

CITY OPERATIONS

Edmonton

PARKS AND ROADS SERVICES

2021/2022 Annual Service Plan

INDIGENOUS ACKNOWLEDGEMENT

Parks and Roads 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.

INDIGENOUS FRAMEWORK



The Indigenous Framework, released in 2021, is a living document that will continue to evolve over time as our relationships with Indigenous Peoples continue to grow. Over the course of 2021, the Seven Commitments were activated through the development of both Corporate-wide and Department-specific action plans; City employees had the opportunity to participate in a wide variety of learning opportunities; and City employees were encouraged to and given the appropriate supports to apply the four roles (listener, connector, partner, and advocate) in their everyday work.

City Operations' focus areas for 2022 include:

- » Indigenous Framework Communications Plan (started in 2021)
- » Land acknowledgements in documents (started in 2021)
- » Leadership presence at Indigenous events (started in 2021)
- » Review Branch Action Plans (BAPs) and work plans to identify opportunities to connect work to Calls to Action.
- » Establish clear signage at all City Operations facilities confirming commitment to anti-racism and that discrimination will not be tolerated.
- » Place signage with land acknowledgement in buildings/facilities.
- » Provide notice of Indigenous events on facility notice boards, electronic displays, etc.
- » Encourage and provide support (and time, if appropriate) for staff to attend Indigenous events.
- » Summer hiring through the Indigenous Peoples' Summer Student Program for proactive streetscape inspections in Business Improvement Areas

TABLE OF CONTENTS

INDIGENOUS ACKNOWLEDGEMENT

TABLE OF CONTENTS	1
MESSAGE FROM THE BRANCH MANAGER	2
EXECUTIVE SUMMARY	3
1.0 INTRODUCTION	4
2.0 HIGHLIGHTS FROM 2021	11
3.0 SERVICE PLAN 2022	25
4.0 PROJECTS AND INFRASTRUCTURE 2022	39
5.0 PERFORMANCE TARGETS	47
APPENDIX A: FINANCIAL SUMMARY	50
APPENDIX B: SERVICE STANDARDS	52



MESSAGE FROM THE BRANCH MANAGER



CRAIG MCKEOWN,
BRANCH MANAGER

Parks and Roads Services is essential to a healthy, urban, climate resilient city that supports a prosperous region. We continue to evolve the maintenance and operation of the mobility network and open spaces to help meet the City's commitment of enabling a better life for all Edmontonians.

Each of our employees deserves to be acknowledged for the resourcefulness and resilience they have shown during this historic time, and for the compassion they bring to their job every day. Your work is integrated and diverse, and touches the lives of Edmonton residents every day in how they interact with public spaces and move around the city.

The coming year will be filled with many exciting foundational changes.

Every day, our work ties back to one simple goal – **creating a safe, livable mobility network and open spaces to enable a better life for all Edmontonians.** We're tackling this goal on many fronts.

With a focus on our pillars of safety, quality, environmental sustainability and cost-efficiency, 2022 will be a year of continuous improvement and increased efficiency.

Together, we will help set the stage for Edmonton's growth to two million people by 2050, by contributing in meaningful ways to Edmonton's economic prosperity, health, safety, social well-being and climate resiliency as we are guided by the City Plan, ConnectEdmonton and Council.

Thank you and stay safe.

EXECUTIVE SUMMARY

Parks and Roads Services integrates and works closely with branches across the City of Edmonton and with external partners to support the Movement of People and Goods, Public Safety, and Environmental Protection and Stewardship. In the design and build stages of public infrastructure, Parks and Roads Services is often involved in the completion of important work, such as sign

production, traffic engineering, road paving and tree planting. The branch also influences corporate capital projects, such as a neighbourhood receiving traffic safety improvements when it undergoes renewal. When assets are built, inspected and signed off, Parks and Roads Services is responsible to operate and maintain those assets, such as mowing turf, clearing snow, and programming traffic signals.



1.0 INTRODUCTION

The Parks and Roads Services Annual Service Plan provides an overview of service changes, major projects and infrastructure developments planned for 2022, while recapping some accomplishments from 2021.

STRATEGIC ALIGNMENT

This plan outlines priority actions that align us to realize the choices in Edmonton's City Plan and advance the four strategic goals of ConnectEdmonton, Edmonton's 2019–2028 strategic plan.



