2023
Hamilton Police Service
Asset Management Plan

Hamilton

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HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

SUMMARY AND QUICK FACTS

SERVICE PROFILE

Hamilton Police Service (HPS) serves and protects residents and properties in the City of Hamilton in partnership with the community and in accordance with the Community Safety and Policing Act, 2019 as well as the Adequacy Regulation O.Reg. 3/99 to deliver an adequate and effective police force.

ASSET SUMMARY

Replacement Value

- **$351.9M**
- FAIR CONDITION
- Average Age of 25 years or 43% of the average remaining

Level of Service Summary

Customer

- Customers feel HPS has performed **AVERAGE** overall in the last 24 months in all service areas.
- Customers feel HPS has performed **AVERAGE** in providing good value for money when providing infrastructure and services.
- Customers feel HPS **MEETS NEEDS** with regards to facilities level of comfort, safety and cleanliness.

Technical

- Officers dispatch in 1:08 minutes for emergencies where injuries are imminent.
- HPS used 99.4% of their operating budget last year.
- HPS will require 13 additional staff and 3 additional frontline vehicles a year to maintain current levels of service.

Asset Highlights

ASSETS	QUANTITY	REPLACEMENT COST	AVERAGE CONDITION	STEWARDSHIP MEASURES
Central Station	1	$135.5M	Poor	Building Condition Assessments are completed every 5 years.
Frontline Vehicles	107	$7.0M	Good	Vehicles are replaced at 5 years or 150,000 km.

DATA CONFIDENCE

VERY GOOD | FAIR | VERY LOW

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DEMAND DRIVERS

Population change – Hamilton's population will continue to grow to 2051. Ontario Police Services determine their officer requirements using a ratio often referred to as the "cop to pop" ratio which allocates how many officers are required per the population.

Technological changes - The Canadian Radio-television and Telecommunications Commission (CRTC) has mandated that all municipalities replace Canada's aging E911 emergency services network and cutover to the new Next Generation-911 (NG-911) platform by March 4, 2025.

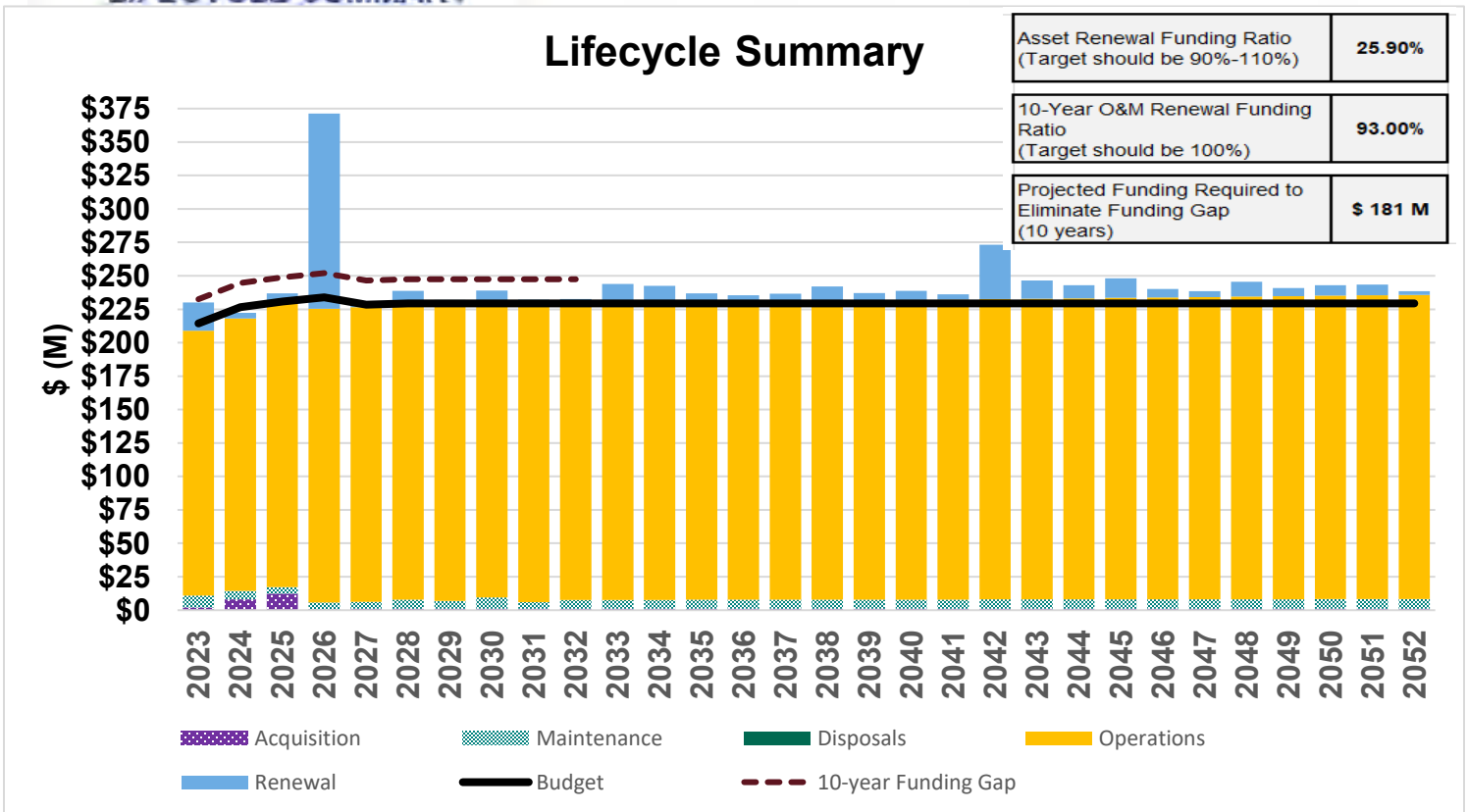
RISK

- Critical Assets are identified as the 911 Communication equipment, Frontline Vehicles and Facility Generators.

CLIMATE CHANGE MITIGATION

- Proposed Waterdown Station specifications call for Net Zero design
- Nine (9) Frontline Hybrid Vehicles, 3 acquired in 2021 and 6 acquired in 2022

LIFECYCLE SUMMARY



1. INTRODUCTION

Hamilton Police Service (HPS) is a people led service which serves and protects residents and properties in the City of Hamilton in partnership with the community. The purpose of this Asset Management (AM) Plan is to ensure that HPS has fulfilled the Asset Management Planning requirements outlined in O.Reg 588/17 for current and proposed levels of service as well as ensuring HPS has the required assets to deliver an adequate and effective police service in accordance with the Community Safety and Policing Act, 2019 and the Adequacy Regulation O.Reg. 3/99.

This AM Plan is intended to communicate the requirements for the sustainable delivery of services through the management of assets, compliance with regulatory requirements and required funding to provide the appropriate levels of service over the 2023 - 2052 planning period.

2. BACKGROUND

The information in this section is intended to give a snapshot in time of the current state of the HPS service area by providing background on the service, outlining legislative requirements, defining the asset hierarchy used throughout the report, and providing a detailed summary and analysis of existing inventory information as of December 2022, 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

The service profile consists of four (4) main aspects of the service:

- Service History;
- Service Function;
- Users of the Service; and,
- Unique Service Challenges.

2.1.1 SERVICE HISTORY

The first Hamilton police force was created in 1833 in response to the new concept of policing which originated in London, England in 1829. At the time, Hamilton was simply the Town of Hamilton without the other five (5) communities currently associated with the City of Hamilton. Dundas created their own agency in 1848, Ancaster in 1855, Saltfleet in 1940, and Stoney Creek in 1949. Other smaller area police departments (e.g., Flamborough, Glanbrook, etc.) appear to have also been established during this period, but over time, the smaller area police departments were taken over by the Ontario Provincial Police (OPP) or joined with the other municipal agencies.

In the 1960s, the provincial government removed policing from direct municipal control by establishing independent Police Commissions, meaning that policing was no longer considered a department of City Hall. In 1974, the Hamilton, Stoney Creek, Ancaster, Dundas, and Saltfleet police forces merged into the Hamilton-Wentworth Regional Police Force under its own Board of Commissioners of Police. In 1986, the Hamilton Harbour Police was disbanded, and its function taken over by the Hamilton Wentworth Regional Police Force.

On January 1, 2001, the communities of Ancaster, Dundas, Flamborough, Glanbrook, Stoney Creek and Hamilton merged to become the 'new' City of Hamilton. At the same time, the Hamilton Wentworth Regional Police merged to become the Hamilton Police Service (HPS), which is governed by the Hamilton Police Service Board. [1]

[1] https://hamiltonpolice.on.ca/about/hps-history

The City of Hamilton Police Service Board is responsible for ensuring the provision of policing services under the 2019 Community Safety and Policing Act and the Adequacy Regulation O.Reg. 3/99 within the City by working with citizens and organizations to ensure the appropriate policies are in place. After consultation with the Chief of Police, the Board will determine objectives and priorities for the police service. The Board is responsible for the police budget, for overseeing the actions of the Chief of Police, and is the employer for the police service.

2.1.2 SERVICE FUNCTION

According to the Community Safety and Policing Act, 2019[2] and the Adequacy Regulation O.Reg. 3/99[3] the purpose of the police service is to provide adequate and effective policing in the area where policing responsibility has been granted, while considering the needs and diversity of the area's population. Adequate and effective policing means all the following functions are provided in accordance with the standards set out in both the Act and Regulation:

1. Crime prevention;
2. Law enforcement;
3. Maintaining the public peace;
4. Emergency response;
5. Assistance to victims of crime; and
6. Any other prescribed policing functions.

HPS provides all of these requirements to the community. HPS also provides other services including but not limited to online reporting, paid duty, public outreach, and road safety.

Hamilton Police are responsible for many things under the Community Safety and Policing Act, 2019 and the Adequacy Regulation O.Reg. 3/99, including maintaining the Public Safety Answering Point (PSAP). In 2021, call takers responded to 419,690 calls (911 and non-emergent calls), diverting them to the appropriate emergency response: police, fire, or ambulance.

As of 2021, the most frequent and time-consuming calls across all divisions were in response to domestic violence, disturbances, motor vehicle accidents, and ambulance assistance. Across the City, assault and family trouble were cited as the most frequent, time consuming calls.

[2] https://www.ontario.ca/laws/statute/19c01

[3] https://www.ontario.ca/laws/regulation/990003

Based on the 2022 community survey, the top five (5) areas customers expressed as priorities in the community were:

1. Traffic;
2. Drugs;
3. Homelessness;
4. Neighbourhood Safety; and,
5. Mental Health.

In order to deliver adequate and effective police services, the HPS requires assets. Some ways assets support the delivery of the service include:

- Reliable technology to ensure communication lines are always available to accept urgent and non-urgent calls and dispatch officers;
- Adequate facilities in each division to assist residents with urgent and non-urgent issues;
- Reliable vehicles and staff that will arrive at emergencies in a timely manner and be available for other non-emergency duties; and,
- Required officer equipment for officers to be able to assist in emergency situations and/or crime prevention.

2.1.3 USERS OF THE SERVICE

The City of Hamilton is comprised of a diverse population. Based on the 2021 Census results[4], the average age of Hamilton's population is 41.5 years old, and the average household size is 2.5 people. The most common language spoken is English, but 24% of the population's mother tongue is neither English or French, and 27% of residents identify as a visible minority. There are differences in populations / priorities in areas (unique policing needs).

HPS service the entire Hamilton population of approximately 570,000 people. HPS breaks the City down into three (3) divisional boundaries which correspond to the three (3) Police Stations (Division 1: Central Station, Division 2: East End Station, and Division 3: Mountain Station), there is also a Community Policing Centre in Dundas which is leased by the City. The fourth division, Division 0, is used when an address isn't verified or for marine calls. In addition, there is a proposed new Waterdown Station which will be located along Hwy 6 and will be a substation of Division 3.

A table showing each division by number of police officers, population, land mass, and percentage of call time is shown below in ***Table 1***. There are 855 sworn officers in HPS, which increase annually. A map of the division boundaries and police station locations are shown in ***Figure 1*** below. It is evident that Division 3 is significantly larger than Divisions 1 and 2 which can result in longer response times.

[4] https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&GENDERlist=1&STATISTIClist=1&HEADERlist=0&DGUIDlist=2021A00033525&SearchText=Hamilton

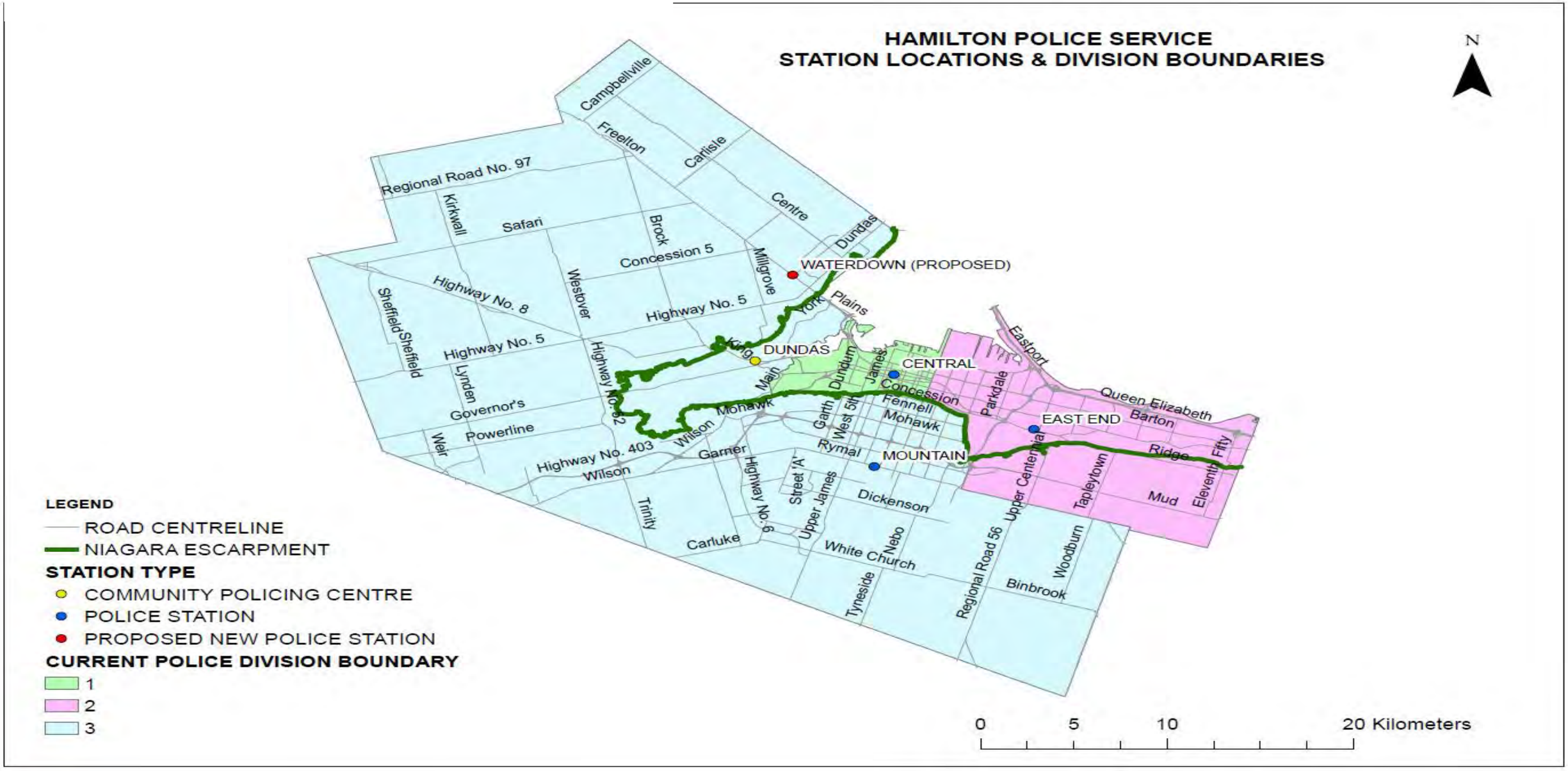
Table 1: Division Summary

DIVISION	FRONTLINE POLICE OFFICERS[5]	POPULATION[6]	AREA (KM2)	% OF CALL TIME (2021)
Division 1: Central Station	182	106,900	27	35.5%
Division 2: East End Station	175	175,401	146	31.3%
Division 3: Mountain Station	179	301,662	953	33.2%

[5] Police officers by Division include all Divisional Sworn members at all ranks

[6] Population estimates derived from City of Hamilton Planning & Economic Development Non-Boundary Expansion Scenario mapped to HPS Division Boundaries

Figure 1: ***Hamilton Police Service Station Locations***



2.1.4 UNIQUE SERVICE CHALLENGES

Given the geographical makeup of the City of Hamilton, the Service often faces variable distances within Divisions as shown in ***Figure 1***, which impacts response times. Distances from stations to the outer edge of the City's borders could see an officer having a 20-minute drive or longer. Historically, HPS has recorded dispatch times which are referenced in Section 4.3.2 to determine performance, tracking data based on response times to better represent the service requirements and has been identified as a Continuous Improvement Item in ***Table 34***.

With requirements for officers to quickly respond to emergency calls, HPS will need to ensure proper deployment of patrol officers within a given area, while also ensuring that minimum staffing numbers are met. These minimum numbers are not aligned with current population densities or calls for service and are instead based on data from the 1970's, which is before the creation of the HPS as it stands today.

The PSAP has requirements for answering calls within a specified amount of time, and therefore HPS must have the required capacity to answer calls. In addition, there are differences in being able to staff patrol areas (i.e., beats) in rural regions where demand is low, but travel time is high.

2.2 LEGISLATIVE REQUIREMENTS

The most significant legislative requirements that impact the delivery of the police service are outlined in ***Table 2***. These requirements are considered throughout the report, and where relevant, are included in the levels of service measurements.

Table 2: Legislative Requirements

LEGISLATION OR REGULATION	REQUIREMENT
Community Safety and Policing Act, 2019	This regulation sets out the code of conduct for police officers and establishes clear expectations for officers, including when interacting with the public and other members of the police service.
Adequacy Standards, Police Services Act, O.Reg. 3/99	While HPS waits for the provincial government to enact regulations under the new Community Safety and Policing Act, the O. Reg 3/99 is still in effect outlining policing adequacy requirements.
Mental Health Act, R.S.O. 1990	In Ontario, the Mental Health Act permits police officers to apprehend individuals for the purpose of examination by a physician, if the officer has reasonable grounds to believe that a person is acting in a disorderly manner and is a threat or at risk of causing harm to themselves or others.

LEGISLATION OR REGULATION	REQUIREMENT
Next Generation 911 (NG-911) modernization	The CRTC has mandated that all municipalities replace Canada's aging E911 emergency services network and cutover to the new NG9-11 platform by March 4, 2025. Failure to do so will result in disruption (failure) of 911 services provided by the City of Hamilton. NG-911 allows members of the public to communicate with municipal 911 call centres using more than just their voice. It allows for the transmission of GPS location coordinates, text messages, photos, and videos.

2.3 ALIGNMENT WITH POLICE BOARD PRIORITIES

The Board is comprised of seven (7) members and according to the Ontario Police Services Act, must consist of the head of the municipal council, two (2) members of council, three (3) people appointed by the Lieutenant Governor in Council, and one (1) person appointed by resolution of council. Although the Police Board has its own priorities, Council priorities are considered in the development of these priorities.

Table 3: Police Board Priorities

PRIORITY	DESCRIPTION	ALIGNMENT WITH AM PLAN
Community Safety	**Be Ready for the Future** — identifying emerging crime trends, managing legislative/regulatory changes, and preparing for a growing and more diverse population. **Share Information and Insight** — maximizing communication with our community, helping people to both be and feel safe.	AM Plan discusses demand and forecasts how growth and legislative/regulatory changes affect HPS.
Collaborative Engagement	**Bolster Two-Way Communication** — enhancing timely, comprehensive, and transparent communication with our communities, promoting information sharing and strengthening mutual respect. **Connect with the Community** — building relationships and fostering genuine dialogue with our diverse population and furthering the goals of the city-wide Community Safety and Well-Being Plan.	AM Plan conducts a survey to ask what customers value about the service, how customers feel about the service, and how HPS is technically performing in order to develop levels of service.

HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

PRIORITY	DESCRIPTION	ALIGNMENT WITH AM PLAN
Culture and Capacity	**Ensure Employee Well Being** —deploying resources to effectively manage workload and continuing to implement employee wellness initiatives that focus on prevention, early intervention and a supportive return to work. **Provide Quality Service** — ensuring that our values and professionalism are consistently reflected in everything that we do: from decision-making to community interaction, to day-to-day activities.	AM Plan assesses required resources to ensure that HPS continues to deliver agreed upon levels of service. AM Plan also assesses the quality of the service from a customer and technical perspective.
Core Assets	**Shape and Secure the Future** — developing and implementing a long-term plan for technology, facilities, and fleet. **Act on the Climate Emergency** — creating a plan to help the Service adapt to, mitigate and reduce the impacts of climate change through fleet management, building design and retrofits, energy use and embracing emerging technology. **Leverage Technology and Innovation** — exploring and implementing digital solutions and new processes that improve service delivery, create internal and external efficiencies, and enhance organizational effectiveness. **Use Data Strategically and Responsibly** — gathering and sharing information to inform decision-making, enhancing safe and effective data management that respects privacy, and ensuring continuity of service. **Remain Current** — providing members with the required uniforms and equipment to effectively perform their duties and meet all legislated requirements.	AM Plan assesses HPS assets to ensure we are acquiring, operating, maintaining, renewing and disposing of assets appropriately while considering effects of climate change.

PRIORITY	DESCRIPTION	ALIGNMENT WITH AM PLAN
Trusting Change	**Earn Your Trust** — establishing the basis for a new era of cooperation and collaboration that reflects collective aspirations for productive relationships and a safer community. **Engage in Authentic Dialogue** — listening genuinely to member and community views, understanding lived experiences/varied perspectives, openly communicating, and working together to find solutions. **Deliver Value** — demonstrating a real and vital return on community investment in the delivery of police services through effective stewardship, transparency and accountability.	Through customer engagement, customers have an opportunity to give their opinions on the service and educating customers on the value HPS delivers to the public.

2.4 ASSET HIERARCHY

As previously mentioned, in order to deliver adequate and effective police services, HPS requires assets. The HPS Service Area has been broken down into four (4) asset classes for the purpose of this AM Plan: Facilities, Vehicles, Officer Equipment, and Technology.

- **Facilities:** refers to any City-owned facilities necessary to deliver police services;
- **Vehicles:** describes different types of vehicles (i.e., motor vehicle, bicycle, marine vehicle) which are used for either frontline, non-frontline or marine responses, and any required tools to maintain these assets;
- **Officer Equipment**: refers to all equipment an officer requires to protect the public as well as themselves; and,
- **Technology:** describes the different type of technology required to deliver the service including communications, IT, desktop, and mobile equipment.

HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

The asset class hierarchy outlining assets included in this section is shown below in ***Table 4***.

Table 4 : Asset Class Hierarchy

SERVICE AREA	HAMILTON POLICE SERVICE			
ASSET CLASS	**FACILITIES**	**VEHICLES**	**OFFICER EQUIPMENT**	**INFORMATION TECHNOLOGY**
	• Police Stations • Investigative Services Division (ISD) Building • Marine Unit	• Patrol Vehicles • Ground Vehicles • Marine Vehicles • Tools	• Body Armour • Officer Outfit • Personal Issue Equipment • Miscellaneous Uniform Equipment	• Service Wide Technology • Site Specific Technology • Desktop & Mobile Technology • Security Technology

HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

3. SUMMARY OF ASSETS

Table 5 displays the detailed summary of assets for the HPS service area. The sources for this data are a combination of data included in the City's database information. It is important to note that inventory information does change often, and that this is a snapshot of information available as of December 2022.

The City owns approximately **$350M** in Police assets which are on average in **Fair** condition. Assets are a weighted average of **twenty-five** (**25) years** in age which is **43%** of the average remaining service life (RSL) with the majority of the weight coming from Facilities assets. For most assets this means that the City should be completing preventative, preservation, and minor maintenance activities per the inspection reports as well as operating activities (e.g., inspection, cleaning) to prevent any premature failures. Data confidence associated with this information is also presented in Table 5

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 City owns. Facilities leased from other bodies 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.

Data confidence associated with asset information is also presented in Table 5. 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 using an internal tool which encompasses current market rates, building type and size. Vehicle and Officer Equipment replacement costs were gathered from the most recent purchase price for similar assets and are typically High confidence. Technology assets are taken from the most recent purchase price for similar assets as well, but since some of these assets aren't replaced as frequently, this was given a Medium data confidence.

All assets have an itemized inventory with varying degrees of attribute information. A continuous improvement item identified in ***Table 34*** is to implement an asset registry for all HPS assets which includes key database fields and follows the newly developed City Data Standard.

