact on the assets we manage and the services we provide. Climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which those impacts are responded to and managed.<sup>15</sup>

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report<sup>16</sup> guided by ICLEI's Building Adaptive and Resilient Communities (BARC) Framework as part of the Climate Change Impact Adaptation Plan (CCIAP) (ICLEI, 2021). The BARC Framework identified thirteen high-impact areas.

#### Adaptation Demand Analysis

**Table 22: Managing the Demand of Climate Change on Assets and Services**

ADAPTATION IMPACT STATEMENT	BASELINE <sup>17</sup> (1976-2005)	AVERAGE PROJECTED CHANGE <sup>15</sup> in 2021-2050 (Assuming RCP4.5 <sup>18</sup> Scenario)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Reduced capacity of flood protection measures and water storage caused by an increase in rainfall intensity leading to flooding.	6.7 Total Heavy Precipitation Days (20 Mm)	7.7 Total Heavy Precipitation Days (20 Mm)	<p>Flooding poses a risk of damaging facilities, leading to increased costs for remediation and impacting the operational budget.</p> <p>Presently, efforts to address basement flooding involve implementing foundation repairs.</p>	Currently not a concern. Plan to create a mitigation strategy for any potential flooding mitigation strategy.

<sup>15</sup> IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

<sup>16</sup> City of Hamilton & Local Governments for Sustainability Canada, 2021

<sup>17</sup> ICLEI Canada 2022.

<sup>18</sup> RCP4.5 Scenario: Moderate projected GHG concentrations, resulting from substantial climate change mitigation measures. It represents an increase of 4.5 W/m<sup>2</sup> in radiative forcing to the climate system. RCP 4.5 is associated with 580-720ppm of CO<sub>2</sub> and would more than likely lead to 3°C of warming by the end of the 21<sup>st</sup> century.

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ADAPTATION IMPACT STATEMENT	BASELINE <sup>17</sup> (1976-2005)	AVERAGE PROJECTED CHANGE <sup>15</sup> in 2021-2050 (Assuming RCP4.5 <sup>18</sup> Scenario)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
More frequent and intense heatwaves will increase instances of heat-related health and safety issues, particularly for households without access to reliable air-conditioning.	2.1 Average Annual Heat Waves	4.7 Average Annual Heat Waves	CHH offers cooling spaces in select buildings. The potential enactment of the Adequate Temperature By-law could increase the operation and maintenance budget requirements.	Develop a demand management plan, considering the costs associated with purchasing, operating, maintaining, and replacing A/C units if needed for all individual units to comply with proposed by-laws.
Prolonged power outages during winter months due to an increase in ice storms resulting in safety concerns for tenants.	187mm Average Total Winter Precipitation	204mm Average Total Winter Precipitation	Power outages may result in interruption of heating, water supply, and elevator operations, posing health and safety concerns and preventing people from accessing their homes.	CHH employs emergency measures in collaboration with community organizations. Responses are customized based on the specific situation.
Increased intensity and frequency of ice storms leading to increased hazardous roads, pathways, and sidewalk conditions.	187mm Average Total Winter Precipitation	204mm Average Total Winter Precipitation	Potential increase in injuries to tenants and staff.  Increase the scope of snow removal contracts and catch-basin cleaning.	Further, define service contracts for snow removal and catch basins. Implement ongoing performance monitoring to ensure that contractors are consistently meeting the specified requirements.
Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.	6.7 Heavy Precipitation Days (20mm)	7.7 Heavy Precipitation Days (20mm)	Flooding poses a risk of damaging facilities, leading to issues like mold, and physical damage. This could result in increased costs for remediation and an impact on the operational budget. To address	Currently not a concern. Plans to create a mitigation strategy for any potential flooding.

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ADAPTATION IMPACT STATEMENT	BASELINE <sup>17</sup> (1976-2005)	AVERAGE PROJECTED CHANGE <sup>15</sup> in 2021-2050 (Assuming RCP4.5 <sup>18</sup> Scenario)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
			basement flooding, ongoing efforts are in place, focusing on foundation repairs.	
Increase in average annual temperatures (especially in the summer) leading to increased food insecurity in the region (i.e., decrease in local crop yields, food cost fluctuations, etc.)	13.1 Degrees Celsius Average Annual Temperature	15.1 Degrees Celsius Average Annual Temperature	Currently, CHH supports tenant-led food security programs.	CHH will continue to work with community agencies and tenants to help support food security programs provided to CHH tenants.
Rising summer temperatures and extreme heat will increase energy demand for air conditioning, causing a financial burden for low-income households.	25.9 Degrees Celsius Average Summer Seasonal Temperature	27 Degrees Celsius Average Summer Seasonal Temperature	Some tenants are expected to cover utility bills, depending upon their lease arrangements, but with the increasing cost of living, it may become more difficult for tenants to make rent payments.	Resources available from other parties for relief (utility company etc.). CHH works with tenants to collaborate with community organizations for support.

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### ADAPTATION RISK ANALYSIS

Additionally, the City and CHH should consider the risks for the asset or service as a result of climate change and consider ways to adapt to reduce the risk. Adaptation can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

Similarly, to the exercise above and using the risk process in **Section 6.2**, asset owners:

- Reviewed the likelihood scores in the Vulnerability and Risk Assessment Report for the adaptation impact occurring;
- Identified the consequence to the asset/service if the event did happen to develop a risk rating; and,
- If the risk was identified as high, the asset owner produced a preliminary risk adaptation plan shown below in **Table 23**.

It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of mitigating the risks below has not been included in the lifecycle and financial models at this time. The adaptation plans discussed in this section should be explored by asset owners in more detail following the AM Plan, and new projects should consider these risks during the planning and design processes. Future changes will be incorporated into future iterations of the AM Plan. Moving forward, the Climate Lens tool will assess projects based on these targets and will assist with the prioritization of climate adaptation projects.

**Table 23: Adapting to Climate Change**

ADAPTATION IMPACT STATEMENT	SERVICE OR ASSET AT RISK DUE TO IMPACT	WHAT COULD HAPPEN	RISK RATING	RISK ADAPTATION PLAN
Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns.	Electrically powered HVAC equipment, elevators, water supply equipment, and security systems.	Tenant safety concerns and marginalized population safety concerns.	High	CHH has developed and implemented emergency plans for extreme conditions, such as hot and cold weather.

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### CURRENT ADAPTATION PROJECTS

CHH is adapting to make newly developed facilities climate resilient. The impact of climate change on assets and how the City and CHH will adapt is a new and complex discussion and further opportunities will be developed in future revisions of this AM Plan.

**Table 24: Asset Climate Adaptation Projects**

PROJECT	ADAPTATION IMPACT STATEMENT	PROJECT DESCRIPTION OF CLIMATE CHANGE ADAPTATION
<b>Climate Adaptation for New Developments</b>	Changes in the frequency of extreme rainfall events will result in increased instances of flooding on private and public properties.	CHH's newly developed buildings integrate climate-resilient measures. These features include thermal resistance to sustain interior temperatures during power outages, sufficient cooling for extreme heat days, and Low Impact Development (LID) practices for water management.
	Increased intensity and frequency of ice storms leading to increased hazardous roads, pathways, and sidewalk conditions.	
	Rising summer temperatures and extreme heat will increase energy demand for air conditioning, causing a financial burden for low-income households.	

### CLIMATE ADAPTATION DISCUSSION

Adaptation to climate change impacts such as increased temperatures, precipitation, and ice storms is being addressed through the implementation of climate-resilient features in newly developed facilities. However, the majority of CHH facilities are on average 40 years old, with newly developed facilities representing only a small portion of the overall CHH portfolio. As CHH completes full building retrofits, opportunities to incorporate these adaptation measures will be considered.



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### 8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how CHH plans to manage these assets at the agreed levels of service and the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan include costs from both the Capital and Operating budgets. Asset management focuses on how taxpayer or ratepayer dollars are invested by lifecycle activities and not by budget allocation. Since both budgets contain various lifecycle activities, they have been consolidated and separated by lifecycle activity in this section.

As a result of this new process, there may be some areas where the budget was not able to be broken down perfectly by lifecycle activity. Future AM Plans will focus on improving the understanding of Whole Life Costs and funding options. However, at this time the plan is limited to those aspects. Expenditure on new assets and services will be accommodated in the long-term financial plan but only to the extent that there is available funding. Details on the financial data used to develop the lifecycle plan are detailed in **Section 10.1**.

#### 8.1 ACQUISITION PLAN

The acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its current capacity. They may result from growth, demand, legal obligations or social or environmental needs. Assets are typically acquired through the construction of new assets which are mostly related to population growth.

#### CURRENT PROJECT DRIVERS – 10-YEAR PLANNING HORIZON

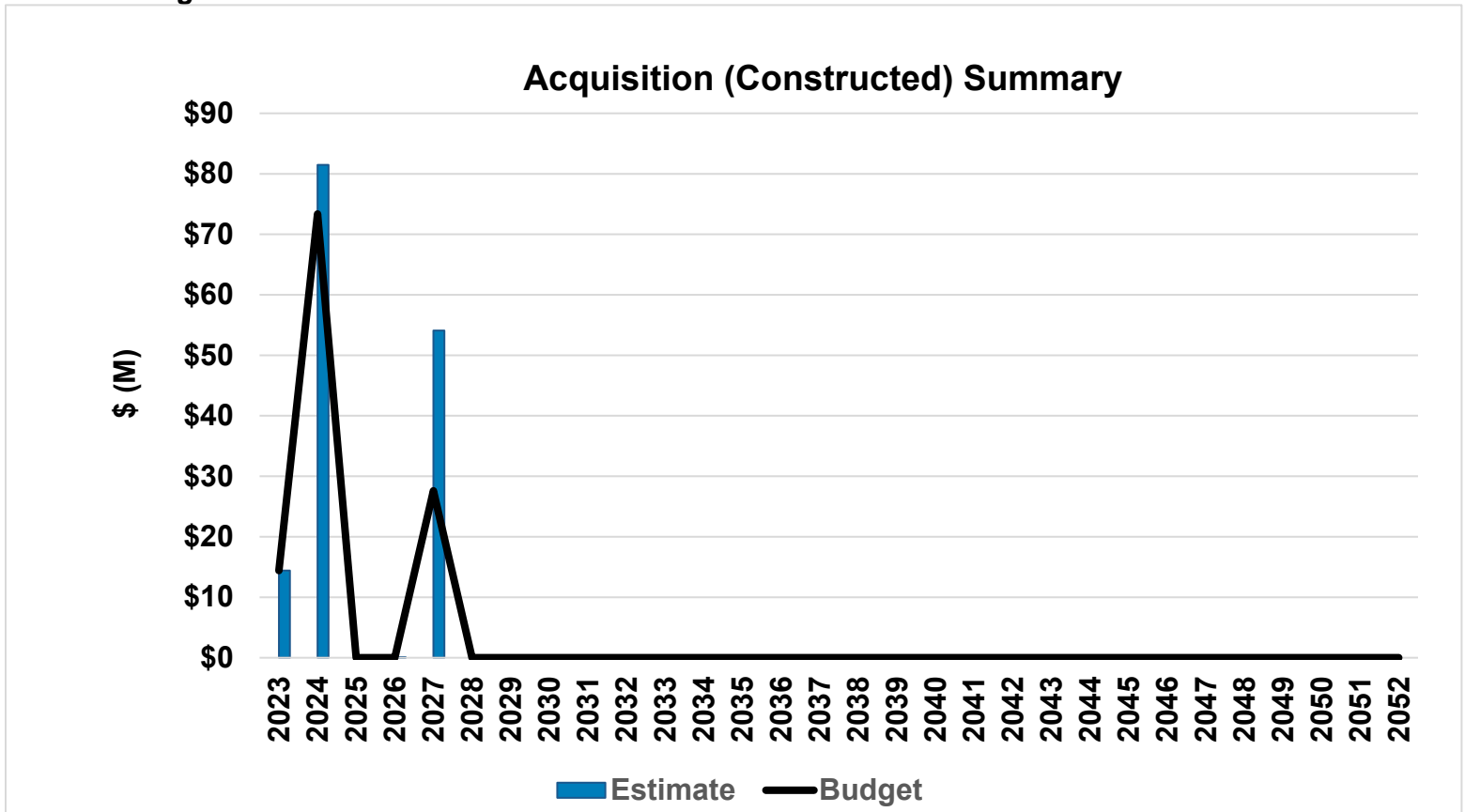
CHH is developing these project drivers at the time of writing this AM Plan. These drivers will include legal compliance, risk mitigation, operation and maintenance impacts, growth impacts, health and safety, reputation, and others. Once developed, these drivers should be reviewed during each iteration of the AM Plan to ensure they are appropriate and effective in informing decision-making and used by CHH as part of their capital project prioritization matrix.

#### CONSTRUCTED OR PURCHASED ACQUISITIONS

Over the next ten-year planning period CHH will acquire approximately **\$150.2M** of purchased or constructed assets as shown below in **Figure 14**. However, the ongoing development of the Long-term Development Strategy may influence these plans, which may include additional acquisitions and dispositions of assets. CHH and the City will continue to monitor constructed and purchased assets and use this data to update future AM Plans when new information becomes available.

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**Figure 14: Acquisition (Constructed) Summary**  
All Figure Values Are Shown In 2023 Dollars.



Approved major acquisition expenditures over the next ten years include:

- **\$149.7 Million** in 2023-2028 acquisitions for new development projects to increase CHH housing portfolio: and,
- **\$450 Thousand** for new additional vehicle acquisitions

CHH will acquire approximately **\$150.2 Million** of assets, and with **\$116.4 Million** of planned budget for acquisition. CHH does not have a sufficient budget for its planned constructed acquisitions at this time. CHH is in the process of identifying funding sources for some of these future acquisitions.

The acquisition forecast consists of approved projects identified until 2027. This forecast does not detail any future acquisitions beyond this time and future acquisitions are expected to continue to meet future housing demand.

