

Edmonton

2022/2023

CITY OPERATIONS

# FLEET AND FACILITY SERVICES

2022/2023 Annual Service Plan



## LAND ACKNOWLEDGMENT

Fleet and Facility Services acknowledges that our City operates within the traditional land of Treaty 6 Territory. We acknowledge this land as the traditional territories of many First Nations such as the Nehiyaw (Cree), Dene, Nakota Sioux (Stoney), Anishinaabe (Saulteaux) and Niitsitapi (Blackfoot). We also acknowledge this as the Métis' homeland and the home of one of the largest communities of Inuit south of the 60th parallel.

The City of Edmonton owes its strength and vibrancy to these lands and the diverse Indigenous Peoples whose ancestors' footsteps have marked this territory, as well as settlers from around the world who continue to be welcomed here and call Edmonton home.

Together we call upon all our collective honoured traditions and spirits to work in building a great city for today and future generations.

Artwork by: Dawn Marie Marchand





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# CITY MANAGER'S COMMITMENT STATEMENT TO HEALTH AND SAFETY



ANDRE CORBOULD  
CITY MANAGER

## SAFE

We value, respect and protect the physical, mental and emotional well-being of each other and those we serve.

## HELPFUL

We care about people's experiences. We work with them and for them, to seize opportunities, address challenges and deliver outstanding service.

## ACCOUNTABLE

We are trusted and empowered to embrace our responsibility for our actions, decisions and behaviours.

## INTEGRATED

We get the best results when we align our diverse ideas, knowledge and efforts in shared purpose.

## EXCELLENT

We perform to the highest standard. We passionately pursue innovation and continuously improve ourselves, our teams and our city.

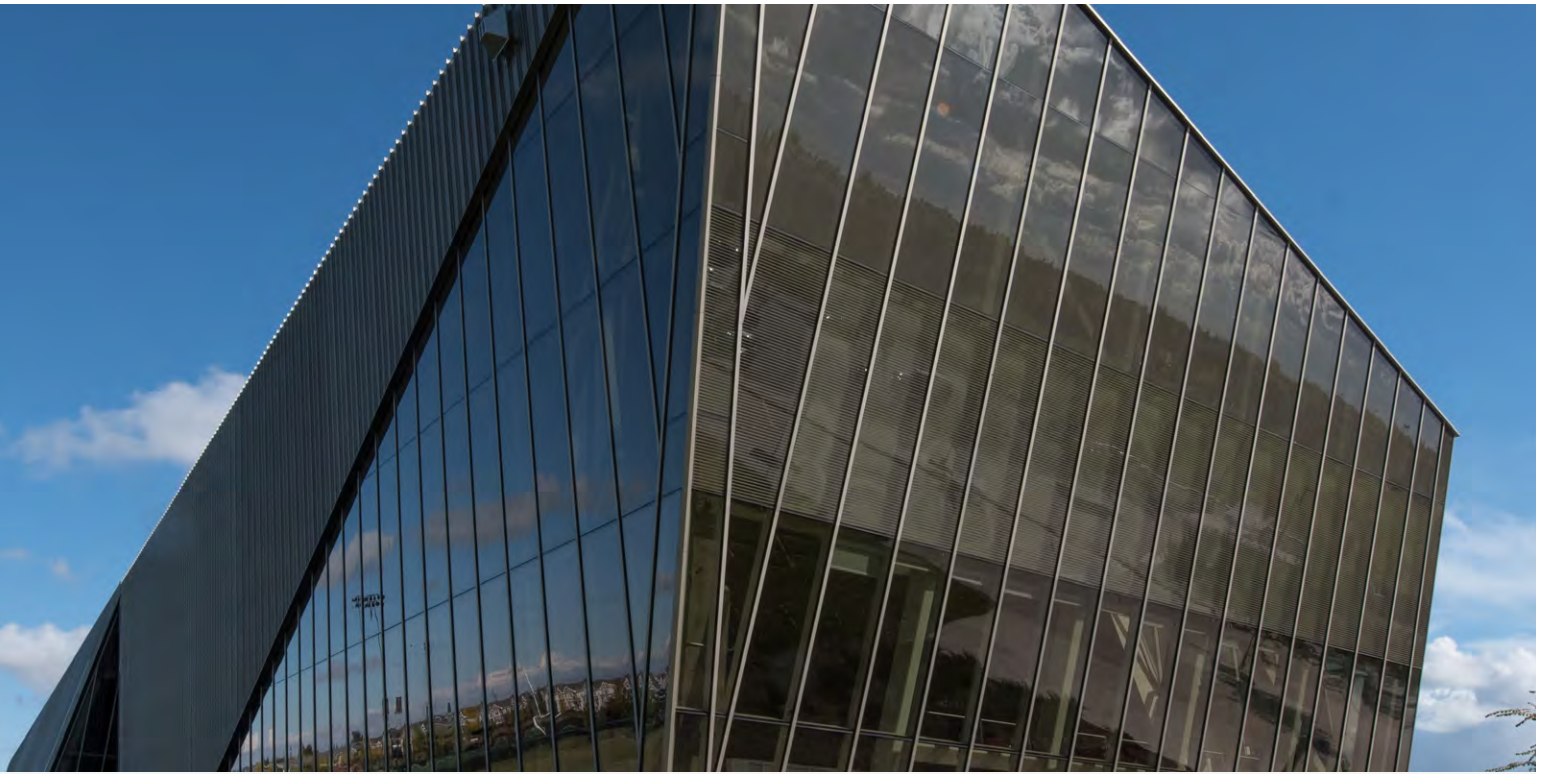
The City of Edmonton is committed to providing a safe and healthy experience for all employees and visitors (e.g. contractors, volunteers, residents) where employees feel valued, appreciated and are empowered to work safely.

Our workforce safety and employee health program informs how we keep our workplaces and employees safe, healthy and well. We conduct our business so that it meets or exceeds occupational health and safety legislation, industry best practices and City standards. We also strive to continuously align with *The National Standard for Psychological Health and Safety in the Workplace* along with other industry-leading best practices in mental health and wellness.

The responsibility for health, safety and wellness is shared by all employees throughout the organization, as well as those providing services on behalf of the City. All leaders have additional responsibilities to lead by example, promote health, safety and wellness and take action to implement practices that support the physical, psychological and social well-being of employees.

Working with stakeholders, including the public, we continuously improve our health and safety management systems to ensure the safest and healthiest environment for our employees. This dedication to employee safety and well-being is one way we bring our cultural commitments to life.

A handwritten signature in blue ink, which appears to be "Andre Corbould". The signature is fluid and cursive, written over a white background.



## **EXECUTIVE LEADERSHIP TEAM COMMITMENT TO SAFETY**

The City of Edmonton has developed and implemented an Occupational Health and Safety (OHS) program which is independently audited every three years. The Executive Leadership Team supports the following recommended actions from the City's 2022 Certificate of Recognition (COR) Audit of our OHS system:

### **Completing our 2022 COR Safety Audit Actions**

- » Complete audit action planning
- » Monitor progress of audit actions
- » Ensure readiness for bi-annual Audit Leadership Review sessions

### **Advancing Health & Safety Committees**

- » Complete and record corporate training for all committee members
- » Monitor meeting attendance and meetings planned vs. conducted
- » Include committees in audit actions
- » Enact committee consolidation recommendations

### **Improving Safety Inspection Performance**

- » Complete corporate training on inspections
- » Reconcile branch inspection requirements and communicate expectations
- » Review branch inspection performance quarterly
- » Conduct required number of inspections as per corporate standard

### **Enhancing Incident Investigations for Injury Prevention**

- » Monitor performance related to incident investigation closures quarterly
- » Focus on ensuring corrective actions are identified and completed
- » Apply new Incident Management Standard in the branch and provide resources to develop incident management procedures in applicable sections
- » Ensure supervisors and leaders are trained to the new Incident Management Standard requirements

## MESSAGE FROM THE BRANCH MANAGER



**EDDIE ROBAR**  
BRANCH MANAGER

**Fleet and Facility Services enables Edmontonians to live, work and play in their city, by providing safe, reliable, well-maintained vehicles and buildings. This team of over 1,200 employees works together to modernize and evolve the management and maintenance of over 5,000 vehicles and equipment, and over 900 buildings and structures, as well as related programs and services.**

Our work is typically behind the scenes, but we provide a foundation that supports every aspect of the City organization. We also play a crucial role in the City's climate action goals through the adoption and advancement of new technologies and are continually improving our operations to better support our City partners, external clients and all Edmontonians.

2023 is going to be an exciting year, as we kick off and ramp up several transformative projects. In addition to its role in the Alberta Zero Emission Hydrogen Transit (AZEHT) initiative's hydrogen bus pilot project, Fleet and Facility Services is a key player in the development of the Alberta hydrogen node. This initiative will accelerate a new provincial hydrogen economy, combining supply from the Alberta Industrial Heartland and demand generated across the greater Edmonton region

through municipal and private sector opportunities and expertise. Other exciting projects include the continued greening of the fleet, retrofits to City buildings for energy efficiency and sustainability, implementation of a facility asset management strategy, enhancements to our Driver Safety Program and the continued development and implementation of a new Fleet Strategy and Governance model that will improve the way we maintain and manage City of Edmonton vehicles and equipment.

This year is also the first in Edmonton's 2023–2026 Budget which outlines our key priorities for the next four years. Following Council's direction, we will continue to focus on our pillars of safety, quality, environmental sustainability and cost efficiency as we work to deliver the programs, services and projects that matter to Edmontonians now and in the future.

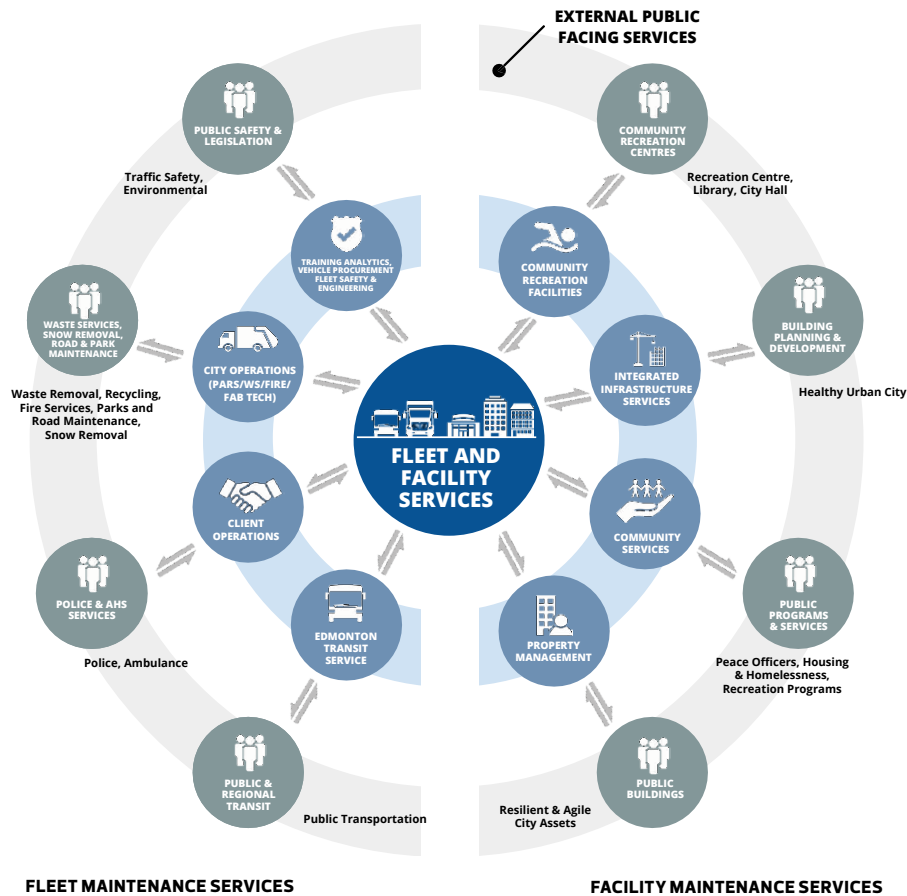
# EXECUTIVE SUMMARY

Fleet and Facility Services is a team of over 1,200 employees actively evolving and modernizing the management and maintenance of the City of Edmonton's vehicle and facility assets, including a fleet of over 5,000 vehicles and equipment and more than 900 buildings and infrastructure.

The branch touches every part of the organization and is crucial in providing safe, reliable, well-maintained vehicles and buildings to deliver the services that Edmontonians need. In addition, Fleet and Facility Services is responsible for managing the overall Driver Safety Program and the National Safety Code (NSC) for the City of Edmonton. Other key support services provided by the branch include managing the City's fuel services, as well as the procurement and monitoring of fuel levels,

alternative fuels, emission standards and legislative requirements.

The way Fleet and Facility Services integrates and works with the other branches across the City of Edmonton and external partners can be visualized as a wheel of service delivery. Fleet and Facility Services has touch points across every branch in the City; the team is the centre hub for fleet maintenance and facility maintenance for the organization, with spokes connected to each area. The first layer is internal support to City branches and partners, in addition to external clients who then, in turn, provide programs and services for Edmontonians; for example, ambulance, police, fire, waste collection, buildings, libraries, recreation centres and more.