Table 5 : ***Detailed Summary of Assets***
Weighted Average based on Replacement Costs

FACILITIES				
ASSET CATEGORY	**NUMBER OF ASSETS**	**REPLACEMENT VALUE**	**AVERAGE AGE (% RSL)**	**AVERAGE EQUIVALENT CONDITION**
Central Station	1	$135.5M	46 years (8%)	4-POOR
Data Confidence	Very High	Medium	Very High	Medium
East End Station	1	$37.6M	30 years (40%)	2-GOOD
Data Confidence	Very High	Medium	Very High	High
Mountain Station	1	$37.6M	19 years (62%)	2-GOOD
Data Confidence	Very High	Medium	Very High	High
Investigative Services Division (ISD) Building	1	$64.4M	2 years (96%)	2-GOOD
Data Confidence	Very High	Medium	Very High	High
Temporary Marine Unit Trailer	1	$5.1M*	3 year (40%)	2-GOOD
Data Confidence	Very High	Very High	Very High	Very High
Administrative Facilities (MATA)	2	$20.4M	12 years (76%)	2-GOOD
Data Confidence	Very High	Medium	Very High	Very High
SUBTOTAL	**$300.9M**		**28 YEARS* (43%)**	**3-FAIR***
DATA CONFIDENCE	**MEDIUM**		**VERY HIGH**	**HIGH**

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VEHICLES				
ASSET CATEGORY	**NUMBER OF ASSETS**	**REPLACEMENT VALUE**	**AVERAGE AGE (% RSL)**	**AVERAGE EQUIVALENT CONDITION**
Frontline Vehicles	107	$7.0M	4 years (24%)	2-GOOD
Data Confidence	High	High	High	Medium
Non-Frontline Vehicles	188	$8.6M	7 years (29%)	2-GOOD
Data Confidence	High	High	High	Medium
Bicycles	30	$52.2K	4 years	3-FAIR
Data Confidence	High	High	High	Low
Marine Vehicles	4	$999.4K	6 years (51%)	2-GOOD
Data Confidence	High	Medium	Very High	Low
Tools	24	$74.7K	1 year (88%)	N/A
Data Confidence	High	Medium	Low	
SUBTOTAL	**$16.9M**		**6 years* (28%)**	**2-GOOD***
DATA CONFIDENCE	**HIGH**		**HIGH**	**MEDIUM**

OFFICER EQUIPMENT				
ASSET CATEGORY	**NUMBER OF ASSETS**	**REPLACEMENT VALUE**	**AVERAGE AGE (% RSL)**	**AVERAGE EQUIVALENT CONDITION**
Body Armour	2,660	$1.61M	5 years (38%)	2-GOOD
Data Confidence	High	High	High	Low
All Officer Issued Uniform & Equipment (not including personal radios)		$5.97M	N/A	
Data Confidence		High		
SUBTOTAL		**$7.9M**	**5 YEARS* (38%)**	**2-GOOD***
DATA CONFIDENCE		**HIGH**	**HIGH**	**LOW**

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TECHNOLOGY				
ASSET CATEGORY	**NUMBER OF ASSETS**	**REPLACEMENT VALUE**	**AVERAGE AGE (% RSL)**	**AVERAGE EQUIVALENT CONDITION**
Personal Issue Equipment (including portable radios)	1346	$10.5M	9 years (7%)	4-POOR
Data Confidence	High	Medium	Medium	Low
Service-Wide Technology (including Servers, Storage, Network)	167	$6.9M	4 years (47%)	4-POOR
Data Confidence	High	Medium	Medium	Low
Tech Crime Unit	48	$4.5M	8 years (0%)	3-FAIR
Data Confidence	High	Medium	Medium	High
Desktop & Mobile Technology (including Computers, Phones, Modems, Vehicle Mobile Inventory)	2327	$4.3M	5 years (32%)	3-FAIR
Data Confidence	High	Medium	Medium	Low
Site Specific Technology (including CCTV Cameras)	199	$0.2M	6 years (40%)	3-FAIR
Data Confidence	High	Medium	Medium	Low
Security Equipment (including APs, Firewalls, Fortinet, Forcepoint)	40	$0.1M	3 years (57%)	3-FAIR
Data Confidence	High	Medium	Medium	Low
SUBTOTAL	**$26.5M**	**6 years* (23%)**		**3-FAIR***
DATA CONFIDENCE	**Medium**	**Medium**		**Low**
TOTAL	**$351.9M**	**25 years* (43%)**		**3-FAIR***
DATA CONFIDENCE	**MEDIUM**	**HIGH**		**MEDIUM**

3.1 ASSET CONDITION GRADING

Condition refers to the physical state assets are in, 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 6*** 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.

Table 6: Equivalent Condition Conversion Table

EQUIVALENT CONDITION GRADING CATEGORY	CONDITION DESCRIPTION	% REMAINING SERVICE LIFE	FACILITIES CONDITION INDEX (FCI)	PATROL& GROUND VEHICLES / BODY ARMOUR	TECH CRIME TECHNO LOGY
1 Very Good	The asset is new, recently rehabilitated, or very well maintained. Preventative maintenance required only.	>79.5%	N/A	>79.5 RSL	N/A
2 Good	The asset is adequate and has slight defects and shows signs of some deterioration that has no significant impact on asset's usage. Minor/preventative maintenance may be required.	69.5% – 79.4%	< 5%	79.4% - 0% RSL	Good
3 Fair	The asset is sound but has minor defects. Deterioration has some impact on asset's usage. Minor to significant maintenance is required.	39.5% - 69.4%	>= 5% to < 10%	N/A	Fair
4 Poor	Asset has significant defects and deterioration. Deterioration has an impact on asset's usage. Rehabilitation or major maintenance required in the next year.	19.5% - 39.4%	>= 10% to <30%	0% RSL	Poor
5 Very Poor	Asset has serious defects and deterioration. Asset is not fit for use. Urgent rehabilitation or closure required.	<19.4%	>= 30%	N/A	N/A

The following conversion assumptions were made:

- For assets where a condition assessment was not completed, but age information was known, the condition was based on the % of remaining service life;
- Facilities Condition Index was based on ranges provided by the consultant who completed the Building Condition Assessment (BCA); and,
- Vehicles/Armour was based on the age and subject expert opinion based on the condition descriptions above.

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 assets typically have an estimated service life (ESL) where the asset can be expected to be in service before the condition has degraded and requires 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. Although typically, age is used when projecting replacements beyond the ten (10) year forecast to predict degradation.
- As previously mentioned, 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 therefore performance issues may arise which must be noted and prioritized.

3.2.1 FACILITIES PROFILE

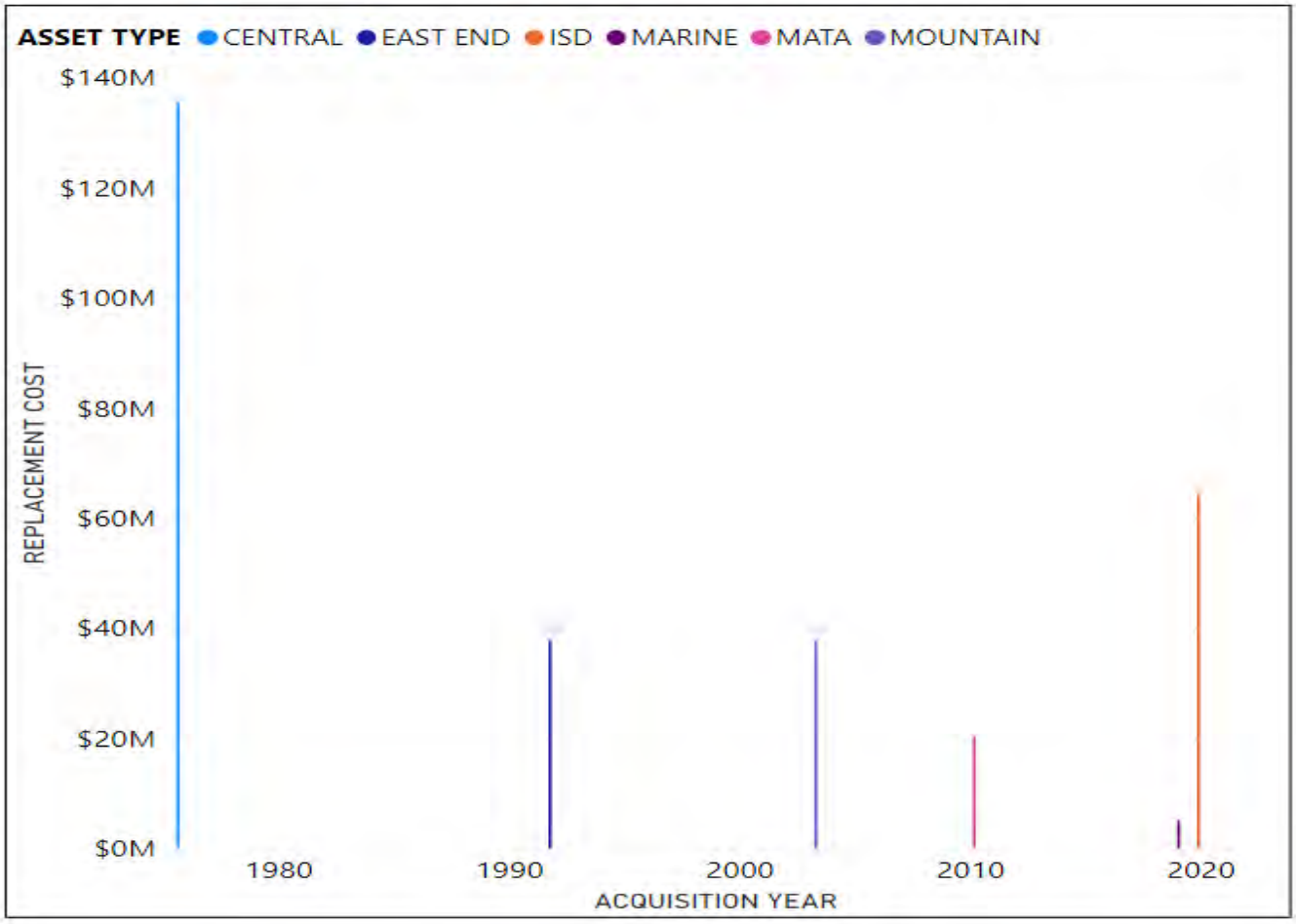
3.2.1.1 AGE PROFILE

The age profile for HPS assets is shown in ***Figure 2***. For HPS Facility assets, the data confidence for age is typically "Very High", because this information was recorded during the construction of the facilities.

Per ***Figure 2*** below, it is evident that the Investigative Services Division (ISD) and Temporary Marine Unit are both new facilities having been constructed in the last five (5) years. However, the Temporary Marine Unit is a temporary facility, which was put in place due to the Harbour front re-development which required the previous marine facility to be demolished and will be replaced in 2026 as shown in the Renewal forecast in ***Section 8.3.***

The three (3) Police Stations are an average of thirty-two (32) years of age meaning that there is an average of 34% of the fifty (50) year estimated service life remaining for these assets. The oldest Police Station is the Central Police Station which is a $135M constructed in 1976 and is approaching its fifty (50) year service life in 2026 as shown in the Renewal Forecast in ***Section 8.3.***

Figure 2: Facilities Age Profile



3.2.1.2 CONDITION METHODOLOGY & PROFILE

Condition for HPS facilities is determined based on the results of a Building Condition Assessment (BCA). BCAs are completed on Police facilities every five (5) years and output a score called a Facility Condition Index (FCI) which is typically considered to be a high confidence level source in the AM Plans. The FCI 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 Asset Management is shown in ***Table 6***.

Table 7 : Inspection and Condition Information

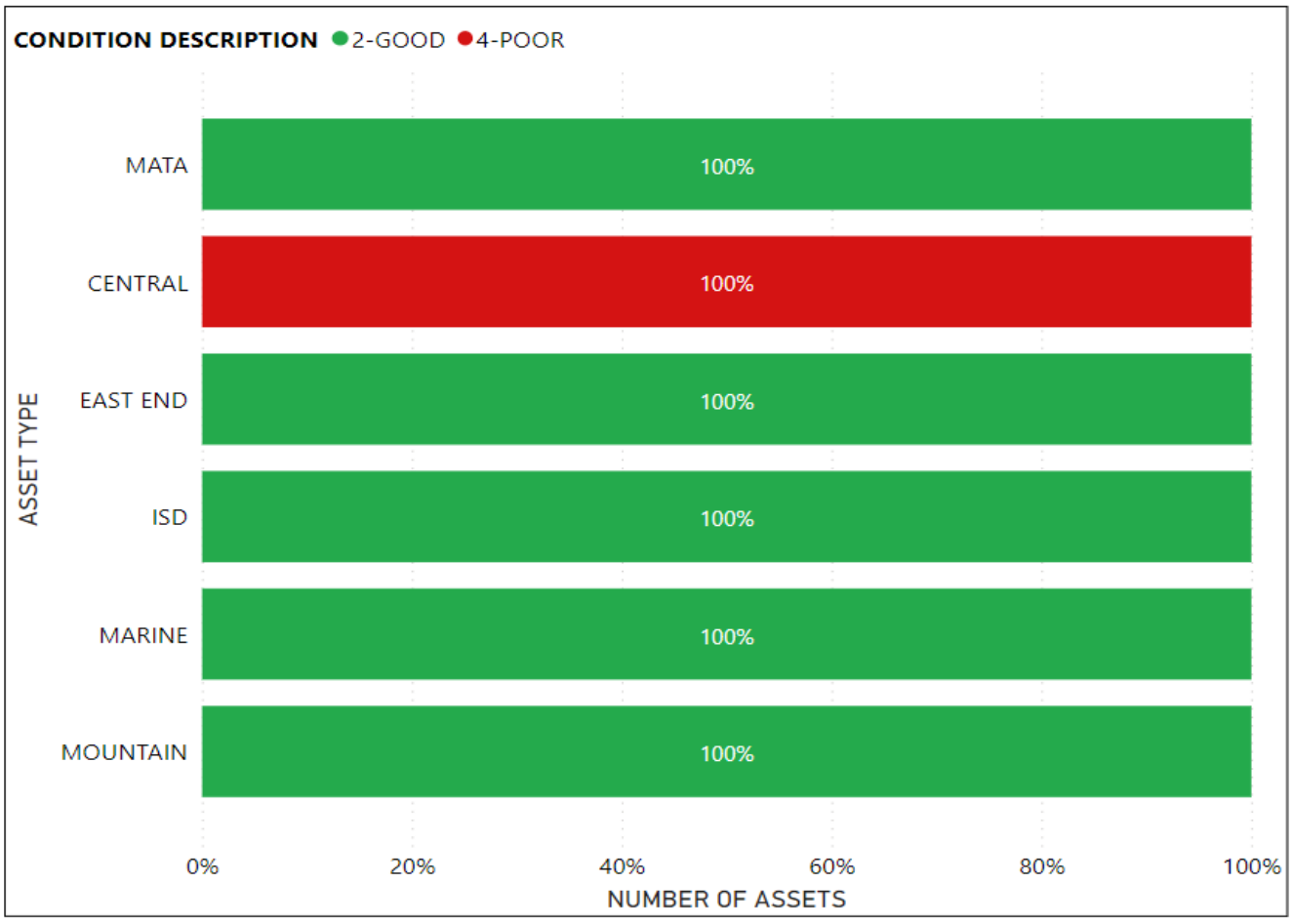
ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Police Stations & ISD	Every 5 years	2021	Facility Condition Index (0% - 100%)
Administration Facilities (MATA)			

Per the BCA, all facilities were shown to be in Good condition. However, the BCA is a visual, surface level inspection which is typically a high confidence indicator of condition in the AM Plans, but does not involve detailed analysis such as cutting into walls or removing mechanical panels, and therefore occasionally additional findings arise during detailed analysis which can result in modifications to the condition score.

After the BCA, HPS investigated renovating the Central and East End Stations to improve the building flow due to the relocation of staff to the ISD building as well as to account for the requirements due to the legislated NG-911 upgrades. During the detailed site investigation for that project, the consultant identified an additional $11.3M required in mechanical upgrades due to poor condition components and the consultant did not recommend that the renovations be completed without these upgrades.

As a result of this high, unexpected cost estimate, HPS did not move forward with these renovations, and this additional upgrade amount was incorporated into the FCI calculation. The revised FCI calculation showed the Central Station having an FCI reflecting a Poor condition. This is also consistent with Central Station approaching its 50-year service life. The condition profile of the City's assets is shown below in ***Figure 3***.

Figure 3: Facilities Asset Condition Distribution



There is currently capital budget allocated to replace the roof for Central Station which may be delayed while HPS determines the best approach moving forward. In addition, if Central Station had been in better condition, it would have been used as the primary location of the proposed NG-911 communications centre due to its geographic location, but in the interim it is being used as the secondary location, and the NG-911 communications primary location will temporarily be incorporated into the MATA facilities.

3.2.1.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with Facilities involve poor condition of asset components. The known service performance deficiencies in ***Table 8*** are identified using information from the 2022 Building Condition Assessment (BCA) and the results of the Mechanical Design Brief on Central Station outlining the aforementioned mechanical upgrades.

Table 8 : Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Facility	**Central Station**	Mechanical Upgrades required	Upon inspection, most of the equipment and components are well beyond their serviceable life. It was found that the mechanical infrastructure of the building requires major upgrades to maintain operational reliability.
		Roof in poor condition	It was reported that multiple areas of the building have been experiencing water leakage from the roof.
		Groundwater & Sanitary Lift Pumps in poor condition	Upon inspection, the pumps appeared to be in poor condition with visible rusting and deterioration.
		Chain Link fencing in poor condition	Upon inspection, the fencing appeared to be in poor condition with visible rusting and deterioration.
		Painted and tile ceilings in poor condition	Upon inspection, the tiles appeared to be in poor condition with many areas of visible/water damage.

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
	East End Station	Boiler system in poor condition	Upon inspection, the boilers appeared to be in poor condition with reported leaking issues.
		Parking Lot in poor condition	Upon inspection, the paving appeared to be in poor condition with extensive surface crack in multiple areas.
		Ceiling tiles in poor condition	Upon inspection, the tiles appeared to be in poor condition with areas of damage/water damage caused by the previous roof leaks.
		Concrete floors in poor condition	Upon inspection, the paint appeared to be in poor condition with visible paint chipping and deterioration.
	Mountain Station	Humidifiers in poor condition	Upon inspection, the humidifiers were found to be in poor condition overall due to the non-functioning units.

3.2.2 VEHICLES PROFILE

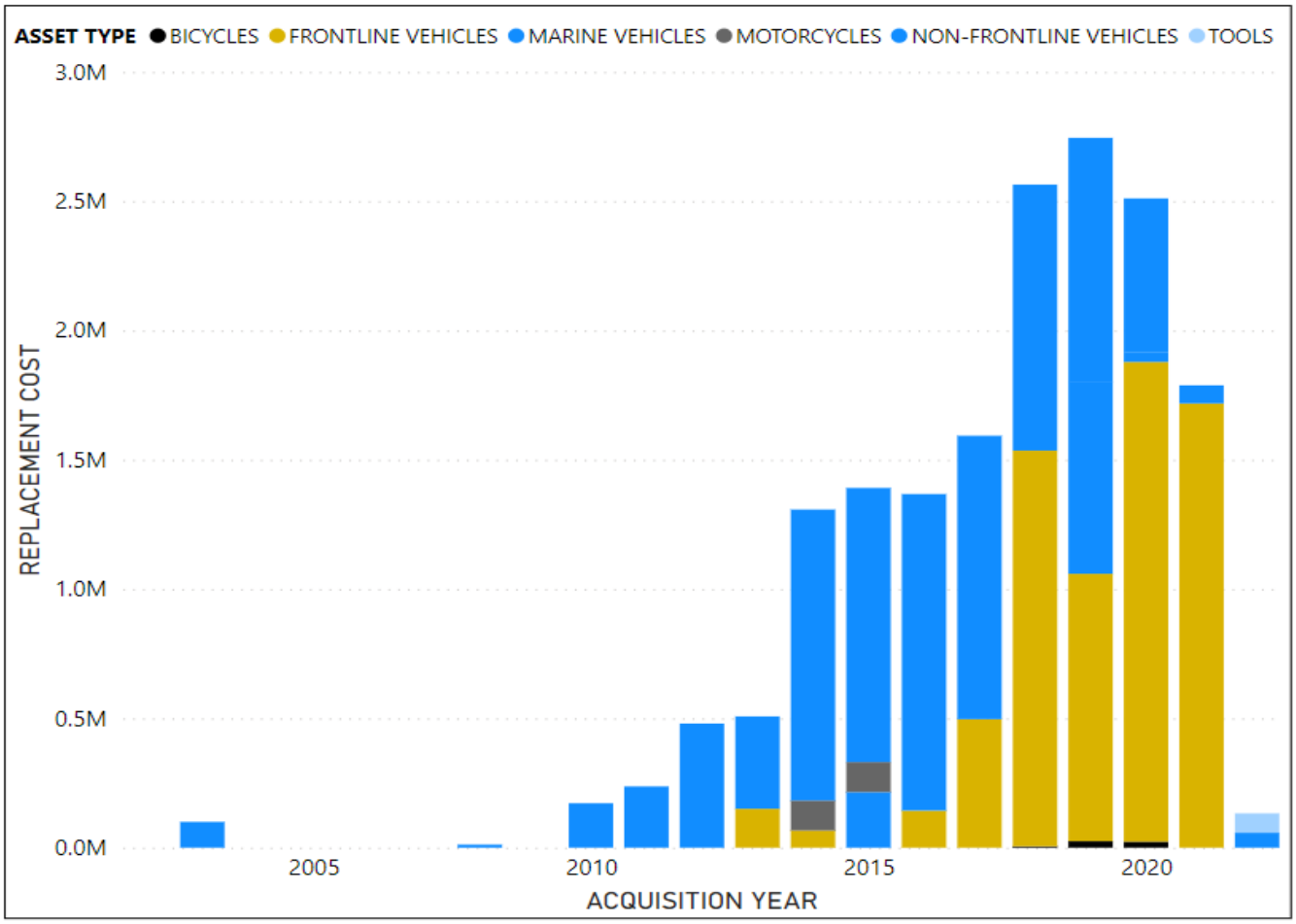
3.2.2.1 AGE PROFILE

The age profile of the HPS Vehicle assets is shown in ***Figure 4***. For Vehicle assets, the data confidence for age is typically High because asset's ages are formally tracked, and many assets are replaced based on age.

Frontline vehicles are replaced at five (5) years or 150,000 km, and non-frontline are replaced at 10-years or 150,000 kms. The age profile below shows replacement timelines have mostly been adhered to, however, with complications from COVID-19 and associated supply chain issues, many assets are being used for longer durations than anticipated. Since these assets have relatively short ESLs, they will repeat throughout the renewal forecast shown in Section 8.3.

In addition, marine vehicles are generally replaced at ten (10) to fifteen (15) years or as required, and bicycles are also replaced as required based on inspection or user complaints.

Figure 4: Vehicles Age Profile



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 9***, however, no formal condition rating is assigned to each vehicle. Since frontline vehicles assets are expected to be maintained in good working condition and vehicles are replaced so frequently, the ESL of the vehicle is not necessarily representative of the actual condition of the asset (i.e., a 6-year old vehicle at 100,000 kms could still be considered in good condition for most uses, but would be auctioned and replaced, or converted to a non-frontline vehicle because frontline vehicles are held to a higher standard).

Table 9: Vehicle Inspection and Maintenance Activities

ASSET	INSPECTION TYPE	DESCRIPTION	FREQUENCY	CONDITION SCORE OUTPUT
FRONTLINE & NON-FRONTLINE VEHICLES	**A**	Lube, oil, and filter change including a fluid level check. Check all major systems. Report any body damage. Road test vehicle.	5,000 kms	None
FRONTLINE & NON-FRONTLINE VEHICLES	**B**	Includes An inspection as well as: rotate tires, record brake measurement	15,000 kms	None
FRONTLINE	**C**	Includes An inspection as well as replace fuel filter, and fluid change.	30,000 kms	None
NON-FRONTLINE VEHICLES			45,000 kms	
FRONTLINE	**D**	Includes An inspection as well as replace spark plugs and transaxle service	60,000 kms	None
NON-FRONTLINE VEHICLES			75,000 kms	
MARINE	**N/A**	General inspection, top up oil	50 hours	None
BICYCLE	**N/A**	Officer does self-inspection	As required	None

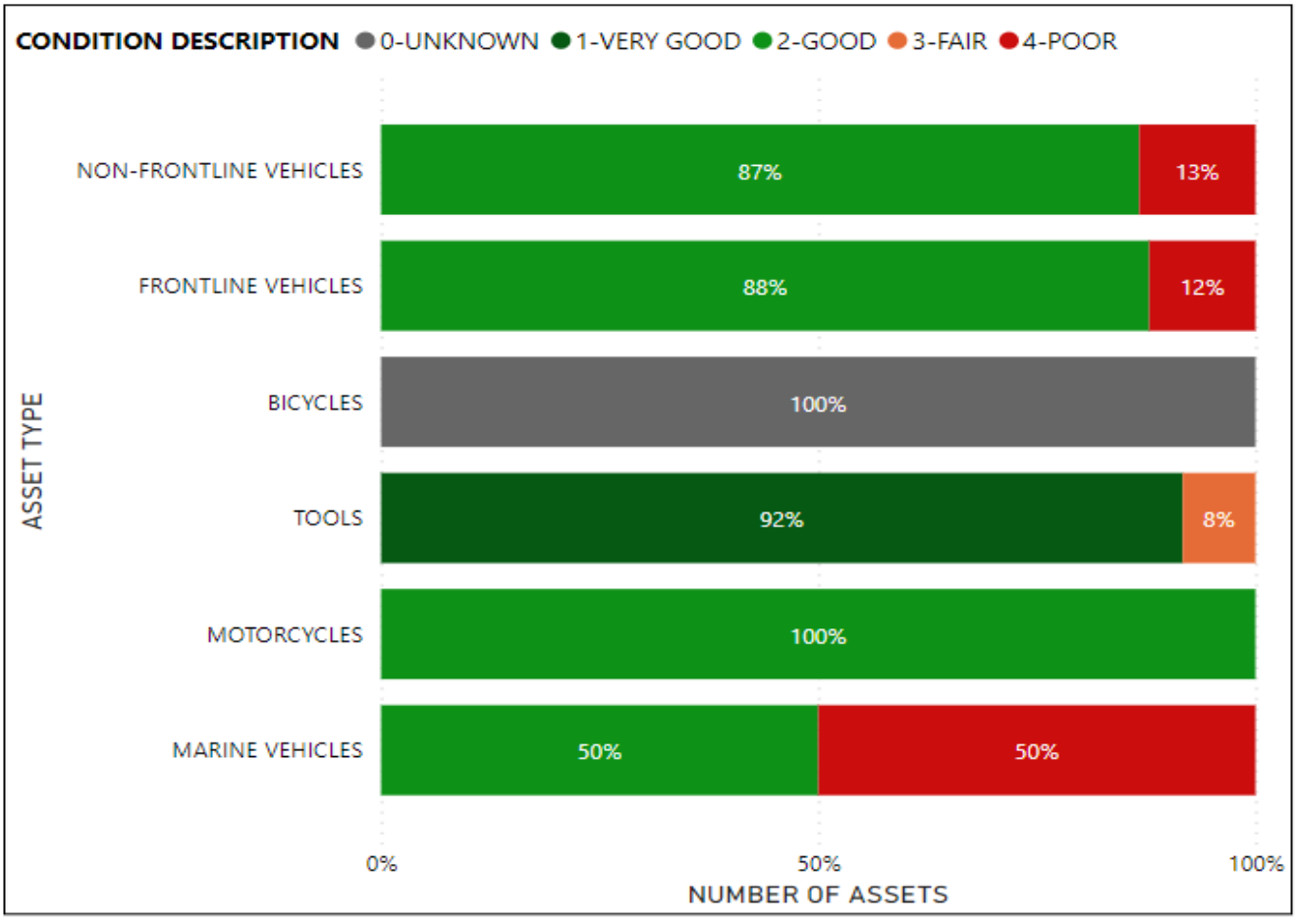
Since there is no formal condition rating based on inspection, the condition was estimated based on the assumptions outlined in the condition conversion table in ***Table 6***. For frontline and non-frontline vehicles that were within the first 20% of their service life, they were considered to be in very good condition. if they are within their service life, they were considered to be in good condition. Any vehicles past their service life or mileage were in poor condition since they are considered deficient. As stated, the reason these vehicles are beyond their service life or mileage is due to COVID-19 supply chain issues, but all vehicles in service are in good working condition but may result in additional operations and maintenance costs as the situation continues.