As mentioned in the section above, CHH is currently conducting a planning process to establish a Long-term Development Strategy which will guide long-term growth, including informing

# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

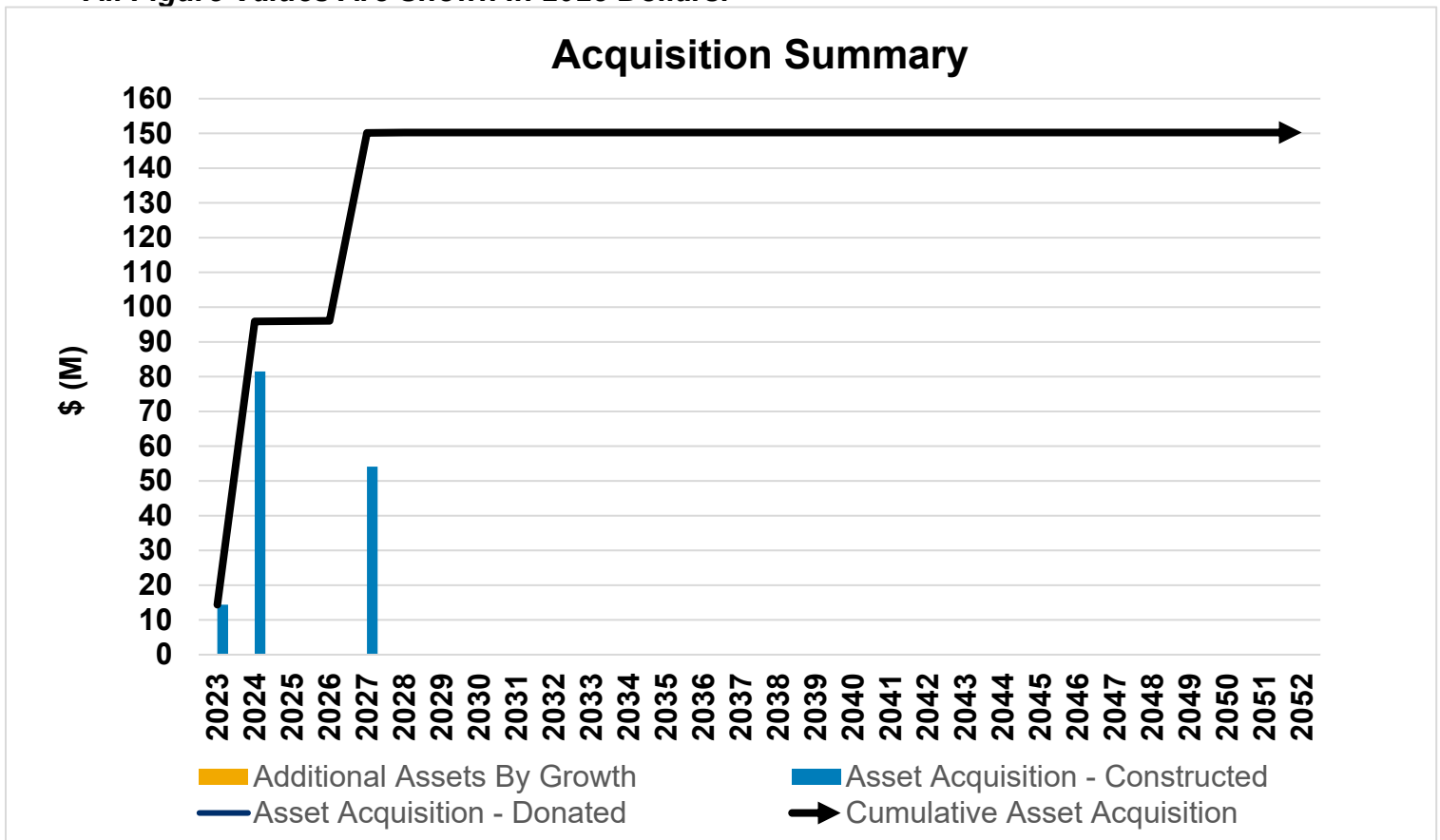
disposition and acquisition of CHH assets. This strategy will likely impact acquisitions in future years and will be considered in the future AM Plans as information becomes available.

In addition, as Asset Management knowledge, practices and abilities mature within the City and CHH, it is likely that there will be significant projects with equally significant costs that will appear within the later years of the 30-year planning horizon.

## ACQUISITIONS SUMMARY

Forecast acquisition asset costs are summarized in **Figure 15** and show the cumulative effect of asset acquisitions over the next ten 10-year planning period.

**Figure 15: Acquisition Summary**  
All Figure Values Are Shown In 2023 Dollars.



When CHH commits to constructing new assets, it must be prepared to fund future operations, maintenance, and renewal costs. CHH must also account for future depreciation when reviewing long-term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in **Figure 15**. CHH

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## 2024 ASSET MANAGEMENT PLAN

and the City will need to address how to best fund these ongoing costs as well as the costs to construct the assets while seeking the highest level of service possible.

### 8.2 OPERATIONS AND MAINTENANCE PLAN

Operations include all regular activities to provide services. Daily, weekly, seasonal, and annual activities are undertaken by staff to ensure the assets perform within acceptable parameters and to monitor the condition of the assets for safety and regulatory reasons. Examples of typical operational activities include operating assets, utility costs, inspections, and the necessary staffing resources to perform these activities.

- **\$11.4 Million** in employee-related costs in 2023 (i.e., salaries, wages, benefits);
- **\$11.3 Million** in utility billings (i.e., hydro, water & sewer, and heating (natural gas) fuel);
- **\$3.6 Million** in contractual operating costs (grounds snow removal, building security, broiler, and machinery); and,
- **\$3.1 Million** in legislated and routine preventative maintenance costs in 2023.

Maintenance should be viewed as the ongoing management of asset deterioration. The purpose of planned maintenance is to ensure that the correct interventions are proactively applied to assets and to ensure they reach their intended useful life. Maintenance does not significantly extend the useful life of the asset but allows assets to reach their intended useful life by returning the assets to a desired condition. Examples of typical maintenance activities include equipment repairs and component replacements along with appropriate staffing and material resources required to perform these activities. For this AM Plan, maintenance also includes component renewal of the facilities, i.e., replacement of elevators, kitchen renewals, HVAC replacements or roofing replacements are considered as maintenance in the AM Plan as they contribute to the overall asset, the Facility (entire building), reaching the estimated service life.

Proactively planning maintenance significantly reduces the occurrence of reactive maintenance which is always linked to a higher risk to human safety and higher financial costs. CHH needs to plan and properly fund its maintenance to ensure the CHH buildings are reliable and can achieve the desired level of service.

Major maintenance projects CHH plans to continuously manage over the next 10 years include:

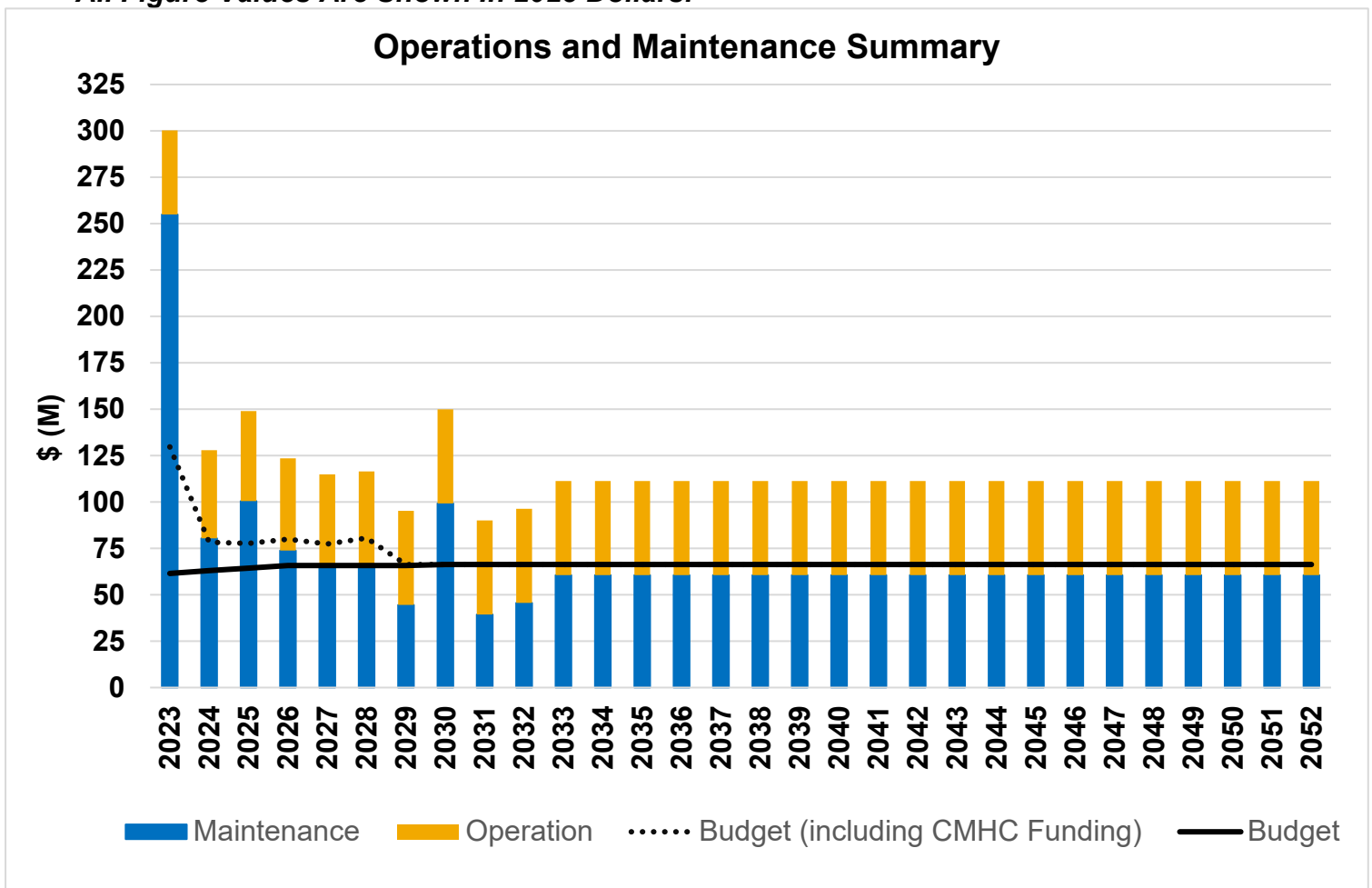
- **\$131.5 Million (2023-2029)** for revitalizing the current housing portfolio and improving energy efficiency by 25%, largely supported by dedicated CMHC grant funding;
- **\$0.5 Million** to update Building Condition Assessments;
- **\$0.9 Million** for legislated preventative maintenance activities; and,
- **\$2.2 Million** for routine preventative maintenance activities.

# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

These investments for maintenance are intended to allow these assets to reach their estimated service life and minimize reactive maintenance costs. These forecast costs do not yet fully include the recommended works that need to be undertaken to ensure the entire inventory of assets will achieve their desired service lives and level of service.

Forecast operations and maintenance costs vary in relation to the total value of the asset registry. When additional assets are acquired, future operations and maintenance costs are forecast to increase. When assets are disposed the forecast operation and maintenance costs are reduced. **Figure 16** shows the forecast operations and maintenance costs relative to the proposed operations and maintenance budget.

**Figure 16: Operations and Maintenance Summary**  
All Figure Values Are Shown In 2023 Dollars.



The forecasted operations and maintenance needs will increase steadily over time with the addition of new CHH assets, such as new facilities, administrative assets, and tools and equipment. Forecasted operational and maintenance costs for additional acquired assets are not included in this AM Plan due to data limitations.

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

As per **Figure 16**, there is a significant funding shortfall spanning from 2023 to 2032. This shortfall is primarily due to unfunded repairs to CHH facilities based on the Building Condition Assessments. Priority repairs are being completed on these facilities, and the facilities are in overall fair condition as shown in **Table 4**. However, due to budget constraints, many facility repairs are deferred annually, resulting in a backlog of recommended maintenance activities. For 2023, the maintenance needs shown in the graph above include **\$38.2 Million** of planned maintenance work for 2023, along with **\$131.1 Million** of backlog maintenance work which has accumulated over time, as per the BCA's. The 2023 to 2032 funding shortfall also includes an average of **\$1.5M** per year of additional operational activities.

As discussed in **Section 3.2.1.1**, the estimated service of 75 years was selected for the shell of the building. This estimated service did not include the service life of the building component, as each component has a unique estimated service. These components typically require timely replacement to ensure the facility remains functional and reaches its intended estimated service life. For instance, in a facility with a 75-year expected service life, components such as the roof, installed during construction, may have a separate estimated service life of 25 years. Therefore, the roof would need replacement in year 25 and again in year 50. The costs associated with these two roof replacements are considered part of the maintenance expenses necessary to sustain the building's functionality and ensure it reaches its estimated service life of 75 years.

A significant spike of **\$131.1 Million** in deferred maintenance activity is shown for 2023 including the following repair work:

- **\$2.3 Million** of deferred repair work to the substructure of facilities which includes repair work to the basement and foundation of the building;
- **\$39 Million** of deferred maintenance work which includes roofing, exterior doors, exterior walls, and substructure;
- **\$76.3 Million** in deferred repair work for interior and electrical and mechanical repair; and,
- **\$13.5 Million** in parking lot surfacing and lighting.

From 2024 – 2032, the maintenance spikes average to **\$37.5M** per year, which signifies forecast ongoing maintenance repairs taken from BCA's required to keep facilities in good condition. As mentioned in **Section 3.2.1.2**, BCAs are completed every five years, and these forecasted needs may change depending on the results of the new BCAs.

As BCAs are only completed for a 10-year period, maintenance needs from 2033-2052 are projected based on average BCA maintenance needs from 2023-2032. The average projected BCA need without incorporating backlog is **\$41.8M** per year and this is included in the forecast costs in **Figure 16** above.

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

It is anticipated that at the current budget levels, there will be insufficient budget to address all operating and maintenance needs over the 30-year planning horizon. The graph above illustrates that without increased funding or changes to lifecycle activities, there is a significant shortage of funding which will lead to:

- Impacts on tenants' homes and well-being;
- Possible reduction to the availability of the assets;
- Higher cost reactive maintenance;
- Increased financial and reputational risk; and,
- Assets do not reach estimated service life.

As previously mentioned, CHH created a three-year operating budget which included operations, maintenance, and renewal items until 2026. This multi-year forecast was included in **Figure 16** above with the operations and maintenance portions of the Operating budget, and then these numbers were carried flat across the 30-year forecast from 2027-2052. The dotted line on the graph shows the CMHC and CHH contributed funding available until 2029. More discussion can be in **Section 3.2.1.1** and **Table 21**.

### 8.3 RENEWAL PLAN

Renewal is major work which does not increase the asset's design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Asset renewals are typically undertaken to either ensure the asset's reliability or quality will meet the service requirements set out by CHH. Renewal projects are often triggered by service quality failure and can often be prioritized by those that have the highest consequence of failure, have high usage, have high operational and maintenance costs and other deciding factors.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 25** and are based on the estimated design life for this iteration. Future iterations of the plan will focus on the Lifecycle approach to ESL which can vary greatly from design life. Asset useful lives were last reviewed in 2023 however they will be reviewed annually until their accuracy reflects the City's and CHH's current practices.

For the purposes of this AM Plan, facilities were considered "renewed" if the undertaken work was substantial enough to consider that the service life of the entire facility (asset) was reset. This typically involves complete replacement or extensive renovation which essentially reconstructs the entire facility. Such activities are infrequent, and CityHousing allocates significant funds on maintenance activities that replace individual components but might not impact the overall service life of the entire facility (building). As an example, a facility with an ESL of 75 years might have a roof lasting 25 years. If the roof undergoes replacement twice

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## 2024 ASSET MANAGEMENT PLAN

during the life of the facility, it is considered a maintenance activity as it does not extend the ESL of the facility but is required to help the asset reach the estimated service life.

**Table 25: Useful Lives of Assets**

ASSET SUBCATEGORY	ESTIMATED SERVICE LIFE (YEARS)
Facilities	75*
Vehicles	8
Computers	4-5
Mobile Phones	2
Tools	8-10
Fridges	10
Stoves	10

\*A facility with an ESL of 75 years that is nearing 75 years of age that has a condition rating of good or very good condition might also have the ESL extended on a case-by-case basis if data is available to support the increase in ESL.

The estimates for renewals in this AM Plan were based on the register method which utilizes the data from the City's and CHH asset registry to analyze all available lifecycle information and then determine the optimal timing for renewals based on the ESL.