## Branch by the Numbers



**1200+** EMPLOYEES

14 different trades across the sections



Completes mechanical and body midlife refurbishment of over **80 buses per year**



Performs over **1,200 road tests and provides support and training**

MAINTAINS **900+** CITY-OWNED BUILDINGS

Recreation Centres, City Hall, LRT Facilities, Libraries, Office Towers, Waste Management Facilities, Fire Halls, EPS Facilities, Spray Decks & Splash Pads



**100,000**  
fleet work orders



**35 million**  
LITRES OF FUEL DISPENSED

**185** BUILDINGS HAVE DIGITAL BUILDING AUTOMATION

**59,000** FACILITY WORK ORDERS



**22** municipal, transit and facility maintenance facilities

**>5000**

VEHICLES & PIECES OF EQUIPMENT

**4,600+** municipal vehicles  
**1,047** buses & DATS vehicles



# 2022 Year in Review

## BUSINESS INTEGRATION

**2023-26 BUDGET PREPARATION** **GPS PROJECT** **35M litres fuel dispensed**

**\$1.96M WARRANTY RECOVERY** Alberta Zero Emission Hydrogen Transit (AZHET) project support

**416 units placed into service** **742 units of out service**

**1,215** road tests performed **133** new employees on-boarded **1,001** collision investigations

**98** engineering projects **112** failures investigated

**2** Standard Operating Procedures (SOPs) **6** Maintenance Practice Bulletins (MPBs) **11** Campaign technical instructions

Branch Performance Review Tracking **18** NEW SERVICE PROCUREMENTS IMPLEMENTED

**723** courses delivered **28** new dashboards developed **217** COMPLIANCE CHECKS **95** adhoc data reporting requests

**28** new dashboards developed **217** COMPLIANCE CHECKS **95** adhoc data reporting requests

**FLEET STRATEGY AND GOVERNANCE PROJECT** **\$2.4M** IN COST SAVINGS/AVOIDANCE THROUGH INITIATIVES & PROJECTS (EXCLUDING WARRANTY)

**ENTERPRISE COMMONS SUPPORT** 2,100 facility maintenance tickets managed at 36 facilities

**Driver Safety Cards rollout** **GPS data utilized in the Critical Fleet Dashboard for Snow and Ice Control**

**PAPAL VISIT SUPPORT** **32** new branch capital procurement contracts **2,200** M5 inquiries managed **450** IT HARDWARE UNITS REFRESHED

## FACILITY MAINTENANCE SERVICES

**58,953 WORK ORDERS COMPLETED**

Cambridge Pedway restoration project

Multiple security panel and card reader installation and upgrade projects

**23,000** PO line items created **27,661** work orders created from notifications **60,000** inbound client service calls

**Commonwealth Stadium:**

- concert and event support
- seating project
- shelter conversion of the West pod for people experiencing homelessness during cold winter weather

**DEVELOPMENT OF SEASONAL WATER START UP AND WINTERIZATION DASHBOARDS**

Installation of motion lighting at Government Centre LRT station

**23** MAINTENANCE SHUTDOWNS **113** ELECTRICAL SHUTDOWNS

**PAPAL VISIT SUPPORT** **470** Contractor Safety Inspections completed

Project Review Team (PRT) completed **561+** design and **300** permit reviews

**SUCCESSFUL STARTUP AND WINTERIZATION OF:**

- 5** outdoor pools
- 13** decorative water features
- 75** spray parks
- 101** irrigation systems
- 113** domestic water systems

**THREE STREAM WASTE INITIATIVE SUPPORT**

- 15** rehabilitation projects complete
- 31** buildings retired
- 44** new buildings added to inventory

**SOLAR POWER PROJECT**

**ENTERPRISE COMMONS SUPPORT**

Continued enhanced cleaning and disinfection at City facilities

## SAFETY & ENVIRONMENT

**OZONE EXPOSURE CONTROL PLAN AND PULSE CHECKS**

**Successful completion of the 2022 COR audit**

**8** FFS facilities BOMA Best certified

**2022 NAFA GREEN FLEET AWARD**

- 84%** Lost Time Incident days
- 75%** Lost Time Incident severity
- 42%** Lost Time Incidents
- 30%** Lost Time Incident frequency

**RECYCLED:**

- 157,700 L** of coolant
- 153,800 L** of oil
- 2,155 kg** of oil containers
- 257** drums of oil filters
- 230** drums of aerosol cans
- 87** drums of electrical waste

Initiated the ISO 50001 Energy Management System pilot project for 10 City buildings

## CULTURE & ENGAGEMENT

**CULTURAL COMMITMENTS AWARDS**

- 441** nominees
- 12** finalists
- 1** team winner

**LONG SERVICE RECOGNITION EVENT CELEBRATING 2020, 2021 & 2022 RECIPIENTS**

Connecting at events such as BBQs and pancake breakfasts

**EMPLOYEE EXPERIENCE SURVEY** **76,330** Google site page views

**196** Peer-to-peer recognition nominations **66%** Participation rate for the June 2022 check-in survey

Recognizing employees through good news stories on Digital Media Panels and in the Employee Newsletter

**16** B.I.G. Box (Bright Idea Generator) responses

## TRANSIT FLEET MAINTENANCE

**365 DAYS ACHIEVING CONTINUOUS BOOKOUT COMMITMENT**

- 82** engine replacements
- 35** autobody midlife refurbishments
- 14** midlife engine replacements

**BUSES INTO REVENUE SERVICE**

- 20** Proterra Electric Buses
- 17** New Flyer Xceliors

**DESIGN AND SPEC OF NEW TRANSIT FACILITY**

**Papal visit support** resource coordination and repairs

**309** total transit training sessions for **900** employees

**Hydrogen Fueling Station RFI** **Received the Hydrogen Fuel Cell Bus in June**

Led Ferrier facility retrofits for Hydrogen Bus Maintenance

Chaired the Alberta Zero Emission Hydrogen Transit (AZHET) Steering Committee

**\$100,000** savings in labour hours efficiencies on relines and engine replacements

**\$539,225** savings in materials and labour by completing in-frame engine repairs vs replacement

**1,992** PARK & RIDES **844** CHARTERS

- 1,141** tows & boosts
- 3,456** campaigns
- 3,597** retorques
- 3,059** minor inspections
- 5,700** accident repair hours
- 32,185** major inspections & correctives
- 86,391** running repairs

- 955** Active Air installations
- 336** brake relines
- 58** transmission overhauls

**NAFA Green Garage Award: Kathleen Andrews**

## MUNICIPAL FLEET MAINTENANCE

Designed, fabricated and installed signage at Mary Burkie Park, Eric Faraone Park and the Bryan Anderson Athletic Grounds

**PAPAL VISIT SUPPORT**

**Realignment of garage workload and resourcing across the section** **Field and Tow Services Centralization**

**SNOW & ICE CONTROL SUPPORT:**

- Seasonal maintenance location review
- Inspections and repairs:
  - 130** sander bodies
  - 90** front mount plows
  - 16** snowblower heads

**REINTRODUCTION OF RAP STUDENT PROGRAM**

Installation of cameras and RFID scanning systems for waste carts on waste curbside units

**130** SAFETY SIDE RAILS DESIGNED, FABRICATED AND INSTALLED ON WASTE CURBSIDE UNITS

**Critical Fleet dashboard developed based on real time information increases unit availability**

**PMA CLIENT CALENDAR INITIATION PILOT**

Implemented Light Duty category-specific Standard Repair Times and PM forms

**\$200,000** savings in lowered cost of repairs for Spring Sweep **3** long haul trailer walking floors rebuilt from surplus fleet

- 1,819** campaigns
- 3,438** tows & boosts
- 5,729** retorques
- 5,490** minor inspections & oil changes
- 32,217** major inspections & correctives
- 67,043** running repairs

# 1.0 INTRODUCTION

The Fleet and Facility Services Annual Service Plan 2022–23 provides an overview of services, major projects and infrastructure developments planned for 2023, while recapping several accomplishments from 2022.

## 1.1 STRATEGIC ALIGNMENT

This plan outlines priority actions that enable Fleet and Facility Services to realize the initiatives in Edmonton's City Plan and ultimately advance the four strategic goals of ConnectEdmonton, Edmonton's Strategic Plan 2019–2028 to achieve our vision of:



### HEALTHY CITY

Edmonton is a neighbourly city with community and personal wellness that embodies and promotes equity for all Edmontonians.



### REGIONAL PROSPERITY

Edmonton grows prosperity for our Metro Region by driving innovation, competitiveness and relevance for our businesses at the local and global level.



### URBAN PLACES

Edmonton neighbourhoods are more vibrant as density increases, where people and businesses thrive and where housing and mobility options are plentiful.



### CLIMATE RESILIENCE

Edmonton is a city transitioning to a low-carbon future, has clean air and water and is adapting to a changing climate.

These goals are advanced through three objectives:



1.

#### Strategic Objective:

Make transformational impacts in our community.

2.

#### Public Service Objective:

Deliver excellent services to our community.

3.

#### Supporting Service Objective:

Manage the corporation for our community.

## Strategic Alignment



The City's Executive Leadership Team, which consists of the City Manager, Chief of Staff and each Deputy City Manager, sets focus areas for the organization that align with Council's priorities, the strategic direction outlined in the City Plan and the objectives outlined in the corporate business plan (managing the corporation, delivering excellent services and making transformational changes).

Fleet and Facility Services has identified four main priorities for 2023 based on those strategic plans and direction, as well as what has been learned through employee feedback, and the 2023–2026 budget

deliberations and decisions. These are safety, climate action and energy transition, operational excellence and a relationship-based city.

These priorities are aligned with Council's strategic objectives of Healthy City, Urban Places, Regional Prosperity and Climate Resilience, as identified in the ConnectEdmonton plan. They connect with the 2023–2026 objectives of community safety and well-being, arts and culture, climate action and energy transition, 15-minute districts, mobility network and economic growth.

## 1.2 FLEET AND FACILITY SERVICES TOP BRANCH PRIORITIES

Below are Fleet and Facility Services' top branch priorities as strategic actions that reflect City Council and the Executive Leadership Team's vision for Edmonton. These actions will help advance the City's ConnectEdmonton Strategic Plan and the City Plan's big city moves. Throughout the 2023 Service Plan and Projects and Infrastructure sections, these strategic action icons connect each initiative to the branch's priorities.



### Safety

- » The Fleet and Facility Services Leadership Team is committed to providing a safe and healthy experience for all employees and visitors (eg, contractors, volunteers and residents) and a workplace where employees feel valued, appreciated and empowered to work safely.
- » The Occupational Health and Safety (OHS) program is integral to our daily operational activities. We strive for continual improvement of our health and safety system by setting goals, monitoring our performance and celebrating our successes. Each of us shares the responsibility for excellence through safe work.
- » The Fleet and Facility Services Leadership Team has taken responsibility for implementing ten key recommendations identified in the City's successful 2022 Certificate of Recognition (COR) audit. The COR audit indicates that the City has been evaluated by a certified auditor and meets professional standards established by OHS. This shows our commitment to employee safety and promotes the City of Edmonton as an employer of choice. Our focus on continuous improvement results in reduced incidents, higher employee engagement, reduced lost time and an embedded culture of a deep commitment to safety.



### Climate Action and Energy Transition

- » The \$11.2 million Emissions Neutral City Fleet and Equipment Capital Profile includes the initial planning, design and delivery of lower/zero emissions vehicle fleet and equipment transition, as well as associated required infrastructure.
- » Transitioning to a low carbon fleet supports our Community Energy Transition Strategy through fleet electrification and exploration of additional low carbon alternatives such as hydrogen fuel cells.
- » Following the testing of the fuel cell electric buses in year-round weather conditions through the Alberta Zero Emissions Hydrogen Transit (AZEHT) pilot project, 2023 will see the commencement of extensive data analysis and reporting as well as the maturity of a comprehensive fleet transition plan to attain long-term emission reduction targets.
- » The City plays a critical role in the region, securing a healthy stake in the \$2.5 trillion hydrogen industry by demonstrating how Edmonton and the region are uniquely positioned to be a global leader in clean energy supply. In alignment with provincial and federal initiatives, Edmonton has the opportunity to secure and perpetuate economic and environmental stability for generations to come—all starting with the hydrogen transformation project that includes the transition of the transit fleet, the development of a hydrogen fuelling station and a new transit garage.
- » Accelerating the transition of lower/zero emissions vehicles and associated infrastructure significantly contributes to a market shift that encourages increased investment in "green" technologies. This aligns with actions identified in Edmonton's Economic Action Plan and supports the goals of Catalyze and Converge.
- » Fleet and Facility Services will continue the implementation of new technologies for predictive maintenance, remote monitoring for building management systems and onsite microgeneration solar (photovoltaic) energy projects at civic facilities. These technologies and systems help to offset the

City's energy use with renewable sources and reduce greenhouse gas (GHG) emissions.

- » Fleet and Facility Services will continue to maintain and develop the Blatchford Renewable Energy utility, which supports the Blatchford development by providing renewable heating and cooling energy to homes and buildings, as well as the Downtown District Energy Initiative, which supports the implementation of a district energy network in the downtown core. Both projects support City Council's ten-year climate resilience goal and the Edmonton Community Energy Strategy that aims to limit GHG emissions.



### Operational Excellence

- » Fleet and Facility Services will continue to deliver high quality maintenance and management of over 5,000 vehicles and equipment and over 900 buildings and infrastructure.
- » The Fleet and Facility Services Leadership Team is focused on improving the quality of service offered to City Operations and other areas of the City, through a customer-centric mindset. By enhancing our services and processes, we support our City partners in delivering improved public-facing services.
- » Fleet and Facility Services will continually improve business processes using Lean/Six Sigma methodologies and tools to reduce waste, add value and optimize quality, time, cost, employee resources and safety.

- » Continued promotion of a 'problem-solving' culture and mindset, along with easy options to share feedback, will empower employees to bring forward innovative solutions and ideas for improvement. Fleet and Facility Services embraces city-building as a team sport.