Marine asset conditions were based on remaining service life assuming ESLs of ten (10) to fifteen (15) years and bicycles are replaced as required and were considered to be in unknown condition.

A continuous improvement item identified in ***Table 34*** is to incorporate a condition rating during regular vehicle inspection/maintenance activities. Although vehicles are considered to be in good working condition while they are in service, there are often indicators during these inspections that can predict the remaining useful life of the asset which will assist HPS with capital forecasting for all vehicles and provide information to make decisions about which frontline vehicles will likely be converted to non-frontline vehicles and which will be disposed of. In addition, collecting this data will allow HPS to confirm or revisit the vehicle replacement frequency as there is typically a point in a vehicle's lifecycle where it is more costly to operate and maintain the asset than it is to renew.

The condition profile of HPS' vehicle assets is shown in ***Figure 5***. At this time the average condition of frontline and non-frontline vehicle assets is considered to be Good. Due to the condition methodology, marine vehicles have a significant amount of assets showing poor condition because they are beyond their Estimated Service Life (ESL).

Figure 5: Vehicles Asset Condition Distribution



3.2.2.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with Police vehicles involve assets exceeding their ESL or mileage allotments. The known service performance deficiencies in ***Table 10*** were identified using staff input.

Table 10 : Known Service Performance Deficiencies

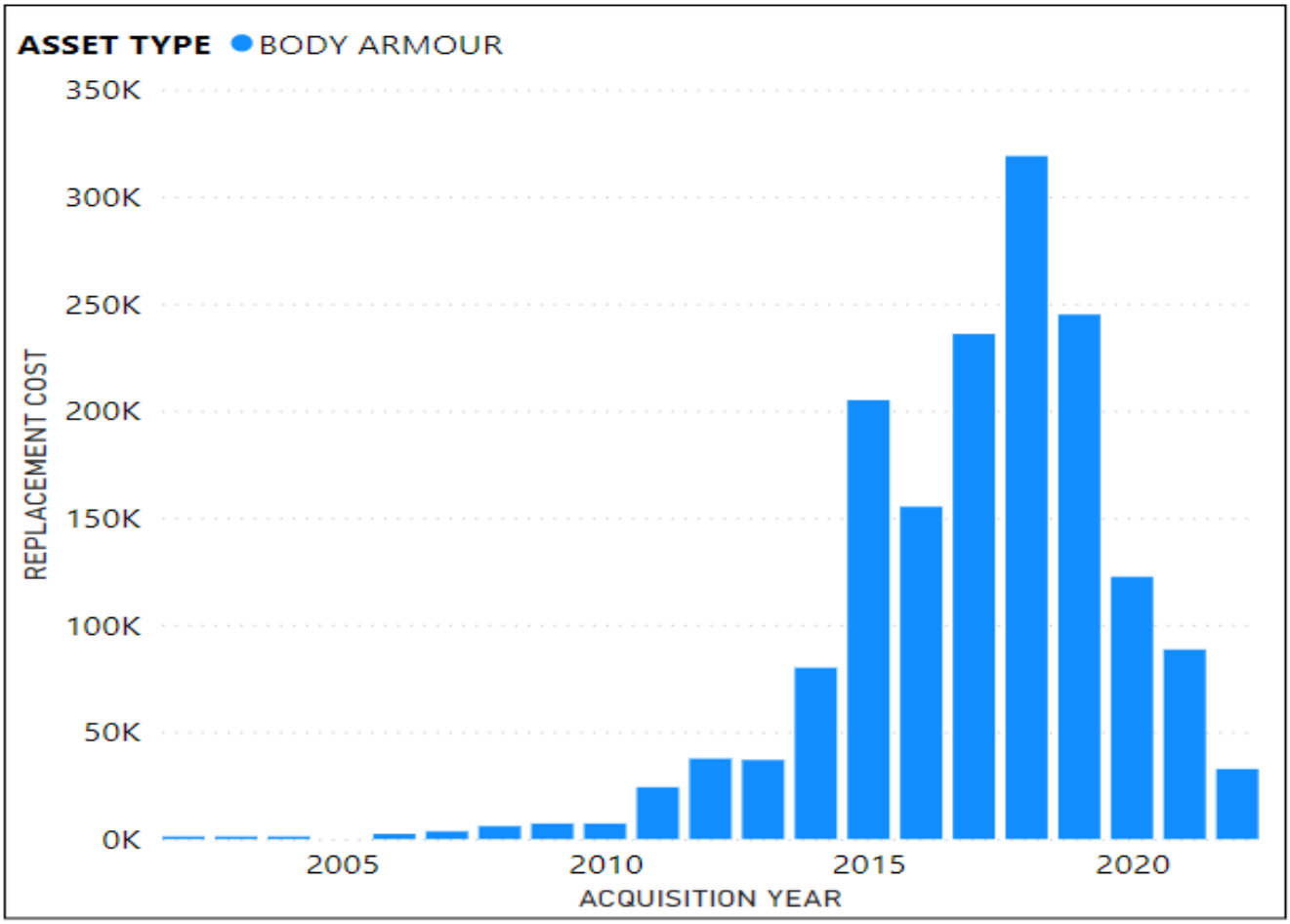
ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Patrol Vehicles	**Various**	Frontline Vehicles past service life/ mileage recommendations	Microchip shortage caused by pandemic causing difficulty in replacing assets at desired frequency.
Non-Patrol Vehicles	**Various**	Non-Frontline Vehicles past service life/ mileage recommendations	Microchip shortage caused by pandemic causing difficulty in replacing assets at desired frequency.

3.2.3 OFFICER EQUIPMENT PROFILE

3.2.3.1 AGE PROFILE

The age profile of Officer Equipment assets is shown in Figure 6. Age is currently only tracked for the body armour asset, which is at a data confidence level of High since this information is formally documented. Since Body Armour has an estimated service life of 8 years, any assets acquired before 2015 in the profile below are past their service life. Since Body Armour is a critical asset for an officer, expired body armour has been recorded as a technical metric in Section 4.3.2.

Figure 6: Officer Equipment Age Profile



3.2.3.2 CONDITION METHODOLOGY & PROFILE

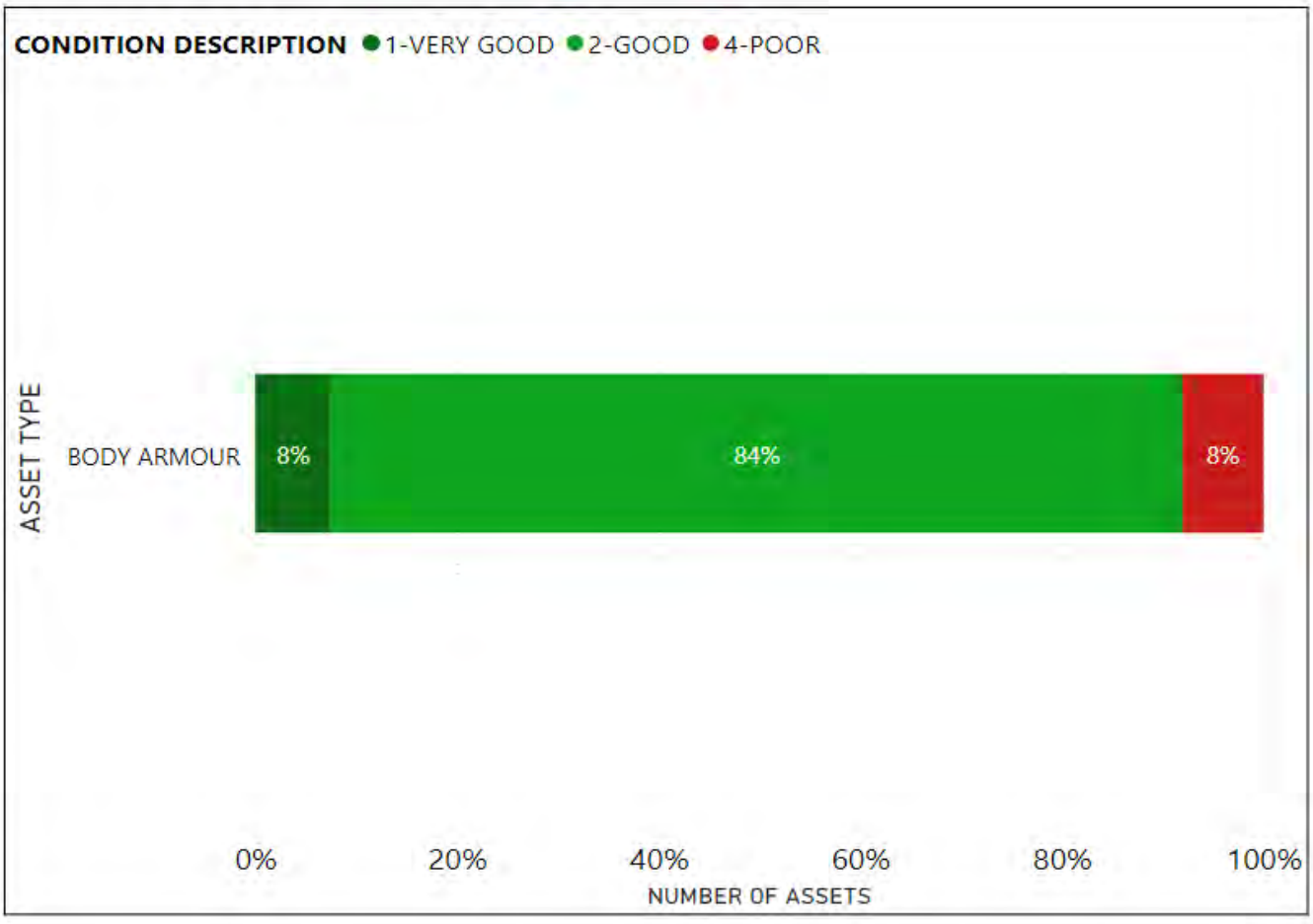
At this time, the majority of officer equipment does not have a formal inspection. For Body Armour, officers are expected to complete their own inspections annually and certify their equipment is acceptable per the table below.

Table 11 : Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Body Armour	Annual	2022	None – officer certifies their equipment is acceptable

The condition profile of the City's assets is shown in ***Figure 7***. As mentioned in ***Table 6***, the original condition grades were converted to a standardized condition category for report consistency. Since age and condition are not formally tracked for most officer equipment, the only asset shown below is body armour which is considered to be in good condition on average based on age.

Figure 7: Body Armour Asset Condition Distribution



3.2.3.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with officer equipment involves expired equipment. The known service performance deficiencies in ***Table 12*** were identified using database information.

Table 12 : Known Service Performance Deficiencies

ASSET	LOCATION	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
Name	**Various**	Expired Body Armour	Body Armour should be replaced every 8 years.

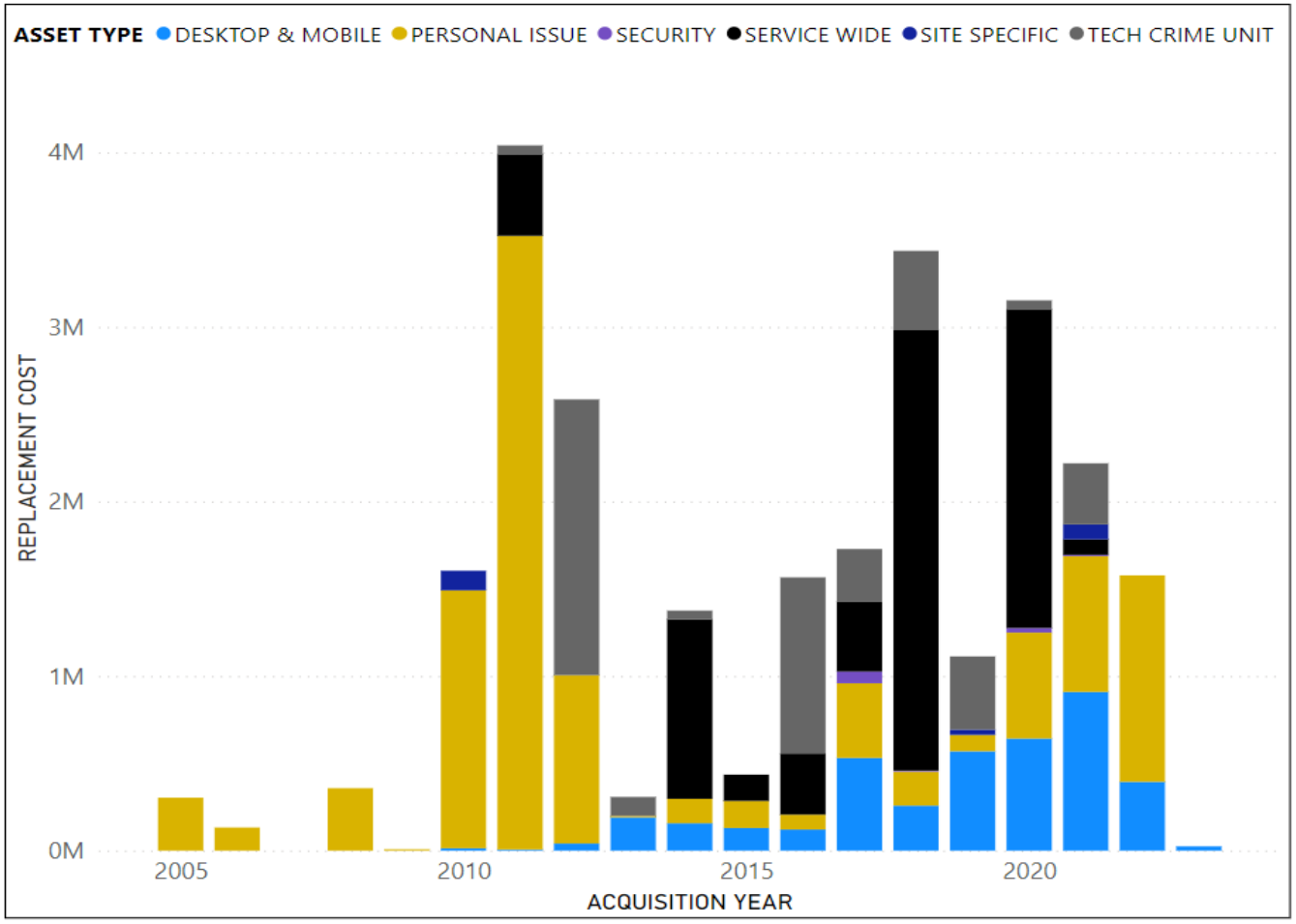
3.2.1 TECHNOLOGY PROFILE

3.2.1.1 AGE PROFILE

The age profile for Technology assets is shown in ***Figure 8***. For many Technology assets, age is not formally recorded which has been identified as a continuous improvement item in ***Table 34***. Many of the ages below were based on subject matter expert opinion with the exception of the Tech Crime Unit assets, and therefore typically the age information has a medium data confidence.

Many technology assets have estimated service lives of five (5) to ten (10) years. Since these assets have relatively short ESLs, they will repeat throughout the renewal forecast shown in ***Section 8.3***. There are typically large costs associated with these assets and therefore it is recommended that the ESLs be reviewed for these assets to ensure the renewal forecast is accurate.

Figure 8: Technology Age Profile



3.2.1.2 CONDITION METHODOLOGY & PROFILE

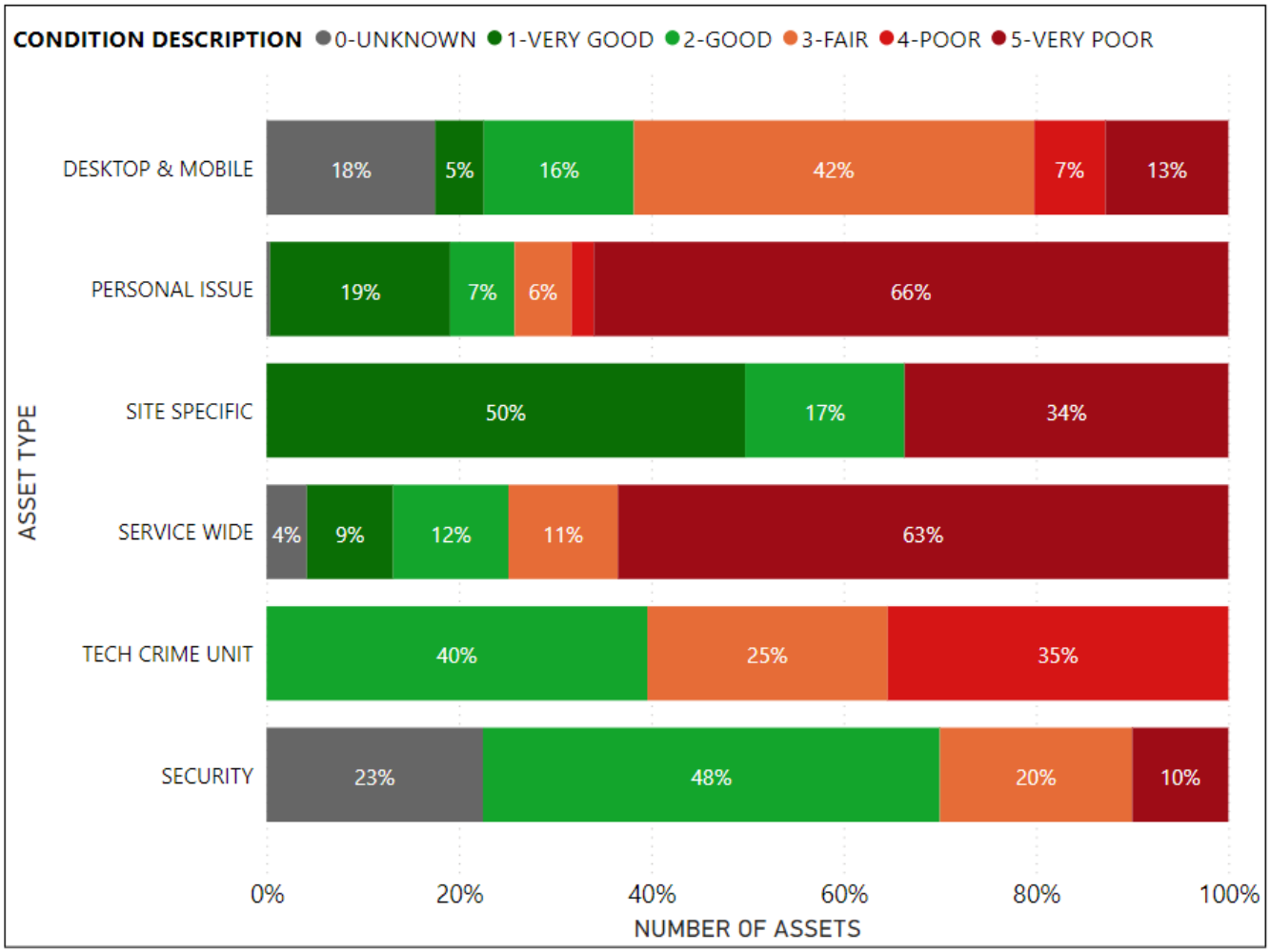
The majority of technology assets do not have a formal inspection program which has been identified as a continuous improvement item in ***Table 34***. The Tech Crime Unit does assign condition scores to their assets on a 3-point scale per the table below. It is recommended for asset management best practice that these condition scores be modified to align with the AM 5-point scale which has been identified as a continuous improvement item in ***Table 34***.

Table 13 : Inspection and Condition Information

ASSET	INSPECTION FREQUENCY	LAST INSPECTION	CONDITION SCORE OUTPUT
Tech Crime Unit	6 months	March 2023	Three Point Scale
All Other Technology	None	None	None

The condition profile of the City's assets is shown in ***Figure 9***. At this time the average condition of technology is considered to be Fair. Due to the condition methodology, many assets have a significant amount of assets showing poor or very poor condition because they are approaching or beyond their Estimated Service Life (ESL).

Figure 9: Technology Asset Condition Distribution



3.2.1.3 ASSET USAGE AND PERFORMANCE

The largest performance issues with Technology involve inabilities to upgrade. The known service performance deficiencies in ***Table 14*** were identified using staff input.

Table 14: Known Service Performance Deficiencies

ASSET	SERVICE DEFICIENCY	DESCRIPTION OF DEFICIENCY
911 PHONE SYSTEM	Requires replacement	Inability to upgrade to remain supported.

4. MUNICIPALLY DEFINED LEVELS OF SERVICE

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

O. Reg 588/17 does not define levels of service for HPS assets and therefore the City 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 AM Plan 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: Hamilton Police Service* was released on February 13, 2023, on the Engage Hamilton platform and closed on March 20, 2023. The survey results can be found in Appendix "A".

The survey received submissions from 258 respondents and contained fourteen (14) questions related to the Hamilton Police Service delivery of service. For the purposes of this report, data has been evaluated from a confidence level perspective (margin of error at 95% confidence in sample size) and a data consistency (standard deviation) perspective per ***Table 15*** below.

Table 15: Data Confidence Levels

Grade	Data Consistency (Standard Deviation)	Confidence Level (Margin of Error at 95% Confidence in Sample Size)
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
High	0.5 to 1.0 – results are tightly grouped but with slightly more variance in response	5% to 10% - error has becoming noticeable, but results are still trustworthy
Medium	1.0 to 1.5 – results are moderately grouped together, but most respondents are generally in agreeance	10% to 20% - error is a significant amount and will cause uncertainty in final results
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
Very Low	2.0+ - results are highly variant with little to no grouping	30%+ - significant error in results, hard to interpret data in a meaningful way

Based on an approximate population size of 570,000 and the table above, a sample size of 258 correlates to a 6.1% margin of error at 95% confidence, and therefore these survey results correspond with an overall high confidence level. It is important to note that respondents were allowed to opt out of questions, and as such, different questions may have different confidence levels depending on the opt out rate for that question, and therefore the confidence level grades presented differ throughout this section.

Although the sample size correlates to a high confidence level, the data consistency also differed between questions. A 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 on why respondent's 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

While these surveys were used to establish customer values and customer performance measures, it is important to note that there were also limitations to the survey methodology which may also reduce the confidence level in the survey data. The survey was only 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. When reviewing the demographic responses for the survey, there was no clear evidence that the survey results had been skewed. When comparing the age and postal code demographics from the survey to the age and postal code demographics for the City, there does not appear to be a significant over-representation of any age or postal code demographic within the survey. In addition, the responses were distributed across the City with responses from most communities as well as from a variety of self-identifications. Even when assessing the spikes in respondents per day, the results were distributed across different ages, postal codes, and self-identifiers. Therefore, although there are limitations to the survey methodology, it does appear that these results can be used to provide some context about the feelings of customers on the services HPS provides, but decisions should not be made based on this survey alone.

The future intent is to release this survey on a regular basis to measure the trends in customer satisfaction and ensure that the City is providing the agreed level of service as well as to improve the marketing strategy by both incorporating telephone surveys and IP controls to improve confidence levels in the survey responses. This has been noted in ***Table 34*** in the continuous improvement section.

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 is 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 using the results from the *Let's Connect, Hamilton – City Services & Assets Review: Hamilton Police Service* survey.

Table 16: Customer Values

SERVICE OBJECTIVE:			
CUSTOMER VALUES	**CUSTOMER SATISFACTION MEASURE**	**CURRENT FEEDBACK**	**EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)**
Emergency Medical Calls and Investigative Services are very important services.	2023 HPS City Services & Assets Review Survey	Based on survey responses, on average, these are considered very important services for HPS to be responsible for providing with high data consistency.	Maintain
Non-Emergency Calls, Road Safety, Online Reporting and Victim Services are important services.		Based on survey responses, on average, these are considered important services for HPS to be responsible for providing with high to medium data consistency.	Maintain
Emergency Mental Health Calls are important services, but customers are divided.		Based on survey responses, on average it is important for HPS to be responsible for providing mental health services, but the data consistency was low and therefore respondents were divided.	Maintain

HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

SERVICE OBJECTIVE:			
CUSTOMER VALUES	**CUSTOMER SATISFACTION MEASURE**	**CURRENT FEEDBACK**	**EXPECTED TREND BASED ON PLANNED BUDGET (10-YEAR HORIZON)**
Crime Prevention / Public Outreach Services and Vulnerable Sector Clearance is a fairly important service.	2023 HPS City Services & Assets Review Survey	Based on survey responses, it is fairly important for HPS to be responsible for providing these services, with a medium data consistency.	Maintain
HPS Facilities should be maintained in good condition and be welcoming and accessible, but facility renewals and public parking are not priorities.		Based on survey responses with a high data consistency, HPS buildings should be accessible, safe, equitable, inclusive, clean, in good repair, comfortable, energy efficient, and inviting. However, facility renewals and increased public parking at stations were not that important to survey respondents with a medium data consistency.	Decrease
Body cameras should be considered as a future need.		Based on survey responses, these are considered an important future need for HPS to consider implementing with a medium data consistency.	N/A
Increasing the number of police officers is a divided subject.		Based on survey responses, there are differing opinions on if HPS should increase the number of police officers with a low data consistency.	Maintain
Rate Level Increases should be minimized.		HPS should minimize rate level increases and maintain service levels based on a medium data consistency.	Maintain

4.3 CUSTOMER LEVELS OF SERVICE

Ultimately customer performance measures are the measures that the City 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 the City's Police Service in terms of their quality, reliability, accessibility, responsiveness, sustainability and over course, their cost. The City will continue to measure these customer levels of service to ensure a clear understanding on how the customers feel about the services and the value for their tax dollars.

The Customer Levels of Service are considered in terms of:

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

In ***Table 17*** under each of the service measures 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 currentt budget allocation.

It is important to note that many of HPS' customers are internal customers (e.g., staff) as they are the main users of most of HPS assets (i.e., facilities, vehicles, equipment, technology). For this first iteration of the AM Plan the focus was on external customers (e.g. the Public), and as a result there are some gaps within the alignment between customer and technical levels of service as discussed in **Section 4.3.3**.