### RENEWAL RANKING CRITERIA

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Facilities can process required volumes); or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., Vehicles are reliable).<sup>19</sup>

Future methodologies may be developed to optimize and prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure;
- Have high use and the subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have the potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.<sup>20</sup>

<sup>19</sup> IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

<sup>20</sup> Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

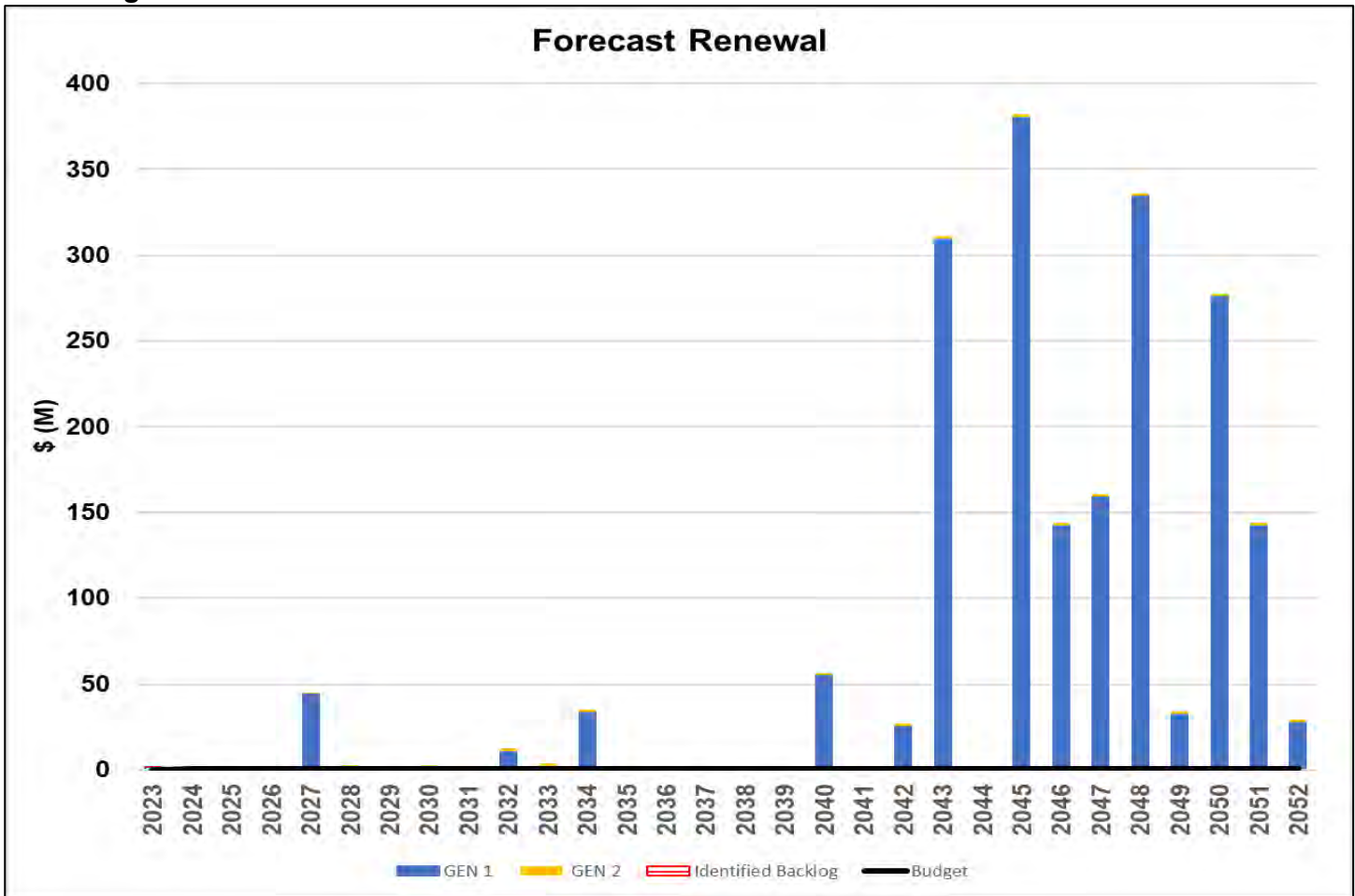


# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

## SUMMARY OF FUTURE RENEWAL COST

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in **Figure 17**.

**Figure 17: Forecast Renewal Costs**  
All Figure Values Are Shown In 2023 Dollars.



Although difficult to see on this graph, 2023 represents the cumulative backlog of deferred renewal. This backlog is nearly \$1.4 million of deferred renewals that have been accumulated over time which includes two single facilities past their estimated service life and the rest are administrative assets due for renewals.

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## 2024 ASSET MANAGEMENT PLAN

Other major forecast renewal costs include the following:

- 2027: **\$42.7 Million** renewal forecast for renewal of 85 semis and singles;
- 2032: **\$10.8 Million** renewal forecast for renewal of 11 facilities and 48 computers; and,
- 2034: **\$33.3 Million** renewal forecast for renewal of 64 semis and singles.

The significant spikes from 2040 onwards are driven by renewals of facilities. As discussed in **Section 3.2.1.1**, the facility's estimated service life is 75 years and as most facilities are 40 years, these facilities would reach their estimated service life in the next 30 years and renewal will need to be considered. These facility renewals will be an extremely large expenditure for CHH and will require careful financial planning. CHH has begun to strategically plan for these upcoming renewals.

Deferring renewals (assets identified for renewal and not funded) creates risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. Continuously deferring renewals works ensures CHH will not achieve intergenerational equality. If CHH continues to push out necessary renewals, there is a high risk that future generations will be unable to maintain the level of service the customers currently enjoy. It will burden future generations with significant costs that inevitably they will be unable to sustain. Prioritization of these projects will need to be funded and managed over time to ensure renewal occurs at the optimal time.

Properly funded and timely renewals will ensure the assets perform as expected and it is recommended to continue to analyze asset renewals based on criticality and availability of funds for future AM Plans.

### 8.4 DISPOSAL PLAN

Disposal includes any activity associated with the disposal of a decommissioned asset including the sale, possible closure of service, disposal of asset materials, or relocation. Disposals will occur when an asset reaches the end of its useful life. The end of its useful life can be determined by factors such as excessive operation and maintenance costs, regulatory changes, obsolescence, or demand for the asset has fallen.

Assets identified for possible decommissioning and disposal are shown in **Table 26**. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposal of the assets are also outlined in **Table 26**. The current progression of a Long-term Development Strategy will influence decisions regarding future disposition, as discussed in **Section 8.1**. Any costs or revenue gained from asset disposals is included in future iterations of the plan and the long-term financial plan.

# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

**Table 26: Assets Identified for Disposal**

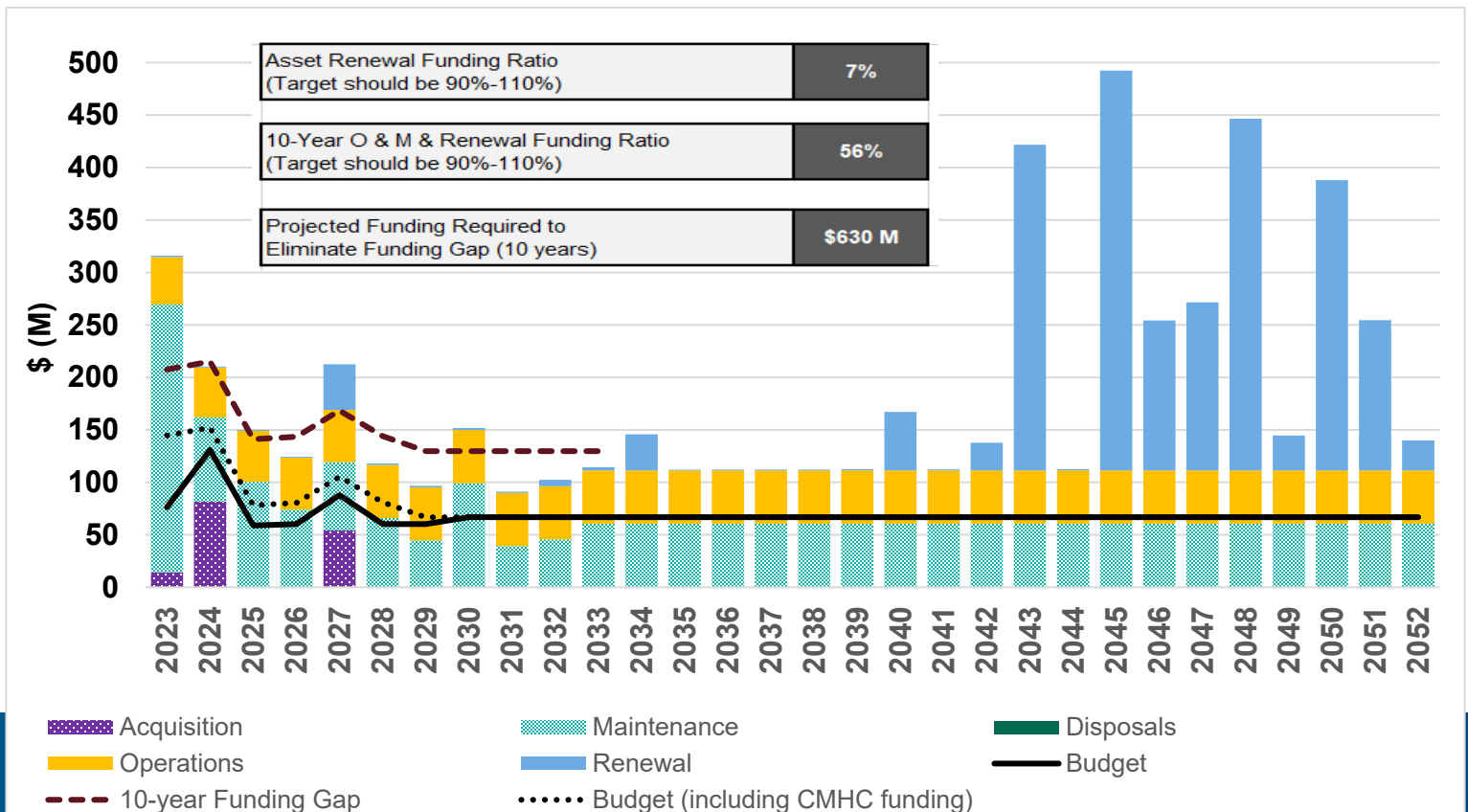
ASSET	REASON FOR DISPOSAL	TIMING	DISPOSAL COSTS	OPERATIONS & MAINTENANCE ANNUAL SAVINGS
Facilities (units)	Strategic Realignment	TBD	Unknown	Unknown
Vehicles	End of Life	TBD	N/A	N/A

## 8.5 LIFECYCLE COST SUMMARY

The financial projections from this asset plan are shown in **Figure 18**. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs estimated to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving a balance between costs, levels of service and risk to achieve the best value outcome.

**Figure 18: Lifecycle Summary**  
All Figure Values Are Shown In 2023 Dollars



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## 2024 ASSET MANAGEMENT PLAN

There is insufficient budget to address all lifecycle activities by CHH. The underfunded activities include operational activities and deferred maintenance work. CHH needs to continue increasing its operation and maintenance budgets annually to fund all the forecast operation activities, deferred maintenance activities and to fund increasing reactive maintenance work that can occur due to aging facilities. The 10-year funding gap is explained in **Section 9.1**.

CHH currently has no approved budget to address the renewal work that is projected over the 30-year horizon. There is significant forecasted renewal work projected from 2040 – 2052, this accounts for 63% of the current CHH portfolio due for renewal in this period, with a renewal value of \$1.88 Billion.

Without sufficient funding, CHH has little option but to defer these necessary lifecycle activities. Deferring important lifecycle activities is never recommended. The City would benefit from incorporating these considerations into its long-term financial analysis of CHH's operating and capital budget needs. Funding these activities helps to ensure the assets are compliant, safe, and effectively deliver the service the customers need and desire.

Deferring renewals (assets identified for renewal and not funded) creates risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance and is not an optimal recommendation.

The number of acquisitions in 2023, 2024 and 2027 will also commit CHH to additional ongoing operations, maintenance, and renewal costs throughout these acquired assets' lifecycles. The actual acquisitions will fluctuate with changing housing demands over the 30-year period and will have an impact on the lifecycle management of CHH.

As previously mentioned, due to the lack of data confidence in the current levels of service information, CHH will need to collect more data before proposing any new levels of service. It has been assumed in the interim that the current levels of service will be the proposed levels of service continuing forward past 2025 in accordance with O. Reg 588/17.

The City and CHH will continue to improve lifecycle data, and this will allow for informed choices as to how best to mitigate impacts and how to address the funding gap itself. In future plans, this gap in funding will be refined over the next three years to improve the confidence and accuracy of the forecasts.

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## 2024 ASSET MANAGEMENT PLAN

### 9. FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. Effective asset and financial management will ensure CHH provides the appropriate level of service for CHH and the City to achieve their goals and objectives. Reporting to stakeholders on service and financial performance ensures the City and CHH are transparently fulfilling stewardship accountabilities.

Long-term financial planning (LTFP) is critical for CHH to ensure that lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. CHH is under increasing pressure to meet the wants and needs of its customers while keeping costs at an affordable level and maintaining its financial sustainability.

Without funding asset activities properly; CHH will have difficult choices to make in the future which will include options such as higher costs reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all the asset needs will be met while the City and CHH are finalizing a clear financial strategy with measurable financial targets. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

#### 9.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered within the AM Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years); and,
- Medium-term forecast costs/proposed budget (over 10 years of the planning period).

#### ASSET RENEWAL FUNDING RATIO

##### Asset Renewal Funding Ratio<sup>21</sup> 7%

The Asset Renewal Funding Ratio is used to determine if CHH is accommodating asset renewals optimally and cost-effectively from a timing perspective and relative to financial constraints, the risk CHH is prepared to accept and targeted service levels it wishes to maintain. The target renewal funding ratio should be ideally between **90% - 110%** over the entire planning period. A low indicator result generally indicates that service levels are achievable, however, the expenditures are below this level in some service areas predominantly due to underinvestment,

<sup>21</sup> AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

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including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

If assets are not renewed at the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to the City's and CHH's reputation and risk of fines or legal costs

This low Asset Renewal Funding Ratio outlines that this service is underfunded and while CHH is completing priority repairs to keep their assets functional, CHH will not be able to renew and maintain assets at an appropriate rate. This ratio is largely driven by the significant costs anticipated to renew whole facilities at the end of their useful life.

The lack of renewal resources will be addressed in future AM plans while aligning the plan to the City's LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate.

### MEDIUM-TERM – 10 YEAR FINANCIAL PLANNING PERIOD

#### 10-Year Operating, Maintenance & Renewal Ratio 56%

Although this AM Plan includes forecast projections to 30 years, the higher confidence numbers are typically within the first 10 years of the lifecycle forecast. The 10-year Operating, Maintenance & Renewal Ratio compares the Planned Budget with the Lifecycle Forecast for the optimal operation, maintenance, and renewal of assets to provide an agreed level of service over the next 10-year period. Similarly, to the AARF, the optimal ratio is also between **90-110%**. A low ratio would indicate that assets are not being funded at the rate that would meet the organization's risk and service level commitments.

The forecast operations, maintenance and renewal costs over the 10-year planning period is **\$142.3 Million** on average per year. Over time as improved information becomes available, it is anticipated to see this number change. The proposed (budget) operations, maintenance and renewal funding is **\$79.3 Million** on average per year giving a 10-year funding shortfall of **\$63.0 Million** per year or **\$630 Million** over the 10-year planning period. This funding shortfall stems from costs of facility renewal, as discussed in **Section 8.3**, additional operational costs and maintenance needs identified in the BCA, as mentioned in **Section 8.2**. These costs are currently not fully funded and should be prioritized based on the criticality of components.

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This indicates that **56%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget, which is outside of the 90-110% range. Therefore, it can be concluded that CHH is not able to fund its assets at an acceptable rate. Note, that these calculations **exclude** acquisition costs.