### Relationship Based City

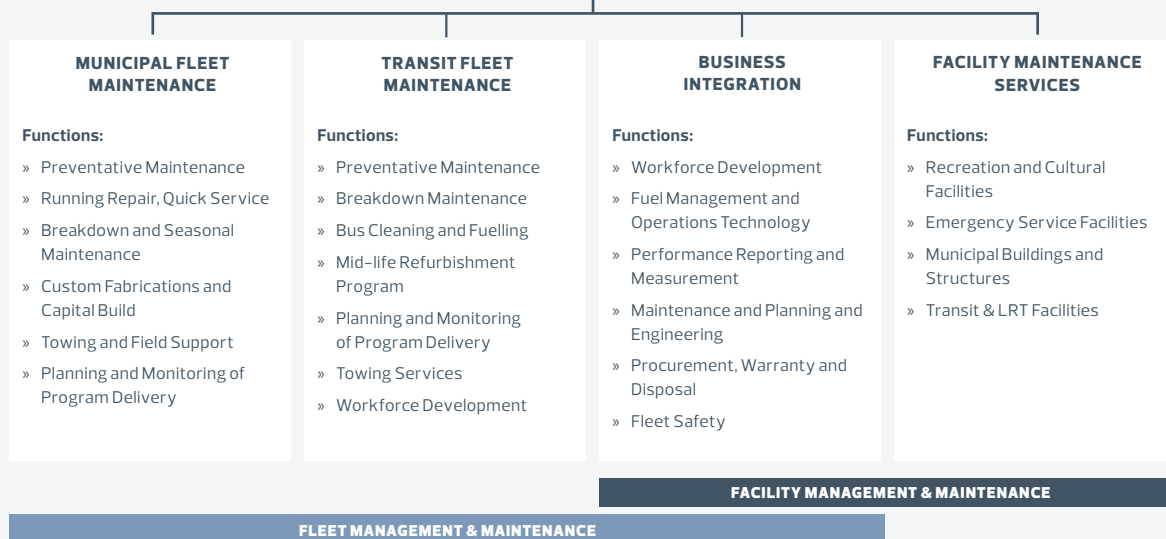
- » Fleet and Facility Services achieves excellence in collaborative city-building by moving forward with people, partnerships and relationships at our side.
- » Fleet and Facility Services supports every part of the City organization. Our work enables our City partners and external clients to deliver critical programs and services that keep Edmontonians moving and thriving.
- » Our relationships are aligned, impactful, integrated, service focused and innovative.
- » Edmonton continues to advance the implementation of Arc, the regional Smart Fare payment system, with regional partners including Strathcona County, City of St. Albert, City of Leduc, City of Beaumont, City of Spruce Grove and City of Fort Saskatchewan. The Edmonton Metropolitan Region is the first in Canada to offer regional fare capping through Arc.



### 1.3 BRANCH STRUCTURE

#### FLEET & FACILITY SERVICES

Direct Reports: 6; Total Staff: 1,211



## Transit Fleet Maintenance

Transit Fleet Maintenance (TFM) is responsible for legislated and scheduled preventative maintenance, repairs, warranty campaigns, seasonal maintenance, mid-life refurbishments, daily cleaning/sanitizing and refuelling of City of Edmonton buses. The section ensures that the bus fleet is safe, reliable and clean for residents' daily commute and transportation needs.

TFM is committed to continuous improvement which is showcased in process improvements, new technology advancements and service efficiencies. With a total of 60 battery electric buses, TFM has incorporated one of Canada's largest fleets of battery electric buses into their operations. In addition, TFM is leading the testing of a hydrogen fuel cell electric bus (FCEB) as part of the Alberta Zero Emissions Hydrogen Transit pilot project where the City of Edmonton and Strathcona County were awarded \$4.6 million from Emissions Reduction Alberta. The buses will be put into revenue service in 2023 to test their performance. The data collected will be used to inform the future use of hydrogen FCEBs on a larger scale in the City of Edmonton and Strathcona County.

Further advancements include the installation of Active Air and Surface Purification Technology on the entire ETS fleet to safely sanitize the air and surfaces within the fleet, addressing the general public's increased expectations of cleanliness since COVID-19 and ensuring continued confidence in transit ridership.

TFM was recently recognized as having one of the Top 10 Green Garages in North America. The award recognizes the most progressive and environmentally committed fleets and allows organizations to share best practices for eco-friendly vehicle fleet maintenance garages.

## Municipal Fleet Maintenance

Municipal Fleet Maintenance (MFM) is responsible for legislated and scheduled preventative maintenance, repairs, towing services, custom fabrication and seasonal maintenance of all City vehicles and equipment. MFM services a complex and wide

variety of vehicles and heavy/light equipment, including fire apparatus, police vehicles, waste trucks, sanders, lawn mowers, paving machines, ice resurfacing machines, light duty trucks and DATS buses. The section is crucial in keeping fleet and equipment available for the execution of critical public-facing services such as the Snow and Ice Control (SNIC) program, street sweeping, turf maintenance, Fire and Police Services and Waste Collection throughout the year. The MFM section is committed to continuous improvement and a growth mindset. It has implemented a number of strategies, such as the SNIC Support Seasonal Maintenance Location Review and Enhanced On-Demand Field Service Model, to enhance the customer experience and improve labour and facility efficiency.

Fabrication Technologies repairs and maintains the City's fleet of vehicles and equipment and provides custom fabrication services to the entire organization. The Fabrication Technologies team builds new equipment from scratch and is involved in many exciting projects. These include fleet projects like trailers, dump boxes, snow plows and stainless steel hopper bodies, and facility projects like fences, guardrails, gates and rooftop access ladders for the many other City departments.

## Facility Maintenance Services

Facility Maintenance Services (FMS) ensures the cleanliness, safety and maintenance of over 900 City-owned facilities with a current replacement value of more than \$7 billion. This extensive portfolio includes services such as electrical work, roof repair, carpentry, locksmithing, plumbing and air conditioning/heating repair, as well as executing maintenance plans that extend the useful life of facility assets in accordance with the City's asset management plan. FMS also provides custodial services for facilities including recreation centres, police stations, libraries, City-owned office towers and transit shelters.

FMS is a key driver in implementing new technologies for predictive maintenance, building management systems for remote monitoring of operational



efficiencies and onsite microgeneration solar (photovoltaic) energy projects at civic facilities. These technologies and systems help to offset the City's energy use with renewable sources and reduce the overall City Operations GHG emissions. Day to day, the Facility Maintenance Services team ensures that City Hall, recreation centres, libraries, transit shelters, spray parks and other amenities are safe, clean, functional and compliant with all regulatory and legislative requirements so our client groups can achieve their service program delivery successfully.

### Business Integration

Business Integration (BI) provides supporting services to enable effective and strategic operations within the branch. The section ensures that the needs of internal and external partners are addressed through service delivery and reporting; capital planning; capital fleet procurement and recoveries; lifecycle maintenance planning and data that is timely, accurate, transparent and easily accessible for business partners. Utilizing key performance

indicators and information technology, processes are constantly improved to enhance value to our partners. The section also manages vendor activities, including contract negotiations, warranty claims, vendor performance and concessions to ensure the best value is passed on to our partners. Key highlights from 2022 include the recovery of over \$1.96 million in warranty claims and a further \$2.4 million in cost avoidance and savings for the organization.

This section ensures that the Fleet and Facility Services delivery model reflects partner business needs through standards and service. The M5 support team within Business Integration keeps our primary asset management system functional and upgraded, and supports mobile phones and hardware for the branch. The section also provides legislated training and manages the City's fuel services, including procurement and monitoring of fuel levels, alternative fuels, emission standards and legislative requirements. Fleet Safety is also part of Business Integration and manages the Driver Safety Program for the entire organization.

Business Integration's portfolio is also responsible for budget and business planning, as well as policy development and support. The section supports the Branch Manager's office in developing the branch strategy and ensures branch plans are aligned with department and corporate goals.

### Operational Support: Occupational Health and Safety & Enviro

Occupational Health and Safety (OHS) creates a safe and effective work environment by taking a proactive approach to minimizing the occurrence of injury and illness to employees. Enviro, the City's environmental management system, helps to ensure the branch complies with relevant regulations and prevents environmental impacts. The Joint Worksite Health and Safety Committee consists of front-line supervisors, management and worker representatives. The committee's mandate is to address safety or environmental concerns that arise, find innovative solutions and take timely action. Occupational Health and Safety and the environment are integral components of Fleet and Facility Services operations.



## 2.0 HIGHLIGHTS FROM 2022

### 2.1 Alberta Zero Emission Hydrogen Project Support

With the arrival of Edmonton's first hydrogen fuel cell electric bus (FCEB) bus in June 2022, the hydrogen transformation officially began. As part of the Alberta Zero-Emission Hydrogen Transit (AZEHT) initiative, Edmonton was awarded over \$4.6 million to test the technology's capabilities under Alberta's extreme weather conditions. This initiative is expected to increase demand for hydrogen and support the deployment of economically viable fuelling stations and distribution systems in the province. This is necessary in a transition to a hydrogen economy that will achieve emission reductions, economic growth and job creation. Adding a clean running hydrogen bus to the City's fleet also supports Edmonton's climate-resilient goals, improves the customer experience and lowers the City's GHG emissions. The City of Edmonton is committed to reaching net zero GHG emissions by 2040. Projects like the hydrogen fuel cell electric buses will help us on the path to achieving that target.

In 2022, the primary focus areas were safety, employee training and infrastructure requirements. The City initiated a feasibility study on hydrogen-fueled bus storage options as part of the project, which explored appropriate indoor, heated FCEB storage and repair facilities. The existing paint booth at Ferrier Garage was identified as being able to accommodate the additional safety controls required due to extreme flammability and other hazards associated with hydrogen gas. Construction to convert the space began in December 2022. This includes improvements to exhaust ductwork and ventilation to prevent stagnant air and gas build up or migration of gas within the building, the installation of hydrogen gas detection devices with automatic audible and visual alarm signals, automatic activation of additional ventilation volume when detection devices register hydrogen gas above prescribed



thresholds and a manual emergency shutdown device that allows users to activate alarms and purge ventilation.

The bus will enter into regular revenue service in 2023 and will test its performance in varying temperatures, weather and road conditions throughout the year. The operational data collected will be used to create a total cost of ownership model and GHG emission model specific to operations in Alberta. The project will see the development of a comprehensive transition plan for each agency participating in the AZEHT initiative, outlining a roadmap to full zero-emission operations. See section 4.3 for the AZEHT initiative for 2023 planned work and how the City of Edmonton will be taking a leadership role in transitioning to zero-emission fuels that can be produced from the province's vast energy resources.



# Critical Fleet - PARS Operations - All

Most Recent Data:

Data updates every hour 9-Feb-2023 12:16:53 PM



Target Active	Fleet Type Status	Section	Fleet Type	+/-	Unit Count	Target	Units Available	Available Waiting for Pick..	Units Down	
Active	Below Target	SNIC	Sander Truck	-1	131	102	97	4	30	
			Sidewalk Tractor	-3	11	7	4	0	7	
			Snow Blower Wheel Loader	-1	14	12	11	0	3	
Target Met (..)	Forestry	Aerial 5T w/ Chipper	0	4	3	1	2	1		
Target Met	Forestry	Forestry	Aerial 2T	0	9	7	7	0	2	
			Aerial 5T	1	3	2	3	0	0	
			Stump Grinder/Cutter	0	5	3	3	0	2	
			Trailer Chipper	1	14	8	9	0	5	
			SNIC	Grader	1	20	16	16	1	3
				Mower 72 Cab & Broom	18	38	17	32	3	3
				Mower 192 Cab & Broom	3	16	9	12	0	4
				Skid Steer - Roads	1	6	5	6	0	0
				Snow Blower Attachment	3	15	12	15	0	0
				Toolcat - Parks	6	21	10	13	3	5
				Toolcat - Roads	0	9	7	7	0	2
Starts Next ..	Below Target	Spring/Su..	Street Sweeper	-2	20	15	12	1	7	

### Section

All

#### Units Waiting for Pick up

Section	Fleet Type	Unit No	WO Location (Domicil..)	WO Completed	Notified
Forestry	Aerial 5T w/ Chipper	C3000	Westwood (Davies)	7-Feb-23 05:58 AM	Null
		C3003	Fab Shop (Westwood)	6-Jul-22 08:09 AM	6-Jul-22 08:09 AM
SNIC	Sander Truck	R3037	Fab Shop (Kennedale)	26-Jan-23 02:10 PM	Null
		V3134	Westwood	9-Feb-23 07:20 AM	9-Feb-23 07:40 AM
		V3135	Westwood (Davies)	9-Feb-23 09:49 AM	Null
	Z3452	Kennedale	4-Feb-23 10:55 AM	Null	
	Grader	B4686	Davies	9-Feb-23 11:43 AM	30-Dec-99 12:00 AM
	Mower 72 Cab & Broom	W4458	Davies	9-Feb-23 11:19 AM	9-Feb-23 11:44 AM
		Y4665	Davies	8-Feb-23 12:10 PM	8-Feb-23 03:21 PM
	Z4003	Davies	8-Feb-23 01:20 PM	8-Feb-23 03:22 PM	
	Toolcat - Parks	D4623	Kennedale (Kennedale)	2-Feb-23 01:40 PM	3-Feb-23 07:47 AM
		R4007	Davies (Kennedale)	7-Feb-23 08:38 AM	8-Feb-23 11:49 AM
Z4480		Kennedale (Kennedale)	8-Feb-23 01:45 PM	9-Feb-23 11:34 AM	
Spring/Su..	Street Sweeper	B4674	Westwood (Kenneda..)	1-Feb-23 07:32 AM	1-Feb-23 09:14 AM

#### Units Down by WO Location

(If a unit has more than 1 open work order on it, it will appear more than once in this chart)

Section	Fleet Type	Davies	Fab Shop	Field Service	Kennedale	West End	Westwood
SNIC	Sander Truck	14	2	2	7	4	1
	Sidewalk Tractor	1			3		3
	Snow Blower Wheel Loader	2	1				
Forestry	Aerial 5T w/ Chipper	1					
Forestry	Aerial 2T	2					
	Stump Grinder/Cutter						2
	Trailer Chipper	4					1
SNIC	Grader	2					1
	Mower 72 Cab & Broom	1			2		
	Mower 192 Cab & Broom	3					1
	Toolcat - Parks	1		2	2		
	Toolcat - Roads					1	1
Spring/Su..	Street Sweeper						7

#### Fleet Type Status

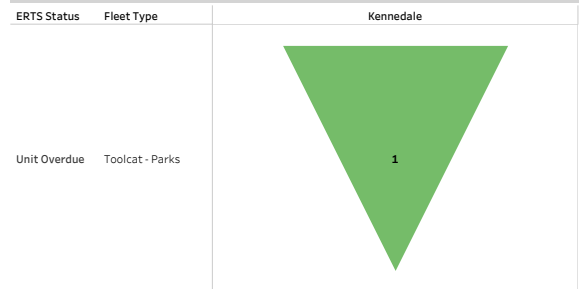
- Below Target
- Target Met (Available+Pick up)
- Target Met

#### ERTS Status

- Unit Overdue

#### Units Due Back Today and Past ERTS Date

ERTS - Estimated Return To Service



## 2.2 Snow and Ice Control Critical Fleet Dashboard Pilot

Fleet and Facility Services staff identified inconsistencies in their line of sight on snow removal equipment, which resulted in a challenge to providing effective service delivery to Parks and Roads Services. Up until recently, each branch would manually track unit status to ensure they could achieve their service delivery each shift. This resulted in extra work to ensure consistency and accuracy between the two branches. To address these issues, a new near-live interactive dashboard was created for both sides of the business to use. This new tool eliminated the duplication of effort,

provided transparency and alignment and allowed both branches to understand the current status of the critical snow fleet at any point in time. Additionally, the network of garages is also able to see book-out on certain fleet types, which enables them to more effectively prioritize repair and maintenance decisions. Repaired units are also visible to business units, which enables a quicker return to service. Building on this success, the tool will be rolled out to other Parks and Roads service delivery groups. Waste Services and Fire Rescue Services dashboards will also be developed in 2023.