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Table 17 : Customer Levels of Service

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
Quality/ Condition	Provide effective and adequate core policing services.	2023 HPS City Services & Assets Review Survey	Average survey respondent opinion on how HPS has performed overall in the last 24 months in all service areas	Average Performance	Maintain
			Confidence level	Medium	
			Data Consistency	Medium	
	Ensure that police assets are maintained in good condition.	2023 HPS City Services & Assets Review Survey	Average survey respondent opinion on if HPS facilities met comfort, safety and cleanliness needs over the last 24 months	Meets Needs	Decrease
			Confidence levels	Very Low	
			Data Consistency	Medium	
	Be fiscally responsible when delivering services.	2023 HPS City Services & Assets Review Survey	Average survey respondent opinion on if HPS is providing good value for money when providing infrastructure and services.	Average Performance	Maintain
			Confidence levels	Low	
			Data Consistency	Medium	
Function	Provide effective and adequate core policing services.	2023 HPS City Services & Assets Review Survey	Average survey respondent opinion on if HPS is meeting service needs overall	Meets Some Needs	Maintain

HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

TYPE OF MEASURE	LEVEL OF SERVICE STATEMENT	SOURCE	PERFORMANCE MEASURE	CURRENT PERFORMANCE	EXPECTED TREND BASED ON PLANNED BUDGET
		Confidence levels		Medium	
		Data Consistency		Medium	
		2023 HPS City Services & Assets Review Survey	Average survey respondent opinion on if HPS dispatch times are meeting service needs overall	Meets Some Needs	Maintain
		Confidence levels		Medium	
		Data Consistency		Medium	
Capacity	Ensure HPS services are accessible to the public when required.	2023 HPS City Services & Assets Review Survey	Average survey respondent opinion on if HPS services are satisfied with their ability to be accessed overall	Neither satisfied nor dissatisfied	Maintain
		Confidence levels		Low	
		Data Consistency		Medium	

4.3.1 CUSTOMER INDICES

The three (3) indices calculated to assess how customer expectations are aligning with the perceived performance for HPS are listed below in ***Table 18***. 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.

Table 18 : Customer Indices

Customer Indices	Average Result
Service Importance Versus Performance Net Differential	-20
Net Promoter Score (%)	-17.58%
Service Rates Versus Value for Money Net Differential	-2

It is important to note that since the HPS survey results appear to overall be divided on 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 HPS with areas to further investigate before proposing any new levels of service.

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 twenty (20) points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale.

Per ***Figure 10*** below, the net differential exceeds twenty (20) points for Investigative Services, Emergency Criminal Calls, Non-Emergency Calls, and Road Safety. This indicates that although customers generally consider these services to be between Very Important to Important on the Likert scale, they also perceive that HPS only performed Average for these services over the last twenty-four (24) months. The data consistency on both questions showed an overall medium consistency.

To reduce the net differential, HPS would have to increase their performance to between Good and Very Good, which they would accomplish by altering their Technical Levels of Service explained in **Section 4.3.2**, and if HPS were looking for service areas to improve, these would be the key services to investigate further. However, whether the customer is willing to pay for this increase in service is determined by the Service Rates Versus Value for Money Net Differential which is explained in detail in the section below.

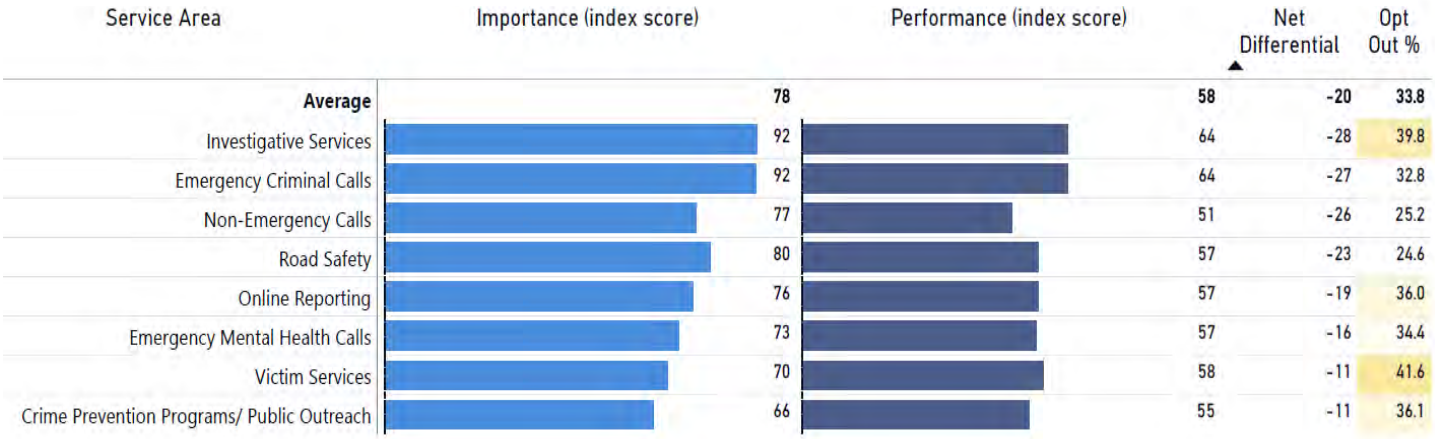
It is important to note that the Q2-Importance question asked if these services were important as a responsibility for HPS, as such, it is unclear if some of these answers are regarding the importance of the service or the importance of HPS being responsible for that service. This could be the case for the Emergency Mental Health Calls where the data consistency was Low which may either indicate that respondents are divided on if these are important services for HPS to

be responsible for, or it could indicate that there are differing opinions on whether the services are important to the customer overall. Future surveys will clarify verbiage to ensure the question is clear and this has been included as a Continuous Improvement Item in ***Table 34***. However, it is also important to note that mental health services are required services that HPS must provide according to the Mental Health Act, R.S.O. 1990 and Community Safety and Policing Act, 2019 referenced in **Section 2.2**.

NET PROMOTER SCORE INDICE

The Net Promoter Score Indices outlines how likely an individual is to recommend a service to another person and measures customer loyalty. For municipal services, this score is difficult to interpret because often individuals do not have many alternatives for utilizing different services

Figure 10: Importance versus Performance Index Score



and also there may be internal biases for certain service areas. However, this score does provide valuable information for determining whether customers would recommend using the service, seek alternatives, or avoid using the service altogether.

Respondents who selected a score less than four (4) are considered 'Detractors' meaning that they would not recommend the service. While scores of five (5) are considered 'Promoters' who would recommend the service. Scores of four (4) are considered 'Passive' which means they do not have strong feelings about the service and as such, they are not considered in the Net Promoter score calculation. In addition, respondents who opted out by not answering or selecting 'Can't Say' were removed from the sample. The Detractor and Promoter scores were then converted to a percentage, and the Net Promoter Score was calculated by subtracting (% Detractors) from (% Promoters). The Standard Deviation (σ) is also calculated in a percentage, the same units as the Net Promoter Score.

Per ***Figure 11*** below, generally most users of the service would not recommend HPS to another person. For the two (2) most important services (Emergency Criminal Calls and Investigative Services), the net promoter result is closer to zero (0) which may indicate that overall respondents are more neutral about recommending these services, whereas the higher negative promoter values (>20%) for Emergency Mental Health Calls, Crime Prevention Programs/Public Outreach, Victim Services, and Non-Emergency Calls services indicates that HPS may need to investigate the public perception for why customers would not recommend using these services.

However, the standard deviation being greater than twenty (20) does indicate that survey respondents were divided on their opinion for these services.

Figure 11: Net Promoter Score

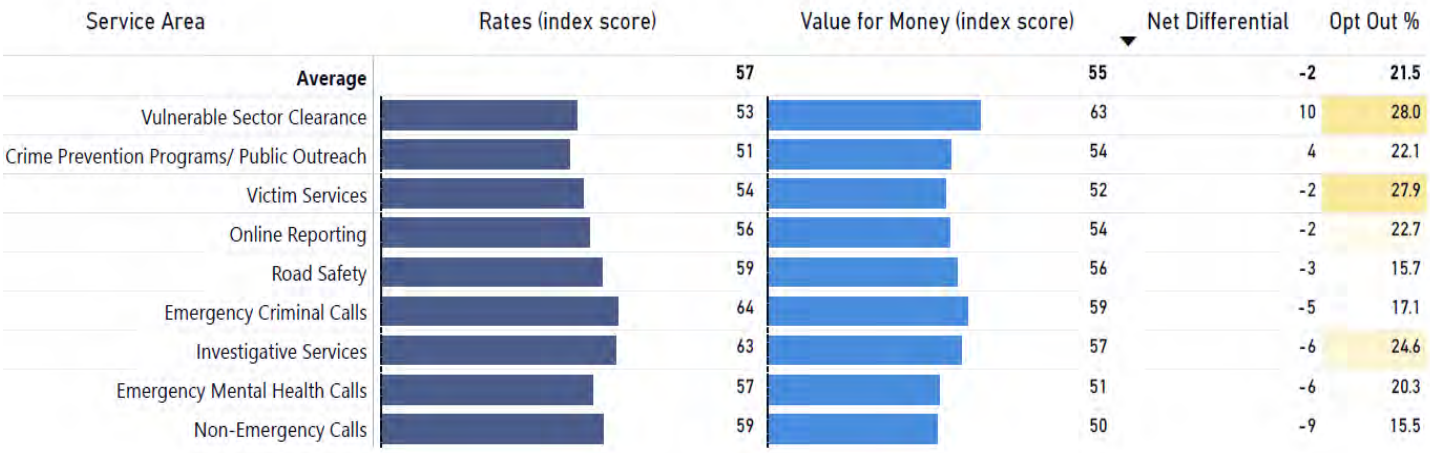
	σ	Net Promoter Score	Detractors	Passives	Promoters
All Service Areas	**30.6**	**-17.58**	**848**	**273**	**552**
Emergency Criminal Calls	30.6	-4.19	85	29	77
Investigative Services	28.9	-5.06	77	33	68
Vulnerable Sector Clearance	28.3	-5.68	73	40	63
Online Reporting	29.2	-15.05	89	36	61
Road Safety	29.4	-18.41	101	36	64
Non-Emergency Calls	30.2	-24.64	114	30	63
Victim Services	32.1	-24.85	94	23	52
Crime Prevention Programs/ Public Outreach	31.2	-25.43	96	25	52
Emergency Mental Health Calls	32.4	-34.90	119	21	52

SERVICE RATES VERSUS VALUE FOR MONEY INDICE

The Service Rates versus Value for Money indices is 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 twenty (20) points is 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.

Per ***Figure 12*** below, survey respondents generally perceived that they were getting Average value for money across all services and thought that HPS should minimize rate level increases and maintain service levels across all services as well. On average, since the net differential is under twenty (20) across all services, survey respondents thought the value for money was in alignment with the current rates. However, the data consistency was considered medium approaching low for both value for money and rate level as there are differing opinions on this issue. Therefore, based on these conclusions, HPS should consider only increasing rate levels to the minimum required to maintain the current levels of service.

Figure 12: Rates versus Value for Money Index Score



Service Area	Rates (index score)	Value for Money (index score)	Net Differential	Opt Out %
Average	**57**	**55**	**-2**	**21.5**
Vulnerable Sector Clearance	53	63	10	28.0
Crime Prevention Programs/ Public Outreach	51	54	4	22.1
Victim Services	54	52	-2	27.9
Online Reporting	56	54	-2	22.7
Road Safety	59	56	-3	15.7
Emergency Criminal Calls	64	59	-5	17.1
Investigative Services	63	57	-6	24.6
Emergency Mental Health Calls	57	51	-6	20.3
Non-Emergency Calls	59	50	-9	15.5

4.3.2 TECHNICAL LEVELS OF SERVICE

Technical levels of service are operational or technical measures of performance, which measure how the City plans to achieve the desired customer outcomes and demonstrate effective performance, compliance and management. The metrics should demonstrate how the City 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. The City will measure specific lifecycle activities to demonstrate how the City is performing on 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.[7]

Police specific calls are categorized into five (5) Priority Call Responses ranked by type and urgency of the call which are defined below in ***Table 19***. Different priority call responses have different dispatch times which are shown in ***Table 19***. As previously mentioned, a continuous improvement item identified in ***Table 34***, is to investigate quantifying response times so that HPS can quantify changes in levels of service. With the addition of the Waterdown Station, response times will likely improve in rural areas which is a proposed level of service that cannot be quantified at this time.

[7] IPWEA, 2015, IIMM, p 2|28.

Table 19: Priority Call Types

PRIORITY CALL TYPE	DESCRIPTION
0	Emergencies where injuries are occurring or are imminent
1	People and property emergencies that do not involve personal injury
2	A crime has just occurred within the past 15 minutes
3	Do not involve crimes that are in progress or have just occurred
4	Non-urgent, low-risk calls involving non-emergency or incidental complaints

Table 17 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.

Table 20 : Technical Levels of Service

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE (2022)	CURRENT TARGET PERFORMANCE (2022)	PROPOSED 10-YEAR PERFORMANCE
Acquisition	Ensure police have the capacity to reliably respond to emergencies in a timely manner.	Number of new patrol vehicles purchased due to growth/demand	3	3	30
		Budget	$0.3M	$0.3M	$2.6M
	Ensure HPS services are accessible to the public when required.	Number of new facilities acquired due to growth/demand	0	0	1
		Budget	$0	$0	$8.0M
Operation	Provide effective and adequate core policing services.	Dispatch Time for Priority 0 (minutes)	1:08	0:30	0:30
		Dispatch Time for Priority 1 (minutes)	3:10	3	3
		Dispatch Time for Priority 2 (minutes)	13:28	15	15
		Dispatch Time for Priority 3 (minutes)	95	60	60
		Dispatch Time for Priority 4 (minutes)	108	180	180
		Budget	N/A	N/A	N/A

HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

LIFECYCLE ACTIVITY	LEVEL OF SERVICE	ACTIVITY MEASURE	CURRENT ACTUAL PERFORMANCE (2022)	CURRENT TARGET PERFORMANCE (2022)	PROPOSED 10-YEAR PERFORMANCE
	Be fiscally responsible when delivering services.	Actual Operating Expenditures vs Planned Budget	99.4%	90%-100%	90%-100%
	Ensure that police assets are maintained in good condition.	Average Facility Condition Index for Facilities	2.3%	<5%	<5%
Maintenance	Ensure police have the capacity to reliably respond to emergencies in a timely manner.	Average number of days frontline vehicle is out of service for maintenance	3.0	3.0	3.0
		Budget	$0.6M	$0.6M	$1.0M
Renewal	Ensure that police assets are maintained in good condition.	% of in-service front-line vehicles over replacement frequency target (i.e., 5-years or 150,000 km)	12.1%	0%	0%
		Budget	$0	$0.8M	$15.6M
		% of expired Body Armour	8%	0%	0%
		Budget	$0	$0.2M	$1.8M

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.

It is important to note that these metrics were created specifically for this 2023 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 AM Plan 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. HPS has recently completed a revised KPI framework and therefore it is anticipated that these performance measurements will improve for the next iteration of the plan. These have been identified as continuous improvement items in ***Table 34***.

4.3.3 PROPOSED LEVELS OF SERVICE DISCUSSION

It is evident per ***Table 20*** that HPS is often meeting technical standards with some exceptions. However, customer preferences and expectations do not always match internal technical targets. Since the HPS survey results appear to be divided on many issues, it is difficult to make any conclusive decisions based on the initial survey. Due to the lack of data confidence in the current levels of service information, HPS 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 moving forward past 2025 in accordance with O.Reg 588/17.Therefore, the information below is intended to provide context to direct HPS to areas for further investigate before proposing any new levels of service.

As previously mentioned, many of HPS' asset customers are internal customers (e.g., staff) as they are the main users of HPS assets. For this first iteration of the AM Plan the focus was on external customers (i.e., the Public), and as a result there are some gaps in the information below with respect to internal customers. This has been identified as a continuous improvement item in ***Table 34.***

CONDITION / QUALITY

Based on ***Table 20***, survey respondents thought that HPS was meeting needs in terms of HPS Facilities' comfort, safety, and cleanliness needs. At this time, based on the FCI, the average condition for HPS facilities is Good which would relate to the safety of the facility. As such, there is generally customer and technical levels of service alignment. However, Central Station is in Poor condition meaning it may not meet safety needs over time, but there is conflicting information since survey respondents also indicated that facility and parking lot renewals were not a priority for customers at this time. Therefore, it is difficult to make any conclusions on this item in this report. In future, the technical measures should also indicate facility operational measures (i.e., frequency of cleaning) to better align with the comfort and cleanliness measures. This has been identified as a continuous improvement item in ***Table 34***.

In addition, per ***Table 20***, survey respondents thought that HPS was performing average when providing good value for money for the service, with a medium data consistency. At this time, HPS is within the recommended target for actual operating expenditures versus planned budget.

Therefore, proposed levels of service should consider, where possible, only increasing rate levels to the minimum required to maintain the current levels of service and any legislated requirements.

FUNCTION

Based on ***Table 20***, survey respondents indicated that dispatch time targets met customer needs overall. At this time, HPS is meeting their dispatch time targets for Priority 2 and 4 calls, however HPS is not meeting dispatch time targets for Priority 0, 1 or 3 calls. Since customers indicated that the technical target times would meet needs, HPS should investigate opportunities to improve dispatch times to meet internal targets. This must be communicated clearly to the public since there are concerns with increasing rate levels.

In addition, as previously mentioned, dispatch times are not the best measurement for response. This has been indicated as a continuous improvement item in ***Table 34***. As previously mentioned, with the addition of the Waterdown Station, response times will likely improve in rural areas which is a proposed level of service change that cannot be fully quantified at this time.

CAPACITY

Based on ***Table 20***, survey respondents were neither satisfied nor unsatisfied with their ability to access HPS services. Per ***Table 21***, HPS is currently adding an additional station, Waterdown Station, to ensure better access to the service. Since customers do not have a strong opinion on this addition, adding this asset would be up to the discretion of HPS in terms of operational needs.

Customer values also indicated that body cameras would be something to consider adding for proposed levels of service. Based on survey responses, there are differing opinions on if HPS should increase the number of police officers. HPS is currently only increasing their number of officers and assets in accordance with the “cop to pop” ratio mentioned in **Section 5.1** which is the amount required to maintain current levels of service which is in line with the customer value of minimizing rate level increases.

5. FUTURE DEMAND

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

The ability for the City to be able to predict future demand for services enables the City to plan and identify the best way of meeting the current demand while also 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 (assumption of assets due to development growth) and types of service required (e.g., NG911, body cameras).

5.1 DEMAND DRIVERS

For the HPS service area, the key drivers are population change, and technological changes.

- Population change – Per page 45 in the AM Plan Overview, it is evident that Hamilton's population will continue to grow to 2051. Ontario Police Services determine their officer requirements using a ratio often referred to as the "cop to pop" ratio which allocates how many officers are required per the population.
- Technological changes - At this time, since the Canadian Radio-television and Telecommunications Commission (CRTC) has mandated that all municipalities replace Canada's aging E911 emergency services network and cutover to the new Next Generation-911 (NG-911) platform by March 4, 2025, this is a large change that HPS as well as Hamilton Fire and Hamilton Paramedics Services have been preparing for.

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 21***. Growth projections have been shown on page 45 in the AM Plan Overview document, however, the growth projections for the "cop to pop" ratio projections were completed by HPS staff for the development charges by-law study.

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.

5.3 DEMAND IMPACT AND DEMAND MANAGEMENT PLAN

The impact of demand drivers that may affect future service delivery and use of assets are shown in ***Table 21***. 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 21***. Climate change adaptation is included in ***Table 25***.

HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

Table 21 : Demand Management Plan

DEMAND DRIVER	CURRENT POSITION	PROJECTION	IMPACT ON SERVICES	DEMAND MANAGEMENT PLAN
Population Growth	"Cop to Pop ratio" 146 officers per 100,000 population, 3 stations	"Cop to Pop ratio" 13 officers per year over 10 years, 23 additional staff to meet service standards, 4 stations.	Increase to uniform and equipment, increase to # of frontline vehicles, parking spaces, facility space, desks, lockers, IT equipment. Require new station in Waterdown which will increase operations and maintenance costs.	Increase budget to maintain level of service for new officers. Add new Waterdown Station. Complete Master Plan for HPS.
Technological Change: Connected Officer	270 mobile phones deployed	All officers supplied with mobile devices	Increase to number of mobile devices, IT support staff, software licensing	Increase budget to improve/enhance level of service. Budget will be requested in 2024.
Technological Change: Increase in digital evidence	AXON licenses for 625 Basic and 250 Pro users, which provides for 13,750 GB storage	To Be Determined. Will result in increase in network bandwidth and cloud storage costs	Increase in storage costs, network bandwidth, etc.	Increase budget to increase network & storage capacity to improve/enhance level of service. Costs to be determined.
Legislative Technological Change: Next Generation - 911 (NG-911)	NG-911 System is being implemented	The HPS will require two NG-911 sites starting March 2025, i.e., primary and back-up	Increased budgetary requirements for maintaining NG-911 sites and replacement of equipment at end of life cycle, i.e., call-handing, CAD, radio dispatch, data centres, etc.	Increase budget to replace all necessary equipment related to NG-911 estimated at $7.8M as well as upgrade facilities estimated currently at $5.7M but is expected to increase as this project is ongoing. Estimated annual cost of operating technology at $1.05M per year

5.4 ASSET PROGRAMS TO MEET DEMAND

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

At this time there are approximately $27.0M in assets acquired over the next five (5)-years, and an anticipated $51.6M over the 30-year planning period. Acquiring new assets will commit HPS to ongoing operations, maintenance and renewal costs for the amount of time that the service is required. These future costs have been estimated at a high level in the Lifecycle Models 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.

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'[8].

The City has released 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 also identifies the likelihood of those risks occurring, and the consequences should the event occur which calculates a risk rating. Risk options are then evaluated, and a risk treatment plan is created which will be initiated after the release of this plan and has been identified as a continuous improvement item in ***Table 34***.

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, and along with their typical failure mode, and the impact on service delivery, are summarized in ***Table 22***. Failure modes may include physical failure, collapse or essential service interruption.

Table 22 : Critical Assets

CRITICAL ASSET(S)	FAILURE MODE	IMPACT
911 Communications Equipment (including critical radio, network, server and storage infrastructure)	Physical Failure	Loss of essential communications service
Frontline Vehicle	Essential service interruption	Inability to respond due to not enough vehicles.
Generator	Physical Failure	Power outage to facilities without a back-up system

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.

[8] ISO 31000:2009, p 2

6.2 RISK ASSESSMENT

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and 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 is shown in ***Table 23***. It is essential that these critical risks and costs are reported to management.

Table 23 : Risks and Treatment Plans
Note * The Residual Risk Is the Risk Remaining After the Selected Risk Treatment Plan Is Implemented

SERVICE OR ASSET AT RISK	WHAT CAN HAPPEN	RISK RATING	RISK TREATMENT PLAN	RESIDUAL RISK *	TREATMENT COSTS
Core network data centre	Major water leak due to poor condition mechanical equipment.	High	Create Off Site Back-up. Renew Central Station.	Low	TBD

HPS did not identify many risks that were not already controlled during this first iteration of the AM Plan, and the treatment costs for the risks outlined in ***Table 23*** are unknown and have not yet been incorporated into the lifecycle model. This has been identified as a Continuous Improvement item in ***Table 34***.

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 needs to understand its capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service.

Resilience covers the capacity of the City 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.

We do not currently measure our resilience in service delivery and this will be included in the next iteration of the AM Plan.

6.4 SERVICE AND RISK TRADE-OFFS

The decisions made in AM Plans are based on the objective to achieve the optimum benefits using the available resources.

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

Table 24: Service and Risk Tradeoffs

WHAT WE CANNOT DO (WHAT CAN WE NOT AFFORD OVER NEXT 10 YEARS?)	SERVICE TRADE OFF (HOW WILL NOT COMPLETING THIS AFFECT OUR SERVICE?)	RISK TRADE OFF (WHAT RISK CONSEQUENCES ARE WE UNDERTAKING?)
Central Station Upgrades/Reconstruction	Flow of building is currently not optimal leading to inefficiencies in service delivery. There will not be enough space over time for expected new officers.	Reactive maintenance cost on mechanical infrastructure will likely increase. Service disruption could occur due to risk of mechanical failure in IT back-up centre.
Lifecycle Replacement for Network assets due to lack of resources	Network will likely slow down for staff.	Ongoing support cost (operational) increase. Response times may increase.

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've already begun to experience (adaptation). At a minimum the City must consider how to manage our existing assets given potential climate change impacts for our region.

Changes to Hamilton's climate will impact City 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. Associated levels of service and costs will be addressed in future revisions of the plan. This has been identified as a Continuous Improvement item in ***Table 34***.

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 (CEEP includes five (5) 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.

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, that 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 previously mentioned, due to the high level of uncertainty with the demand management plans for climate change, the cost of the demand impacts below may not have been included in the lifecycle models or levels of service at this time unless they were previously identified. 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 reductions methods, and changes which will be incorporated into future iterations of the AM Plan. This has been identified as a continuous improvement item in ***Table 34.***

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.

Since HPS possesses Facilities and Vehicles, the transformations that relate to *transforming our buildings*, *changing how we move, and growing green* are the key modelled targets that HPS will have to accommodate as shown in ***Table 25*** below.

Table 25: Climate Change Mitigation Transformation

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE/ASSET	DEMAND MANAGEMENT PLAN
Transforming our buildings	By 2050, all new municipal buildings achieve net-zero emissions.	Any new builds must be designed to Net Zero standards which is an increased cost to HPS. Proposed Station 40 specifications call for Net Zero design.	Gather Class D estimates on Station 40 to quantify cost to present to Council and the Police Board.
Transforming our buildings	By 2050, all municipal buildings are retrofitted to achieve 50% energy efficiency relative to 2016.	Any renewals of HVAC material will be with energy efficient equipment. Lighting renewals will be to LED lighting. ISD building constructed in 2020 was designed with District Energy for heating and cooling solution.	Use Building Condition Assessments to plan for renewals and budget accordingly. Investigate grants for energy efficient conversions. Gather Class D estimates & savings for these conversions to present to Council and the Police Board.
Transforming our buildings	Post-retrofits, switch buildings to heat pumps for space and water heating by 2050.		
Changing how we move	100% of new municipal small	Currently, there is no clean fuel option that	Continue to investigate alternatives to gas

CLIMATE CHANGE MITIGATION TRANSFORMATION	MODELLED TARGET	IMPACT TO SERVICE/ASSET	DEMAND MANAGEMENT PLAN
	and light-duty vehicles are electric by 2040. 100% of new municipal heavy-duty vehicles switch to clean hydrogen by 2040.	would be adequate for Police uses which is a challenge for future planning purposes. It is anticipated there will be additional acquisition costs for these vehicles. Recently received conditional approval from NRCan to install Electric Vehicle Charging Stations.	powered vehicles. Continue to prepare for conversion to electric vehicles for light duty vehicles by investigating grant funding and installing charging stations.
Growing Green	Planting 50,000 trees a year through 2020	Trees will be incorporated in new build landscapes, without comprising security.	Analysis of facility risk will be required to ensure the safety of staff and the public.