This gap will need to be managed over time to reduce it sustainably and limit financial shock to customers. Options for managing the gap include;

- Financing strategies – increased funding, block funding for specific lifecycle activities, long-term debt utilization;
- Adjustments to lifecycle activities – increase/decrease maintenance or operations, increase/decrease frequency of renewals, limit acquisitions or dispose of underutilized assets;
- Influence level of service expectations or demand drivers;
- Developing and implementing the Long-term Development Strategy; and,
- Making incremental investments and improvements in resources and policies which drive effective and optimal day-to-day management of CHH's diverse portfolio of facilities assets.

These options and others will allow Hamilton to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to eventually achieve a financial indicator of **90-110%** for the first years of the AM Plan and ideally over the 10-year life of the Long-Term Financial Plan.

### 9.2 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

**Table 27** shows the forecast costs (outlays) required for consideration in the 30-year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the operational and capital budget. The City will begin developing its long-term financial plan (LTFP) to incorporate both the operational and capital budget information and help align the LTFP to the AM Plan which is critical for effective asset management planning.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

CHH will manage the 'gap' by continuing to develop this AM Plan to guide future service levels and resources required to provide these services in consultation with the community. Options to

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## 2024 ASSET MANAGEMENT PLAN

manage the gap include reduction and closure of low-use assets, increased funding allocations, reduce the expected level of service, utilize debt-based funding over the long term, adjustments to lifecycle activities, improved renewals and multiple other options or combinations of options.

The completion and implementation of the Long-Term Development Strategy can also play a role in managing the gap.

**Table 27: Forecast Costs (Outlays) For the Long-Term Financial Plan Forecast  
Costs Are Shown In 2023 Dollar Values**

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2023	\$ 14,400,000	\$ 45,241,540	\$ 254,998,848	\$ 1,420,922	\$ -
2024	\$ 81,490,000	\$ 47,448,092	\$ 80,440,472	\$ 905,212	\$ -
2025	\$ 90,000	\$ 48,553,872	\$ 100,486,888	\$ 904,357	\$ -
2026	\$ 90,000	\$ 49,687,292	\$ 73,862,400	\$ 796,399	\$ -
2027	\$ 54,090,000	\$ 49,687,292	\$ 65,231,648	\$ 43,500,912	\$ -
2028	\$ 90,000	\$ 50,687,292	\$ 65,811,000	\$ 1,377,461	\$ -
2029	\$ -	\$ 50,687,292	\$ 44,523,112	\$ 1,429,429	\$ -
2030	\$ -	\$ 50,687,292	\$ 99,227,664	\$ 1,836,640	\$ -
2031	\$ -	\$ 50,687,292	\$ 39,348,808	\$ 1,100,116	\$ -
2032	\$ -	\$ 50,687,292	\$ 45,644,168	\$ 6,111,194	\$ -
2033	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 3,170,870	\$ -
2034	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 34,496,684	\$ -
2035	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 799,357	\$ -
2036	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 886,399	\$ -
2037	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 944,381	\$ -
2038	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 856,961	\$ -
2039	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 1,208,929	\$ -
2040	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 55,820,640	\$ -
2041	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 995,116	\$ -



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YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2042	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 26,410,694	\$ -
2043	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 310,499,360	\$ -
2044	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 1,184,683	\$ -
2045	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 381,173,920	\$ -
2046	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 142,991,904	\$ -
2047	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 160,215,888	\$ -
2048	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 335,357,472	\$ -
2049	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 33,259,928	\$ -
2050	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 276,781,632	\$ -
2051	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 143,237,120	\$ -
2052	\$ -	\$ 50,687,292	\$ 60,589,960	\$ 28,627,694	\$ -

### 9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in CHH's operational budget and multi-year capital budget.

These operational and capital budgets determine how funding will be provided, whereas the AM Plan typically communicates how and when this will be spent, along with the service and risk consequences. Future iterations of the AM Plan will provide service delivery options and alternatives to optimize limited financial resources.

### 9.4 VALUATION FORECASTS

Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will likely increase significantly despite some assets being programmed for disposal that will be removed from the register over the 30-year planning horizon.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts. Any disposals of assets would decrease the operations and maintenance needs in the longer term and remove the high costs of renewal obligations. At this

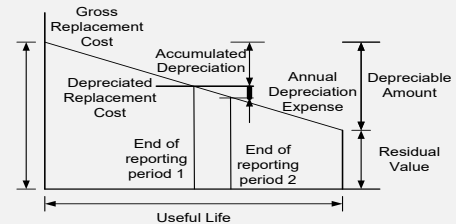
# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

time, it is not possible to separate the disposal costs from the renewal or maintenance costs, however this will be improved for the next iteration of the plan.

### 9.5 ASSET VALUATION

<b>Replacement Cost (Current/Gross)</b>	<b>\$2,951,342,848</b>
<b>Depreciable Amount</b>	<b>\$2,951,307,520</b>
<b>Depreciated Replacement Cost<sup>22</sup></b>	<b>\$1,203,954,816</b>
<b>Depreciation</b>	<b>\$ 40,125,408</b>



The current replacement cost is the most common valuation approach for specialized infrastructure assets. The methodology includes establishing a comprehensive asset registry, assessing replacement costs (based on market pricing for the modern equivalent assets) and useful lives, determining the appropriate depreciation method, testing for impairments, and determining remaining useful life.

As CHH matures its asset data, it is highly likely that these valuations will fluctuate significantly over the next 30 years, and they should increase over time based on improved market equivalent costs as well as anticipated cost changes due to climate change mitigation and adaptation strategies.

### 9.6 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Operational forecasts are based on current budget allocations and are the basis for the projections for the 30-year horizon and encompass additional operational needs, where known, but do not address all other operational needs that may not yet be identified;
- Maintenance forecasts are based on current budget allocations and encompass anticipated needs, where known, but do not necessarily identify all asset needs at this time; and,
- Replacement costs were based on historical costing and subject matter expertise. They were also made without determining what the asset would be replaced with in the future.

<sup>22</sup> Also reported as Written Down Value, Carrying or Net Book Value.

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## 2024 ASSET MANAGEMENT PLAN

### 9.7 FORECAST RELIABILITY AND CONFIDENCE

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is defined in the AM Plan Overview.

**Table 28: Data Confidence Assessment for Data Used in AM Plan**

DATA	CONFIDENCE ASSESSMENT	COMMENT
<b>Demand Drivers</b>	Medium	Based on the 2022 Housing assessment report and SME expertise.
<b>Growth Projections</b>	Medium	Population data is of high confidence. Current growth projections will need to be vetted and improved.
<b>Acquisition Forecast</b>	Low	Additional assets beyond those identified are anticipated.
<b>Operation Forecast</b>	Low	Currently budget-based and additional operational costs for approved future acquired assets are not accounted for and the operational needs for acquired assets are under-reported in this AM Plan.
<b>Maintenance Forecast</b>	Low	Legislated and routine preventative maintenance activities costs are high confidence numbers and are accounted for in operational and capital budgets. BCA forecast is available until 2032, and maintenance needs are projected beyond 2032. BCA numbers have low confidence. Additionally, maintenance needs for acquired assets are not included in the budget needs or the BCA, leading to underreporting of the additional maintenance needs.
<b>Renewal Forecast - Asset Value</b>	Medium	Most Facility's assets renewal costs are based on recent market value. Tools and appliance renewal costs are high-level estimates and are based on SME (subject matter experts) estimates.
<b>Renewal Forecast - Asset Useful Lives</b>	Medium	Based on SME opinion. Tools and appliances have a high-level estimated useful life and may need to be reviewed in the future.

# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

DATA	CONFIDENCE ASSESSMENT	COMMENT
<b>Renewal Forecast - Condition Modelling</b>	Low	Condition information was only known for multi-unit facilities. Many assets are replaced according to a renewal schedule, do not have conditions assigned and are often based on age.
<b>Disposal Forecast</b>	Very Low	Not included in AM Plan. Continuous improvements are required to ensure accurate data is available.

The estimated confidence level for and reliability of data used in this Asset Management Plan is considered to be a Medium confidence level.

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

### 10. PLAN IMPROVEMENT AND MONITORING

#### 10.1 STATUS OF ASSET MANAGEMENT PRACTICES<sup>23</sup>

##### ACCOUNTING AND FINANCIAL DATA SOURCES

This AM Plan utilizes accounting and financial data. The sources of the data are:

- 2023 Approved Operating Budget;
- 2024-2025 Multi-Year Operating Forecast;
- 2023 Approved Capital Budget;
- 2021-2028 CMHC/Capital funding proposed projects;
- 2023 Vacancy Renewal and Management Plan (Report #23009)
- 2023-2027 CHH Strategic Plan 2023 Q1 Progress Update
- Building Condition Assessment Reports;
- Asset Management Data Collection Templates;
- Audited Financial Statements and Government Reporting (FIR, TCA etc.);
- Financial Exports from internal financial systems; and,
- Historical cost and estimates of budget allocation based on SME experience.

##### ASSET MANAGEMENT DATA SOURCES

This AM Plan also utilizes asset management data. The sources of the data are:

- Data extracts from various city applications and management software;
- Asset Management Data Collection Templates;
- Tender documents, subdivision agreements and projected growth forecasts as well as internal reports;
- Condition assessments;
- Subject matter expert opinion and anecdotal information; and,
- Reports from the mandatory inspections, operational & maintenance activities internal reports.

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<sup>23</sup> ISO 55000 Refers to this as the Asset Management System

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

### 10.2 IMPROVEMENT PLAN

It is important that the City and CHH recognize areas of the AM Plan and planning processes that require future improvements to ensure both effective asset management and informed decision-making. The tasks listed below are essential to improving the AM Plan and CHH's ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, improved financial planning, and plans to physically improve the assets.

The Improvement Plan **Table 29** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this AM Plan will provide updates on these improvement plans. The costs and resources to complete each of these tasks have not been included in the lifecycle models to date, and resource requirements and prioritization would need to be reviewed for internal resource-driven projects.

**Table 29: Improvement Plan**

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1	Design and develop a condition assessment for all major assets based on the Long-term Development Strategy	CHH	TBD	Initiate in 2025-2026
2	Developing a detailed asset register with an accurate number of assets, age, and replacement costs for all assets.	CHH	\$5000 Internal Resources	Q4 2024
3	Design, analyze and develop condition assessment for all assets.	CHH	\$5000 Internal Resources	Q4 2024
4	Develop tenant satisfaction and tenant complaints metrics.	CHH	Internal resources of the CHH team and City of Hamilton staff	2024-2025
5	Benchmarking common sector KPIs with other local housing corporations.	CHH	\$10,000 per year	2024-2026
6	Design, analyze and develop a preventative maintenance plan for deferred maintenance.	CHH	Approximately \$ 1.2M per year	2024-2026

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
7	Develop a renewal priority the ranking criterion to allocate capital to renewal projects using multi-criteria evaluation approach (i.e. condition, age, environmental impact, health and safety).	CHH	\$50,000 annually in internal resources	TBD
8	Develop a priority criterion for future acquisitions which will include factors such as proximity to transit, percent vacant, purchase and improvement cost.	CHH	Included within the Long-term Development Strategy planning process	2025
9	Investigate incorporating a condition rating during regular vehicle inspection /maintenance activities per 5-point scale.	CHH/ Fleet	TBD 40 hours of internal resources	TBD
10	Improve the survey process by incorporating telephone surveys or IP controls.	CAM	N/A	2025-2028
11	Clarify verbiage regarding CHH responsibility for Q18-Importance question.	CAM	N/A	2024-2025

### 10.3 MONITORING AND REVIEW PROCEDURES

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated regularly to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget will be incorporated into the Long-Term Financial Plan once completed.

# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

### 10.4 PERFORMANCE MEASURES

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan;
- The degree to which the one to ten 10-year detailed works programs, budgets, business plans and corporate structures consider the 'global' work program trends provided by the AM Plan;
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans; and,
- The Asset Renewal Funding Ratio achieving the Organizational target (this target is often 90 – 110%).



# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

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# CITYHOUSING HAMILTON

## 2024 ASSET MANAGEMENT PLAN

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Newbold, C., Skidmore, S., Chessman, T., Imhoff, T., & McDowell, A. (2022). ReCharge Hamilton. Energy and Emissions Plan, City of Hamilton, Hamilton, Ontario. Retrieved 2023, from <https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=335400>

# CITYHOUSING HAMILTON 2024 ASSET MANAGEMENT PLAN

## 12. APPENDIX A – SURVEY ANALYSIS



Hamilton

Corporate Asset Management

CityHousing Hamilton

Survey Period: September 5th - October 10, 2023

January 2024

# Survey Response Demographics

09/05/2023 to 10/10/2023

54

Respondents

133

Survey Questions

9

Demographic Questions

2992

Survey Responses

346

Demographic Responses

Age	% Pop. by Age	% of Respondents	Respondents
18 to 34	22.1%	16.7%	9
35 to 64	41.7%	51.9%	28
65+	19.5%	29.6%	16

Gender	% of Respondents	Respondents
Female	57.4%	31
Male	31.5%	17
Prefer not to answer	9.3%	5
Other	1.9%	1

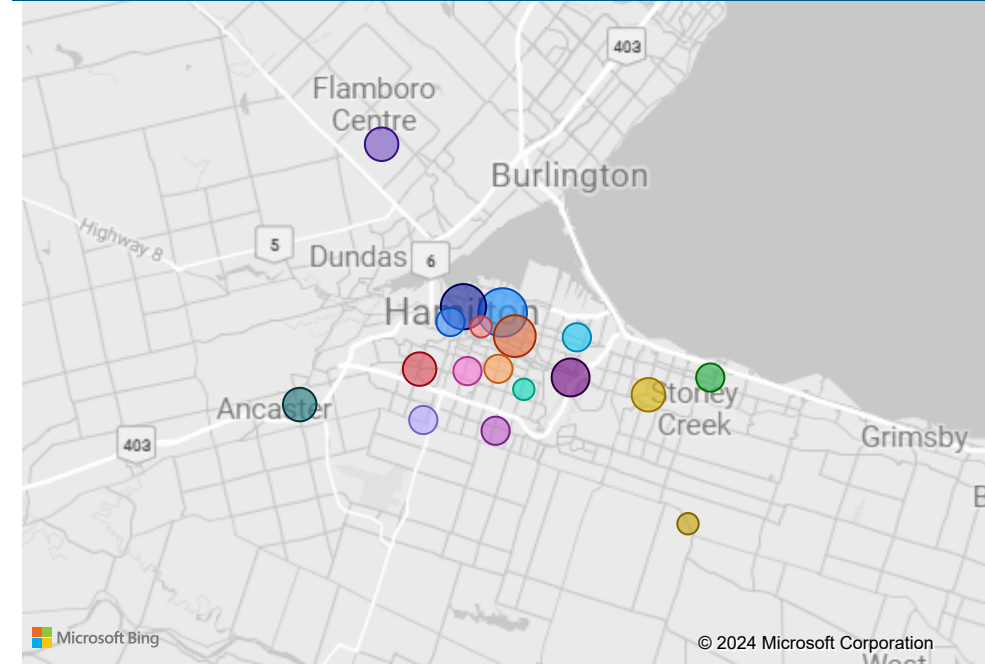
Residency	% of Respondents	Respondents
I live in Hamilton	90.7%	49
I work in Hamilton	46.3%	25
I'm retired	24.1%	13
Other	3.7%	2

Identity	% of Respondents	Respondents
Marginalized group	51.9%	34
I do not identify with any of the above groups	44.4%	24