### 2.3 Preventative Maintenance Interval Review

Municipal Fleet Maintenance identified two major areas for preventative maintenance improvement in 2022.

**Standard inspection time and preventative maintenance form review** – The team conducted a comprehensive review of the light duty (trucks and equipment) preventative maintenance inspection times and forms. This supported aligning the scope of the inspection with industry expectations and time required for completion of that inspection. This allowed for standardization and consistency across the fleet to ensure inspections are tailored to the appropriate category of equipment and aligned to expected service delivery.

**Municipal and Fire light duty truck major inspection interval review** – The team reviewed light duty truck maintenance plans and alignment with current original equipment manufacturer recommendations. The review demonstrated that the City was completing major inspections too often, which was driving up the total cost of ownership on those fleet types. This initiative has achieved a savings of \$110,000, which is a 26.5% reduction in maintenance costs. Please see section 3.2.1 for planned activities in 2023.



### 2.4 Municipal Fleet Maintenance Field Service Model

A new centralized field model was piloted in Q2/Q3 that supported the Parks and Roads Services turf maintenance program. The change in service delivery centralized all light duty maintenance employees and the intake/dispatch process into one group, which allowed for a more efficient use of resources and provided the customer with one point of contact. The pilot demonstrated great results in supporting turf maintenance service delivery requirements and improved customer experience. Based on the success of the pilot, the project moved into phase 2, which centralized all heavy duty work into the model within Q4. This increased field service levels to better support clients and service delivery, particularly the Snow and Ice Control crews who experienced reduced travel and repair times. The team has also increased the complexity of repairs that they can tackle in the field. In 2023, there will be further refinement and continuous improvement of the new service delivery model, which will be fully implemented by Q2. Please see section 3.2.1 for planned activities in 2023.



## 2.5 Papal Visit Support

Fleet and Facility Services integrated and collaborated with other City work areas and external partners to provide excellent services and achieve fantastic results during the Papal visit in 2022. Every section in the branch was involved in this collective effort.

Transit Fleet Maintenance (TFM) had a critical job, making sure that all of the buses were ready for ETS Park & Ride service. They also connected with other municipalities, Alberta Transportation and some private charter companies to coordinate road moves, support recovery planning and provide comprehensive parking and fuelling plans in advance. During the events, TFM employees facilitated cleaning, fuelling, towing and repairs for buses from external organizations, as well as tracking of this work. Business Integration teams did significant planning and tracking to support the fleets from other municipalities, including ensuring equipment compatibility and sufficient fuel supply. The team also implemented a process to efficiently and effectively collect all of the fuel and maintenance costs from outside agencies.

Municipal Fleet Maintenance (MFM) provided additional support to many client groups to ensure operational needs would be met during the visit. This included adjusting maintenance and repair schedules to ensure emergency services (Alberta Health Services and Edmonton Police Services) had increased fleet availability as well as effective prioritization to ensure City partners could meet service requirements. During the events, MFM employees provided on-call and after-hours servicing, and some team members acted as ushers at Commonwealth Stadium. City street sweepers were also prepared to support events in Maskwacis. Facility Maintenance Services had the task of making sure that City facilities were in good repair and looking their best for the events. They worked with City of Edmonton partner groups and provided trades maintenance work including plumbing, lighting, HVAC and additional electrical media needs. They also provided custodial services to Commonwealth Stadium to ensure the facility was clean and safe for employees and visiting patrons, both before and after the Papal visit events.



Safety Card Month  
January 2023

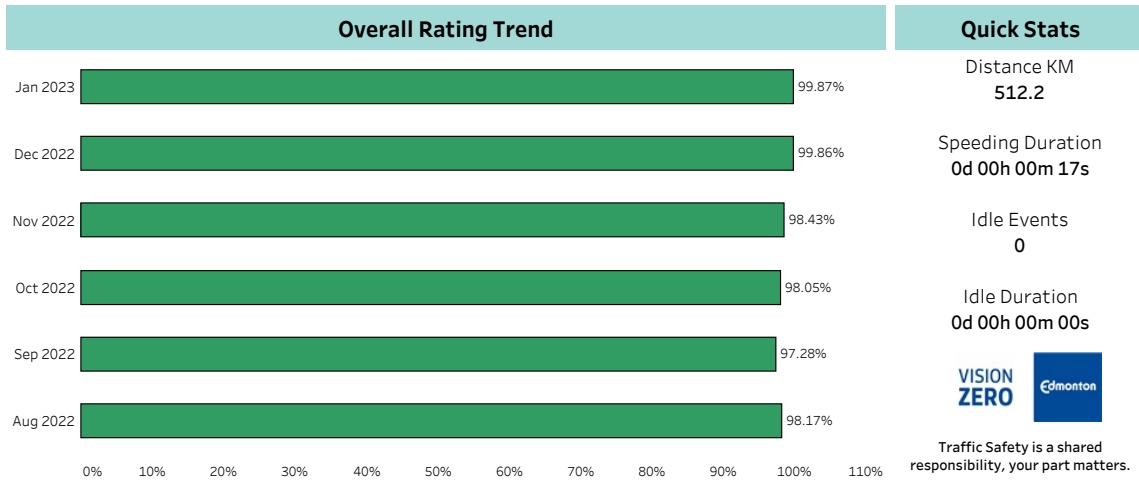
# Driver Safety Card

Driver Name



January 2023			
Safety Rating	Events		Rate
	Speeding	2	0.3319 per 100KM
	Hard Acceleration	0	0.00 per 100KM
	Harsh Braking	0	0.00 per 100KM
	Hard Cornering	0	0.00 per 100KM

■ Above Expectations (> 95%)   
 ■ Meets Expectations (95%-75%)   
 ■ Below Expectations (74.9%-60%)   
 ■ Far Below Expectations (< 60%)



## 2.6 Driver Safety Cards

Employees who hold City Driving Permits and drive GPS-equipped vehicles or equipment with Geotab swipe systems now have access to Driver Safety Cards, thanks to the GPS Telematics and Fleet Safety teams. These cards use GPS trip data on speeding, harsh braking, hard acceleration and hard cornering to give drivers a safety rating for the previous month. The cards also give drivers information on their idling behaviour, in support of the City's goals to lower emissions. Driver Safety Cards provide an excellent

opportunity for employees to take pride in their safe driving behaviours at work and to identify areas where they can improve even further.

These cards are the last major step in a years-long process of research, evaluation and testing. The City now has high quality, accessible GPS data that can be used for a variety of purposes, from enhancing the Driver Safety Program and improving environmental performance, to finding routing and usage efficiencies, cost savings and more.



## 2.7 Active Air and Surface Purification Technology on Transit & DATS Buses

In June 2021, City Council approved a Capital Growth Profile for the acquisition and installation of Active Air and Surface Purification Technology for the DATS Bus, Transit Bus and LRT fleets.

The Fleet and Facility Services Business Integration team worked with various stakeholders from Edmonton Transit Service and Corporate Procurement and Supply Services to competitively tender for a suitable solution. In May 2022, the City successfully completed negotiations and awarded contracts for Active Air and Surface Purification technology for all vehicle categories. The chosen technology eliminates 99% of germs, microbes, viruses and bacteria in the air and on surfaces by generating safe levels of gaseous hydrogen peroxide in the vehicle compartment.

The Transit Fleet Maintenance team commenced installations on approximately 1,137 units in July 2022 and will finalize the completion early this year. The installation of this innovative technology on the entire ETS fleet to safely sanitize the air and surfaces

helped to address the general public's increased expectations of cleanliness due to COVID-19 and ensured continued confidence in transit ridership.

Benefits Include:

### **Active technology**

- » Continually purifies the air and surfaces within the vehicle interior

### **Proven effective**

- » Five million units in service over 20+ year history
- » 99% kill rates with third party test results (SARS CoV2, H1N1, Avian Flu, MRSA, E.coli, bacterial, mold, carcinogens virus, sneeze test, etc.)

### **Proven safe**

- » No negative effects, heavily tested
- » Ozone, non additive to current levels
- » Hydrogen peroxide production one tenth of OSHA limits
- » UV-C is non-detectable outside 15 cm from unit



## 2.8 Solar Panels on City Buildings

In April 2021, City Council adopted the Climate Resilient Policy C627. The policy aligns with the strategic goal of Climate Resilience in ConnectEdmonton, the Big City Move of Greener As We Grow in The City Plan and the City leadership actions set out in the Revised Energy Transition Strategy.

Edmonton is one of the sunniest places in Canada and is geographically primed for solar energy. To ensure environmental sustainability and reduce the carbon footprint of City facilities, work is currently underway to retrofit some City buildings with solar panels. Integrated Infrastructure Services is working on the design and delivery of the solar systems and our FMS team will maintain the systems after install. Currently there are approximately 20 different solar installation projects underway or just finishing completion on buildings, from libraries to recreation centres to fire stations. Fleet and Facility Services

buildings have also been selected for installation.

Davies Municipal Facility had solar panels installed in 2019 and Ellerslie, Centennial and Kathleen Andrews had panel installations completed in 2022. The Davies Municipal Facility system of 125 solar panels has generated 153 MWh of electricity since October 2019. This is equivalent to planting 1,557 trees and reducing CO<sub>2</sub> emissions by 114,833 lbs. The panels are in use year-round, and continue to produce energy when covered with up to three inches of snow. The system now generates approximately 54 MWh per year, or enough to power 45 average homes in Edmonton, which is routed into Alberta's power grid to offset some of the City's energy use. As the solar installations are complete, ongoing work will involve continued maintenance and training for City staff. The Fleet and Facility Services training team has designed and implemented a training program for impacted positions.



## 2.9 GPS Data and Snow Removal

The Fleet and Facility Analytics team is using GPS data to support our City colleagues in providing excellent, cost-effective service to Edmontonians. In 2022, they supported Parks and Roads Services in helping City Council to understand the current state of the Snow and Ice Control program. By referencing GPS data from various types of equipment, our colleagues in Parks and Roads Services were able to determine the average working speed of each type of unit, and then compare it to the number of kilometres of roads and pathways that they have to clear throughout the city. This data proved incredibly valuable in demonstrating the operational capacity of the current fleet in a way that was clear and easy for Council to understand. The data also informed a variety of potential service scenarios for the future, accompanied by clear, data-driven cost estimates.



## 2.10 Cambridge Pedway Work

FMS completed a successful rehabilitation project in the Cambridge pedway that connects to Central Station after decorative, cold-pressed steel panels were found to have rusted due to water and moisture exposure. Primary tasks included changing the material on the walls, and installing waterproofing and other preventative measures.

This was a large and complex project, with a budget approximately three times the amount of typical FMS spending limits, but the crew determined that they could save a significant amount of money for the City by managing the repairs in-house with support from Integrated Infrastructure Services. There were many challenges throughout the project, such as delays due to equipment failures, but the team persevered. The work was completed successfully and full use of the pedway, with beautiful new panels, has been restored.





### 2.11 Jill of All Trades at NAIT

Jill of All Trades aims to provide information and encouragement for female high school students who are interested in learning more about or entering the trades. NAIT was among the host schools, welcoming nearly 100 participants from Edmonton and northern Alberta to try their hands at more than a dozen trades. At workshops across campus, students got a firsthand feel for welding, carpentry and many more trades, in addition to hearing from women in the field who shared their own experiences. Multiple tradespeople from across the branch volunteered to serve as group leaders and mentors for the day. They guided small groups of students to various workshops around campus and were available to answer any questions and discuss their experiences as women working in the trades. Other team members helped to promote and offer additional support to the event.

This initiative is supported by the Women@CityOps Committee which helps identify initiatives that support current and future City Operations employees who identify as women to achieve equity in the workplace.



### 2.12 Indigenous-Designed Bus Wrap

In September 2022, the City partnered with iHuman Youth Society to wrap a bus in Indigenous artwork in recognition of the National Day for Truth and Reconciliation. The Indigenous bus wrap features submissions from young artists nestled within a sweetgrass braid. Sweetgrass symbolizes healing, peace, spirituality and strength. This partnership with young local artists demonstrates our commitment to the City's Indigenous Framework and forging stronger relationships with Indigenous Peoples. Similar to the Pride buses, this bus will be in year-round circulation and will also be used to support special events.