MITIGATION RISK ANALYSIS

Since the risk of not completing climate change mitigation projects was modelled in the Climate Science Report for the City of Hamilton completed by ICLEI Canada, a risk analysis has not been completed in this AM Plan for climate mitigation projects (ICLEI Canada, 2021).

CURRENT MITIGATION PROJECTS

Mitigation projects HPS is currently pursuing are outlined below in ***Table 26.*** These projects may already be included in the budget and may be quantified in the lifecycle models.

Table 26 : Asset Climate Mitigation Projects

PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
EV Chargers Installation	Changing how we move	Recently received conditional approval from NRCan to install Electric Vehicle Charging Stations.	Reduce emissions associated with Police vehicles.
Hybrid Vehicles	Changing how we move	9 New frontline vehicles, 3 in 2021 and 6 in 2022	Reduce emissions associated with Police vehicles.

PROJECT	CLIMATE CHANGE MITIGATION TRANSFORMATION	PROJECT DESCRIPTION	CLIMATE CHANGE IMPACT
New Station 40 Construction	Transforming our buildings	Proposed Station 40 specifications call for Net Zero design.	Reduce emissions associated with facility operation.

CLIMATE MITIGATION DISCUSSION

At this time, HPS has already made progress toward some of the modelled target transformations as discussed below.

Transforming our Buildings & Growing Green

HPS is beginning to move toward the *Transforming our Buildings* targets. The Investigative Services Division (ISD) building constructed in 2020 was designed using Leadership in Energy and Environmental Design (LEED) guidelines. LEED provides a framework for the construction of green buildings by addressing carbon, energy, water, waste, transportation, materials, health and indoor environmental quality (USGBC, 2023).

Due to the cost associated with achieving LEED Certification, the ISD building did not achieve enough points to be considered a LEED Certified building. However, there were still many elements that moved HPS toward our modelled targets which include: a district energy heating and cooling system, and optimization of energy performance.

As shown in ***Table 26***, the proposed Station 40 in Waterdown is currently being designed to Net Zero standards which is in line with the City facility's net-zero 2050 target, but at this time the costing associated with this is unknown and will be subject to Council approval.

Finally, the Growing Green transformation, which will involve planting trees, will eventually be incorporated as part of the Facilities' initiatives as discussed in ***Table 24***, but there are security concerns with ensuing adequate sight lines and visibility for staff and the public at facilities. As such, this will continue to be investigated.

Changing How We Move

At this time, this modelled target is a challenge for HPS because of the specific requirements for HPS vehicles. As discussed in ***Table 25***, there are currently no reliable clean fuel options for frontline vehicles, resulting in a lot of unknowns for what infrastructure will be required for these vehicles and the potential lifecycle cost. It is anticipated that over the next decade with provincial mitigation targets, that more information will become available to assist with planning purposes, but at this time replacement costs for vehicles in the lifecycle models are based on the existing 2022 cost for gas and existing hybrid powered vehicles.

As shown in ***Table 25***, HPS has currently applied for grant funding from NRCan to install charging stations for future electric vehicles which will bring HPS closer to the 2040 light-duty vehicle goal, but currently no electric vehicles have been purchased for the HPS fleet.

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 they 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.[9]

In 2021, the City of Hamilton completed a Vulnerability and Risk Assessment Report 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

The impact areas were incorporated into the climate change adaptation analysis for this service area by:

- Identifying the asset specific adaptation impact statements that affected the service areas;
- Discussing the potential impacts on the asset/service using the projected change in climate using the RCP4.5 Scenario; and,
- Proposing preliminary demand management plans to adapt to these impacts.

It is important to note that 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 and financial models 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 consider these adaptation impacts during the planning and design processes. Once the demand management plans are finalized, the information will be incorporated into future iterations of the AM Plan. This has been identified as a continuous improvement item in ***Table 34***.

Moving forward, a Climate Lens tool is currently being developed which will assess projects based on these targets and will assist with the prioritization of climate adaptation projects.

The adaptation impact statements identified by HPS staff which will have a potential impact on assets and services include temperature increases, and ice storms as shown in ***Table 27*** below.

[9] IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

Table 27 : Managing the Demand of Climate Change on Assets and Services

ADAPTATION IMPACT STATEMENT	BASELINE** (1976 - 2005)	AVERAGE PROJECTED** CHANGE IN 2021-2050 (ASSUMING RCP4.5* SCENARIO)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
Rising summer temperatures and extreme heat will increase energy demand for air conditioning, causing a financial burden for low-income households.	25.9 ° Celsius average summer seasonal temperature	27 ° degrees average summer seasonal temperature	Increase demands on HVAC systems and costs. Increase in temperature could lead to thermal stress of server/network equipment in network closets (small rooms, not good air flow, etc.)	Continue healthy preventative maintenance programs to ensure systems are prepared for extra load. Plan for equipment replacements at end of service life to ensure good condition
Dryer, hotter and longer summers may affect the health and safety of local vulnerable populations.	71.6 days average length of hot season	102 days average length of hot season	Extreme heat can lead to more violent crime which may lead to an increase in emergency response.	Investigate correlation between heat and crime and adjust future projections for “cop to pop” ratios for future planning.
More frequent and intense heatwaves will increase instances of heat-related health and safety issues, particularly for households without access to reliable air-conditioning and the homeless	2.1 average annual heat waves	4.7 average annual heat waves		

ADAPTATION IMPACT STATEMENT	BASELINE** (1976 - 2005)	AVERAGE PROJECTED** CHANGE IN 2021-2050 (ASSUMING RCP4.5* SCENARIO)	POTENTIAL IMPACT ON ASSETS AND SERVICES	DEMAND MANAGEMENT PLAN
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° Celsius average annual temperature	15.1° Celsius average annual temperature		
Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns.	187mm average total winter precipitation	204mm average total winter precipitation	Emergency response increasing. Accidents, traffic signal outages, fallen poles require police presence etc.	Investigate correlation between power outages and emergency response and adjust future projections for police to population ratios for future planning.

*RCP4.5 Scenario: Moderate projected GHG concentrations, resulting from substantial climate change mitigation measures. It represents an increase of 4.5 W/m2 in radiative forcing to the climate system. RCP 4.5 is associated with 580-720ppm of CO2 and would more than likely lead to 3°C of warming by the end of the 21st century.
**Baseline and Projected numbers based on 2021 Climate Science Report.

ADAPTATION RISK ANALYSIS

Additionally, the City 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.

Similar to the exercise above and using the risk process in Section 6, 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 came up with a preliminary risk adaptation plan shown below in ***Table 28***.

It is important to note that due to the high level of uncertainty with the climate change risk adaptation plans, the cost of the mitigating the risks below have 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 28 : Adapting to Climate Change

Adaptation Impact Statement	Service or Asset at Risk due to Impact	What Can Happen	Risk Rating	Risk Adaptation Plan
Prolonged power outages during winter months due to an increase in ice storms resulting in public safety concerns.	**Police Stations**	Potential of loss of essential services (i.e., 911 services) due to power outage.	High	Investigate redundancy locations for critical communications equipment. Ensure proper maintenance of backup power system.
Increased intensity and frequency of ice storms leading to increased hazardous roads, pathways and sidewalk conditions.	**Vehicles**	Increase in motor vehicle collisions to police vehicles, inability for members to get to work	High	Ensure contracts are in place to repair damaged vehicles promptly. Plan to ensure spare vehicles and staff are available. Ensure snow clearing contracts in place to clear parking lots, pathways, and sidewalks. Plan for work from home options when applicable.

CURRENT ADAPTATION PROJECTS

Currently, HPS does not have any current or past climate change adaptation specific projects identified. The impact of climate change on assets and how the City will adapt is a new and complex discussion and further opportunities will be developed in future revisions of this AM Plan.

CLIMATE ADAPTATION DISCUSSION

Currently, HPS has focused their climate change efforts on mitigation efforts and not yet onto adaptation methods. This is because climate effects are more difficult to assess on HPS services and assets and need to be investigated further which has been identified as a continuous improvement item in ***Table 34***.

Increased Temperature

There are many projections related to increased temperature with include heat waves, rising temperatures, increase in average temperatures, and longer summers. One demand result of hot weather is an increase in emergency response. As stated in ***Table 28***, one of the Adaptation Impact Statements shows that hot weather affects health and safety for households without access to reliable air-conditioning and the homeless. During these events, this would lead to an increase in calls for emergency services. HPS and other emergency services should investigate this correlation to ensure appropriate staff and assets are available as the climate continues to shift.

There is also a growing correlation between interpersonal violent crime and hot weather. “A growing body of research suggests that rising temperature increases some violent crimes, such as intentional homicides, sex offences, and assaults. In a retrospective study in seven US cities, every 5°C rise in daily mean temperature between 2007 and 2017 was associated with a 4% to 5% increase in sex offences in the following zero (0) to eight (8) days. A nationwide analysis in Japan between 2012 and 2015 found that ambulance transports due to assault increased linearly with the rise in daily temperatures. Violent incidents also showed a seasonal distribution by which most crimes happened in the summer or hot seasons than in winter.” (Mahendran et al, 2021). HPS should also investigate this correlation to ensure that appropriate staff and assets are available as this problem becomes more prevalent over time.

Finally, from an asset specific lens, increased temperature will increase the demand on Facilities assets’ HVAC systems. This is not unique to the HPS service, but is a demand that should be planned for, for all City facilities.

Increase in Ice Storms

An increase in ice storms can lead to increased motor vehicle collisions and power outages throughout the City which can lead to more emergency response calls. Ice storms could also increase motor vehicle collisions for HPS Vehicle assets and availability of staff. HPS should investigate this correlation to ensure that appropriate staff and assets are available as climate change continues to affect the service.

In addition to more emergency response calls, ice storms can also cause power outages at the stations themselves. Police Stations have back-up generators and redundant power in case of

emergency to not interrupt 911 communications. Although the likelihood of this event is rare, the consequences would be catastrophic. Therefore, investigating back-up locations for 911 communications assets would reduce the risk to low.

8. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the City plans to manage these assets at the agreed levels of service and at the accepted lifecycle costs while excluding inflationary values. The costs included in the lifecycle management plan includes costs from both the Capital and Operating budget. 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 on 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. A continuous improvement item included in ***Table 34*** is to modify the budget sheets to incorporate lifecycle stages so that the results can be more accurate in the next iteration of the plan.

At the time of writing, HPS creates a Capital forecast for ten (10) years into the future, but the forecast only currently includes costs to 2029, with higher confidence values in the first four (4) years. The remainder of the forecast was assumed based on predicted demands and averages. A continuous improvement item identified in ***Table 34*** is to continue to complete a ten (10) year Capital forecast. The Operating budget is created annually, but there is an additional estimated three (3) year projection which was used to estimate the operational budget increase for the first three (3) years for HPS. The projections were not continued throughout the thirty (30) year forecast as the three (3) year projection included collective agreement wage increases and staffing enhancements which may not continue over thirty (30) years.

8.1 ACQUISITION PLAN

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.

CURRENT PROJECT DRIVERS – TEN (10) YEAR PLANNING HORIZON

HPS currently has a newly developed prioritization matrix which they will use to plan and prioritize both acquisition and renewal projects. The weightings are shown below in ***Table 29***.

Table 29 : Priority Ranking Criteria

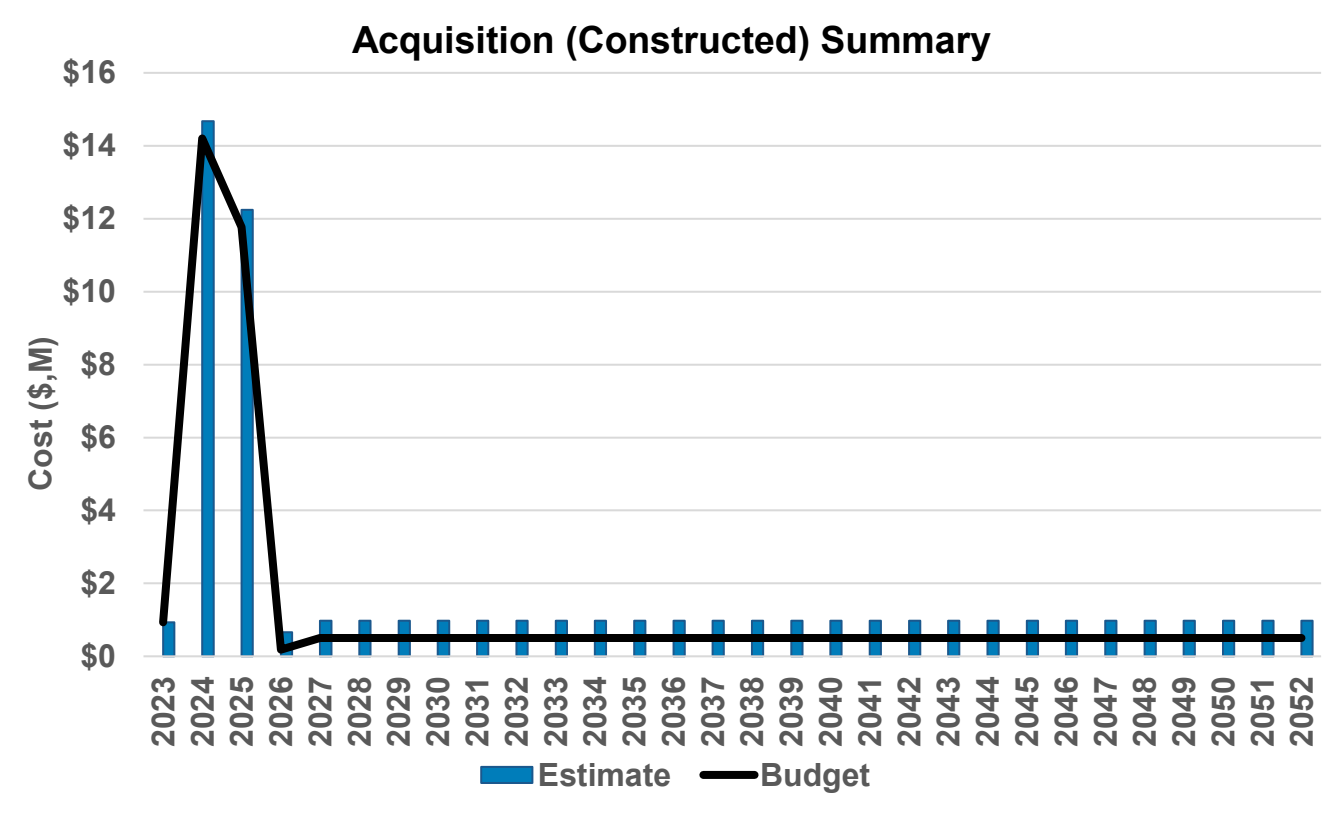
CRITERIA	WEIGHTING
Financial Benefit	25
Strategic Alignment	25
Organizational Efficiencies	25

CRITERIA	WEIGHTING
Risk Mitigation	25
Financial Availability	25
Project Complexity	25
Human Resource Capacity	25
Project Experience	25
Total	**200**

CONSTRUCTED OR PURCHASED ACQUISITIONS

For HPS, assets are typically acquired through the purchase or construction of new assets which are mostly related to population growth or technological changes as discussed in the Demand section. Over the next five (5) year planning period, HPS will acquire approximately $27.0M of purchased or constructed assets as shown below in ***Figure 13***. Hamilton will continue to monitor its constructed and purchased assets annually and update the AM Plan when new information becomes available.

Figure 13: Acquisition (Constructed) Summary
All Figure Values Are Shown In 2023 Dollars.



The major acquisition expenditures over the next ten (10) years include:

- **$11.5 million** in 2025 for proposed Waterdown Shared Station, which may increase as this is an ongoing project;
- **$7.8 million** in 2024 for NG911 technological changes (*this is included as a multi-year budget item from 2021-2023 Information Technology budget, but has been included in the HPS AM Plan because HPS is considered the asset owner and the project must be implemented by March 2025*);
- **$6.0 million** in 2024 for NG911 Facility Upgrades (*this is included as a multi-year budget item from 2021-2023 Information Technology budget, but has been included in the HPS AM Plan because HPS is considered the asset owner and the project must be implemented by March 2025*);
- **$750 thousand** in 2023 for eTickets/Notes pilot project;
- **$732 thousand** from 2022-2026 for 9mm ammunition conversion from .40 calibre magazine;
- **$542 thousand** for Hardware Server/Storage Acquisition in 2024; and,
- **$474 thousand** annually for asset acquisitions due to new officers including vehicles, equipment and technology.

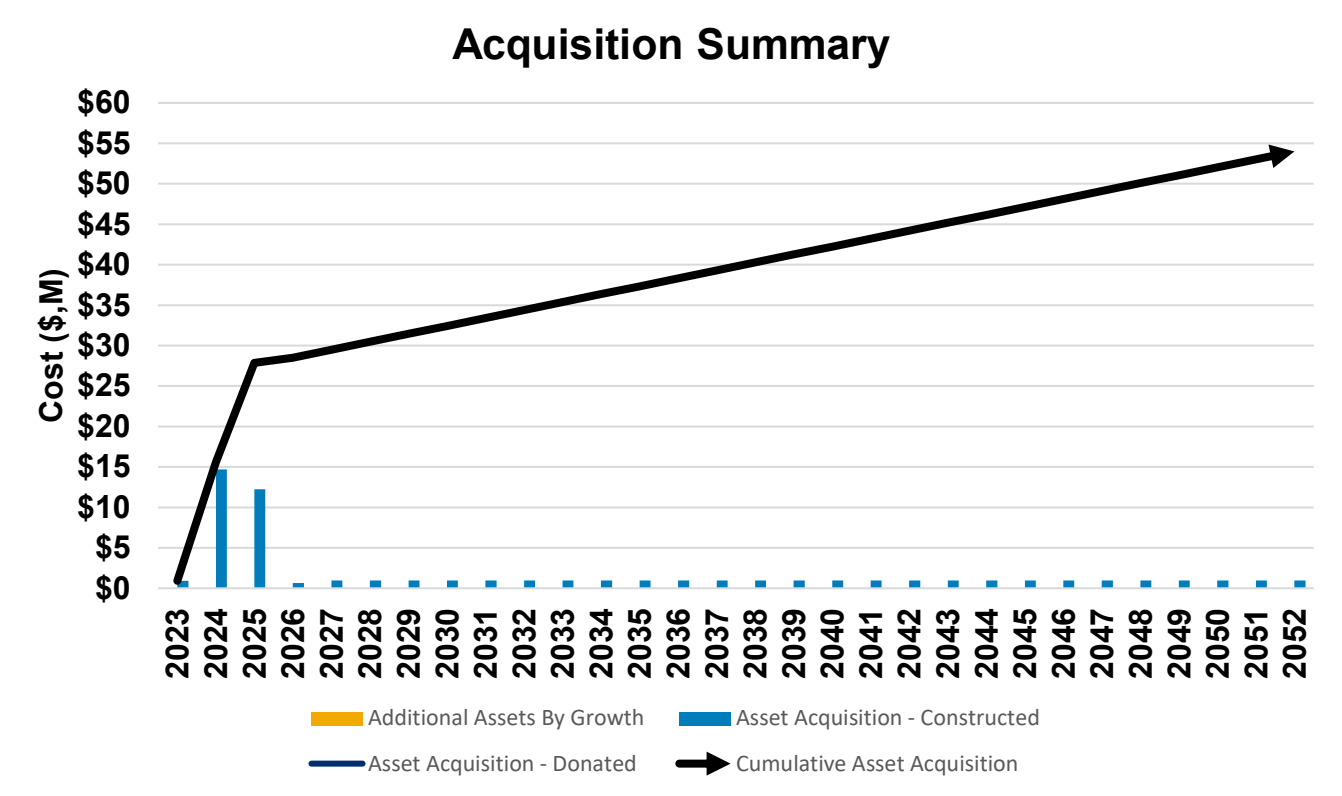
Since the capital forecast only contains four (4) years of acquisitions, the remainder of the capital forecast is based on the four (4) year average (excluding the NG911 and Facility acquisitions) and the estimated number of assets required to support the “cop to pop” ratio. HPS must increase their acquisition budget for the vehicle and equipment assets required to support the new officers. It is recommended that these items be added into the budget forecast based on the “cop to pop” ratio as discussed in Section 5.1. With competing needs for resources across the entire city there will be a need to investigate tradeoffs and design options to further optimize asset decisions and ensure intergenerational equity can be achieved.

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

ACQUISITIONS SUMMARY

Forecast acquisition asset costs are summarized in ***Figure 14*** and show the cumulative effect of asset assumptions over the next ten (10) year planning period.

Figure 14: Acquisition Summary
All Figure Values Are Shown In 2023 Dollars.



When Hamilton commits to constructing or purchasing new assets, the municipality must be prepared to fund future operations, maintenance, and renewal costs. Hamilton 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 on by Hamilton. The cumulative value of all acquisition work, including assets that are constructed and contributed are shown in ***Figure 14*** above. Hamilton 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.

Since the Police Service is a largely people driven service, the majority of costs required to deliver the service are employee related costs. Some of the major operational investments over the next ten (10) years include:

- **$173 million** allocated for employee related costs in 2023 (i.e., salaries, wages, benefits, contractual agreement etc.);
- **$2.64 million** allocated annually starting in 2025 for NG-911 civilian staff operating cost; and,
- **$1.05 million** allocated annually starting in 2024 for NG-911 technology operating cost.

Maintenance should be viewed as the ongoing management of asset deterioration. The purpose of planned maintenance is to ensure that the correct interventions are applied to assets in a proactive manner and to ensure it reaches its 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 for HPS include building component replacements, and vehicle repairs along with appropriate staffing and material resources required to perform these activities.

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

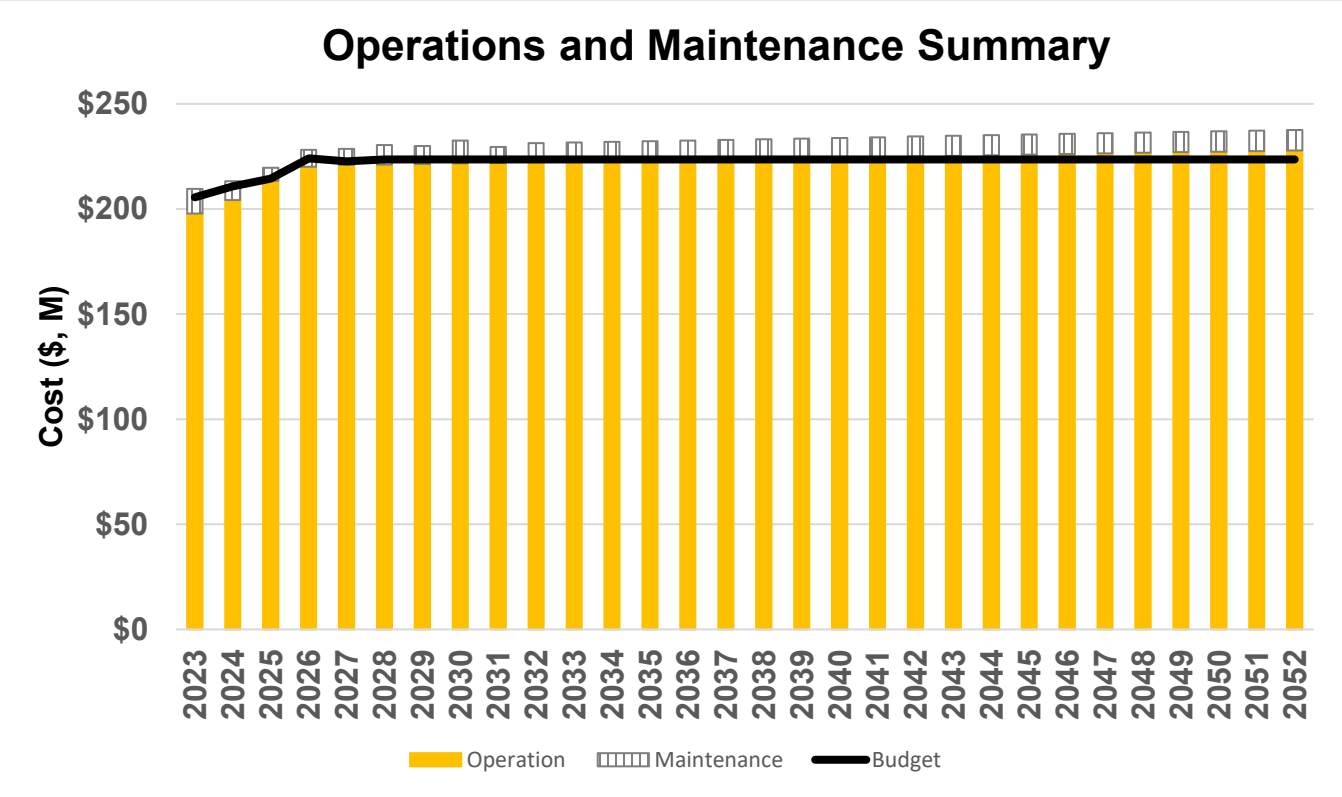
Major maintenance projects the City plans to complete over the next ten (10) years include:

- **$3.5 million** allocated for Central and Mountain station roof replacement from 2023-2026; and,
- **$2.6 million** allocated for Central, East End and Mountain station parking lot replacement from 2023 - 2025

It is important to note that capital works allocated to Central Station may be on hold while HPS evaluates what next steps are required due to the finding of mechanical deficiencies explained in Section 3.2.1.2.

Forecast operations and maintenance costs vary in relation to the total value of the asset registry. When additional assets are acquired, the future operations and maintenance costs are forecast to increase. When assets are disposed of the forecast operation and maintenance costs are reduced. ***Figure 15*** shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

Figure 15: 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 officers, vehicles and equipment per the “cop to pop” ratio, new staff and technology due to the NG-911 technology change, as well as the additional operation and maintenance costs for the proposed Waterdown Station and permanent Marine Unit. All of these costs have been incorporated in this model with information available at the time of writing, but it has been identified as a continuous improvement item in ***Table 34*** to quantify additional operations and maintenance costs for facilities in a more detailed analysis.