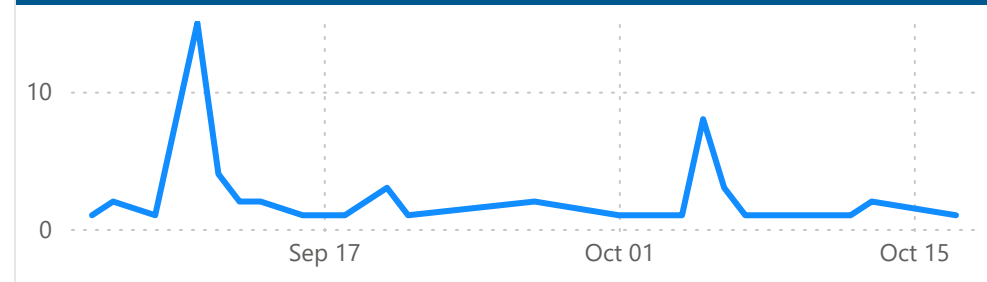
Region	% of Pop. by Region	Population	% of Respondents	Respondents
Lower	45.6%	432375	59.3%	32
Upper	37.3%	353485	27.8%	15
Rural	17.1%	161840	7.4%	4

These tables may not sum to 100% because the survey allowed respondents to choose multiple options or opt out of the question

## Respondent Density Map

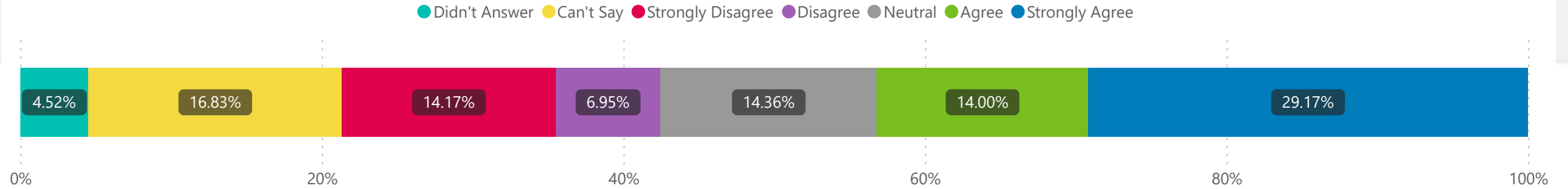


## Respondents by Day



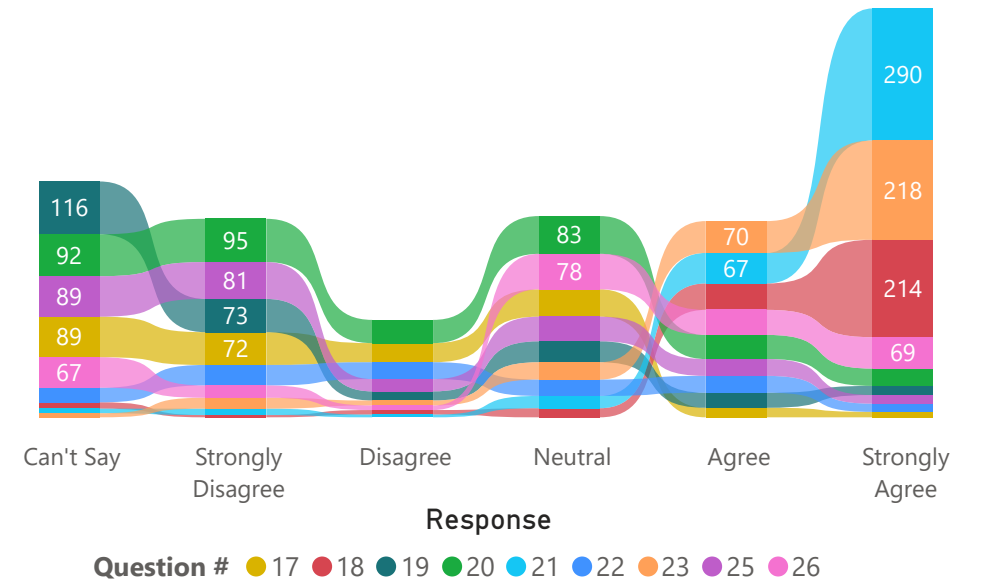
# Summary of Survey Results - General Questions

Total Responses  
**2421**  
Respondents  
**54**



Question	$\sigma$	Avg.	Avg. %	Opt Out	Opt Out %
<b>All Questions</b>	<b>1.50</b>	<b>3.47</b>	<b>53.70</b>	<b>657</b>	<b>21.3%</b>
Q18 Importance of Services - All Respondents	0.88	4.52	85.43	17	5.2%
Q21 Building Ideal Conditions - All Respondents	0.94	4.52	83.66	28	6.5%
Q23 Importance of City Wide Services - All Respondents	1.17	4.24	80.53	17	4.5%
Q26 Funding Rate Changes - All Respondents	1.26	3.54	51.11	85	26.2%
Q22 CityHousing Hamilton - All Respondents	1.34	2.69	42.04	43	19.9%
Q20 Building Current Conditions - All Respondents	1.37	2.65	38.33	112	25.9%
Q19 Recommendation to Others - All Respondents	1.41	2.52	28.83	132	40.7%
Q25 Value for Money - All Respondents	1.36	2.48	32.28	106	32.7%
Q17 Overall Performance - All Respondents	1.21	2.32	27.90	117	36.1%

## Distribution of Question Responses



## Survey Question Summary

Total  
Responses

2421

Respondents

54

Survey Question	n	$\sigma$ (Consistency)	Margin of Error (Confidence Level $\pm$ )
Q17 Over the last 24 months, how do you feel CityHousing Hamilton has performed overall in the following services?	31	1.21	18%
Q18 How important should the following services be as a responsibility for CityHousing Hamilton?	44	0.88	15%
Q19 How likely would you be to recommend these CityHousing Hamilton services to others?	28	1.41	19%
Q20 What is Your Opinion on The Current Condition of CHH Buildings	35	1.37	17%
Q21 What is Your Opinion on The Ideal Condition of CHH Buildings	44	0.94	15%
Q22 What is Your Opinion on The Comfort and Inclusion of CHH Buildings	38	1.34	16%
Q23 Please rate the following City-wide services based on their importance to you.	45	1.17	15%
Q25 How would you rate CityHousing Hamilton for providing good value for money in the infrastructure and services provided to your community?	33	1.36	17%
Q26 With the above information in mind, is the current funding reasonable for the CityHousing Hamilton services provided? Would you prefer to see funding rates rise to increase or maintain service, or would you rather see services reduced to maintain current funding rates?	34	1.26	17%



Hamilton

## Data Disclaimer

### *Insufficient Sample Size*

This report contains a wealth of data; however, a significant limitation arises from insufficient data. The data for the questions regarding tenant opinions (Q10 - Q16) are well below the level with which we feel comfortable dispersing and promoting to leverage for decision making.

Due to such low survey response to the Tenant survey questions, these results have been excluded from the analysis. The data has also been excluded from the following survey analysis for privacy reasons.



# Overall Performance - All Respondents

17

Over the last 24 months, how do you feel CityHousing Hamilton has performed overall in the following services?

Responses

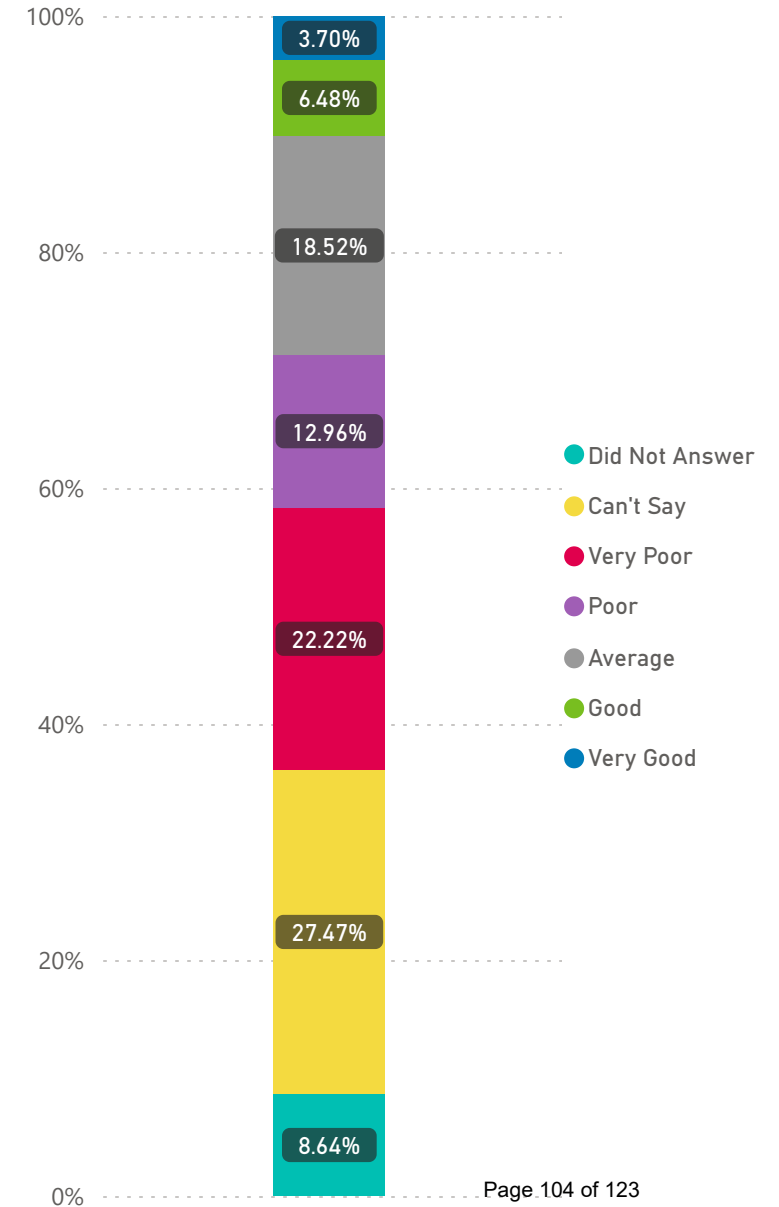
207

Respondents

48

Service Area	Very Poor	Poor	Average	Good	Very Good
<b>Total</b>	<b>72</b>	<b>42</b>	<b>60</b>	<b>21</b>	<b>12</b>
Waste Management	8	7	9	5	4
Tenant Services At Properties	8	5	10	5	
Resolving Safety Concerns	13	9	6	2	1
Redevelopment, Revitalization And Renewal Of The Housing Supply	23	7	8	2	1
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	9	8	11	3	6
Exterior Care / Condition Of Building	11	6	16	4	

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
<b>Total</b>	<b>2.32</b>	<b>46.4%</b>	<b>1.21</b>	<b>117</b>	<b>36.1%</b>
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	2.70	54.1%	1.35	17	31.5%
Waste Management	2.70	53.9%	1.31	21	38.9%
Tenant Services At Properties	2.43	48.6%	1.08	26	48.1%
Exterior Care / Condition Of Building	2.35	47.0%	1.02	17	31.5%
Resolving Safety Concerns	2.00	40.0%	1.08	23	42.6%
Redevelopment, Revitalization And Renewal Of The Housing Supply	1.80	36.1%	1.06	13	24.1%





# Importance of Services - All Respondents

*How important should the following services be as a responsibility for CityHousing Hamilton?*

Responses

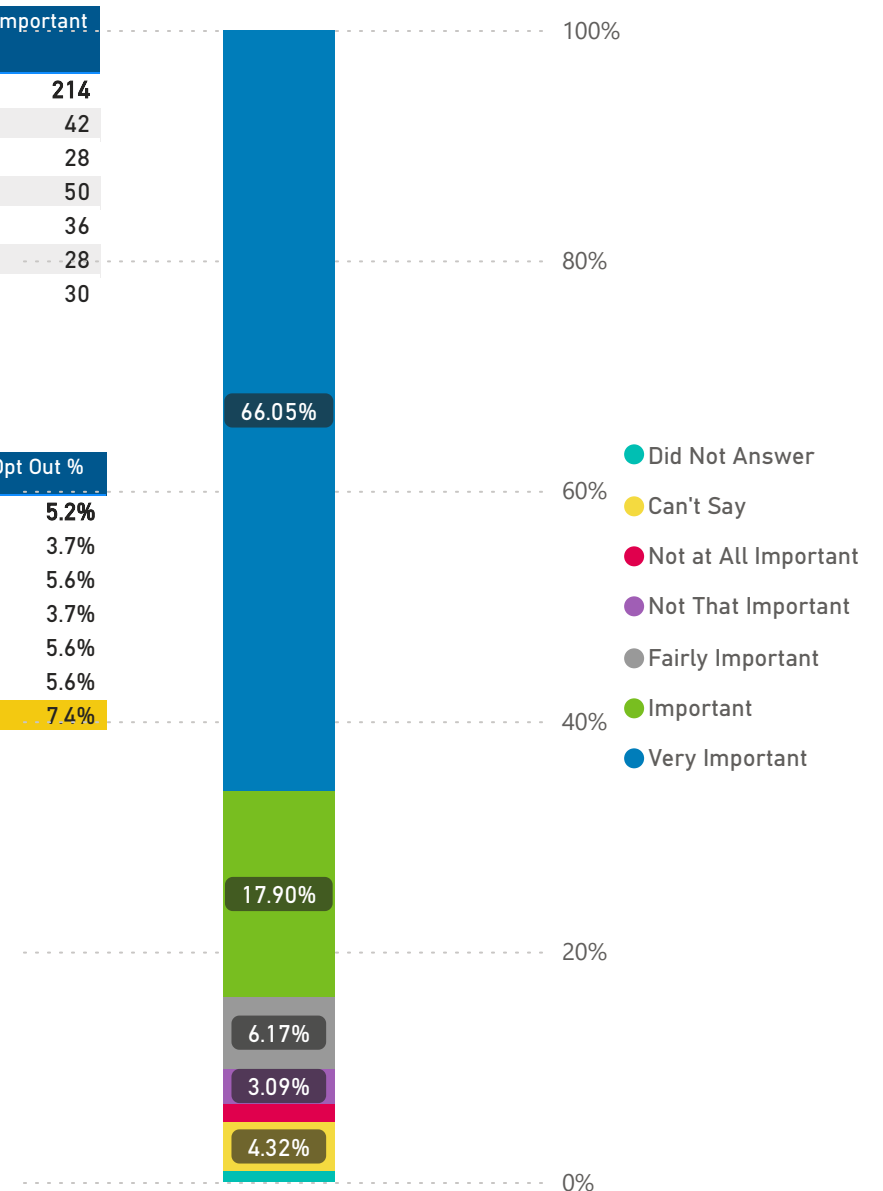
307

Respondents

53

Service Area	Not at All Important	Not That Important	Fairly Important	Important	Very Important
<b>Total</b>	<b>5</b>	<b>10</b>	<b>20</b>	<b>58</b>	<b>214</b>
Waste Management			3	6	42
Tenant Services At Properties	1	3	6	12	28
Resolving Safety Concerns			1	1	50
Redevelopment, Revitalization And Renewal Of The Housing Supply	2	3	3	7	36
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	1	3	4	15	28
Exterior Care / Condition Of Building	1	1	3	17	30

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
<b>Total</b>	<b>4.52</b>	<b>90.4%</b>	<b>0.88</b>	<b>17</b>	<b>5.2%</b>
Resolving Safety Concerns	4.94	98.8%	0.30	2	3.7%
Waste Management	4.76	95.3%	0.55	3	5.6%
Exterior Care / Condition Of Building	4.42	88.5%	0.84	2	3.7%
Redevelopment, Revitalization And Renewal Of The Housing Supply	4.41	88.2%	1.09	3	5.6%
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	4.29	85.9%	0.98	3	5.6%
Tenant Services At Properties	4.26	85.2%	1.02	4	7.4%



## Service Areas Importance vs. Performance

*Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.*

Responses

514

Respondents

54

Service Area	Importance (index score)	Performance (index score)	Net Differential	Opt Out %
<b>Total</b>	<b>90</b>	<b>46</b>	<b>-44</b>	<b>21%</b>
Resolving Safety Concerns	99	40	-59	23%
Redevelopment, Revitalization And Renewal Of The Housing Supply	88	36	-52	15%
Exterior Care / Condition Of Building	88	47	-41	18%
Waste Management	95	54	-41	22%
Tenant Services At Properties	85	49	-37	28%
Landscaping (E.G. Grass Cutting, Snow Clearing, Etc)	86	54	-32	19%

Performance

*Q17 Over the last 24 months, how do you feel CityHousing Hamilton has performed overall in the following services?*

Importance

*Q18 How important should the following services be as a responsibility for CityHousing Hamilton?*

The Net Differential is calculated by getting the average score for Performance and Importance. Then, the average score for Performance and Importance is multiplied by 20. Finally, the Importance score is subtracted from the Performance score. A negative differential indicates a higher perceived importance than performance. A positive differential indicates a higher perceived performance than importance.