## RECOGNIZING FFS ACHIEVEMENTS – 2022 AWARDS

### 2022 NATIONAL ASSOCIATION OF FLEET ADMINISTRATORS (NAFA) FLEET AWARDS

#### NAFA Green Garage Award

Fleet and Facility Services and the City of Edmonton were recognized, and placed seventh on the NAFA Management Association's 2022 Green Garage Award in North America, for the work on Kathleen Andrews Garage, which began operating in 2020. The award recognizes the most progressive and environmentally committed fleets and allows organizations to share best practices for eco-friendly vehicle fleet maintenance garages. Kathleen Andrews is a BOMA BEST certified facility which includes conducting energy and water audits to find opportunities for conservation measures. Some of the building features include:

**Electric Buses:** Kathleen Andrews Transit Garage accommodates 50 of the City's 60 electric buses. Modifications were made to accommodate the needs of electric buses, which included reinforced concrete floors to bear the weight of the buses, an additional emergency generator and charging stations.

**Water Conservation:** The roof was designed to collect rainwater, which is held in a 1.5 million litre cistern, for a bus wash system. This is equivalent to 7,500 household rain barrels.

**LEED Silver Certified:** The entire building was designed to be LEED Silver certified and relies solely on LED lighting, which is much more energy efficient, saves money and lowers emissions.

**Solar Panels:** The roof is reinforced to support future installation of solar panels. Supplemental power from the solar photovoltaic panel installation will then be used to power the charging stations for the electric buses.



#### CULTURAL COMMITMENTS AWARD FOR “HELPFUL” – DALE WHITE

Dale is an amazing individual who consistently works to improve the experiences of others around him. He promotes the Indigenous Framework, assists with Indigenous Awareness Training and is active in the Edmonton Indigenous Employees Resource Network (EIERN). He helps guide staff on journeys of reconciliation to build and maintain positive and respectful relationships with Indigenous Peoples. He is generous with sharing his knowledge, experience and perspective as an Indigenous person, regularly providing guidance, coaching and feedback on the program.

Dale is an Automotive Service Technician, an active shop representative with CUPE 30 and a member of the Municipal Fleet Maintenance peer support team. He is very giving with his time and perspectives and often takes time out of his day, even sometimes in the middle of the night, to connect with those that reach out to him.

Dale is helpful as he demonstrates pride in caring about people's experiences and considers equity and inclusion when addressing people's needs. He helps build trusting relationships with colleagues and fosters engagement within his facility and across the City. Dale is an amazing ambassador who truly promotes the City's values, goals and vision.



### **CULTURAL COMMITMENTS AWARD FOR “HELPFUL” – WATER STATION FOR VULNERABLE EDMONTONIANS – FABRICATION TECHNOLOGIES (MULTI-DEPARTMENT TEAM)**

The Fabrication Technologies Municipal Fleet Maintenance team designed and fabricated water bottle filling stations that attach to fire hydrants, allowing residents to have access to fresh, clean water during the hot summer weather in Edmonton. Using fire hydrants as fountains is a strategy used in Europe and several municipalities in Canada including Calgary, Montreal and Vancouver. Early discussions took place in Edmonton between Edmonton Police Service, Edmonton Fire Rescue Services and EPCOR, but the project really moved forward when the Affordable Housing and Homelessness team connected it to the City's extreme weather response.

The Fabrication Technologies team typically provides operational support such as custom fabrication for vehicles and facilities that tend to be “back of house” and aren't seen by the public. The water stations were designed and crafted to be both beautiful and functional and the results have enhanced the City of Edmonton's brand and reputation. They provided much-needed access to clean, potable water to anyone in need of it. This is especially vital during the more frequent bouts of extreme heat caused by changes to Edmonton's climate, and contributes to the

City's climate resilience, and to developing inclusive and compassionate communities.

The project received a lot of positive feedback from residents and members of City Council. It is an example of small steps the City can take that have a large impact on safety and livability. Even though this project is out of the team's typical scope of work, they went above and beyond to deliver an innovative project as part of a multi-department effort.



### **2022 NAFA FLEET AWARDS**

#### **NAFA Green Fleet Awards**

Fleet and Facility Services, the City of Edmonton, placed 45th on the NAFA Fleet Management Association's 2022 Green Fleet Awards program, which lists the top organizations in North America. Edmonton is the only Canadian city on the list.

The Green Fleet Awards recognize organizations with peak-performing fleet sustainability efforts and honor fleets who have enhanced practices to make a positive impact on the environment. Judgment is based on several factors, including dedicated alternative fuel and hybrid vehicle composition, fuel usage and savings, purchasing policy, planning and other areas.



### **FINALIST – CULTURAL COMMITMENTS AWARD FOR “SAFE” – SAFE SPACE CARTS FOR SEVERE WEATHER SHELTERS TEAM**

In response to previous tornado warnings within the Edmonton region, Nigel Bruce saw a potential need for emergency supplies within severe weather shelter areas in the Richard Paterson Garage and came up with the idea to create Safe Space Carts. After assessing where the shelters were within Paterson, it was determined that five carts would be required. The Safe Space Carts contain a variety of safety items that are helpful if an emergency situation takes place within Paterson.

Monika Meyer and Mitch Shaw helped update the carts by clearly labeling them, adding the Severe Weather branch Standard Operating procedure, new equipment, cart checklists and optimized placemats for specific severe weather scenarios. Now all severe weather shelters in Paterson Garage have a Safe Space Cart.

These Safe Space Carts are one way that City employees within the Paterson facility can feel prepared and less stressed should an emergency severe weather event arise.



### **FINALIST – CULTURAL COMMITMENTS AWARD FOR “CHARLES LABATIUK ENVIRONMENTAL AWARD” – NEIL KETLER**

The City's snow plows use around 1,500 end bits each winter season. End bits are the steel cutting edges used at the front of the snow plow and are fabricated from raw material by the Fleet Services Fabrication Technologies team. These end bits wear down over time and the used parts are discarded as scrap.

This spring, Neil initiated a project to recycle these end bits to use as material for future orders. By having the district yards send used material back to Fabrication Technologies, the flat plate component is able to create new end bits. Neil worked with operations planning and roadways district staff to coordinate a process for recovering material and in May 2022 the district yards began recycling used end bits.

With the price of steel trending upward and worldwide supply chain delays, this is a timely project with tangible benefits for City of Edmonton employees and residents. Neil's efforts resulted in faster product delivery, reduced reliance on external suppliers for raw material, increased use of recycled material in a high-use City product and revenue savings from the reuse of material.

## 3.0 SERVICE PLAN FOR 2023

Fleet and Facility Services provides both fleet and facility maintenance, as well as operations supports to internal and external City of Edmonton partners. The branch is looking forward to 2023 and, in the spirit of continuous improvement, has a number of important changes to its service that will directly and positively impact its partners. The following is a summary of those changes in each service category.

### 3.1 FACILITY MAINTENANCE

#### 3.1.1 Facility Asset Management Strategy

In 2022, Fleet and Facility Services, in conjunction with Real Estate and Integrated Infrastructure Services (IIS), completed a review of the existing facility management portfolio. Through this review a number of underutilized facilities and high cost-per-square-foot facilities were identified as underperforming assets that should be disposed of to reduce ongoing operating costs. This review will continue into 2023, and will help to inform a strategic approach to facility management portfolio governance and asset management decision-making

practices. Developing a clearly defined facility end-of-life approach assists in managing future growth and facility disposal. Another key component of this review is to ensure maintenance coordination roles are clarified between customer branches and departments.

In 2023, Facility Asset Management Strategies will improve further. FMS will develop a maintenance audit framework to assess third party groups who are responsible for the maintenance of City facilities. Through continued collaboration, and in alignment with strategic asset management plans, FMS will develop plans for existing owned or leased facilities and establish a process including point of contact, approval, budget and execution of maintenance work.



LEGEND:



Operational Excellence



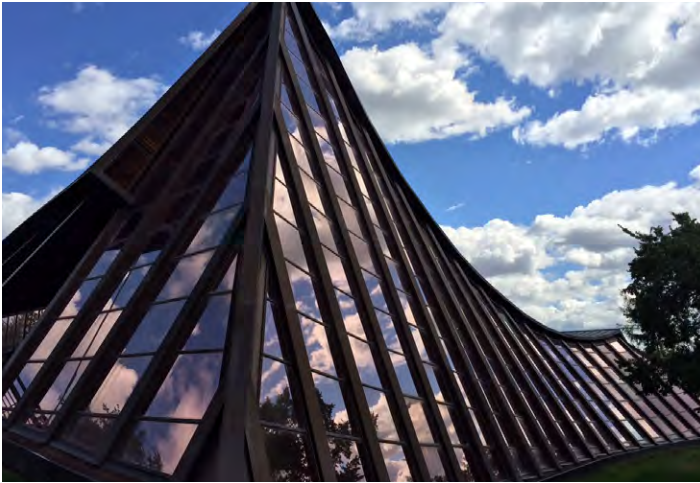
Climate Action and Energy Transition



Safety



Relationship Based City



### 3.1.2 Smart Buildings and Innovative Technologies

FMS leverages new smart and connected technologies to operate buildings more efficiently and to enhance predictive maintenance. The team has a robust building management system (BMS) that can remotely monitor and adjust heating and ventilation systems, and signal an alarm to inform FMS staff if a system has ceased operating within its design parameters or if it has shut down unexpectedly. FMS will expand the BMS to additional buildings in 2023 based off of the GHG projects and ISO50001 energy management plan.

In 2022, FMS Custodial Services investigated the benefit of robotic cleaning equipment. This initiative optimizes labour by reallocating employees to higher-value tasks. Results show a reduction in turnover and positively engaged employees, while executing reliable and consistent cleaning. This improves cleaning performance and provides real-time performance data.

In 2023, Custodial Services will continue exploring new technologies to reduce labour challenges and drive efficiencies, while maintaining a high health and safety standard for patrons and City employees.

### 3.1.3 Maintenance Scheduling Tool

In 2019, FMS conducted a customer journey mapping study. The study confirmed that the current approach to workload planning also has a negative downstream effect on customer experience, related to confusion

about status and state of work orders, roles and responsibilities of work requests and resolution processes. Leveraging an integrated scheduling tool would streamline scheduling, bundling and resourcing of facility maintenance work while providing a better, customer-focused experience. Customers would receive live updates about the status and progress of work without increasing the burden on the front line FMS staff. This tool could assist many other areas within City Operations, including the Municipal Fleet Maintenance and Transit Fleet Maintenance sections within Fleet and Facility Services. Procurement of the tool has been deferred until after Enterprise Commons has been implemented. FMS will prepare in 2023 for implementation in 2024.

### 3.1.4 Service Level Agreements

FMS has a history of providing quality services and continues to strengthen its operations and professionalism. In 2022, FMS began implementing Service Level Agreements (SLAs) with business partners. The purpose of these agreements is to outline the relationship and responsibilities of FMS core services. By the end of 2022, there were two SLAs signed with Waste Services and Edmonton Public Library. In 2023, SLAs will be finalized for Community Services and Property Management.

### 3.1.5 Onboarding New Assets

The City of Edmonton will acquire new assets in 2023, including Northeast Park (formerly Our Lady Queen of Peace), Fire Stations (No. 19, 31), Kihciy Askiy Pavilion IKWC Park, Valley Zoo Ozone, several roof-mounted solar panel projects and new spray parks. The FMS zone model will grow to include these additional assets and longevity will be extended through additional maintenance by more specialized tradespeople.

FMS has also resumed maintenance on several large IIS rehabilitation projects, such as Century Place, Muttart Conservatory, ACT Recreation Centre, Callingwood Arena, Eastglen Pool and the Artifacts Centre.



## 3.2 FLEET MAINTENANCE

### 3.2.1 Municipal Fleet Maintenance – Operational Excellence

#### **Field Service Model**

Municipal Fleet Maintenance will be moving out of the pilot phase of the Field Service Model project and will expand the service to include heavy duty and light duty technicians. This will be followed by a period of sustainment and continuous improvement. The focus will shift to refining current processes and developing enhanced integration between the Towing and Field Technician areas. With separate operations, customers must call the service they think they require. Integration will improve customer service by allowing the Field Services team to assess the situation and dispatch the correct resources.

#### **Standard Inspection Time and Preventative Maintenance Form Review Phase 2**

A comprehensive review of the heavy duty (trucks, trailer and equipment) preventative maintenance inspection times and forms is scheduled to be phased in over 2023. Like the first phase of this review, the scope of the inspection will be aligned with industry expectations and time required for completion of that inspection. Additionally, the review will help eliminate duplication that exists between the National Safety Code provincially mandated, Commercial Vehicle Inspection Program inspection forms and the internal major inspection form (PMC). The scope of phase 2 is to finalize the forms and times required

for 148 categories of heavy duty equipment. Once this project is complete, a standard billing project will be initiated to standardize customer billing for inspections in alignment with industry best practices.

#### **Fleet Conversion to Synthetic Oil**

A continuous improvement initiative has been initiated to transition the City fleet that currently uses conventional engine oil over to synthetic. Using synthetic oil increases the number of hours and/or kilometres a unit can be used before it is due for its manufacturer-recommended oil change. This change will affect over 762 PMA (oil change) maintenance plans where the interval can be lengthened. Synthetic oil has many other advantages that positively impact the City's fleet, including improved fuel economy and better horsepower. Overall, this change will result in customer savings due to reduced preventative maintenance required, and less vehicle and equipment downtime.

#### **Centre of Excellence**

Municipal Fleet Maintenance will continue evaluating specific opportunities to centralize fleet and/or maintenance locations to increase operational uptime. The current focus is on centralizing heavy truck major running repairs to use bays better and develop specialized technician teams. The change will build core competencies within strategic locations for certain repairs that are currently completed on an ad-hoc basis within various garages. This will also allow Municipal Fleet Maintenance to reduce reliance on vendors when garages lack the expertise to



complete the repairs. Consistent service standards and processes will enhance the customer experience and result in efficient maintenance turnover and reduced downtime and associated repair costs for customers.