As previously mentioned, HPS created a three (3) year multi-year operating budget which included operations, maintenance, and renewal items until 2026. This multi-year forecast was included in the figure above with the operations and maintenance portions of the Operating budget, and then these numbers were carried flat across the thirty (30) year forecast from 2027-2052. The reason these values were not escalated is because the three (3) year projection included collective agreement wage increases and staffing enhancements which may not continue over the thirty (30) year forecast and were difficult to separate out at this time. However, it is evident that HPS will need to continue increasing their operations and maintenance budgets annually to continue to deliver the current levels of service.

It is evident that HPS mostly has sufficient funding from the current year budget and multi-year forecast 2023-2026 to achieve the majority of operations and maintenance requirements to ensure that HPS will be able to continue delivering their current levels of service**.** However, it is anticipated that at the current budget levels, there will be a minor shortfall in funding to address all maintenance needs over the ten (10) year planning horizon. This minor shortfall is primarily

due to unfunded repairs to police facilities based on the Building Condition Assessments. However, it is important to note that priority repairs are being completed on these facilities, and the facilities are in overall good condition with the exception of Central Station. This minor shortfall in maintenance funding may result in higher cost reactive maintenance over time.

As the City continues to develop condition profiles and necessary works are identified based on their condition, it is anticipated these operation and maintenance forecasts will change. Future iterations of this plan will provide a more thorough analysis of operations and maintenance costs including types of expenditures for training, mandatory certifications, insurance, staffing costs and requirements, equipment, and maintenance activities.

8.3 RENEWAL PLAN

Renewal is major work which does not increase the assets design capacity but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Works over and above restoring an asset to 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 assets reliability or quality will meet the service requirements set out by the City. 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 30*** and are based on estimated design life for this iteration of the AM Plan. 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 2022 however they will be reviewed annually until their accuracy reflects the City's current practices.

Table 30 : Useful Lives of Assets

ASSET (SUB)CATEGORY	ESTIMATED SERVICE LIFE (YEARS)
All Facilities	50
Frontline Vehicles	5
Non-Frontline Vehicle	10
Marine Vehicles	10-15
Vehicle Tools	15
Bicycle	2
Body Armour	8
All Officer Issued Uniform & Equipment	20
CCTV Camera	10
Vehicle Computer	5
Vehicle Radio	10
Servers & Storage	5
Desktop & Mobile	4-6
FSB Equipment	10
Personal Issue Equipment (Portable Radios)	10
BTC Phone	10
Cell Phone	5
Lab Equipment	10
Network	10
Tech Crime Unit	5-7
Security	5-10

The estimates for renewals in this AM Plan were based on the register method which utilizes the data from the City's asset registry to analyse all available lifecycle information and then determine the optimal timing for renewals based on the ESL. The alternate method was also used to quantify renewals for future anticipated acquisitions.

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., vehicles can respond to an emergency); or,
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., body armour is in acceptable condition).[10]

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 subsequent impact on users would be significant;
- Have higher than expected operational or maintenance costs; and,
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.[11]

The ranking criteria used to determine priority of identified renewal proposals is detailed in ***Table 29*** in the Acquisition Section since HPS uses the same criteria for both Acquisitions and Renewals.

SUMMARY OF FUTURE RENEWAL COSTS

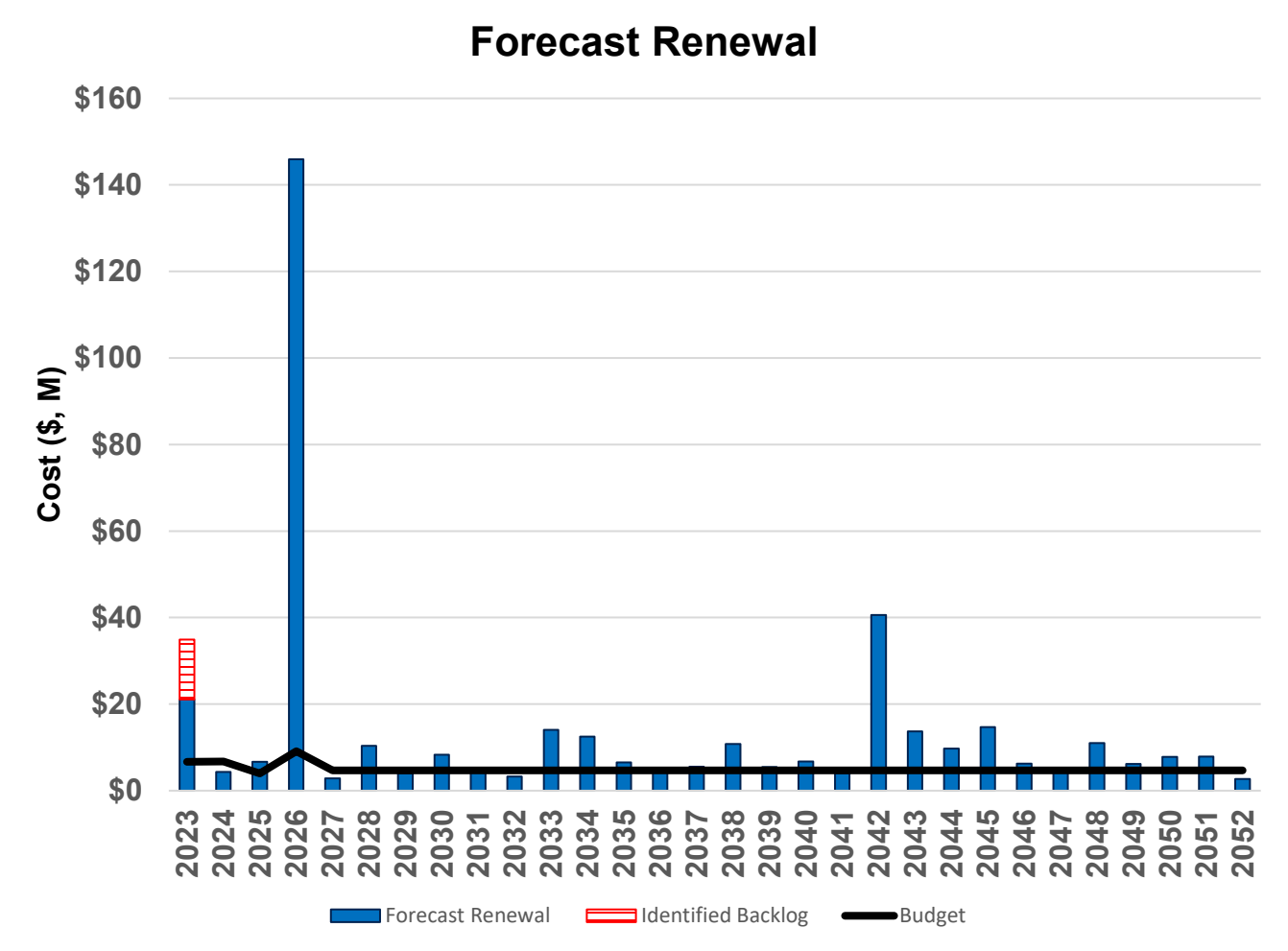
Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in ***Figure 16***.

In the figure below, Generation 1 (Gen 1) costs refer to renewals that occur for the first time in the model based on the estimated service life and Generation 2+ (Gen 2+) costs refer to renewals that have occurred twice or more based on the estimated service life.

[10] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.
[11] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

Figure 16: Forecast Renewal Costs
***** All Figure Values Are Shown In 2023 Dollars.***



The significant spike in 2026 is for the renewals for both the Marine Facility and Central Station. Central Station is at its end of life and is currently unfunded. This is an extremely large expenditure for HPS and significantly affects the Asset Renewal Funding Ratio in Section 9.1.

In addition, the other significant amount in the model above highlighted in red in 2023 represents the cumulative backlog of deferred work needed to be completed that has been identified through its current estimated service life per Table 30. This back log represents nearly $14M of deferred works that have accumulated over the last decade and have created a significant backlog of necessary works.

Major backlog items include:

- **$5.8 million** in personal issue equipment (this is lower confidence data);
- **$2.0 million** in vehicles;
- **$3.7 million** in servers and storage; and,
- **$1.8 million** in vehicle radios.

There is sufficient budget to support the planned renewals, but since the bulk of the backlog in 2023 is for vehicles and IT equipment which have short estimated service lives of five (5) and ten (10) years, and the model assumes the backlog has been addressed in 2023, there are repeating spikes every five (5) and ten (10) years throughout the thirty (30) year lifecycle.

The additional expected renewal works over the ten (10) year planning horizon include**:**

- Replacement of vehicles as they reach the end of useful life;
- Replacement of IT equipment as they reach the end of useful life; and,
- Replacement of Officer equipment as they reach the end of useful life.

In addition, East End Station will be due for renewal in 2042, and HPS should begin to budget appropriately for this replacement in upcoming years while considering the net-zero requirements for Climate Mitigation discussed in Section 7.1.

Since properly funded and timely renewals ensures the assets perform as expected, HPS is performing satisfactorily by replacing assets at the suggested interval with an appropriate budget. Deferring renewals create risks of higher financial costs, decreased availability, and decreased satisfaction with asset performance. 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 sale, possible closure of service, decommissioning, 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 structure has fallen.

Assets identified for possible decommissioning and disposal are shown in ***Table 31***. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in ***Table 31***. Any costs or revenue gained from asset disposals is included in future iterations of the plan and the long-term financial plan.

Table 31: Assets Identified for Disposal

ASSET	REASON FOR DISPOSAL	TIMING	DISPOSAL COSTS	OPERATIONS & MAINTENANCE ANNUAL SAVINGS
23 Vehicles	Past service life/mileage	Annual	N/A	$0

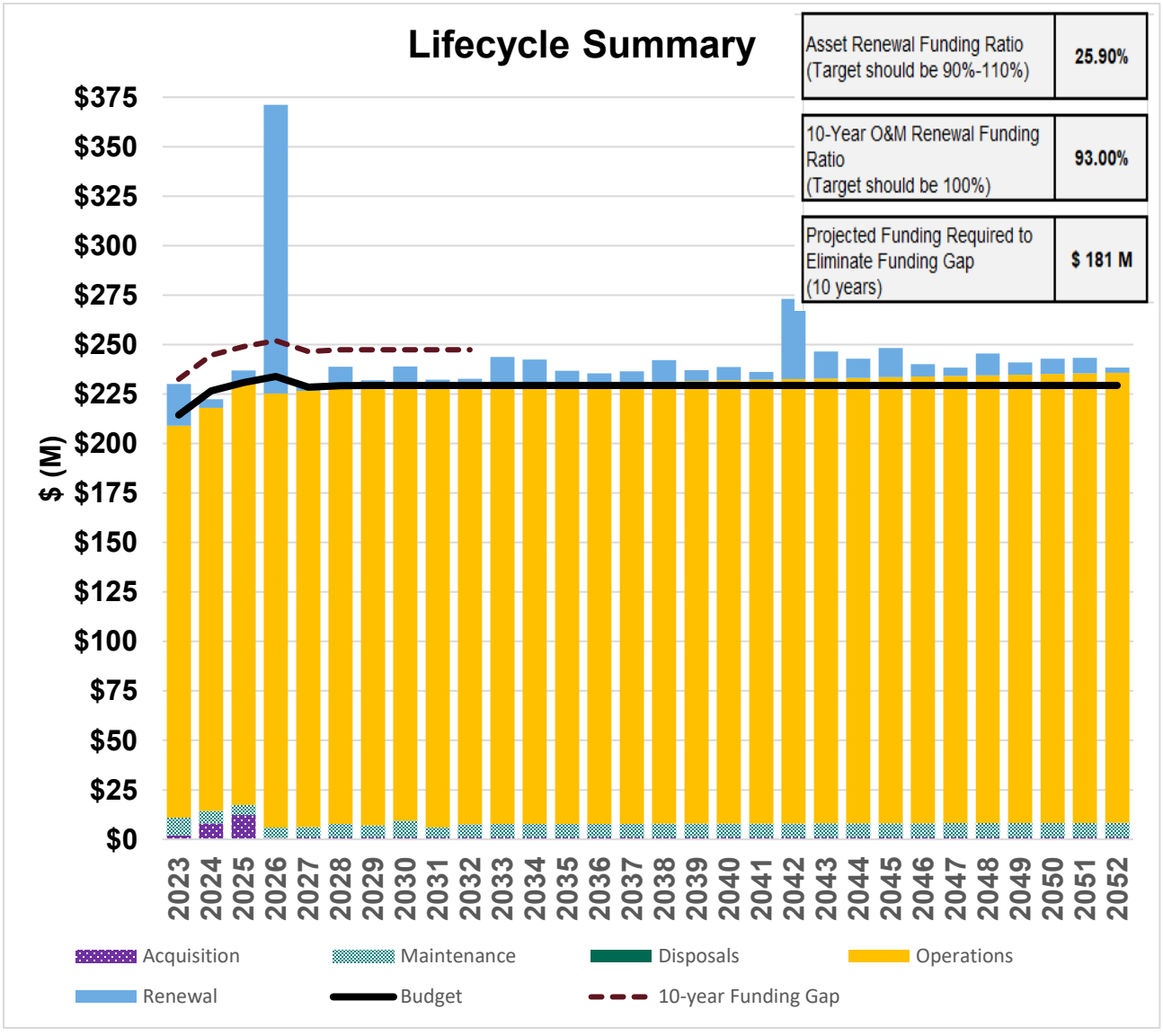
HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

8.5 LIFECYCLE COST SUMMARY

The financial projections from this asset plan are shown in ***Figure 17***. 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 needed 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 balance between costs, levels of service and risk to achieve the best value outcome.

Figure 17: Lifecycle Summary
All Figure Values Are Shown in 2023 Dollars.



However, HPS will need to continue to increase their budget annually from 2027 to 2052 to account for the additional staff time and assets to support the “cop to pop” ratio, the NG-911 technological changes, and the new Waterdown Station and Marine Unit, otherwise HPS will be unable to maintain their current levels of service. The 10-year funding gap is explained in **Section 9.1.**

There is typically sufficient budget to address the planned lifecycle activities for the 2023 to 2026 planning period, with the exception of the Central Station renewal in 2026. This large number of acquisitions in 2025 will also commit HPS to funding ongoing operations, maintenance, and renewal costs throughout the forecast.

As previously mentioned, due to the lack of data confidence in the current levels of service information, HPS 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 will continue to improve its lifecycle data, and this will allow for informed choices as how best to mitigate impacts and how to address the funding gap itself. This gap in funding future plans will be refined over the next three (3) years to improve the confidence and accuracy of the forecasts.

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 enable the City to ensure HPS provides the appropriate level of service for the City to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the City is transparently fulfilling its stewardship accountabilities.

Long-Term financial planning (LTFP) is critical for the City to ensure the networks lifecycle activities such as renewals, operations, maintenance, and acquisitions can happen at the optimal time. The City 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, the City will have difficult choices to make in the future which will include options such as higher cost reactive maintenance and operational costs, reduction of service and potential reputational damage.

Aligning the LTFP with the AM Plan is critical to ensure all of the network's needs will be met while the City is 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 (2) 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 ten (10) years / forecast renewal costs for the next ten (10) years; and,
- Medium term forecast costs/proposed budget (over ten (10) years of the planning period).

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio[12] **25.9%**

The Asset Renewal Funding Ratio is used to determine if the City is accommodating asset renewals in an **optimal** and **cost effective** manner from a timing perspective and relative to financial constraints, the risk the City 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, including a lack of permanent infrastructure funding from senior levels of government, as well as large spikes of growth throughout the years.

Over the next ten (10) years the City expects to have **25.9%** of the funds required for the optimal renewal of assets. While this number seems significantly low, the ratio is heavily influenced by

[12] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

the need for the renewal of Central Station in 2026. If this building were funded, the AARF would be closer to 70%. Although the 70% is still below the 90 to 110% ideal threshold, HPS would be considered to be well funded for renewals in comparison to many other City services.

If assets are not renewed in 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 reputation and risk of fines or legal costs.

The lack of renewal resources will be addressed in future AM Plans while aligning the plan to the LTFP. This will allow staff to develop options and long-term strategies to address the renewal rate. The City will review its renewal allocations once the entire inventory has been confirmed and amalgamated.

MEDIUM TERM – 10 YEAR FINANCIAL PLANNING PERIOD

10-Year Lifecycle Financial Ratio 93%

Although this AM Plan includes forecast projections to thirty (30) years, the higher confidence numbers are typically within the first ten (10) years of the lifecycle forecast. The ten (10) year Lifecycle Financial 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 ten (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' risk and service level commitments.

The forecast operations, maintenance and renewal costs over the ten (10) year planning period is **$244M** 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 **$226M** on average per year giving a ten (10) year funding shortfall of **$18.1M** per year or **$181M** over the ten (10) year planning period. This indicates that **93%** of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget, which is within the 90-110% range. Therefore, it can be concluded that HPS is funding their assets at an acceptable rate. Note, these calculations exclude acquired assets.

Funding an annual funding shortfall or funding 'gap' should not be addressed immediately. The overall gap in funding city-wide will require vetting, planning and resources to begin to incorporate gap management into the future budgets for all City services. This gap will need to be managed over time to reduce it in a sustainable manner 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; and,
- Influence level of service expectations or demand drivers.

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 to 110%** for the first years of the AM Plan and ideally over the ten-year life of the Long-Term Financial Plan.

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

Figure 18 shows the forecast costs (outlays) required for consideration in the ten (10) 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.

These options will be explored in the next AM Plan and the City will provide analysis and options for Council to consider going forward.

Table 32 : Forecast Costs (Outlays) For the Long-Term Financial Plan
**** Forecast Costs Are Shown In 2023 Dollar Values**

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2023	$1,989,060	$198,033,840	$8,955,751	$21,065,320	$ -
2024	$8,057,861	$203,701,824	$6,322,750	$4,313,572	$ -
2025	$12,342,501	$212,837,936	$4,986,256	$6,695,838	$ -
2026	$669,501	$219,528,832	$5,161,683	$145,892,512	$ -
2027	$1,010,501	$220,414,704	$5,167,677	$2,852,463	$ -
2028	$1,010,501	$220,654,896	$6,836,212	$10,354,390	$ -
2029	$980,501	$221,015,088	$6,034,634	$4,013,774	$ -
2030	$980,501	$221,255,280	$8,434,822	$8,307,152	$ -

HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

YEAR	ACQUISITION	OPERATION	MAINTENANCE	RENEWAL	DISPOSAL
2031	$980,501	$221,495,488	$5,107,598	$4,691,421	$ -
2032	$980,501	$221,735,680	$6,712,203	$3,253,916	$ -
2033	$980,501	$221,975,872	$6,743,611	$14,090,624	$ -
2034	$980,501	$222,263,424	$6,775,018	$12,481,528	$ -
2035	$980,501	$222,550,960	$6,806,425	$6,514,679	$ -
2036	$980,501	$222,838,496	$6,837,832	$4,830,425	$ -
2037	$980,501	$223,126,032	$6,869,240	$5,548,754	$ -
2038	$980,501	$223,413,568	$6,900,647	$10,821,391	$ -
2039	$980,501	$223,701,120	$6,932,054	$5,434,903	$ -
2040	$980,501	$223,988,656	$6,963,461	$6,749,888	$ -
2041	$980,501	$224,276,192	$6,994,869	$4,005,449	$ -
2042	$980,501	$224,563,728	$7,026,276	$40,593,168	$ -
2043	$980,501	$224,851,264	$7,057,683	$13,690,689	$ -
2044	$980,501	$225,138,816	$7,089,090	$9,720,525	$ -
2045	$980,501	$225,426,352	$7,120,498	$14,702,613	$ -
2046	$980,501	$225,713,888	$7,151,905	$6,239,473	$ -
2047	$980,501	$226,001,424	$7,183,312	$4,288,050	$ -
2048	$980,501	$226,288,976	$7,214,720	$11,037,001	$ -
2049	$980,501	$226,576,512	$7,246,127	$6,148,507	$ -
2050	$980,501	$226,864,048	$7,277,534	$7,812,747	$ -
2051	$980,501	$227,151,584	$7,308,941	$7,899,328	$ -
2052	$980,501	$227,439,136	$7,340,349	$2,694,192	$ -

9.3 FUNDING STRATEGY

The proposed funding for assets is outlined in the City's operational budget and ten (10) 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 more detailed service delivery options and alternatives to optimize limited financial resources.

9.4 VALUATION FORECASTS

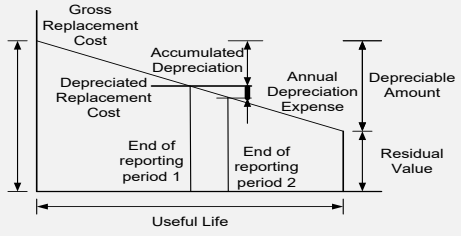
Asset values are forecast to increase as additional assets are added into service. As projections improve and can be validated with market pricing, the net valuations will increase significantly.

Additional assets will add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs for 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 would remove the high costs renewal obligations. At this 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 VALUATIONS

The best available estimate of the value of assets included in this AM Plan are shown below. The assets are valued at estimated replacement costs:

Replacement Cost (Current/Gross)	**$351,957,702**
Depreciable Amount	**$351,957,702**
Depreciated Replacement Cost[13]	**$138,297,136**
Depreciation	**$ 12,420,014**



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 the City matures its asset data, it is highly likely that these valuations will fluctuate significantly over the next three (3) 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.

[13] Also reported as Written Down Value, Carrying or Net Book Value.

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 development charge by law staff projections and are the basis for the projections for the ten (10) year horizon and encompass additional operational needs where known and on anticipated budget proportions when unknown;
- Maintenance forecasts are based on current budget allocations and encompass anticipated needs where known and on anticipated budget proportions when unknown;
- Replacement costs were based on historical costing. They were also made without determining what the asset would be replaced with in the future.

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 on page 31 in the AM Plan Overview.

The estimated confidence level for and reliability of data used in this AM Plan is considered to be a **Low -Medium** confidence level.

Table 33 : Data Confidence Assessment for Data Used in AM Plan

DATA	CONFIDENCE ASSESSMENT	COMMENT
Demand drivers	Medium	Based on a combination of Development Charges By-Law assumptions and NG-911 reports. Cell phones are a high-level estimate. All of which are subject to change as the situation develops.
Growth projections	Medium	Based on Development Charges By-Law assumptions, which is subject to change.
Acquisition forecast	Low	First 4 years are accurate, the remaining 26 are based on the 4-year average.
Operation forecast	Low	First 4 years are accurate, the remaining 26 are based on high level numbers. New facility numbers are very high level. There is uncertainty around future collective agreements and officer enhancements for model.

HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

DATA	CONFIDENCE ASSESSMENT	COMMENT
Maintenance forecast	Low	First 4 years are accurate, the remaining 26 are based on high level numbers. Building Condition Assessment forecast numbers have low confidence. New facility numbers are very high level.
Renewal Forecast - Asset values	High	Most assets are based on recent market value.
- Asset useful lives	Medium	Officer Equipment and Technology assets are not always replaced per their renewal schedule, these may need to be reviewed in future.
- Condition modelling	Low	Many assets are replaced according to a renewal schedule, do not have conditions assigned and are often based on age.
Disposal forecast	Very Low	There is no clear disposal forecast, this has not been included.

10. PLAN IMPROVEMENT AND MONITORING

10.1 STATUS OF ASSET MANAGEMENT PRACTICES[14]

ACCOUNTING AND FINANCIAL DATA SOURCES

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

- 2023 Capital & Operating Budgets;
- 2024 – 2026 Multi-Year Operating Forecast;
- Building Condition Assessment reports;
- Various internal reports;
- Asset Management Data Collection Templates;
- 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 databases;
- Asset Management Data Collection Templates;
- Development Charges Collection Template;
- Condition assessments; and,
- Subject matter Expert Opinion and Anecdotal Information.

10.2 IMPROVEMENT PLAN

It is important that the City 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 the City's ability to make evidence based and informed decisions. These tasks span from improved lifecycle activities and improved financial planning to physically improving the assets.

The Improvement plan ***Table 34*** below highlights proposed improvement items that will require further discussion and analysis to determine feasibility, resource requirements and alignment to current workplans. Future iterations of this AM Plan will provide updates on these improvement plans. The costs and resources to complete each of these tasks has not been included in the lifecycle models to data, and resource requirements would need to be reviewed for internal resource driven projects.

[14] ISO 55000 Refers to this as the Asset Management System

HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

*Table 34 : Improvement Plan (*p.a – per annum)*

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1.	**Investigate incorporating a condition rating during regular vehicle inspection /maintenance activities per 5-point scale**	HPS Fleet / HPS IT Operations	$2,000 Internal Resources	2024-2026
2.	**Release public engagement survey annually to ensure customer satisfaction and track customer trends**	CAM / HPS	$3,100 Internal Resources	2025
3.	**Identify additional risks and trade-offs/shortfalls and develop detailed risk management plans with treatment costs**	CAM / HPS	$1540 Internal Resources	2024-2026
4.	**Investigate designing report in management system to extract required technical performance data for Facilities (Archibus) and Fleet (PMExpert)**	HPS	$4000 Internal Resources	2024-2026
5.	**When operationalizing the Strategic Plan, ensure SMART objectives are incorporated per page 43 of AM Plan Overview**	HPS	$4000 Internal Resources	2023-2026
6.	**Continue to create 10-year capital budget**	Finance / HPS	$2000 Internal Resources	2024
7.	**Further investigate climate mitigation and adaptation effects on assets and revise lifecycle model (e.g., when is fleet going to convert to green fuel before 2050?).**	HPS / Climate Office	N/A	Ongoing
8.	**Improve technical levels of service data by investigating measuring response time. This deliverable should also quantify the required budget to achieve response times.**	HPS	$2000 Internal Resources	2024-2025

HAMILTON POLICE SERVICE ASSET MANAGEMENT PLAN

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
9.	**Investigate developing 10-year master plan to identify future demands on the service due to growth.**	HPS	$2000 Internal Resources	Ongoing 2023-2033
10.	**Coordinate with Corporate Facilities & Energy Management to ensure HPS internal facilities work orders are accurately represented in Archibus.**	HPS Facilities Operations	$400 Internal Resources	Ongoing 2024-2025
11.	**Investigate implementing asset registry for all assets and ensure it is following the defined City Data Standard.**	CAM / HPS	$1120 Internal Resources	Ongoing 2023 - 2024
12.	**Review resourcing requirements with future project needs when planning budgets.**	HPS	Might be solved with new project prioritization methodology	Ongoing 2023 - 2024
13.	**Incorporate internal staff opinions into staff customer levels of service for assets where staff are also the customer.**	CAM	$6000 Internal Resources	Ongoing 2024-2025
14.	**Deploy new computer inventory tools and processes to better track devices and determine investment needs across the lifecycle.**	HPS IT Services	$8000 Internal Resources	2023-2024
15.	**Document IT Procurement process and communicate to staff to ensure asset information is tracked for all new assets.**	HPS IT Services	$500 Internal Resources	2023-2024
16.	**Develop condition assessment program for significant technology assets and review estimated service lives.**	HPS IT Services	$2000 Internal Resources	2023-2024

#	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
17.	**Modify Tech Crime Unit 3-point condition scale to a 5-point scale condition scale.**	Tech Crime Unit	$350 Internal Resources	2023-2024
18.	**Improve survey process by incorporating telephone surveys or IP controls.**	CAM	N/A	2025-2028
19.	**Clarify verbiage regarding HPS responsibility for Q2-Importance question as well as Facility public experience for future survey.**	CAM	$300 Internal Resources	2023-2024
20.	**Investigate modifying capital and operating budgets so that projects are categorized by lifecycle stage.**	Finance / CAM	$2400 Internal Resources	Ongoing
21.	**Complete operations and maintenance projections for new or renewed facilities using internal data.**	HPS	$2000 Internal Resources	2023-2025

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 on a regular basis 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.