# Recommendation to Others - All Respondents

How likely would you be to recommend these CityHousing Hamilton services to others?

Responses

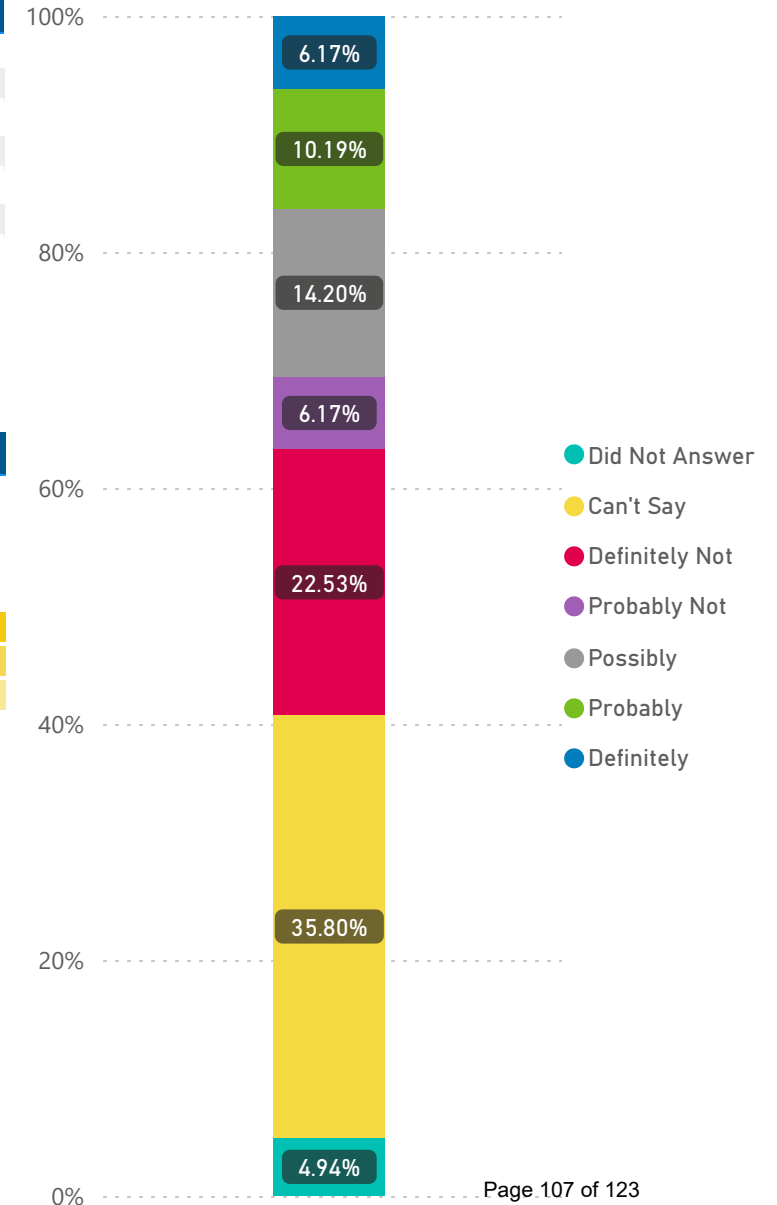
192

Respondents

39

Service Area	Definitely Not	Probably Not	Possibly	Probably	Definitely
<b>Total</b>	<b>73</b>	<b>20</b>	<b>46</b>	<b>33</b>	<b>20</b>
Waste Management	10	2	10	7	4
Tenant Services At Properties	11	4	6	6	2
Resolving Safety Concerns	14	2	7	4	3
Redevelopment, Revitalization And Renewal Of The Housing Supply	16	2	6	3	4
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	9	5	9	6	4
Exterior Care / Condition Of Building	13	5	8	7	3

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
<b>Total</b>	<b>2.52</b>	<b>50.3%</b>	<b>1.41</b>	<b>132</b>	<b>40.7%</b>
Waste Management	2.79	55.8%	1.39	21	38.9%
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	2.73	54.5%	1.35	21	38.9%
Exterior Care / Condition Of Building	2.50	50.0%	1.36	18	33.3%
Tenant Services At Properties	2.45	49.0%	1.35	25	46.3%
Resolving Safety Concerns	2.33	46.7%	1.42	24	44.4%
Redevelopment, Revitalization And Renewal Of The Housing Supply	2.26	45.2%	1.48	23	42.6%



Question

# Net Promoter Score

19

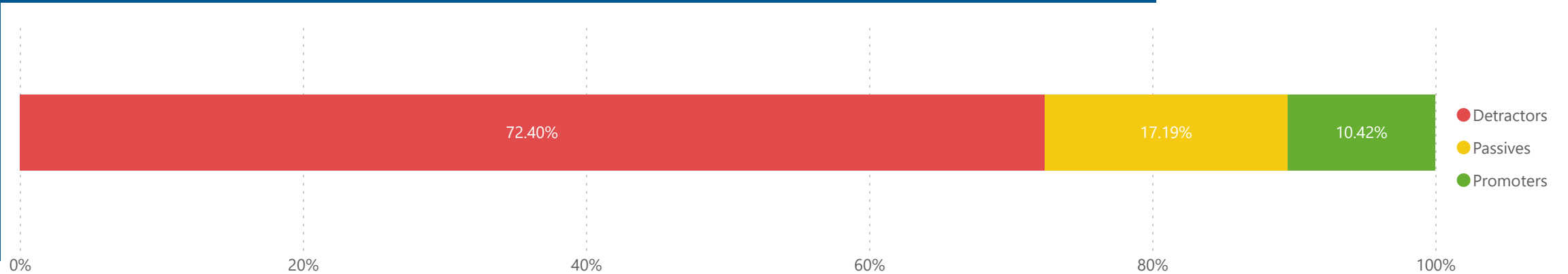
*Typically the Net Promoter Score is used to measure customer loyalty.*

Responses

192

Respondents

39



Service Area	σ	NPS	Detractors	Passives	Promoter
<b>All Service Areas</b>	<b>1.41</b>	<b>-61.98</b>	<b>139</b>	<b>33</b>	<b>20</b>
Resolving Safety Concerns	1.42	-66.67	23	4	3
Tenant Services At Properties	1.35	-65.52	21	6	2
Redevelopment, Revitalization And Renewal Of The Housing Supply	1.48	-64.52	24	3	4
Exterior Care / Condition Of Building	1.36	-63.89	26	7	3
Landscaping (E.G. Grass Cutting, Snow Clearing, Etc)	1.35	-57.58	23	6	4
Waste Management	1.39	-54.55	22	7	4



Hamilton

*Q19 How likely would you be to recommend these CityHousing Hamilton services to others?*

Likert choices less than or equal to 3 are considered 'Detractors', 4s are 'Passive' and 5s are considered 'Promoters'. Respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. Net Promoter score is calculated by subtracting (% Detractors) from (% Promoters).

# Building Current Conditions - All Respondents

Please let us know if you agree with the following statements

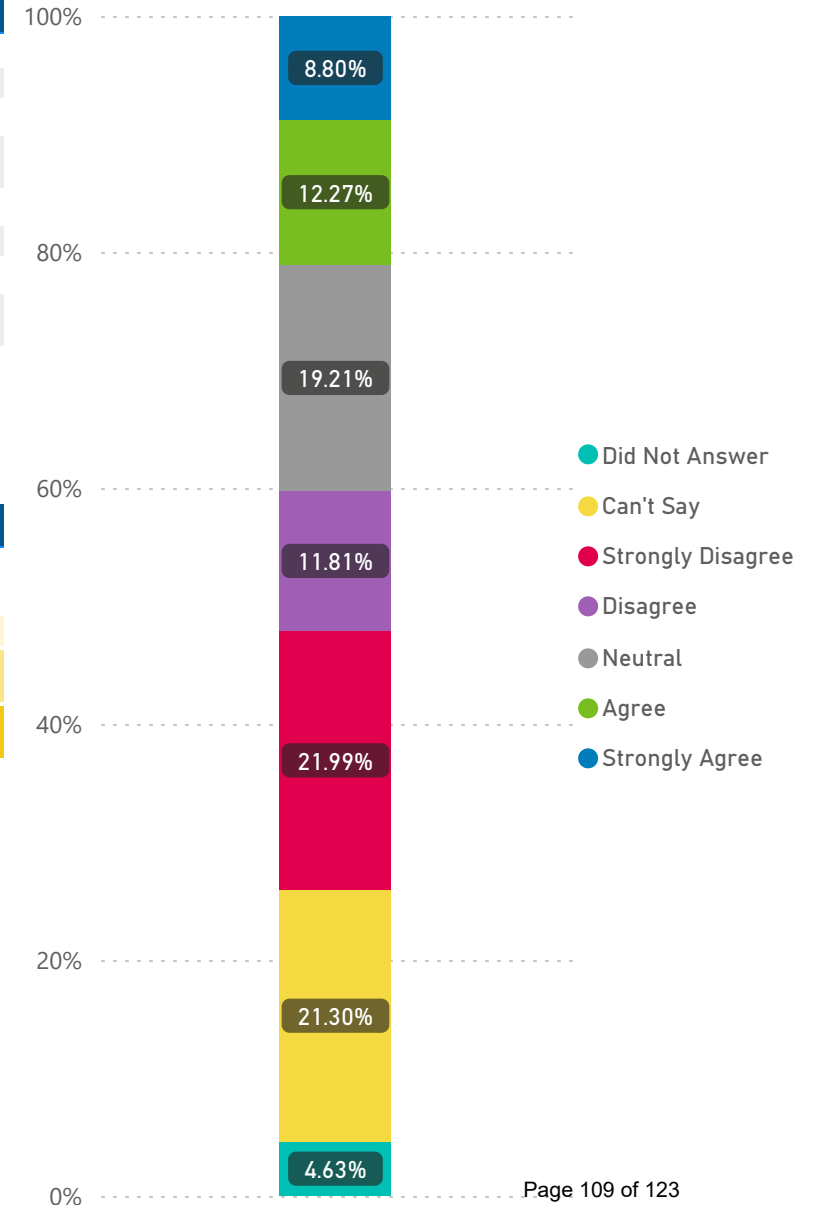
Responses

320

Respondents

47

Service Area	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>Total</b>	<b>95</b>	<b>51</b>	<b>83</b>	<b>53</b>	<b>38</b>
Safe, Equitable And Inclusive Spaces For All.	16	7	8	7	4
Inviting, Appealing And Attractive	18	7	12	5	3
Energy Efficient, Helping The City Meet Energy Targets And Reduce Utility Usage.	10	5	10	5	3
Easy To Enter, With Clearly Marked Public Entrances.	7	4	13	7	7
Comfortable With Appropriate Levels Of Lighting And Noise.	14	5	10	7	4
Clean And In Good Repair	17	12	7	7	2
Accessible, Meeting Provincial Minimum Standards Per Aoda (Accessibility For Ontarians With Disabilities Act, 2005).	6	8	11	6	5
Accessible By Public Transportation.	7	3	12	9	10



Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
<b>Total</b>	<b>2.65</b>	<b>53.0%</b>	<b>1.37</b>	<b>112</b>	<b>25.9%</b>
Accessible By Public Transportation.	3.29	65.9%	1.37	13	24.1%
Easy To Enter, With Clearly Marked Public Entrances.	3.08	61.6%	1.33	16	29.6%
Accessible, Meeting Provincial Minimum Standards Per Aoda (Accessibility For Ontarians With Disabilities Act, 2005).	2.89	57.8%	1.26	18	33.3%
Energy Efficient, Helping The City Meet Energy Targets And Reduce Utility Usage.	2.58	51.5%	1.30	21	38.9%
Comfortable With Appropriate Levels Of Lighting And Noise.	2.55	51.0%	1.38	14	25.9%
Safe, Equitable And Inclusive Spaces For All.	2.43	48.6%	1.38	12	22.2%
Inviting, Appealing And Attractive	2.29	45.8%	1.28	9	16.7%
Clean And In Good Repair	2.22	44.4%	1.23	9	16.7%

# Building Ideal Conditions - All Respondents

Please let us know if you agree with the following statements

Responses

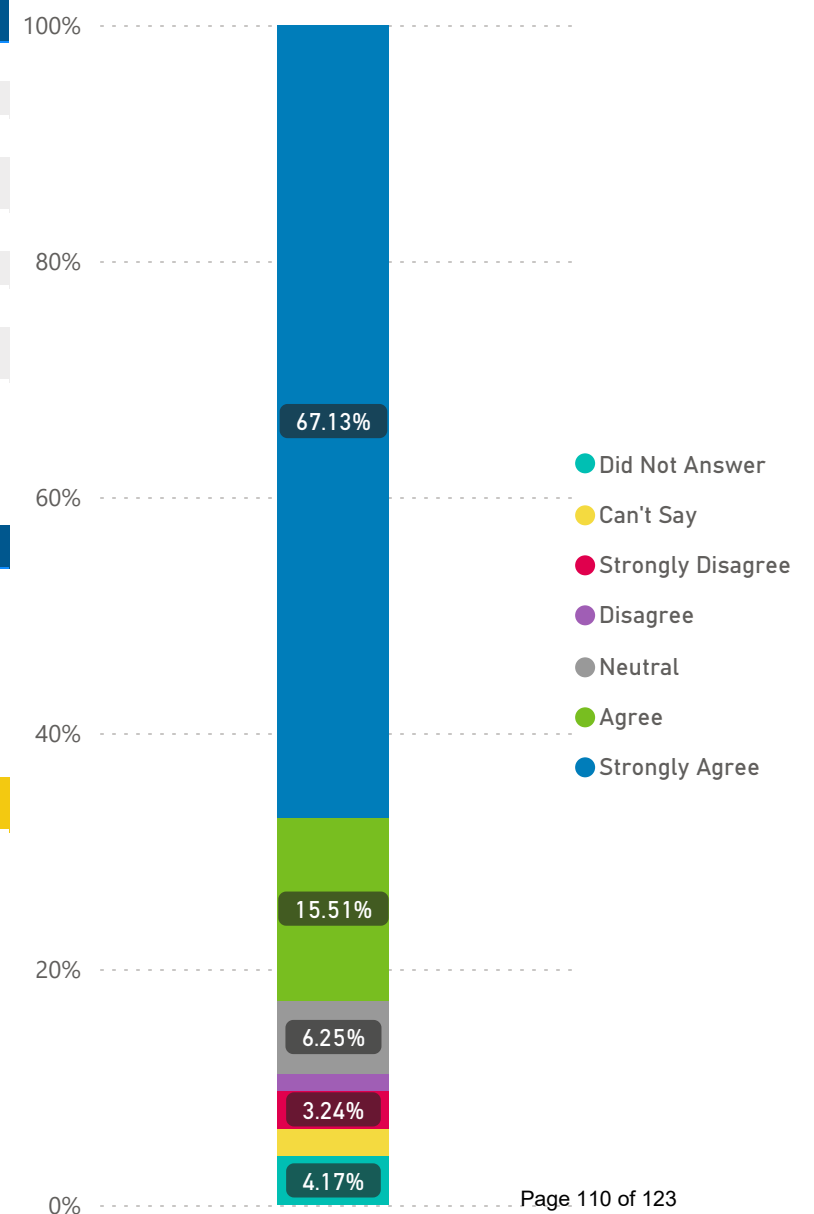
404

Respondents

51

Service Area	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>Total</b>	<b>14</b>	<b>6</b>	<b>27</b>	<b>67</b>	<b>290</b>
Safe, Equitable And Inclusive Spaces For All.	2		4	3	42
Inviting, Appealing And Attractive	1	1	7	13	28
Energy Efficient, Helping The City Meet Energy Targets And Reduce Utility Usage.	1	2	2	12	32
Easy To Enter, With Clearly Marked Public Entrances.	2	2	3	13	31
Comfortable With Appropriate Levels Of Lighting And Noise.	1		3	8	39
Clean And In Good Repair	2		3	5	41
Accessible, Meeting Provincial Minimum Standards Per Aoda (Accessibility For Ontarians With Disabilities Act, 2005).	2	1	1	6	41
Accessible By Public Transportation.	3		4	7	36