#### **Critical Fleet Service Location Review**

A critical fleet domicile review of Collection Services (Waste Services) and Snow and Ice Control (Parks and Roads Services) equipment will be completed before the end of Q1 2023. The review will optimize where seasonal and major maintenance takes place on these high-profile fleets to reduce downtime and minimize the completion of major seasonal jobs within our primary service garages. This change will allow for better bay use and labour efficiency within the affected garages. Advancing this project will position Municipal Fleet Maintenance to achieve partnership agreement book-out requirements while considering operational efficiency, which will result in better service and an improved customer experience.

#### **Critical Fleet Dashboard Phase 2**

Municipal Fleet Maintenance will build on the success of the Snow and Ice Control dashboard pilot by expanding the current critical fleet dashboard to Parks and Roads Services, Waste Services and Fire Rescue Services business areas. This change will ensure that all categories identified within existing

service level agreements are measured and reported in near real-time. The dashboards will also be presented on digital media panels within our major shops to ensure that all staff can incorporate book-out information into their everyday prioritization and decision making.

### **3.2.2 Transit Fleet Maintenance – Operational Excellence**

#### **Increasing Garage Capacity – Implementing the Fleet Storage and Maintenance Facility Strategy**

Transit Fleet Maintenance operates six transit garages which enable fleet storage, operations and maintenance for the entire ETS fleet. These facilities are currently operating at full capacity. In order to meet service demands for a population of 1.25 million and achieve GHG emissions reduction targets by 2030, the City is planning to build a new bus garage in the southeast quadrant of Edmonton by 2027 and expand some supporting facilities. The new and expanded facilities will enable the transition to a fully electrified transit fleet and provide capacity to replace over 400 diesel buses with electric buses by 2030. Further to the funding approved by City Council for land acquisition in 2022, Council also approved funding during the 2023–2026 budget for the City's portion of the garage design and construction, pending partner funding support. The City will





work on land acquisition and design for the new garage in 2023, while also seeking partner funding from other orders of government to support the construction. A future phase of this work will see a series of upgrades, renewals and expansion projects within existing facilities to support fleet growth and electrification.

#### **Bus Life Extension Program**

To mitigate risk associated with an aging fleet over the next four year budget cycle, Transit Fleet Maintenance is developing a Life Extension Program to extend the life of our buses to beyond 20 years. This will be done through engine and major component replacements, and body refurbishments. The program optimizes the value of capital funds that have already been invested in order to mitigate the challenges of sourcing capital funding for bus replacements.

#### **Electric Bus Winterization Campaign**

A series of campaigns will be implemented in 2023 to improve electric bus performance and range during winter conditions, including:

- » Retrofitting batteries with battery blankets
- » Enabling regenerative configuration options to maximize regenerative braking

- » Upgrades to powertrain controllers
- » Battery thermal management optimization upgrades to enable more efficient heat usage packs in cold weather
- » Defroster software updates
- » Adjusting acceleration settings to maximize range
- » Adjusting battery settings to maximize range of the batteries
- » Enabling maximum settings on ambient heat temperatures
- » Adjusting auxiliary heat settings

#### **Production Enhancements**

Throughout 2023, Transit Fleet Maintenance will be implementing a number of enhancements to achieve greater efficiency, production and consistency across all facilities, including:

- » Estimated Repair Times (ERTs)
- » Mean Distance Between Failure (MDBF) analysis
- » Parts ordering/visibility improvements
- » Garage standard work practices

### 3.3 BUSINESS INTEGRATION OPERATIONAL SUPPORTS

#### 3.3.1 Overseeing Business Operations



The Business Operations team oversees the Fleet and Facility Services Warranty and Operational Procurement programs.

The Warranty section examines every job flagged for warranty by M5, looking for warrantable repairs. Approximately one-third of the roughly 5,000 vehicles, equipment and transit buses in Fleet and Facility Services' care are under some form of warranty. The team collects faulty parts and then submits claims to the vehicle manufacturers for reimbursement. They also work with our warranty providers to get reporting on cost avoidance numbers that reflect the value of what the City saved by having repairs performed under warranty. This typically saves the City between \$1.2 million to \$1.5 million every year. In 2023, the team will be looking into opportunities to further expand the City's warranty program by managing warranties on City buildings maintained by the FMS section.

The Operational Procurement team supports the creation, tendering and award of all contracts related to non-capital services for Fleet and Facility Services. This includes contracts used to support vehicle repairs for both the municipal and transit fleets, building maintenance, fuelling, tooling and any number of items required for the operational areas to effectively manage their business. The team is responsible for facilitating contracts with a combined value of over \$1 billion. In 2023, the team will be working on multiple high-profile contracts, including Fleet Lubricants and Fluids, Construction Equipment Inspection Repair and Overhaul, Bulk Fuel, Fuel Island Service and Commercial Cardlock Fuel, Graffiti Cleaning Services, Light and Medium Duty Vehicle Sales and Support Services, to name a few.

#### 3.3.2 Overseeing Corporate Fuelling & Operations Technology

The Fleet and Facility Services Fuel and Operations Technology team manages and oversees the ordering and delivery of all fuel and fleet lubricants to the eight major fuelling sites and four ETS garages across the city. In 2022, this amounted to over 35 million litres of fuel and over 700 purchase orders of fleet lubricants.

##### **Overseeing Branch Technology**

The Fleet and Facility Services Fuel and Operations Technology team manages and oversees all branch hardware and software including all diagnostic hardware. In addition, they manage the Fuel Management System and the Fleet Management System, providing 24/7 support.

##### **Connecting Fleet Maintenance with Buildings Maintenance**

The Fleet and Facility Services Fuel and Operations Technology team is the liaison between all TFM and MFM facilities with FMS. Managing over 36 different facilities in 2022, the team processed over 2,100 open tickets including all tool purchases.



### 3.3.3 Managing The Corporate Driver Safety Program

The Fleet Safety group manages the overall Driver Safety Program for the City of Edmonton, which includes the monitoring and evaluation of approximately 8,500 drivers to ensure the safe and competent operation of City vehicles. They also manage the National Safety Code (NSC) and other legislative requirements related to the operation and maintenance of a commercial fleet of over 5,000 vehicles. Fleet Safety is responsible for investigating collisions involving City vehicles, with the exception of ETS and DATS buses, and vehicles operated by EPS officers. In 2023, Fleet Safety will be working with EPS on a collision reporting procedure so that City units do not have to attend a Collision Reporting Centre.

In 2023, Fleet Safety will be working on several projects including moving Driver Management from PeopleSoft and LMS into POSSE in Q1/Q2, and developing GPS notifications on seatbelt usage and speeding over 10 km/hr in City vehicles. The Driver Safety Cards will continue to be used as a tool to optimize performance and provide opportunities to recognize drivers who are performing above expectations.

An updated Driver's Manual Standard for the organization will be rolled out in Q1 2023 to reflect recent program changes.

### 3.3.4 Fleet Engineering: Supporting Maintenance

Fleet Engineering administers the GPS program and provides expert analysis and advice for equipment and vehicles, engineered modifications and certifications, computer aided design services, failure analysis, oil analysis and interpretation, non-destructive testing, reliability analysis, preventative maintenance plans and safety programs. The team works with Municipal Fleet Maintenance and Transit Fleet Maintenance to continually improve processes and measures, increase effectiveness and efficiency and ensure a safe, reliable and compliant fleet through an effective preventative maintenance program.

In 2023, Fleet Engineering will be working towards improving and updating their processes, as well as using new analysis tools to better streamline their work. They will continue the Municipal Fleet Maintenance Standard Repair Time Study to include optimization of preventative maintenance intervals.





Other key projects the team will be working on include providing support for the City's Battery Electric Vehicle (BEV) bus fleet and Alberta Zero Emission Hydrogen Transit (AZEHT) project.

### 3.3.5 Training

Fleet and Facility Services has a dedicated team that organizes and provides various training courses for employees to continuously improve their skills. The Training team is committed to providing high-quality training courses for the branch in five categories: Onboarding, Occupational Health and Safety, Environmental, Driving, Software and Technical.

They provide training through different delivery methods, including online, instructor-led and on-the-job to support employee needs. For courses that are not delivered by the branch, the team assists with the coordination, registration and hosting at Fleet and Facility Services locations. The Training team is an integral part of the success of projects in the branch, including the development of Ammonia, Ozone and Solar training programs. They evaluate business needs and help identify, develop and deliver training requirements in alignment with process changes and safety requirements.

In 2022, the team focused on providing support for the implementation of SuccessFactors, part of the City's new Enterprise Resource Planning (ERP) system under the Enterprise Commons program, which will replace the current Learning Management

System (LMS). The Enterprise Commons program represents a major corporate shift in the way the City of Edmonton operates and will simplify and standardize the systems the City uses with respect to its core services. As the City moves towards implementation of the new systems, the team will support training for branch staff.

### 3.3.6 Analytics That Drive Operations



Facts, Analytics and Strategic Technology (FAST) is a tool developed by Fleet and Facility Services that enables City of Edmonton employees and their stakeholders to increase their strategic reporting capabilities and leverage data for decision making.

The custom dashboards developed by the branch's Analytics and Reporting team enhance information access through a user-friendly, readable tool that takes users from the overall story to more granular, base-level data. The information is timely, accurate and relevant, allowing users to identify inefficiencies and improve operational performance.

The Analytics and Reporting team has been pivotal in the creation, implementation and use of Fleet Maintenance Services data sources and tools to measure and report on performance measurements, audit maintenance plans and provide important operational information. The team's development of these tools has increased communication between internal staff and partners, and has given fleet



customers a broader awareness of their operations. The system allows for the extraction of complex data sets that can be presented in ways that are easily accessible, timely and customer-centric. This has enabled client areas to make informed decisions that improve productivity, fiscal stewardship and corporate safety. For example, enhanced visibility of the Fleet Preventative Maintenance program has resulted in achieving nearly 100% compliance for legislated preventative maintenance.

The Analytics and Reporting team has been working to help streamline FMS processes and build new forms and applications for site inspections, expenditure approvals and more. Dashboards have been developed to support facility maintenance operations, including the performance of legislative maintenance compliance, notification and work order management, cost and hour reporting and more. Finance has also been provided with a dashboard that extracts work order cost and recovery data, which eliminates the need for manual data pulls. These dashboards provide reliable, consistent and timely reporting. Automation has reduced errors caused by inconsistencies in data extraction and manipulation, allowing users to spend more time on analysis and decision making.

In 2023, the Analytics and Reporting team and FMS will introduce new applications and forms to better collect data electronically. They will also continue to leverage GPS data to improve reporting on fleet usage, National Safety Code compliance and more.

### 3.3.7 Overseeing Acquisition and Disposal



Fleet and Facility Services has a dedicated team that performs needs assessments with operational areas to determine the appropriate vehicle types to conduct their work. This team creates specifications and takes them to market through the Request for Proposal process to acquire new vehicles, monitor production and then commission them for service. The team handles acquisition of hoists and capital tools and equipment used by the various fleet maintenance facilities, in addition to overseeing all collision repairs for the City and EPS, the write-off process resulting from collisions, and preparation of vehicles and equipment for salvage disposal at the end of their lifecycle. They also provide oversight on capital contract management and renewal negotiations.

In 2023, the Fleet and Facility Services Acquisition and Disposal team will support many new and ongoing projects and initiatives, including the Capital Fleet Replacement, Hydrogen Fuel Cell Electric Bus Project, Fleet Strategy and Governance Project and the Fuel Tank and Oil Site Replacement Program. Alongside these projects, they will be working on the transition of hired equipment and fleet rentals to Fleet and Facility Services, and the acquisition of green fleet technologies using the new Emissions Neutral City Fleet and Equipment capital allocation.

### 3.3.8 Creating and Reviewing Service Level Agreements with Partners



Fleet and Facility Services creates and maintains agreements and frameworks with other City branches that utilize vehicles and equipment, and/or occupy City-run facilities, including the Edmonton Police Service, Alberta Health Services and Edmonton Public Library.

These agreements outline the relationship between Fleet and Facility Services and partner branches, define roles and responsibilities and set service level KPIs for Fleet and Facility Maintenance. Agreements are reviewed on a regular basis to ensure Fleet and Facility Services continues to provide required service levels to our partners.



## 4.0 PROJECTS AND INFRASTRUCTURE FOR 2023

Each year, Fleet and Facility Services takes on a range of projects that support and enhance branch operations and services. Many of these projects and infrastructure improvements are not public-facing but are necessary for Fleet and Facility Services to continue to innovate and strengthen the overall level of services provided in Edmonton. The following is a summary of some of these projects.

### 4.1 COR AUDIT RESULTS AND IMPLEMENTATION

In 2022, the City of Edmonton successfully passed its Certificate of Recognition (COR) external audit with a score of 89% (the minimum to pass the audit is 80%). A COR shows that the employer's health and safety management system has been evaluated by a certified auditor and meets applicable standards. These standards are established by our certifying partner Alberta Municipal Health & Safety Association (AMSHA).

The Fleet and Facility Services Leadership Team has taken responsibility for implementing ten key recommendations identified in the City's successful 2022 COR audit. This shows our commitment to employee safety and promotes the City as an employer of choice. Our focus on continuous improvement results in reduced incidents, higher employee engagement, reduced lost time and an embedded culture of a deep commitment to safety.