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 (1) to ten (10) year detailed works programs, budgets, business plans and corporate structures consider the 'global' works 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 90 to 110%).

Appendix A
Survey Analysis

Appendix A – Survey Analysis

Hamilton
Corporate Asset Management

Hamilton Police Service

Survey Period: February 13 - March 20, 2023

August 2023

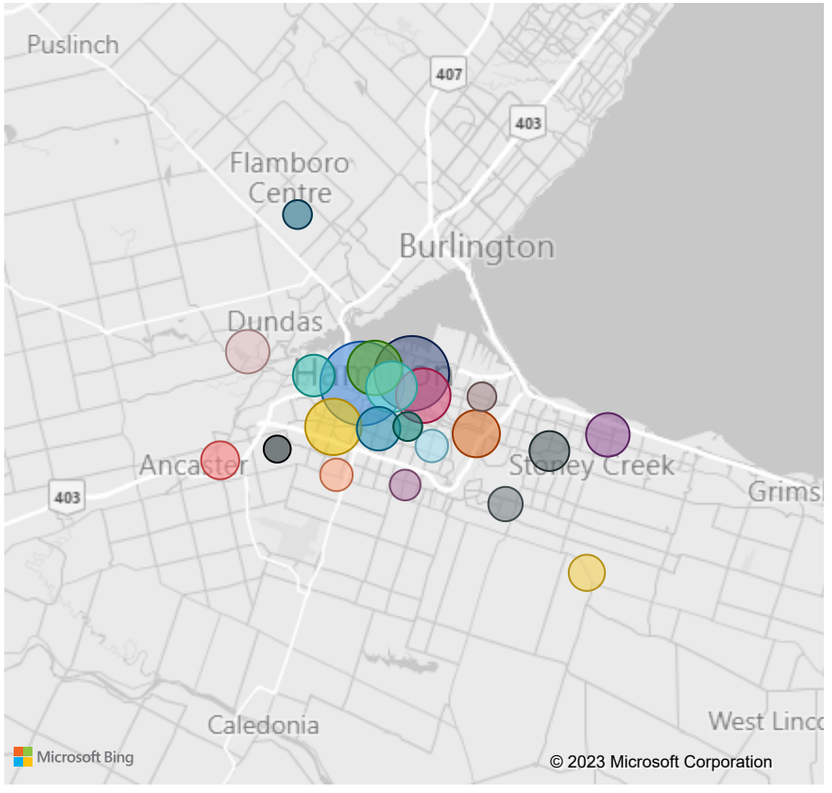
Hamilton Police Service | Corporate Asset Management | 02/13/2023 to 03/20/2023

Survey Response Demographics

258	108	5	24252	1490
Respondents	Survey Questions	Demographic Questions	Survey Responses	Demographic Responses

Postal Code	Respondents	% Respondents	Population
L8P	33	13.75%	42,655
L8L	28	11.67%	50,110
L9C	18	7.50%	64,505
L8M	17	7.08%	22,530
L8R	17	7.08%	19,375
L8N	15	6.25%	26,220
L8K	13	5.42%	52,085
L8E	11	4.58%	64,835
L9A	11	4.58%	40,750
L9H	11	4.58%	50,480
L8S	10	4.17%	26,295
L8G	9	3.75%	36,075
L9G	8	3.33%	38,540
L0R	7	2.92%	123,805
L8J	6	2.50%	42,665
L8T	5	2.08%	31,140
L9B	5	2.08%	38,295
L8W	4	1.67%	39,195
L8B	3	1.25%	38,035
L8H	3	1.25%	41,715
L8V	3	1.25%	34,910
L9K	2	0.83%	23,485
L8A	1	0.42%	

% Respondents by FSA



Age	% Pop. by Age	% Respondents	Respondents
18 to 24	6.8%	0.40%	1
25 to 34	15.3%	14.80%	37
35 to 44	13.8%	18.00%	45
45 to 54	13.2%	17.60%	44
55 to 64	14.7%	25.20%	63
65 to 79	14.3%	22.80%	57
80+	5.2%	1.20%	3

Gender	% Respondents	Respondents
Prefer not to answer	13.49%	34
Male	41.27%	104
Female	53.97%	136

Residency	% Respondents	Respondents
I live in Hamilton	100.00%	254
I run a Hamilton-based business	8.66%	22

Self Identification	% Respondents	Respondents
I do not identify with any of the above groups	71.49%	163
2SLGBTQIA+	12.72%	29
People with disabilities	12.28%	28
Racialized	3.95%	9
Immigrant +10	3.51%	8
Indigenous	3.51%	8
Immigrant <10	1.32%	3

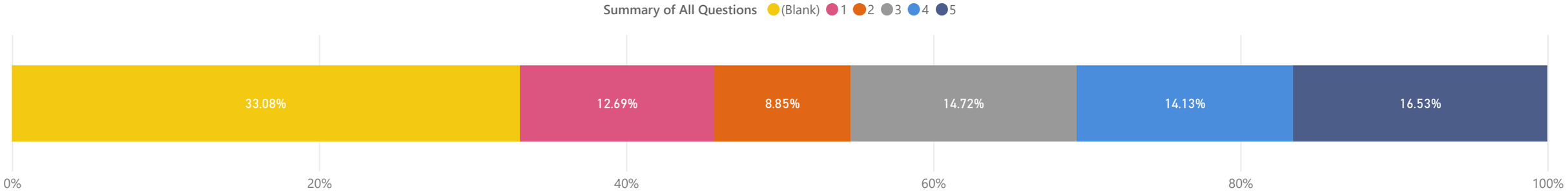
Respondents by Day

Summary of Survey Results

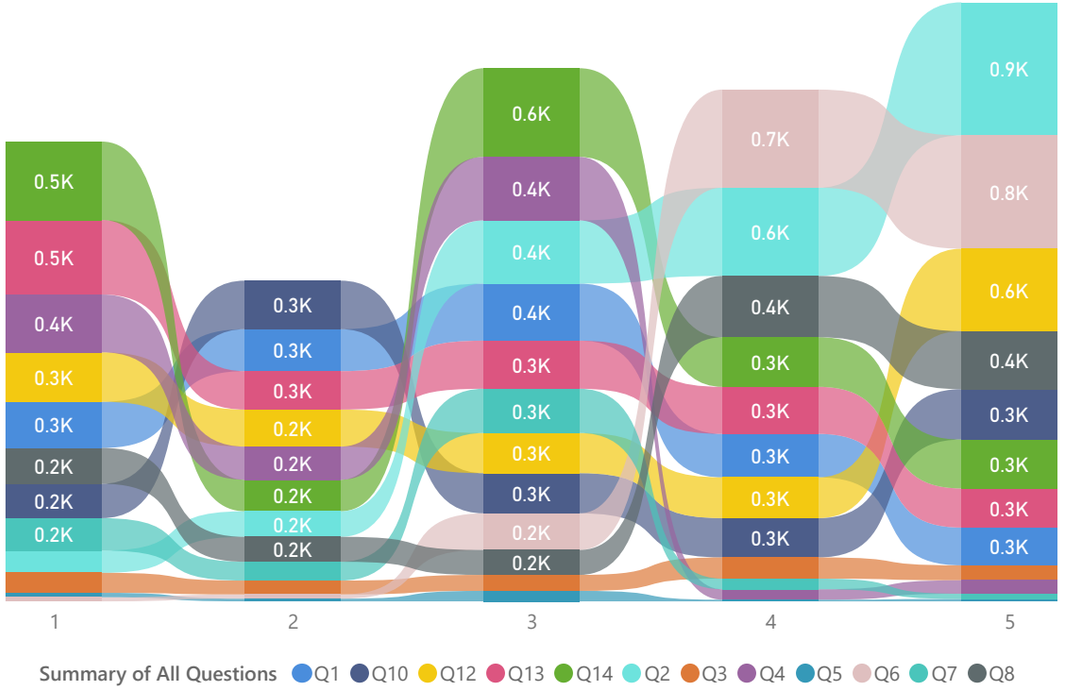
258
Respondents

16230
Responses

City Services & Asset Review
Hamilton Police Services
August 2023



Service Area	σ	Avg.	Avg. %	Opt Out	Opt out %
All Service Areas	**1.18**	**3.2**	**63.9**	**8022**	**33.1**
Q6 Agree with Statements about use and space	0.81	4.2	84.4	91	5.1
Q2 Importance	1.11	3.8	77.1	97	4.2
Q8 Comfortable and Safe, Services	1.43	3.4	67.9	949	40.9
Q12 Recommend to Others	1.51	3.3	65.6	649	28.0
Q10 Future Needs	1.26	3.1	62.1	124	8.0
Q3 Access, last 24 mo	1.40	3.0	59.3	1746	75.2
Q1 Performance, last 24mo	1.34	3.0	58.7	806	34.7
Q14 Rate Level	1.38	2.9	57.2	333	14.3
Q13 Value for Money	1.44	2.8	55.0	667	28.7
Q5 Comfortable, Safe and Clean Spaces	1.22	2.7	55.2	1145	88.8
Q7 Dispatch Times, Meet Needs	1.11	2.4	48.8	287	27.8
Q4 Meet Needs	1.19	2.4	47.5	1128	48.6



258
Respondents

16230
Responses

Survey Question Summary

City Services & Asset Review
Hamilton Police Services
August 2023

Question #	Survey Question	n	σ (Consistency)	Margin of Error (Confidence Level ±)
1	Over the last 24 months, how do you feel the Hamilton Police Service has performed overall in the following services?	168	1.34	20%
2	How important should the following services be as a responsibility for the Hamilton Police Service?	247	1.11	14%
3	In the last 24 months if you have used services provided by the Hamilton Police Service, how satisfied are you with your ability to access services? (If you have not used the services, please choose “Can’t Say”.)	64	1.40	34%
4	Do the following services provided by Hamilton Police Service meet your needs?	132	1.19	20%
5	If you’ve visited a police facility in the last 24 months, were the facilities sufficient for your needs? Please consider if the spaces were accessible, comfortable, and clean.	29	1.22	44%
6	Thinking about how you use internal and external public spaces do you agree with the following statements? Hamilton Police buildings should be:	245	0.81	10%
7	Do the police priority dispatch times meet your needs and expectations for an adequate and effective police response?	186	1.11	16%
8	Did you feel comfortable and safe accessing services provided by the Hamilton Police Service?	152	1.43	23%
10	Please rate the following potential services for the Hamilton Police Service based on their importance to you.	237	1.26	16%
12	How likely would you be to recommend the Hamilton Police Service to others?	186	1.51	22%
13	How would you rate the Hamilton Police Service for providing good value for money in the infrastructure and services provided to your community?	184	1.44	21%
14	If you had to choose, would you prefer to see a tax rate increase to improve service levels OR would you prefer to see changes in service levels to minimize tax rate increases?	221	1.38	18%

Respondents who opted out by not answering or selecting 'Can't Say' are not included in these calculations

All values were calculated and then rounded to the nearest whole number.

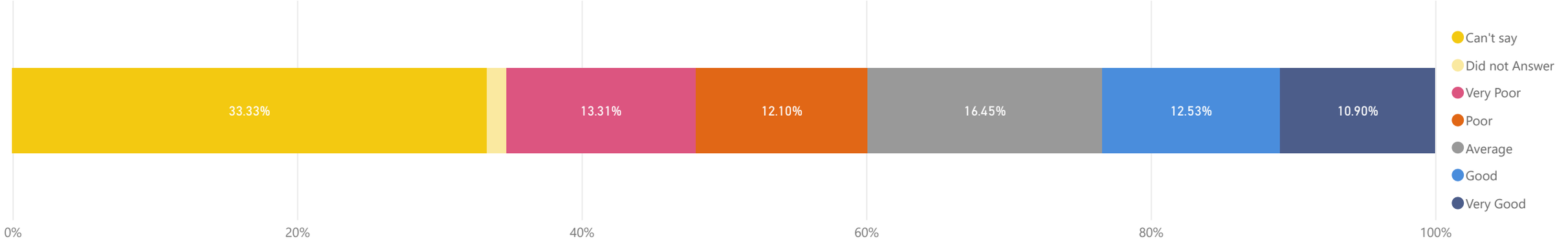
Q1

258
Respondents

1516
Responses

Performance, last 24mo

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



Service Area	σ (consistency)	Avg.	Avg. %	Opt Out	Opt Out %	Very Poor	Poor	Average	Good	Very Good
All Service Areas	**1.34**	**3.0**	**58.7**	**806**	**34.7**	**309**	**281**	**382**	**291**	**253**
Crime Prevention Programs/ Public Outreach	1.39	2.7	54.8	77	29.9	46	40	37	31	27
Emergency Criminal Calls	1.34	3.2	64.2	92	35.7	25	23	47	34	37
Emergency Mental Health Calls	1.40	2.8	56.7	92	35.7	36	41	32	28	29
Investigative Services	1.30	3.2	64.1	106	41.1	19	28	39	35	31
Non-Emergency Calls	1.30	2.5	50.7	57	22.1	56	48	51	25	21
Online Reporting	1.32	2.9	57.1	111	43.1	31	27	42	26	21
Road Safety	1.35	2.9	57.3	41	15.9	50	35	54	50	28
Victim Services	1.42	2.9	58.5	115	44.6	33	26	29	29	26
Vulnerable Sector Clearance	1.20	3.4	68.4	115	44.5	13	13	51	33	33

Respondents who opted out by not answering or selecting 'Can't Say' are included in Opt out.

Q2

258
Respondents

2225
Responses

Importance

How important should the following services be as a responsibility for the Hamilton Police Service?

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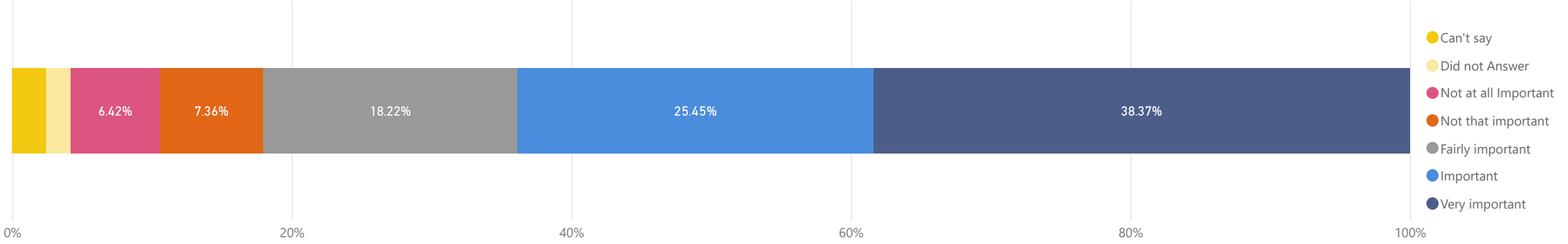

	σ	Avg.	Avg. %	Opt Out	Opt Out %	Not at all Important	Not that Important	Fairly Important	Important	Very Important
All Service Areas	**1.11**	**3.8**	**77.1**	**97**	**4.2**	**149**	**171**	**423**	**591**	**891**
Investigative Services	0.73	4.6	91.7	6	2.4	3	2	13	60	174
Emergency Criminal Calls	0.85	4.6	91.7	7	2.7	5	4	18	36	188
Road Safety	1.10	4.0	80.2	6	2.4	8	18	48	67	111
Non-Emergency Calls	0.96	3.8	76.7	9	3.5	7	13	58	107	64
Online Reporting	1.04	3.8	76.2	13	5.1	10	13	62	89	71
Emergency Mental Health Calls	1.53	3.6	72.7	10	3.8	41	27	24	46	110
Victim Services	1.34	3.5	69.9	11	4.3	29	29	54	61	74
Vulnerable Sector Clearance	1.15	3.4	67.7	25	9.7	17	30	77	64	45
Crime Prevention Programs/ Public Outreach	1.28	3.3	66.1	10	3.9	29	35	69	61	54

Respondents who opted out by not answering or selecting 'Can't Say' are included in Opt out.

258
Respondents

2801
Responses

Individual 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.

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Service Area	Importance (index score)	Performance (index score)	Net Differential	Opt Out %
Average	**78**	**58**	**-20**	**33.8**
Investigative Services	92	64	-28	39.8
Emergency Criminal Calls	92	64	-27	32.8
Non-Emergency Calls	77	51	-26	25.2
Road Safety	80	57	-23	24.6
Online Reporting	76	57	-19	36.0
Emergency Mental Health Calls	73	57	-16	34.4
Victim Services	70	58	-11	41.6
Crime Prevention Programs/ Public Outreach	66	55	-11	36.1

Performance *Q1 Over the last 24 months, how do you feel the Hamilton Police Service has performed overall in the following services?*

Importance *Q2 How important should the following services be as a responsibility for the Hamilton Police Service?*

All values were calculated and then rounded to the nearest whole number.

Q3

258
Respondents

576
Responses

Access, last 24 mo

In the last 24 months if you have used services provided by the Hamilton Police Service, how satisfied are you with your ability to access services? (If you have not used the services, please choose “Can’t Say”.)

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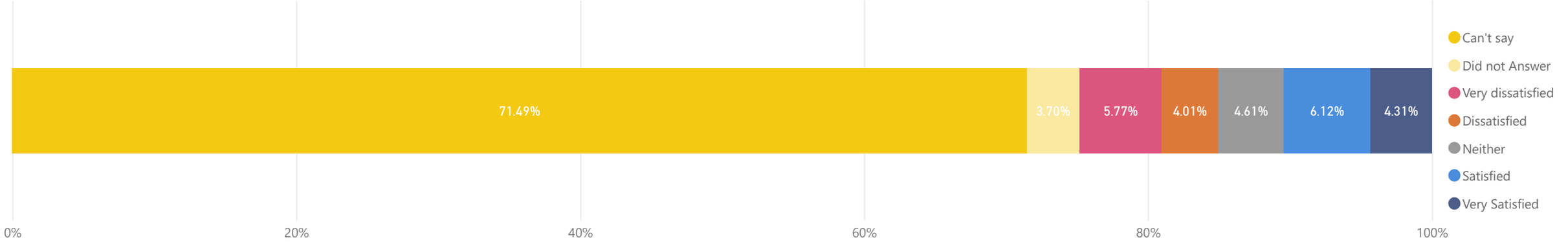

	σ	Avg.	Avg. %	Opt Out	Opt Out %	Very dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
All Service Areas	**1.40**	**3.0**	**59.3**	**1746**	**75.2**	**134**	**93**	**107**	**142**	**100**
Vulnerable Sector Clearance	1.29	3.5	70.4	187	72.5	8	8	12	25	18
Emergency Criminal Calls	1.46	3.2	64.4	204	79.1	11	7	8	15	13
Crime Prevention Programs/ Public Outreach	1.36	3.1	61.6	207	80.2	8	12	8	14	9
Non-Emergency Calls	1.42	2.9	57.1	154	59.7	25	22	16	25	16
Road Safety	1.40	2.9	57.1	154	59.7	26	19	16	30	13
Emergency Mental Health Calls	1.53	2.8	56.6	205	79.5	15	9	12	4	13
Victim Services	1.38	2.8	56.4	219	84.9	10	5	12	6	6
Online Reporting	1.42	2.8	55.6	190	73.7	21	7	14	18	8
Investigative Services	1.38	2.7	53.1	226	87.6	10	4	9	5	4

Respondents who opted out by not answering or selecting 'Can't Say' are included in Opt out.

Q4

258
Respondents

1194
Responses

Meet Needs

Do the following services provided by Hamilton Police Service meet your needs?

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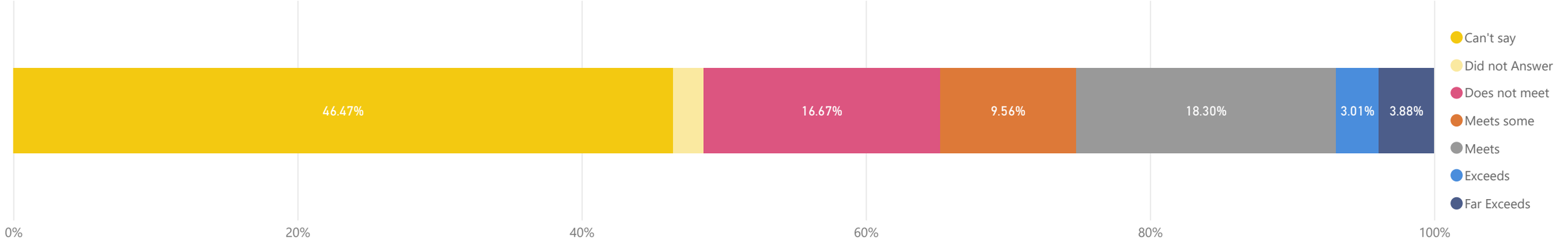


	σ	Avg.	Avg. %	Opt Out	Opt Out %	Does not meet	Meets some	Meets	Exceeds	Far Exceeds
All Service Areas	**1.19**	**2.4**	**47.5**	**1128**	**48.6**	**387**	**222**	**425**	**70**	**90**
Vulnerable Sector Clearance	1.09	2.9	57.9	135	52.3	19	11	69	12	12
Investigative Services	1.20	2.6	51.3	152	58.9	26	21	42	7	10
Emergency Criminal Calls	1.09	2.5	49.3	121	46.9	32	33	57	6	9
Victim Services	1.28	2.4	47.6	155	60.1	36	18	33	6	10
Crime Prevention Programs/ Public Outreach	1.21	2.3	46.9	130	50.3	45	19	48	7	9
Online Reporting	1.21	2.3	46.2	133	51.5	44	23	42	7	9
Road Safety	1.13	2.2	44.3	89	34.5	64	29	57	14	5
Non-Emergency Calls	1.19	2.2	44.0	93	36.0	61	40	46	6	12
Emergency Mental Health Calls	1.30	2.2	43.3	120	46.6	60	28	31	5	14

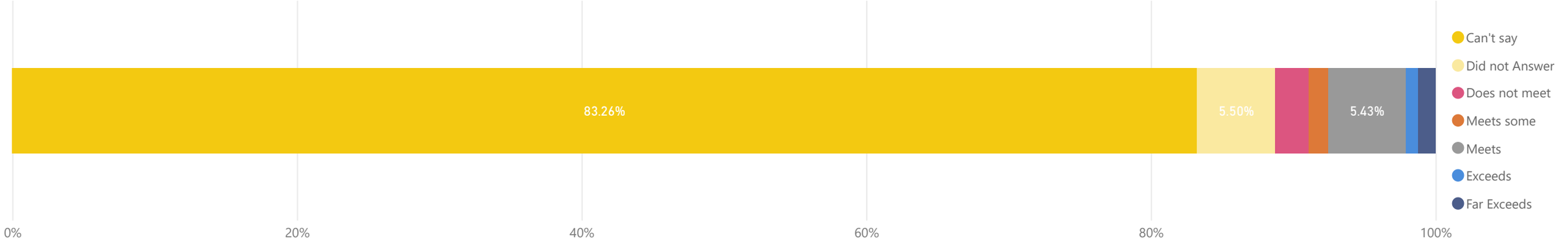
Respondents who opted out by not answering or selecting 'Can't Say' are included in Opt out.

Q5 Comfortable, Safe and Clean Spaces

258 Respondents

145 Responses

If you've visited a police facility in the last 24 months, were the facilities sufficient for your needs? Please consider if the spaces were accessible, comfortable, and clean.



	σ	Avg.	Avg. %	Opt Out	Opt Out %	Does not meet	Meets some	Meets	Exceeds	Far Exceeds
All Service Areas	**1.22**	**2.7**	**55.2**	**1145**	**88.8**	**30**	**18**	**70**	**11**	**16**
Central Station	1.16	2.9	57.9	192	74.5	11	7	34	6	8
Mountain Station	1.12	2.8	55.4	223	86.4	7	3	19	3	3
Investigative Services Station	1.48	2.7	54.5	247	95.7	4		4	1	2
East End Station	1.11	2.6	51.8	236	91.5	4	6	9	1	2
Dundas Station	1.21	2.3	45.5	247	95.7	4	2	4		1

Respondents who opted out by not answering or selecting 'Can't Say' are included in Opt out.