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
<b>Total</b>	<b>4.52</b>	<b>90.3%</b>	<b>0.94</b>	<b>28</b>	<b>6.5%</b>
Comfortable With Appropriate Levels Of Lighting And Noise.	4.65	92.9%	0.76	3	5.6%
Accessible, Meeting Provincial Minimum Standards Per Aoda (Accessibility For Ontarians With Disabilities Act, 2005).	4.63	92.5%	0.93	3	5.6%
Clean And In Good Repair	4.63	92.5%	0.91	3	5.6%
Safe, Equitable And Inclusive Spaces For All.	4.63	92.5%	0.93	3	5.6%
Energy Efficient, Helping The City Meet Energy Targets And Reduce Utility Usage.	4.47	89.4%	0.91	5	9.3%
Accessible By Public Transportation.	4.46	89.2%	1.06	4	7.4%
Easy To Enter, With Clearly Marked Public Entrances.	4.35	87.1%	1.03	3	5.6%
Inviting, Appealing And Attractive	4.32	86.4%	0.93	4	7.4%



# CityHousing Hamilton - All Respondents

Please let us know if you agree with the following statements

Question

22

Responses

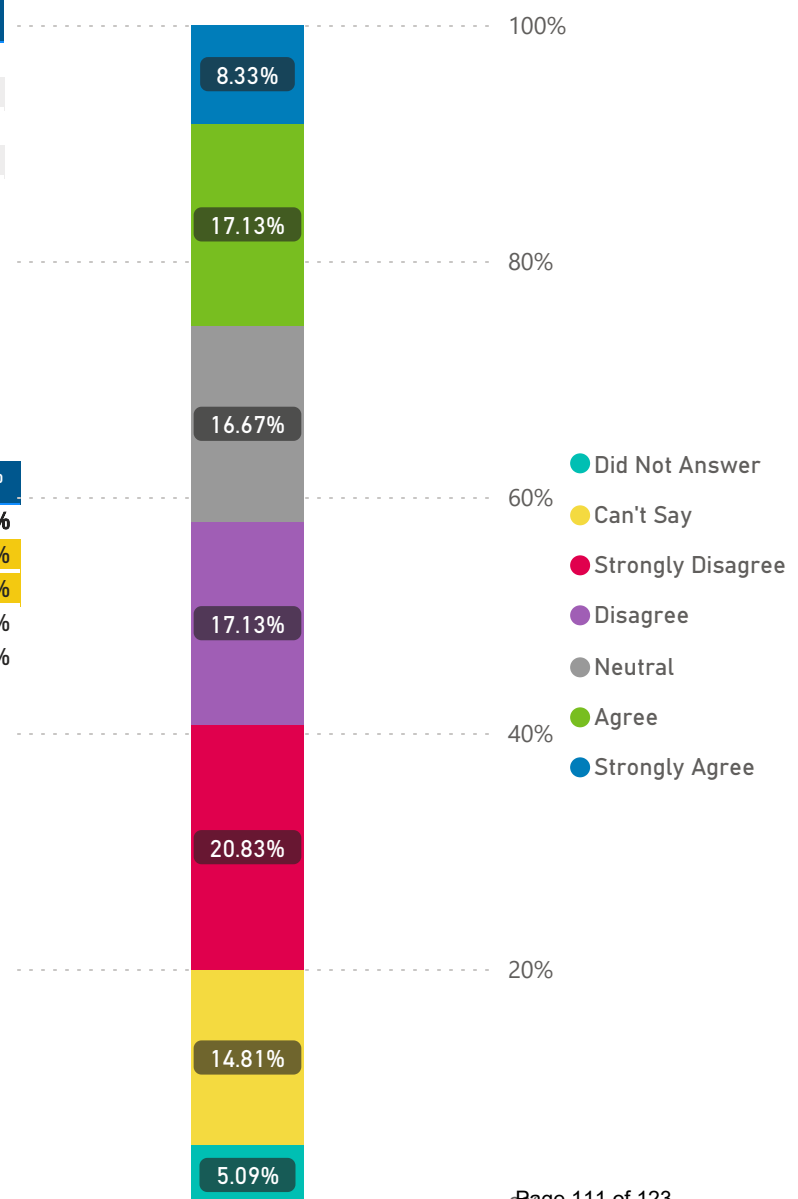
173

Respondents

46

Service Area	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>Total</b>	<b>45</b>	<b>37</b>	<b>36</b>	<b>37</b>	<b>18</b>
Buildings Are Safe Places To Live.	11	10	9	8	4
Fosters, Equitable, Diverse, And Inclusive Communities	9	7	8	12	6
Keeps Their Units And Buildings In A State Of Good Repair.	16	9	7	9	4
Provides Comfortable And Pleasant Living Spaces.	9	11	12	8	4

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
<b>Total</b>	<b>2.69</b>	<b>53.8%</b>	<b>1.34</b>	<b>43</b>	<b>19.9%</b>
Buildings Are Safe Places To Live.	2.62	52.4%	1.31	12	22.2%
Fosters, Equitable, Diverse, And Inclusive Communities	2.98	59.5%	1.37	12	22.2%
Keeps Their Units And Buildings In A State Of Good Repair.	2.47	49.3%	1.38	9	16.7%
Provides Comfortable And Pleasant Living Spaces.	2.70	54.1%	1.24	10	18.5%



# Importance of City Wide Services - All Respondents

Please rate the following City-wide services based on their importance to you.

Responses

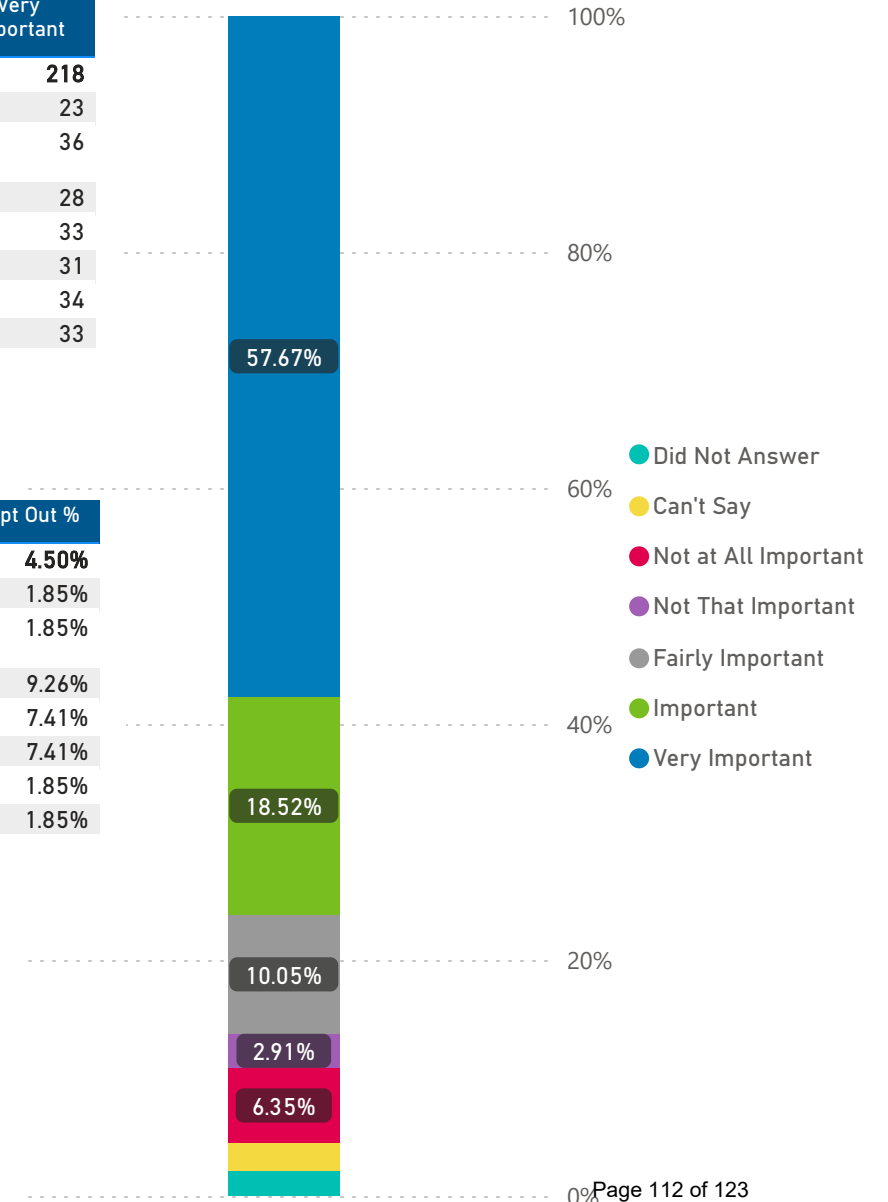
361

Respondents

53

Service Area	Not at All Important	Not That Important	Fairly Important	Important	Very Important
<b>Total</b>	<b>24</b>	<b>11</b>	<b>38</b>	<b>70</b>	<b>218</b>
Renewable Energy Generation Projects	4	1	11	14	23
Provide Affordable Mixed Housing To Support All Residents Of Hamilton And All Life Stages.	4	2	3	8	36
Play Spaces For Children And Adults	2	3	8	12	28
Outdoor Greenspace	1	3	3	13	33
More Units With Supports For Tenants With Disabilities	4		5	9	31
More Subsidized Housing Units	5	1	3	7	34
Access To Subsidized Housing Across The Communities Of Hamilton	4	1	5	7	33

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
<b>Total</b>	<b>4.24</b>	<b>84.8%</b>	<b>1.17</b>	<b>17</b>	<b>4.50%</b>
Outdoor Greenspace	4.40	87.9%	0.96	1	1.85%
Provide Affordable Mixed Housing To Support All Residents Of Hamilton And All Life Stages.	4.32	86.4%	1.21	1	1.85%
More Units With Supports For Tenants With Disabilities	4.29	85.7%	1.18	5	9.26%
Access To Subsidized Housing Across The Communities Of Hamilton	4.28	85.6%	1.22	4	7.41%
More Subsidized Housing Units	4.28	85.6%	1.28	4	7.41%
Play Spaces For Children And Adults	4.15	83.0%	1.11	1	1.85%
Renewable Energy Generation Projects	3.96	79.2%	1.18	1	1.85%







# Value for Money - All Respondents

How would you rate CityHousing Hamilton for providing good value for money in the infrastructure and services provided to your community?

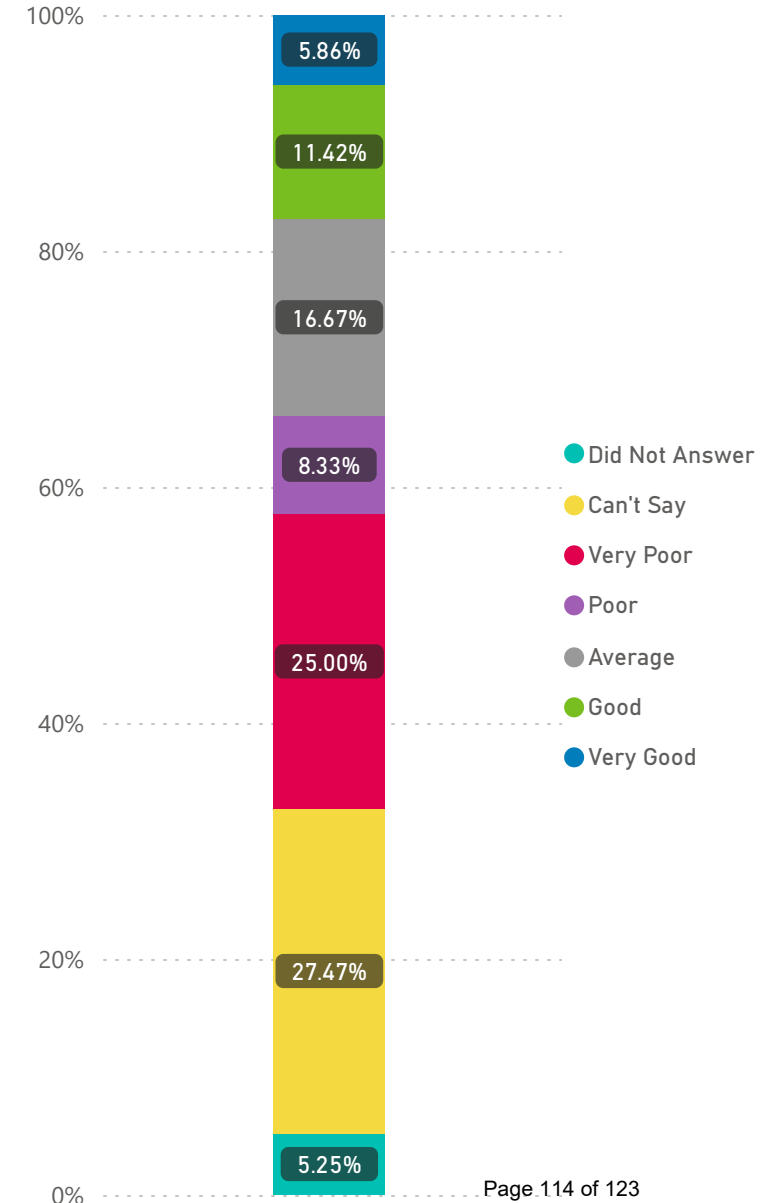
Responses

218

Respondents

43

Service Area	Very Poor	Poor	Average	Good	Very Good
<b>Total</b>	<b>81</b>	<b>27</b>	<b>54</b>	<b>37</b>	<b>19</b>
Waste Management	12	1	11	9	4
Tenant Services At Properties	12	2	10	6	2
Resolving Safety Concerns	14	3	8	4	4
Redevelopment, Revitalization And Renewal Of The Housing Supply	19	7	6	5	2
Landscaping (E.G. Grass Cutting, Snow Clearing, Etc)	11	8	9	6	4
Exterior Care / Condition Of Building	13	6	10	7	3



Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
<b>Total</b>	<b>2.48</b>	<b>49.5%</b>	<b>1.36</b>	<b>106</b>	<b>32.7%</b>
Waste Management	2.78	55.7%	1.40	17	31.5%
Landscaping (E.G. Grass Cutting, Snow Clearing, Etc)	2.58	51.6%	1.33	16	29.6%
Exterior Care / Condition Of Building	2.51	50.3%	1.32	15	27.8%
Tenant Services At Properties	2.50	50.0%	1.32	22	40.7%
Resolving Safety Concerns	2.42	48.5%	1.44	21	38.9%
Redevelopment, Revitalization And Renewal Of The Housing Supply	2.08	41.5%	1.27	15	27.8%



# Funding Rate Changes - All Respondents

26

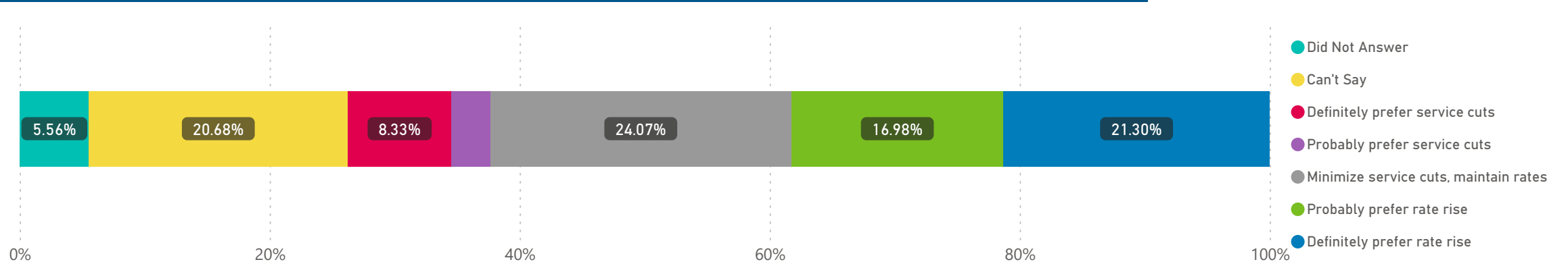
Would you prefer to see funding rates rise to increase or maintain service, or would you rather see services reduced to maintain current funding rates?