## Top focus areas for Fleet and Facility Services in 2023 include:

### **Advancing the Fleet and Facility Services Joint Worksite Health and Safety Committee**

The purpose of the Joint Worksite Health and Safety Committee (JWSHSC) is to promote an integrated safety culture as well as awareness and interest in mental health. The committee plays a key role in establishing strong communication links between management teams and staff to promote that safety is everyone's responsibility. This ensures consistency in application of Occupational Health and Safety (OHS) standards, policies, procedures and corporate initiatives, and allows stakeholder input and ownership in planning of OHS initiatives. JWSHSC's goal is towards proactive safety excellence, building a safer city and ensuring a safe workplace. Actions include:

- » Restructure and consolidate branch and section Committees, and streamline administrative procedures
- » Incorporate Business Integration functions such as Engineering, Fleet Safety and Training, and ensure FMS Zone Model consistency
- » Complete and record corporate training for all committee members
- » Monitor meeting attendance and meetings planned versus conducted
- » Include committees in audit actions

### **Improving Safety Inspection Performance**

The COR audit noted a gap in training requirements when conducting safety inspections. Corrective actions include:

- » Ensure all positions are receiving appropriate mandatory training and complete corporate training on inspections where required
- » Reconcile branch inspection requirements and communicate expectations
- » Review branch inspection performance quarterly
- » Conduct required number of inspections as per Corporate Standard

### **Enhancing Incident Investigations for Injury Prevention**

COR audit findings concluded that information on incident report details and corrective actions is communicated appropriately to all levels of staff. Actions for enhancement include:

- » Improve the current communication strategy to share appropriate incident findings with all levels of the branch
- » Focus on ensuring corrective actions are identified and completed
- » Monitor performance related to incident investigation closures quarterly
- » Apply new Incident Management Standard in the branch and provide resources to develop Incident Management Procedures in applicable sections
- » Ensure supervisors and leaders are trained to the new Incident Management Standard requirements

## 4.2 FLEET STRATEGY AND GOVERNANCE PROJECT

The Fleet Strategy and Governance Project kicked off in 2022. It includes working towards implementing the recommendations found in the Reimagine business plans for Fleet Size Optimization and Lifecycle Replacement Strategy. Endorsed by

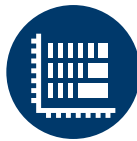
the City's Executive Leadership Team (ELT), the Fleet Strategy and Governance project will create and implement a revised organization-wide Fleet Strategy with the primary goal of optimizing fleet management, while simultaneously increasing efficiency, service levels and net benefit to the City.

### Driving Principles



#### Data Driven

To better understand front line operations in order to build and implement strategies that work



#### Systemic

Looking at the system as a whole: assets, lifecycles and maintenance, to provide a seamless service experience



#### Adaptive

As circumstances change, so will the fleet strategy ensuring continuous service delivery

### Goals and Objectives

#### Fleet Size Optimization

Determine the optimal size and composition of the City of Edmonton fleet

#### Fleet Lifecycle Optimization

Determine asset utilization patterns and impact on maintenance and service delivery

Determine maintenance costs and the impact of maintenance costs past an asset's useful life

#### Implement Fleet Strategy

Determine the procurement strategy and mix for owned and rented vehicles

Updated Fleet Governance model

Determine specific costs associated with service delivery

Deliver asset management plan & ensure the financial sustainability of our fleet

Fleet and Facility Services provides centralized fleet maintenance and fleet-related services to the fleet owners across the City. Currently, fleet management is largely decentralized, with internal branches having ownership and control over their assets. Although this structure is designed to achieve efficiencies through functional specialization, it also highlights competing priorities across the asset lifecycle.

To ensure alignment and integration, the branch is focused on clearly defining the most critical lifecycle management decisions, the decision-making process and decision-making authority (i.e. roles and responsibilities at various levels of management). These incremental changes to the procurement process can lead to more timely procurement decisions, a reduction of out-of-lifecycle fleet and

cost-avoidance of unbudgeted maintenance costs. Decisions that benefit from a clearer allocation of accountability include replacing or keeping aging assets in service, having spare units in the fleet, renting or buying assets and preparing growth capital requests.

In 2022, the branch has advanced the consolidation of all rentals oversight and management within the Fleet and Facility Services branch, updated how fleet lifecycle replacement decisions are made and completed a jurisdictional scan of the best fleet management strategies from around the country. In 2023, the newly developed strategies, policies and procedures will be implemented and savings can start to be realized.





### 4.3 ALBERTA ZERO EMISSIONS HYDROGEN TRANSIT (AZEHT) CONTINUATION

Following the testing of the hydrogen fuel cell electric buses (FCEBs) in year-round weather conditions, 2023 will see the commencement of extensive data analysis and reporting and the maturation of a comprehensive transit fleet transition plan to attain long-term emission reduction targets.

#### Data Analysis and Reporting:

The project team will work with the University of Alberta to document vehicle performance. Acceleration, fuel use, life cycle, GHG emissions and maintenance of diesel internal combustion engine (DICE) buses, fuel cell electric buses (FCEB), battery electric buses (BEB) and compressed natural gas (CNG) buses will all be evaluated under a wide range of conditions (temperature, air pollution, traction, load, etc.). Results will help inform an assessment of the total cost of ownership and the GHG costs and benefits of the FCEB compared to other alternatives.

#### Fleet Transition Plan Maturity

In early 2022, as part of the AZEHT project, the City completed an initial fleet transition plan with project partners Hydrogen Technology & Energy Corporation (HTEC). Starting in 2023, the City will be working with the Canadian Urban Transit Research & Innovation Consortium (CUTRIC) on a robust transit fleet and infrastructure transition plan to a low-carbon fleet of vehicles. The study will be funded through the Zero Emission Transit Fund. This work will be completed in 2024 and will outline how Edmonton can best build infrastructure, replace aging fleet vehicles with zero-emission buses and meet its climate change goals.

### 4.4 HYDROGEN NODE AND HYDROGEN FUELLING STATION DEVELOPMENT



The City of Edmonton has committed to a low-carbon future and has a corporate goal to reach net zero GHG emissions by 2040. The continued support of City Council is essential to improving Edmonton's environment for current and future generations.

Globally, more countries are turning to hydrogen for their energy needs. Edmonton and the surrounding region are uniquely positioned to become a world leader of hydrogen supply. The upcoming testing, in partnership with Strathcona County, of two hydrogen fuel cell electric buses and the exploration of a hydrogen fuelling station are expected to be the catalyst to building a strong, stable hydrogen economy in the region and the province for generations to come, securing Edmonton's hold in the emerging trillion dollar industry.

While the AZHET pilot project has enormous potential in and of itself, it is the tip of the iceberg. In late 2022, the City released a Request for Information (RFI) to industry to identify companies that would be interested in building and operating a more permanent hydrogen fuelling station. Results from the RFI, including information on the pros and cons of potential solutions, will also help assess the scalability and profitability of a hydrogen fuelling station (such as expanding to other municipal fleet vehicles). On top of the potential to convert Edmonton's transit fleet of over 900 diesel buses to clean-burning buses, the City has the opportunity to work with industry to establish a fuelling station and new garage that can eventually support program expansion.

Not only does that make a substantial difference to Edmonton's carbon footprint, but it also lays the groundwork to scale Alberta's hydrogen economy and provide other opportunities, such as other municipal fleets and infrastructure.

#### 4.5 GPS TELEMATICS MATURITY



In 2022, the branch finalized and reintroduced Driver Safety Cards, which have been designed to improve driver safety. In 2023, the branch will also be turning on in-cab alerts to give drivers real-time feedback on specific exception events, such as speeding and harsh braking.

In 2023, there will be further development of telematics data analysis and reporting to help business areas make decisions. Fleet and Facility Services will continue to better integrate GPS data with existing processes and systems to increase efficiency and accuracy. For example, using GPS data to provide more accurate and frequent meter readings can drive Preventative Maintenance Plans. Improved GPS data will also help our partners understand asset use through better business reporting and route optimization, and is integral to the success of the Fleet Strategy and Governance Project. GPS data also improves employee and resident safety through the Driver Safety Program, in alignment with the City's Vision Zero strategy. The GPS team will continue to investigate potential for critical vehicle mapping solutions this year.

#### 4.6 PILOT ENERGY STORAGE UNIT AT KATHLEEN ANDREWS

The City of Edmonton has entered into a partnership with eCAMION through Emissions Reduction Alberta funding to pilot a practical solution for upgrading the capacity of the existing electrical infrastructure at Kathleen Andrews Garage with a 1MWh energy storage unit, which would enable power shaving (reduced consumption during peak times) to avoid high demand charges. This pilot also involves the implementation of an additional overhead pantograph charger operating with direct current microgrid architecture that uses next generation power conversion technology.

Energy storage solutions such as these are new to the City of Edmonton's operations, and understanding storage options and operations will be an important part of preparing for the City's climate resilient and emissions-neutral future. This will allow the City to store low-cost energy for use during peak periods when rates are higher, and is necessary to save on operational costs in powering the grid. Energy storage capacity will also help the City avoid costly operational disruptions and continue normal operations in the event of a power outage.

Energy storage will also be a critical component in supporting battery electric bus fleet growth and the City's transition to carbon neutrality. This exciting pilot project is scheduled to commence in Q1 2023 with a completion date in December 2023.

#### 4.7 ENVIRONMENTAL MANAGEMENT SYSTEM AND CORPORATE CLIMATE RESILIENCE

The City's Environmental Management System (Enviso) is based on ISO 14001 standards and is designed to protect the environment, meet compliance obligations and align corporate environmental policies in order to continually improve the City's environmental performance. As part of the corporate ISO 14001 certification in 2022, the branch participated in internal compliance audits and external surveillance audits. There were no major non-conformances identified. However, some opportunities for improvements will be considered for action in 2023. Additional improvements to the system within the branch will include updates to Enviso procedures (e.g. Fuel Site Guidelines) and a review of monitoring and inspection processes for building assets to ensure due diligence (e.g. USTs for building generators, refrigerant systems and drainage interceptors).

## Management System Improvements

The Environmental Management Team within Environment and Climate Resilience (ECR) will also be developing initiatives in 2023 to serve operational clients better and improve the delivery of the system. These initiatives will require branch input and alignment throughout operations and will include the development and/or implementation of a:

- » Partnership Agreement
- » Engagement Strategy
- » Communication Plan
- » Internal and External Audit Long-Term Strategy
- » Integrated Pest Management (IPM) Policy Implementation

## Climate Resilient Buildings

The Climate Resilience Policy and Procedures (C627) provides direction for the City to lead climate solutions in service delivery and corporate management to reach carbon neutrality targets by 2040. This includes incorporating sustainable building practices for City-owned buildings, such as through the BOMA BEST Program and ISO 50001 Building Energy Management Program.

BOMA BEST is Canada's largest environmental assessment and certification program, and recognizes excellence in energy and environmental management and performance. The City has been participating in the BOMA BEST program since 2019 and currently has 30 certified buildings. In 2022, Century Place, EPL Strathcona, Davies Fleet Services and Centennial Transit Garage were verified by BOMA Canada, and all received a BOMA BEST Silver award for excellence in energy and environmental performance. In 2023, a long-term prioritization and funding strategy will be developed to ensure the program is sustainable and that environmental and energy performance improvements are realized.





#### 4.8 FFS EMPLOYEE CULTURE AND ENGAGEMENT COMMITTEE

Fleet and Facility Services has a well-established Culture and Engagement Committee that meets monthly and includes leadership and employee representation. With participants from each section and location within the branch, the committee's purpose is to enhance the employee experience based on direct employee feedback. The team has been responsible for implementing many valuable initiatives that have had a positive impact on our Employee Experience Survey scores. Some highlights of the work the Committee has been instrumental in over the years are in the infographic above.

In 2022, work continued on the recognition of employee anniversaries through the Annual Anniversary emails. Branch leadership also focused on employee/supervisor relationships and increasing participation in the City's Enabling Conversations for People Leaders series, which helps equip supervisors with tools to incorporate career development conversations into bi-annual supervisor/employee check-ins.

In 2023, Fleet and Facility Services will continue implementing a live employee engagement plan with the help of the branch Culture and Engagement Committee. Additionally, Fleet and Facility Services will continue evaluating action items and their impact on overall employee engagement based on the 2022 Biennial Employee Experience survey and results from the upcoming 2023 Employee Check-in surveys. These snapshots in time allow the branch to implement feedback from frontline employees and will help to inform progress and future priorities.

## 4.9 CITY OPERATIONS INITIATIVES



Fleet and Facility Services supports the following department and corporate initiatives:

### **Enterprise Commons**

Enterprise Commons is the City's name for a new common online employee workspace currently under development.

A number of the City's aging technology applications like PeopleSoft need to be replaced. The Enterprise Commons online workspace will provide employees access to new applications using any internet enabled device.

Enterprise Commons will be the one place where all employees will go when they need to access forms, make changes to their personal information, view data and for some employees, perform their daily work when it's related to human resources, finance or supply chain tasks.

The new applications will reduce manual paper-based and redundant tasks, and improve corporate oversight, reporting capabilities and accessibility.

### **Employee and Community Experience**

The Employee and Community Experience (ECE), launched in 2022, is an initiative spearheaded by the Department Strategy Section (DSS) and is the first of its kind in the City. Its goal is to coordinate five City Operations Department committees working to enhance equity for diverse groups. As a Department, we saw an opportunity to elevate the profile of these committees, highlight leadership commitment, improve collaboration and integration among the committees and ensure diversity, equity, inclusion, anti-racism and reconciliation are core considerations when conducting our work in City Operations.

### **Accessibility Action Committee**

The City Operations Accessibility Action Committee helps staff apply an accessibility lens to their work and find ways to provide access and participation opportunities for people with disabilities.

Accessibility is fundamental to quality of life, well-being and engagement of people with disabilities throughout society.

The specific accessibility actions being worked on within City Operations include:

- » Expanding the City's Assisted Waste Collection Program
- » Performing accessibility audits on public transit infrastructure
- » Delivering travel training to ETS customers with disabilities and mobility challenges
- » Developing strategies to prioritize accessibility considerations in snow and ice removal
- » Developing user panels to provide input into transit vehicle accessibility
- » Developing and delivering disability awareness training for staff that provide direct service to the public

These City Operations actions are part of the [Corporate Accessibility Plan](#), which is the City's first three-year roadmap and includes 70 actions. This work also supports the City's commitment to accessibility outlined in the [Accessibility for People with Disabilities Policy C602](#). In 2023, the Committee will continue to focus on implementing these actions.