Q6

258
Respondents

1715
Responses

Agree with Statements about use and space

Thinking about how you use internal and external public spaces do you agree with the following statements?Hamilton Police buildings should be:

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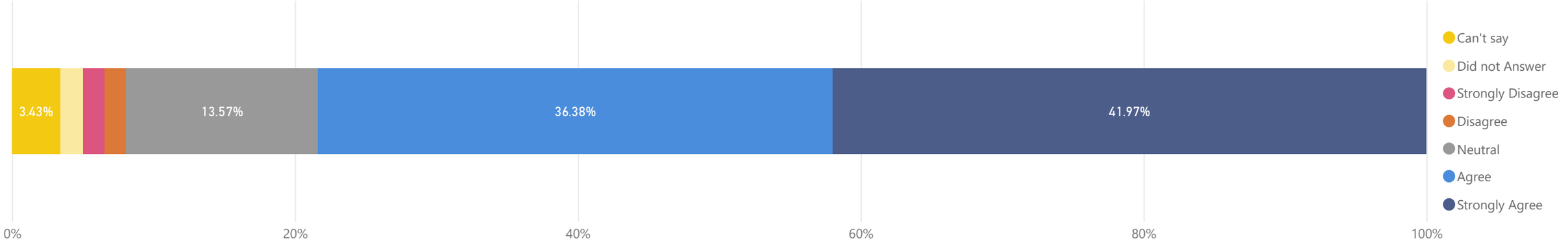


	σ	Avg.	Avg. %	Opt Out	Opt Out %	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
All Service Areas	**0.81**	**4.2**	**84.4**	**91**	**5.1**	**27**	**28**	**245**	**657**	**758**
Accessibility	0.72	4.5	89.9	12	4.6	1	5	12	81	147
Safe, Equitable and Inclusive	0.82	4.5	89.1	14	5.5	5	2	15	77	145
Active Transport Access	0.76	4.4	87.7	11	4.3	2	1	28	85	131
Clean and Good Repair	0.74	4.3	86.2	11	4.3	3	1	20	115	108
Comfortable	0.80	4.1	82.7	14	5.4	3	3	37	116	85
Energy Efficient	0.91	4.1	82.1	16	6.2	3	7	49	85	98
Inviting	0.95	3.6	72.8	13	5.1	10	9	84	98	44

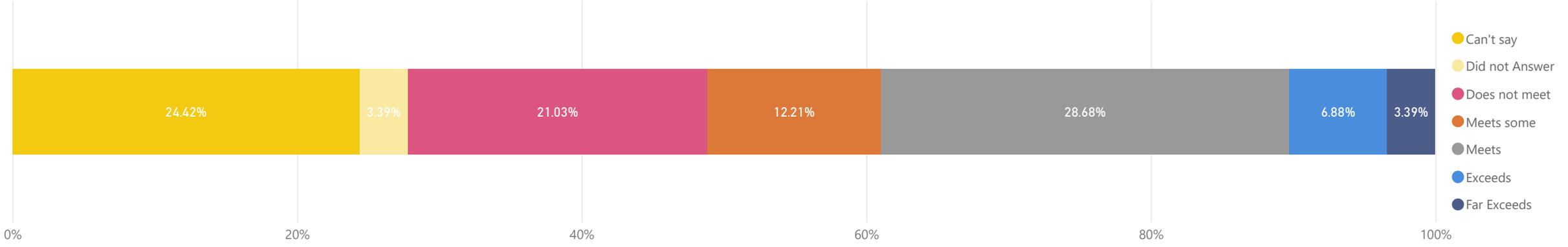
Respondents who opted out by not answering or selecting 'Can't Say' are included in Opt out.

Q7 Dispatch Times, Meet Needs

258
Respondents

745
Responses

Dispatch times reflect the time between an emergency notification (i.e. 911 call) and when police are on-route.Priority 0 Highest Priority - Immediate Response Required, Injury occurring or imminent.Target 0:30 seconds / 2022 Actual 1:08 minutesPriority 1 In Progress Events - Person in Crisis, Domestic Violence, Disturbance on Premise.Target 3 minutes / 2022 Actual 3:10 minutesPriority 2 Just Occurred Events - Suspicious Activity, Driving Complaints, Disturbance on Premise.Target 15 minutes / 2022 Actual 13:28 minutesPriority 3 Report Events - Trespassing, Residence / Compassion, Disorderly.Target 60 minutes / 2022 Actual 95 minutesPriority 4 Report Events - Noise Complaints, Break Enter Reports, Neighbour Trouble.Target 180 minutes / 2022 Actual 108 minutesDo the police priority dispatch times meet your needs and expectations for an adequate and effective police response?



	σ	Avg.	Avg. %	Opt Out	Opt Out %	Does not meet	Meets some	Meets	Exceeds	Far Exceeds
All Service Areas	**1.11**	**2.4**	**48.8**	**287**	**27.8**	**217**	**126**	**296**	**71**	**35**
Priority 1	1.06	2.6	53.0	73	28.3	37	27	94	18	9
Priority 2	1.07	2.6	51.9	67	26.0	42	32	84	27	6
Priority 0	1.18	2.5	50.7	74	28.7	49	32	71	20	12
Priority 3	1.12	2.0	39.4	73	28.3	89	35	47	6	8

Respondents who opted out by not answering or selecting 'Can't Say' are included in Opt out.

Q8 Comfortable and Safe, Services

258 Respondents

1373 Responses

Did you feel comfortable and safe accessing services provided by the Hamilton Police Service?

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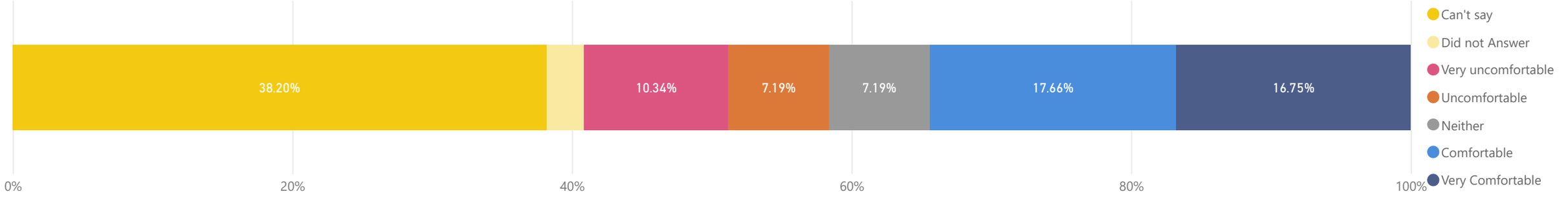


	σ	Avg.	Avg. %	Opt Out	Opt Out %	Very Uncomfortable	Uncomfortable	Neither	Comfortable	Very Comfortable
All Service Areas	**1.43**	**3.4**	**67.9**	**949**	**40.9**	**240**	**167**	**167**	**410**	**389**
Vulnerable Sector Clearance	1.24	3.7	74.7	106	41.1	15	8	28	52	49
Online Reporting	1.37	3.6	71.1	106	41.1	21	16	18	52	45
Emergency Criminal Calls	1.47	3.5	70.7	97	37.6	28	16	13	50	54
Non-Emergency Calls	1.34	3.5	69.8	77	29.8	20	30	23	57	51
Investigative Services	1.45	3.5	69.3	124	48.0	23	15	14	41	41
Road Safety	1.37	3.4	67.4	80	31.0	29	19	28	61	41
Crime Prevention Programs/ Public Outreach	1.44	3.3	66.5	122	47.3	22	23	17	37	37
Victim Services	1.56	3.0	60.2	125	48.4	36	21	15	28	33
Emergency Mental Health Calls	1.63	3.0	59.6	112	43.4	46	19	11	32	38

Respondents who opted out by not answering or selecting 'Can't Say' are included in Opt out.

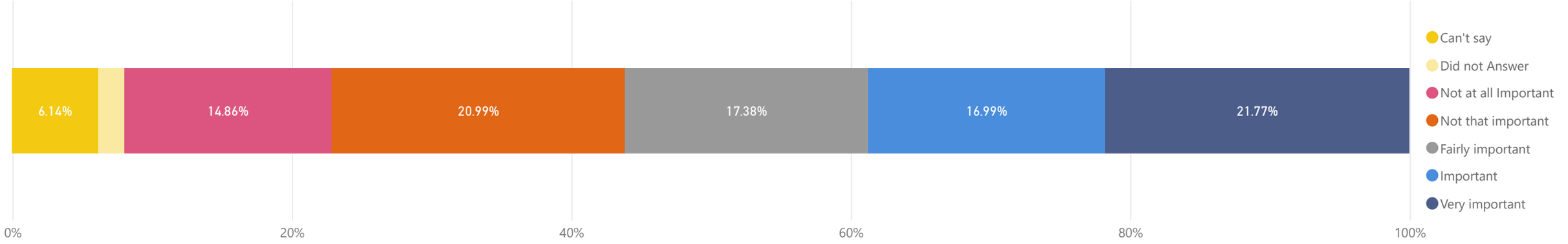
Future Needs

Q10

258 Respondents

1424 Responses

Please rate the following potential services for the Hamilton Police Service based on their importance to you.



	σ	Avg.	Avg. %	Opt Out	Opt Out %	Not at all Important	Not that Important	Fairly Important	Important	Very Important
All Service Areas	**1.26**	**3.1**	**62.1**	**124**	**8.0**	**230**	**325**	**269**	**263**	**337**
Body Cameras	1.17	4.0	80.2	12	4.7	9	27	33	61	116
Meeting Facility Accessibility Standards	1.15	3.6	72.4	22	8.5	13	25	64	71	63
Reduced Emissions	1.38	3.1	62.3	10	3.8	41	46	59	48	54
Increasing Number of Police Officers	1.64	3.0	60.5	11	4.3	68	46	24	30	79
Facility Renewal	1.08	2.4	47.9	29	11.2	48	89	55	27	10
Increased Public Parking at Stations	1.16	2.4	47.3	40	15.5	51	92	34	26	15

Respondents who opted out by not answering or selecting 'Can't Say' are included in Opt out.

Q12 Recommend to Others

258 Respondents

1673 Responses

How likely would you be to recommend the Hamilton Police Service to others?

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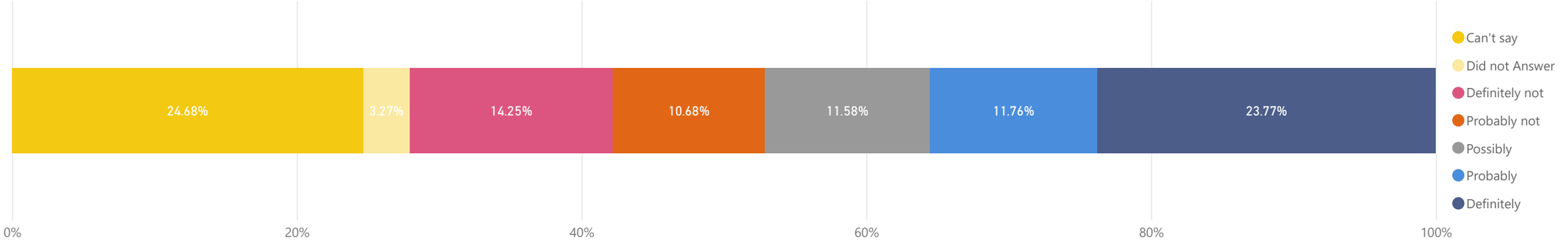

	σ	Avg.	Avg. %	Opt Out	Opt Out %	Definitely not	Probably not	Possibly	Probably	Definitely
All Service Areas	**1.51**	**3.3**	**65.6**	**649**	**28.0**	**331**	**248**	**269**	**273**	**552**
Vulnerable Sector Clearance	1.42	3.6	71.1	82	31.8	24	20	29	40	63
Investigative Services	1.45	3.6	71.1	80	31.0	26	18	33	33	68
Emergency Criminal Calls	1.53	3.5	69.4	67	26.0	30	33	22	29	77
Online Reporting	1.46	3.4	68.0	72	27.9	31	22	36	36	61
Road Safety	1.47	3.3	66.8	57	22.1	35	26	40	36	64
Non-Emergency Calls	1.51	3.2	63.6	51	19.8	39	41	34	30	63
Crime Prevention Programs/ Public Outreach	1.56	3.1	62.3	85	33.0	40	29	27	25	52
Victim Services	1.61	3.1	61.2	89	34.5	44	29	21	23	52
Emergency Mental Health Calls	1.62	2.8	57.0	66	25.6	62	30	27	21	52

Respondents who opted out by not answering or selecting 'Can't Say' are included in Opt out.

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Q12

258
Respondents

1673
Responses

Net Promoter Score

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

How likely would you be to recommend the Hamilton Police Service to others?

	σ	Net Promoter Score	Detractors	Passives	Promoters
All Service Areas	**30.6**	**-17.58**	**848**	**273**	**552**
Emergency Criminal Calls	30.6	-4.19	85	29	77
Investigative Services	28.9	-5.06	77	33	68
Vulnerable Sector Clearance	28.3	-5.68	73	40	63
Online Reporting	29.2	-15.05	89	36	61
Road Safety	29.4	-18.41	101	36	64
Non-Emergency Calls	30.2	-24.64	114	30	63
Victim Services	32.1	-24.85	94	23	52
Crime Prevention Programs/ Public Outreach	31.2	-25.43	96	25	52
Emergency Mental Health Calls	32.4	-34.90	119	21	52

Likert choices less than 4 are considered 'Detractors' while 5s are considered 'Promoters' and 4s are 'Passive'. 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). σ (Standard Deviation) is calculated in percent, the same units as the Net Promoter Score.

Q13 Value for Money

258 Respondents

1655 Responses

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

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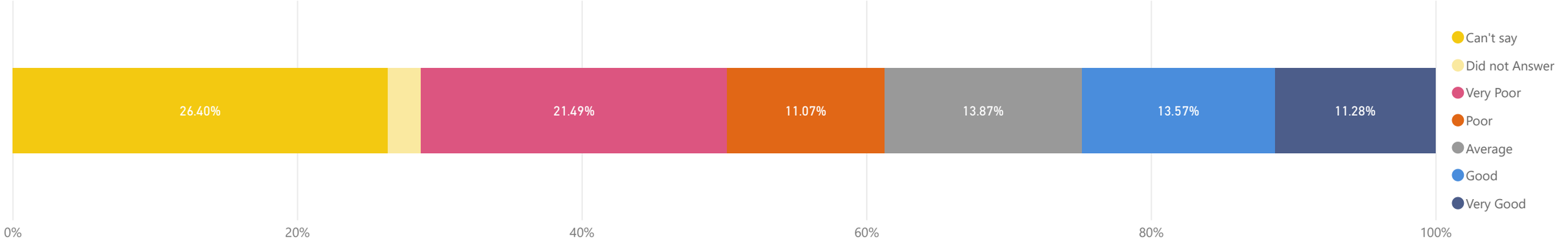


	σ	Avg.	Avg. %	Opt Out	Opt Out %	Very Poor	Poor	Average	Good	Very Good
All Service Areas	**1.44**	**2.8**	**55.0**	**667**	**28.7**	**499**	**257**	**322**	**315**	**262**
Vulnerable Sector Clearance	1.39	3.1	62.6	88	34.1	34	19	41	43	33
Emergency Criminal Calls	1.51	2.9	58.9	58	22.5	55	27	34	42	42
Investigative Services	1.46	2.9	57.0	89	34.5	48	20	40	31	30
Road Safety	1.40	2.8	56.0	53	20.5	54	34	46	41	30
Crime Prevention Programs/ Public Outreach	1.45	2.7	54.2	82	31.8	54	30	31	35	26
Online Reporting	1.41	2.7	53.7	77	29.8	52	36	35	33	25
Victim Services	1.50	2.6	52.2	101	39.1	59	19	27	28	24
Emergency Mental Health Calls	1.52	2.5	50.6	71	27.5	76	24	29	28	30
Non-Emergency Calls	1.36	2.5	50.1	48	18.6	67	48	39	34	22

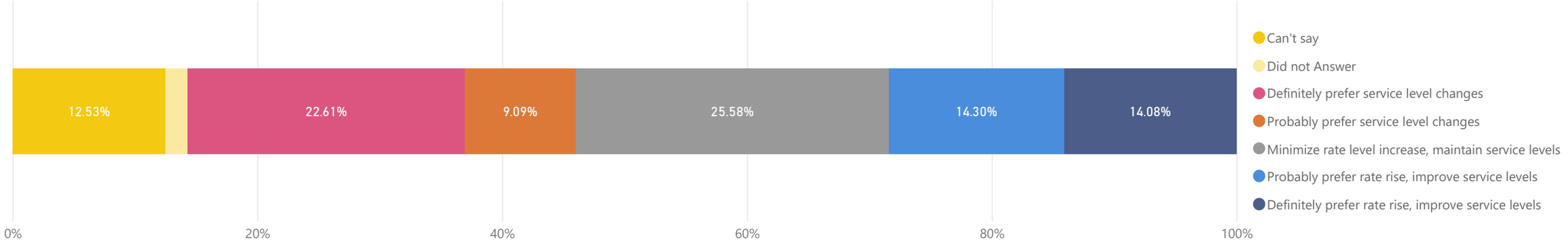
Respondents who opted out by not answering or selecting 'Can't Say' are included in Opt out.

Q14 Rate Level

258 Respondents

1989 Responses

Understanding that Hamilton Police Service is required to provide adequate and effective policing services under the Comprehensive Ontario Police Services Act, 2019, S.O. 2019, c. 1 - Bill 68.If you had to choose, would you prefer to see a tax rate increase to improve service levels OR would you prefer to see changes in service levels to minimize tax rate increases?



	σ	Avg.	Avg. %	Opt Out	Opt Out %	Definitely prefer service level changes	Probably prefer service level changes	Minimize rate level increase, maintain service levels	Probably prefer rate rise, improve service levels	Definitely prefer rate rise, improve service levels
All Service Areas	**1.38**	**2.9**	**57.2**	**333**	**14.3**	**525**	**211**	**594**	**332**	**327**
Emergency Criminal Calls	1.45	3.2	63.5	30	11.6	51	14	62	46	55
Investigative Services	1.37	3.1	62.8	38	14.7	46	12	69	51	42
Non-Emergency Calls	1.41	3.0	59.4	32	12.4	53	27	62	42	42
Road Safety	1.42	3.0	59.2	28	10.8	54	30	63	37	46
Emergency Mental Health Calls	1.52	2.8	56.7	34	13.1	71	25	42	42	44
Online Reporting	1.29	2.8	55.7	40	15.6	52	29	77	34	26
Victim Services	1.40	2.7	54.0	43	16.7	67	24	58	38	28
Vulnerable Sector Clearance	1.24	2.6	52.6	56	21.8	54	23	90	14	21
Crime Prevention Programs/ Public Outreach	1.34	2.5	50.5	32	12.4	77	27	71	28	23

Respondents who opted out by not answering or selecting 'Can't Say' are included in Opt out.

258
Respondents

3644
Responses

Individual Service Areas Rates vs. Value for Money

Service areas where reasonable fees exceed value for money by 20 points is indicative of a mismatch between expectations and service levels, equal to one point on the Likert scale used.

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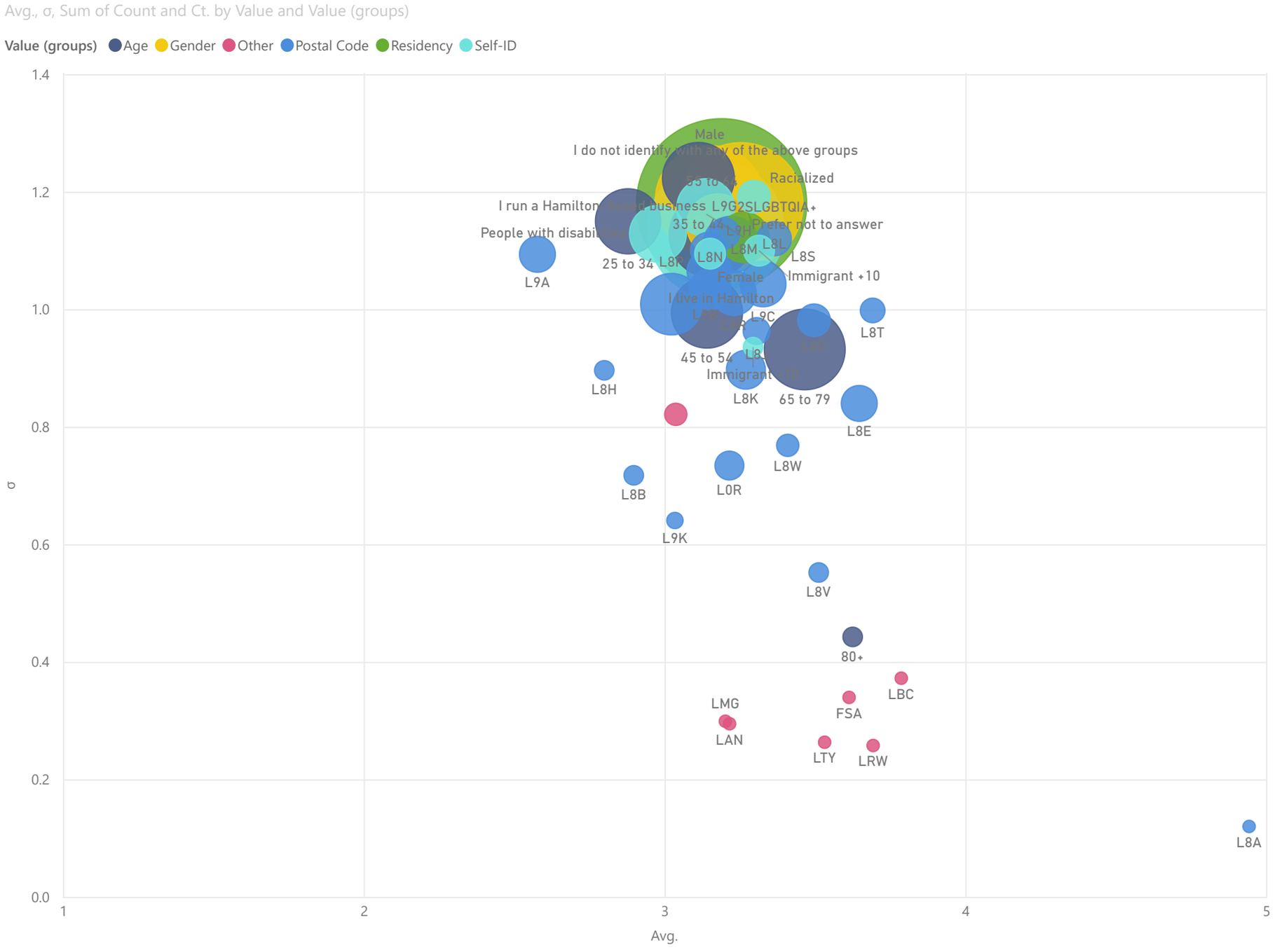
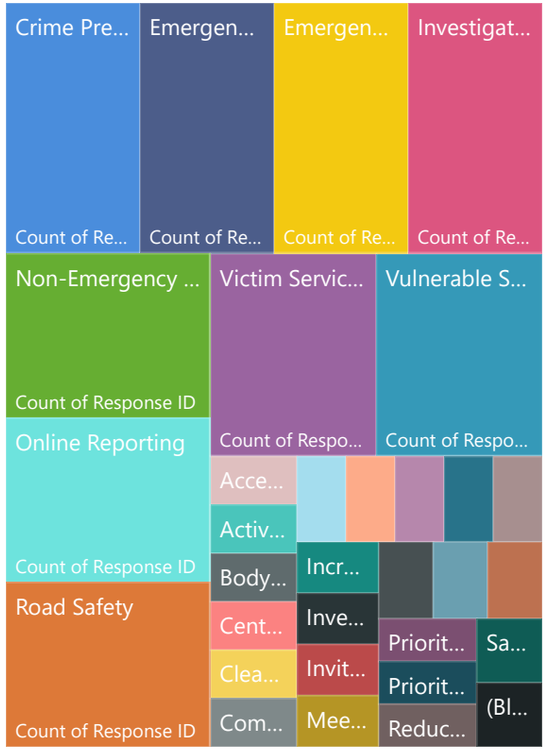
Service Area	Rates (index score)	Value for Money (index score)	Net Differential	Opt Out %
Average	**57**	**55**	**-2**	**21.5**
Vulnerable Sector Clearance	53	63	10	28.0
Crime Prevention Programs/ Public Outreach	51	54	4	22.1
Victim Services	54	52	-2	27.9
Online Reporting	56	54	-2	22.7
Road Safety	59	56	-3	15.7
Emergency Criminal Calls	64	59	-5	17.1
Investigative Services	63	57	-6	24.6
Emergency Mental Health Calls	57	51	-6	20.3
Non-Emergency Calls	59	50	-9	15.5

Positive Net Differential values indicate that 'Value for Money' was greater than willingness for 'Rates'. All values were calculated and then rounded to the nearest whole number. Low index scores in 'Rates' indicate that respondents are not willing to pay increased rates for the service area.

Value for Money *Q13 How would you rate the Hamilton Police Service for providing good value for money in the infrastructure and services provided to your community?*

Rates *Q14 Understanding that Hamilton Police Service is required to provide adequate and effective policing services under the Comprehensive Ontario Police Services Act, 2019, S.O. 2019, c. 1 - Bill 68.If you had to choose, would you prefer to see a tax rate increase to improve service levels OR would you prefer to see changes in service levels to minimize tax rate increases?*





Qshort	QID+mid
Q1	Q1 Performance, last 24mo
Q10	Q10 Future Needs
Q11 - Open	Q11 - Open Future Needs - Open
Q12	Q12 Recommend to Others
Q13	Q13 Value for Money
Q14	Q14 Rate Level
Q2	Q2 Importance
Q3	Q3 Access, last 24 mo
Q4	Q4 Meet Needs
Q5	Q5 Comfortable, Safe and Clean Spaces
Q6	Q6 Agree with Statements about use and spac
Q7	Q7 Dispatch Times, Meet Needs
Q8	Q8 Comfortable and Safe, Services
Q9 - Open	Q9 - Open Comfortable and Safe, Services - O

Definition and Ranking of Consistency and Confidence

Data Grading Scales

Grade	Data Consistency Standard Deviation (σ, Consistency of Responses)	Confidence Level Margin of Error (at 95% Confidence in Sample Size)
A 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 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
C Medium	1.0 to 1.5 - results are moderately grouped together, but most respondents are generally in agreeance	10% to 20% - Error is a significant amount and will cause uncertainty in final results
D 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
E 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

Here we attribute a lower value of consistency of response (Standard Deviation) to a higher confidence grade, but it does not necessarily mean that the data is "better". In reality we receive more insight in the data regardless. With a high consistency we can tell that respondents more often come to the same conclusion on a response for a question, whereas with low consistency we would see a split in people's opinion, some with a very high rating and others with a very low rating. Knowing this and then understanding why is the most important thing.

$$\text{Margin of error} = z \times \frac{\sigma}{\sqrt{n}}$$

The margin of error is calculated using 3 factors:
z - z-score, σ - standard deviation, n - sample size
The margin of error mainly tells us whether the sample size of the survey is appropriate. This is because in the calculation above, sample size would be the largest factor and thus have the biggest impact. The margin of error is represented as a percentage and indicates the range above and below the calculated average the true value is likely to fall. A smaller margin of error indicates a more precise estimate and vice versa.