Responses

239

Respondents

45



Service Area	Definitely prefer service cuts	Probably prefer service cuts	Minimize service cuts, maintain rates	Probably prefer rate rise	Definitely prefer rate rise
<b>Total</b>	<b>27</b>	<b>10</b>	<b>78</b>	<b>55</b>	<b>69</b>
Waste Management	3	3	14	9	11
Tenant Services At Properties	4	4	11	10	8
Resolving Safety Concerns	5		9	9	16
Redevelopment, Revitalization And Renewal Of The Housing Supply	4	2	11	7	19
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	6	1	19	6	8
Exterior Care / Condition Of Building	5		14	14	7

Service Area	Avg.	Avg. %	σ	Opt Out	Opt Out %
<b>Total</b>	<b>3.54</b>	<b>70.8%</b>	<b>1.26</b>	<b>85</b>	<b>26.2%</b>
Redevelopment, Revitalization And Renewal Of The Housing Supply	3.81	76.3%	1.30	11	20.4%
Resolving Safety Concerns	3.79	75.9%	1.32	15	27.8%
Waste Management	3.55	71.0%	1.18	14	25.9%
Exterior Care / Condition Of Building	3.45	69.0%	1.16	14	25.9%
Tenant Services At Properties	3.38	67.6%	1.24	17	31.5%
Landscaping (E.G, Grass Cutting, Snow Clearing, Etc)	3.23	64.5%	1.23	14	25.9%



## Service Areas Rates vs. Value for Money

*Service areas where importance exceeds performance by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.*

Responses

457

Respondents

54

Service Area	Rates (index score)	Value for Money (index score)	Net Differential	Opt Out %
<b>Total</b>	<b>71</b>	<b>50</b>	<b>-21</b>	<b>29%</b>
Redevelopment, Revitalization And Renewal Of The Housing Supply	76	42	-35	24%
Resolving Safety Concerns	76	48	-27	33%
Exterior Care / Condition Of Building	69	50	-19	27%
Tenant Services At Properties	68	50	-18	36%
Waste Management	71	56	-15	29%
Landscaping (E.G. Grass Cutting, Snow Clearing, Etc)	65	52	-13	28%

Value for Money *Q25 How would you rate CityHousing Hamilton for providing good value for money in the infrastructure and services provided to your community?*

Rates *Q26 With the above information in mind, is the current funding reasonable for the CityHousing Hamilton services provided? Would you prefer to see funding rates rise to increase or maintain service, or would you rather see services reduced to maintain current funding rates?*

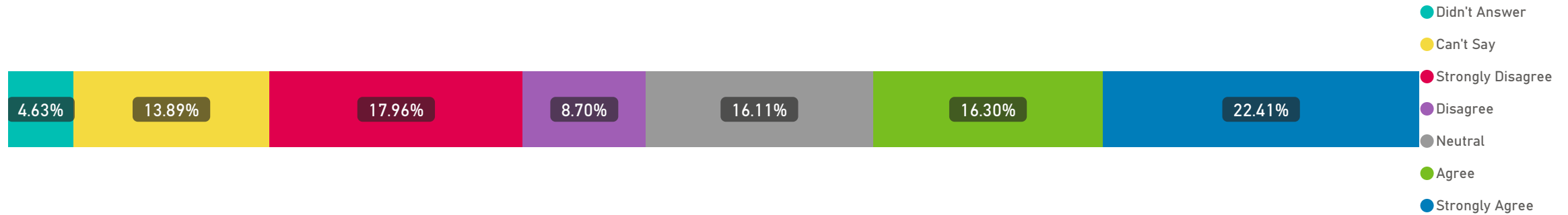
The Net Differential is calculated by getting the average score for Rates and Value for Money. Then, the average score for Rates and Value for Money is multiplied by 20. Finally, the Rates score is subtracted from the Value for Money score. A negative differential indicates higher perceived Rates than Value for Money. A positive differential indicates a higher perceived Value for Money than Rates.



## Summary of Specific Service Areas over Several Questions

### General - Exterior Condition /Cleanliness

Responses  
**440**  
Respondents  
**54**

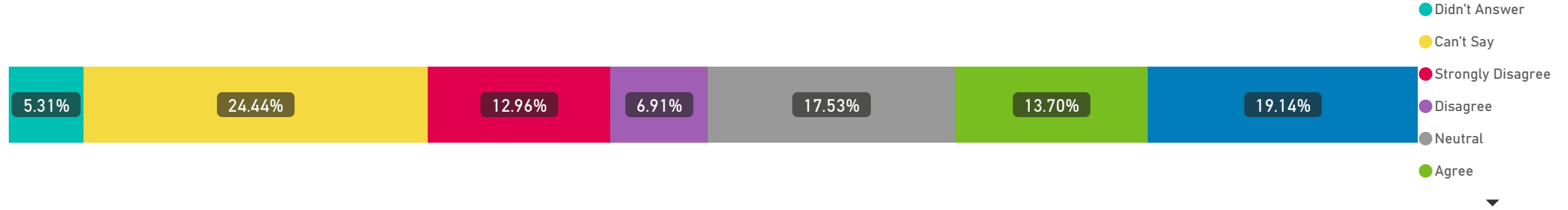


Question	$\sigma$	Avg.	Avg. %	Opt Out	Opt Out %	Count
<b>All Questions</b>	<b>1.50</b>	<b>3.20</b>	<b>64.0%</b>	<b>100</b>	<b>18.5%</b>	<b>540</b>
Q21 Please let us know if you agree with the following statements	0.93	4.48	89.5%	7	6.5%	108
Q18 How important should the following services be as a responsibility for CityHousing Hamilton?	0.84	4.42	88.5%	2	3.7%	54
Q26 With the above information in mind, is the current funding reasonable for the CityHousing Hamilton services provided? Would you prefer to see funding rates rise to increase or maintain service, or would you rather see services reduced to maintain current funding rates?	1.16	3.45	69.0%	14	25.9%	54
Q25 How would you rate CityHousing Hamilton for providing good value for money in the infrastructure and services provided to your community?	1.32	2.51	50.3%	15	27.8%	54
Q19 How likely would you be to recommend these CityHousing Hamilton services to others?	1.36	2.50	50.0%	18	33.3%	54
Q22 Please let us know if you agree with the following statements	1.38	2.47	49.3%	9	16.7%	54
Q17 Over the last 24 months, how do you feel CityHousing Hamilton has performed overall in the following services?	1.02	2.35	47.0%	17	31.5%	54
Q20 Please let us know if you agree with the following statements	1.25	2.26	45.1%	18	16.7%	108

# Summary of Specific Service Areas over Several Questions

## Services

Responses  
**569**  
Respondents  
**52**



Question	$\sigma$	Avg.	Avg. %	Opt Out	Opt Out %	Count
<b>All Questions</b>	<b>1.43</b>	<b>3.27</b>	<b>65.4%</b>	<b>241</b>	<b>29.8%</b>	<b>810</b>
Q18 How important should the following services be as a responsibility for CityHousing Hamilton?	0.90	4.44	88.8%	10	6.2%	162
Q26 With the above information in mind, is the current funding reasonable for the CityHousing Hamilton services provided? Would you prefer to see funding rates rise to increase or maintain service, or would you rather see services reduced to maintain current funding rates?	1.23	3.38	67.7%	45	27.8%	162
Q19 How likely would you be to recommend these CityHousing Hamilton services to others?	1.37	2.66	53.3%	67	41.4%	162
Q25 How would you rate CityHousing Hamilton for providing good value for money in the infrastructure and services provided to your community?	1.36	2.63	52.5%	55	34.0%	162
Q17 Over the last 24 months, how do you feel CityHousing Hamilton has performed overall in the following services?	1.27	2.62	52.4%	64	39.5%	162

# Summary of Specific Service Areas over Several Questions

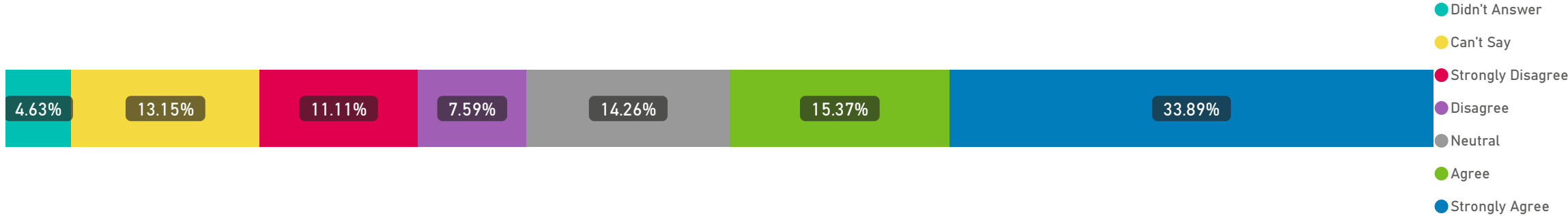
## Accessible Facilities

Responses

444

Respondents

52



Question	$\sigma$	Avg.	Avg. %	Opt Out	Opt Out %	Count
<b>All Questions</b>	<b>1.43</b>	<b>3.65</b>	<b>73.0%</b>	<b>96</b>	<b>17.8%</b>	<b>540</b>
Q21 Please let us know if you agree with the following statements	0.96	4.52	90.4%	13	6.0%	216
Q20 Please let us know if you agree with the following statements	1.36	2.95	59.1%	61	28.2%	216
Q22 Please let us know if you agree with the following statements	1.31	2.84	56.7%	22	20.4%	108



# Summary of Specific Service Areas over Several Questions

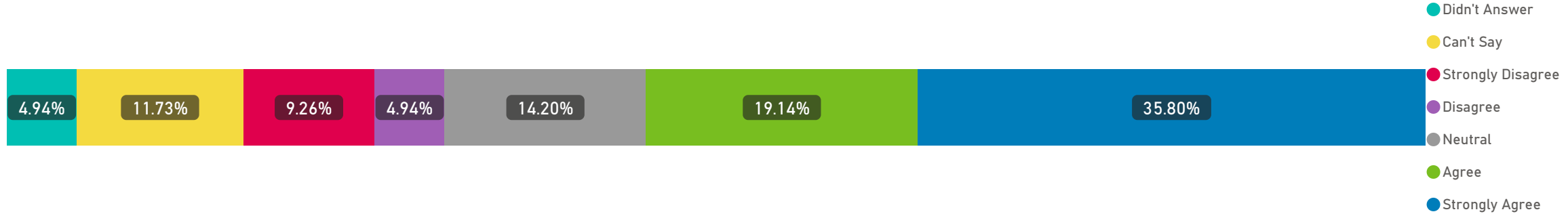
## Climate Initiative

Responses

135

Respondents

53



Question	$\sigma$	Avg.	Avg. %	Opt Out	Opt Out %	Count
<b>All Questions</b>	<b>1.34</b>	<b>3.81</b>	<b>76.1%</b>	<b>27</b>	<b>16.7%</b>	<b>162</b>
Q21 Please let us know if you agree with the following statements	0.91	4.47	89.4%	5	9.3%	54
Q23 Please rate the following City-wide services based on their importance to you.	1.18	3.96	79.2%	1	1.9%	54
Q20 Please let us know if you agree with the following statements	1.30	2.58	51.5%	21	38.9%	54

# Summary of Specific Service Areas over Several Questions

## *City-wide housing supply needs*

Responses

329

Respondents

53



Question	$\sigma$	Avg.	Avg. %	Opt Out	Opt Out %	Count
<b>All Questions</b>	1.19	4.26	85.3%	103	23.8%	432
Q23 Please rate the following City-wide services based on their importance to you.	1.16	4.29	85.7%	16	4.9%	324
Q15 Please rate the following services based on their importance to you	1.53	3.95	79.0%	87	80.6%	108



# Data Grading Scales

Definition and Ranking of Consistency and Confidence

Grade	Data Consistency Standard Deviation ( $\sigma$ , Consistency of Responses)	Confidence Level Margin of Error (at 95% Confidence in Sample Size)
<b>A</b> Very High	0 to 0.5 - results are tightly grouped with little to no variance in response	0% to 5% - Minimal to no error in results, can generally be interpreted as is
<b>B</b> High	0.5 to 1.0 - results are fairly tightly grouped but with slightly more variance in response	5% to 10% - Error has become noticeable, but results are still trustworthy
<b>C</b> Medium	1.0 to 1.5 - results are moderately grouped together, but most respondents are generally in agreement	10% to 20% - Error is a significant amount and will cause uncertainty in final results
<b>D</b> Low	1.5 to 2.0 - results show a high variance with a fair amount of disparity in responses	20% to 30% - Error has reached a detrimental level and results are difficult to trust
<b>E</b> Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - Significant error in results, hard to interpret data in much of a meaningful way

$$\text{Margin of Error} = \frac{0.98}{\sqrt{n}}$$

Assigning a lower consistency value (Standard Deviation) to a higher grade doesn't imply that the data is "better" or "worse". Instead, it helps in understanding how divided or similar people are in their responses. When high consistency is observed, it indicates that most respondents agree on a question. But when the consistency is low, opinions are split, with some rating higher and others lower. The key is to understand why the split occurs which provides valuable insights into the data.

The margin of error is calculated using a standard factor of 0.98 and the sample size (n). The margin of error helps assess if the sample size of the survey is suitable. The margin of error, expressed as a percentage, indicates the range around the calculated sample average where the true population average is likely to be. A smaller margin of error suggests a more accurate estimate, while a larger one implies less precision.