### **Diversity and Inclusion (D&I) Committee**

The City Operations D&I Committee supports implementing the pillars (Diversity, Equity, Skill and Growth) and the objectives and actions of the D&I framework. The committee contributes to corporate goals and establishes actions that meet the needs of the department contexts and realities. The committee helps connect D&I activities to the broader corporate strategy. Members act as change agents by championing D&I and promoting the City as an employer of choice.

In 2022, the committee participated in [The Art of Inclusion Framework](#), Anti-Racism Project, and the D&I Extravaganza. Other key elements the committee participated in, collaborated with and shared across the department included:

- » Inclusion Experience Week (March 2022): D&I Committee developed a Toolbox Talk, digital media panels and posters on the topic of Stop Racism with Allyship including what it means to be an ally.
- » Promoted Employee Resource Network Events such as Women@theCity: Break the Bias Lunch, Pride@theCity Awareness Session for International Transgender Day of Visibility, and Race&Ethnicity@theCity Leadership Q&A Forum on anti-racism and discrimination.
- » One World Festival (November 2022): Produced a virtual booth with a presentation on engaging front line workers in Diversity, Equity and Inclusion initiatives.

In 2023, the committee will focus on creating and implementing a D&I department action plan through its new committee structure while supporting corporate D&I initiatives.

#### **Gender-Based Analysis Plus (GBA+) Committee**

The Gender-Based Analysis Plus (GBA+) Centre of Excellence helps us build the mindset, heartset and skill set for employees to be more inclusive in their workplaces and in their work. We examine how our programs, services, policies and initiatives impact people of all genders, ethnic origin, race, religion, age and intellectual or physical disabilities so we can improve our inclusivity and responsiveness to the needs of our community and our employees.

In 2022, the GBA+ Centre of Excellence supported the completion of 47 GBA+ reports for Council. In 2023, the committee will focus on building awareness about the support they provide to work areas within City Operations and help build capacity among City Operations staff to conduct GBA+ in a thoughtful and intentional way.

#### **Indigenous Framework Implementation Committee**

The Indigenous Framework Implementation Committee supports the corporate [Indigenous Framework](#) which helps employees build positive and respectful relationships with Indigenous Peoples. In 2022, the committee focused on creating the department Indigenous Framework Action Plan in alignment with the seven commitments of the Indigenous Framework, and presented it to senior leadership for approval. From there, a communications and engagement plan was created, with several goals:

- » increase awareness and understanding of the Indigenous Framework and the City Operations Action Plan;
- » ensure staff have equitable access to information; and
- » ensure leaders feel comfortable delivering information and having conversations with staff.

In 2023, the Committee will refine and begin implementing the action plan and communications and engagement plan.

#### **Women@CityOps Committee**

The Women@City Ops Committee was created in 2022 to help promote and build a more diverse and inclusive culture. It is an inclusive committee, which means anyone can join. The committee aims to provide:

- » a space for all employees interested in focusing on supporting an environment to improve personal and professional growth;
- » a networking space for all to support and learn from each other;
- » capacity to develop young women with professional growth in various positions within City Operations;
- » close connections to other women encountering similar struggles and sharing those learnings with others to improve our operational work environments.



## 5.0 PERFORMANCE TARGETS












The City of Edmonton continuously monitors and routinely reports its performance through the Enterprise Performance Management (EPM) system. The EPM system aligns performance measurement to strategic goals and service standards to:

- » Enable a better life for Edmontonians by being accountable for results
- » Provide better service by understanding how we are doing and where we can improve
- » Make better decisions by managing our performance with frequent and more accurate data

In 2023, the branch will collaborate with the City Operations Department Strategy Section for a performance measure refresh to ensure Fleet and Facility Services is measuring and reporting on insightful data that drives informed decisions around performance maturity. Moreover, the branch will ensure that performance measures are directly tied to service-level agreements with our partners, and are aligned with industry best practices.

To provide accountability to Edmontonians, Fleet and Facility Services has currently identified the following performance measures to demonstrate that goals are being achieved, targets are being met and residents are getting good value for money. Additionally, these performance measures enable employees to see their work's positive impact on the goals and the people they serve every day.





## 5.1 CUSTOMER PERFORMANCE MEASURES

SERVICE	MEASURE	MEASURE DESCRIPTION AND NARRATIVE	TRENDING STATUS
<b>Municipal</b>	Legislated Preventative Maintenance Compliance	This measure identifies internal fleet that are compliant with legal preventative maintenance requirements. Preventative maintenance measures ensure the safety of the public and the City staff, while operating the City-owned fleet.	
	Scheduled Preventative Maintenance Adherence	This measures adherence to the non-legislated preventative maintenance schedule. Proper preventative maintenance is expected to reduce unplanned breakdowns, improving reliability and overall cost containment.	
	Repair Time – Estimate vs. Actual (Hrs)	This is an industry standard measure which compares targeted repair times to actual repair times. Reliable repair costs help our customers better manage their fleet-related budgets.	
	Adjusted Availability	This measure is an indicator of the impact of fleet services on the internal customers (unit maintenance timeliness and unit reliability). High availability indicates the amount of time the unit is available for use by the customer over the course of a year. Fleet availability is critical for our customers to meet their obligations.	 Heavy Duty <hr style="border-top: 1px dotted #ccc;"/>  Light Duty
<b>Transit</b>	Legislated Preventative Maintenance Compliance	This measure identifies internal fleet that are compliant with legal preventative maintenance requirements. Preventative maintenance measures ensure the safety of the public and the City staff, while operating a City-owned fleet.	
	Scheduled Preventative Maintenance Adherence	This measures adherence to the non-legislated preventive maintenance schedule. Proper preventative maintenance is expected to reduce unplanned breakdowns, improving reliability and overall cost containment.	
	Repair Time – Estimate vs. Actual (Hrs)	This is an industry standard measure which compares targeted repair times to actual repair times. Reliable repair costs help our customers better manage their fleet-related budgets.	
	Adjusted Availability (Bookout)	This measure is an indicator of the impact of fleet services on the internal customers (unit maintenance timeliness and unit reliability). High availability indicates the amount of time the unit is available for use by the customer over the course of a year. Fleet availability is critical for our customers to meet their obligations.	
<b>Flagship Buildings</b>	Legislated Preventative Maintenance Compliance	This measure identifies City-owned facilities that are compliant with legal preventative maintenance requirements. Preventative maintenance measures ensure the safety of the public and the City staff while in City facilities.	
	Scheduled Preventative Maintenance Adherence	This measures adherence to the non-legislated preventative maintenance schedule. Proper preventative maintenance is expected to reduce unplanned breakdowns, improving reliability and overall cost containment.	





## 5.2 OPERATIONAL PERFORMANCE MEASURES

SERVICE	MEASURE	MEASURE DESCRIPTION AND NARRATIVE	TRENDING STATUS
Municipal	Maintenance Cost per KM	This measure identifies the cost of ownership of the fleet, using the maintenance costs and the usage, over a set period of time. This information helps the business to budget for their units and it can also be an early indicator of poor fleet performance.	 Heavy Duty <hr/>  Light Duty
Transit	Maintenance Cost per KM	This measures adherence to the non-legislated preventative maintenance schedule. Proper preventative maintenance is expected to reduce unplanned breakdowns, improving reliability and overall cost containment.	
Flagship Buildings	Maintenance Cost per Sq.ft.	This measure identifies the cost of ownership of City-owned flagship buildings. These buildings account for the majority of maintenance expenditures and represent key buildings (high traffic and/or political sensitivity).	

## APPENDIX A: FINANCIAL SUMMARY

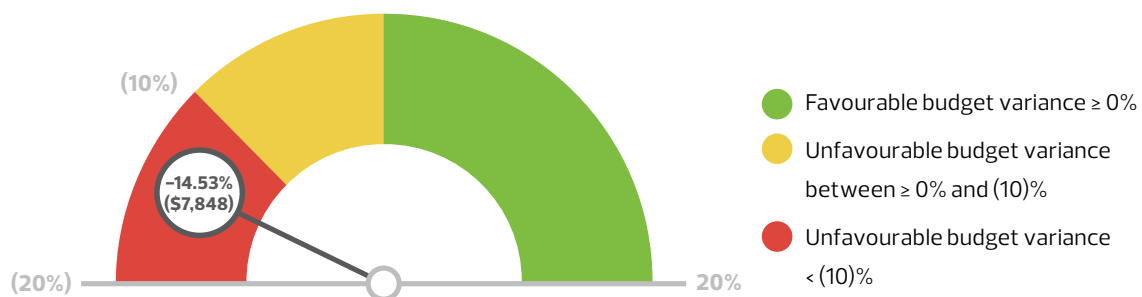
### 2023 BUDGET (000s)

Expenses	\$ 307,360
Revenue and Recoveries	\$ (243,747)
Net Income/(Loss)	\$ 63,613

### SERVICES

	Expenses	Recovery	Revenue	Net
Facility Maintenance	\$ 90,491	\$ (28,787)	\$ (619)	\$ 61,085
Branch Operations	\$ 91,618	\$ (77,859)	\$ (5,549)	\$ 8,210
Municipal Maintenance	\$ 54,114	\$ (54,794)	\$ (2,352)	\$ (3,032)
Transit Maintenance	\$ 71,137	\$ (73,511)	\$ (276)	\$ (2,650)
Total (000s)	\$ 307,360	\$ (234,951)	\$ (8,796)	\$ 63,613

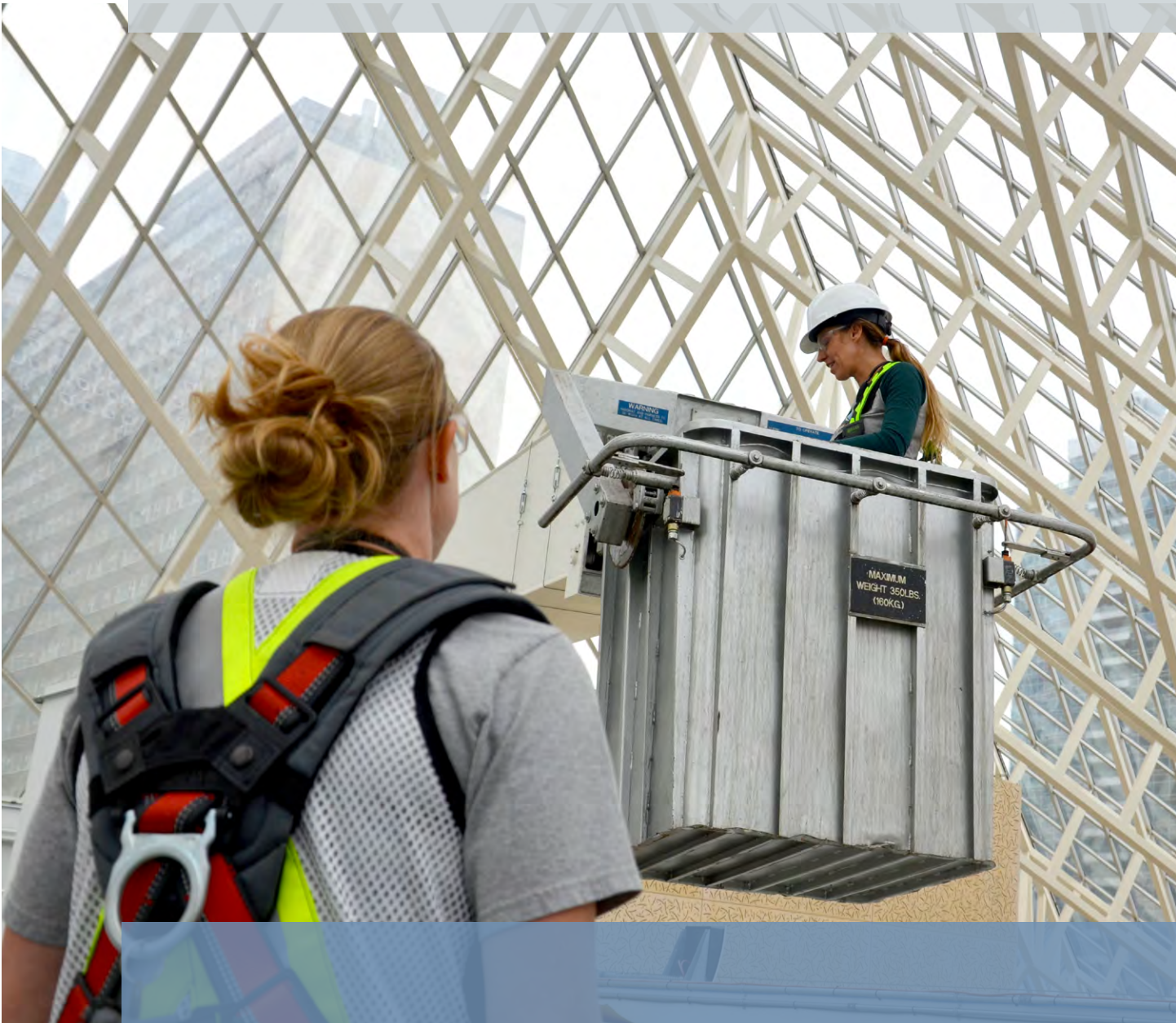
### NET POSITION BUDGET VARIANCE (%)



### YEAR END FINANCIALS (2022) (000s)

	Budget	Actual	Year-end Variance
Expenses	\$ 289,831	\$ 300,203	\$ (10,372)
Revenue and Recoveries	\$ (235,830)	\$ (238,354)	\$ 2,524
Net Position	\$ 54,001	\$ 61,849	\$ (7,848)





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