HEALTHY CITY



URBAN PLACES



REGIONAL PROSPERITY



CLIMATE RESILIENCE

We advance these goals through three objectives:

- » **Strategic Objective:** Make transformational impacts in our community.
- » **Public Service Objective:** Deliver excellent services to our community.
- » **Supporting Service Objective:** Manage the corporation for our community.

Parks and Roads Services plays a key role in supporting ConnectEdmonton's four strategic goals by creating a safe, livable mobility network and open spaces. The safety, cleanliness, reliability and maintenance of the City's mobility and open spaces assets enable a better life for all Edmontonians.

A safe, livable mobility network and open spaces is essential to a connected, thriving, **healthy city**. A mobility network with safer transportation options can equitably address the needs of all demographic groups and those with limited mobility. Improving active transportation routes enhances the safety, connectivity, and quality of life in a neighbourhood. Vibrant open spaces, where everyone has access to natural spaces and can enjoy the benefits of living healthier, lead to a better connected outdoor life.

Public health, local economy and the environment benefit through the creation of **urban places** built for people. Safe access to multi-modal transportation options makes mobility more equitable and supports the City's goal of 50% of all trips being made by transit and active transportation. Increasing the number of people walking, biking or rolling (mode shift) makes our roads safer. Vibrant open spaces build inclusive communities where people feel like they belong and where children, youth and families can live, learn and grow together.

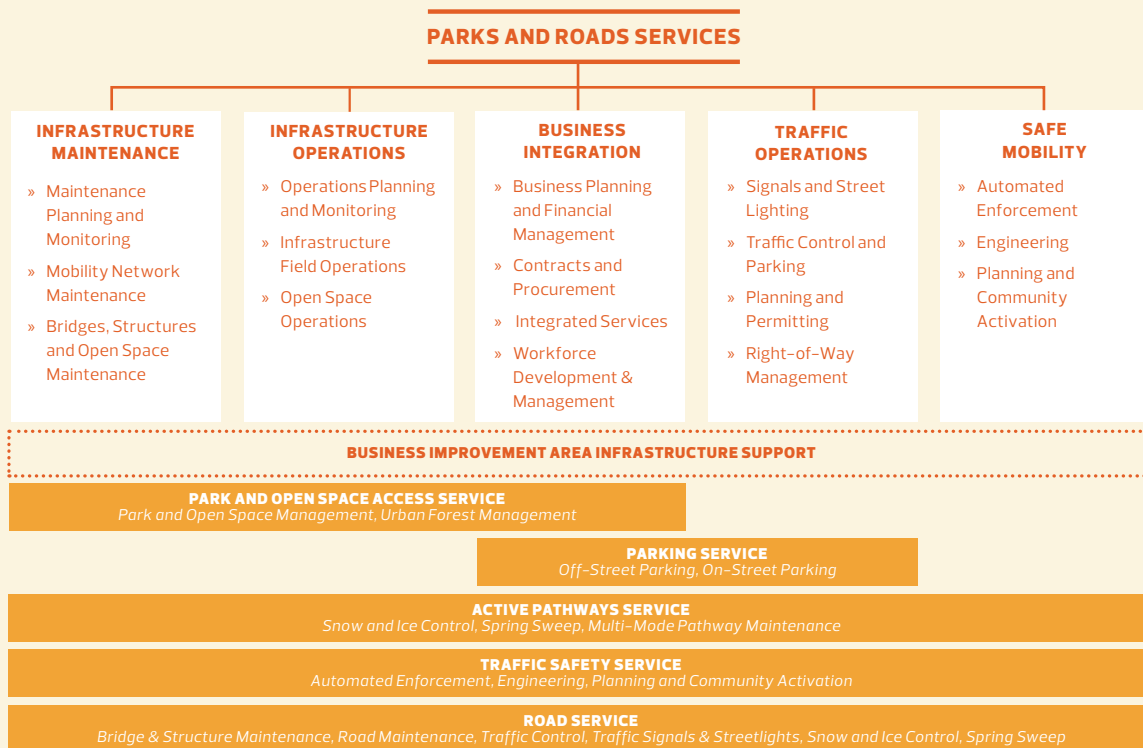
Dense urban cores help people and businesses thrive, and allow for more housing and mobility options, supporting **regional prosperity**. People traveling by foot and bike are more likely to spend money in the local economy than people in cars. Mode shift supports the City's goal to increase population density by 600,000 residents within the city's current boundaries. A safe, efficient mobility network supports the safe movement of people and goods. This is valued by Edmontonians as well as Business Improvement Area partners who work with us to enhance the public, investor, and employee experience of Edmonton main streets, commercial districts, and parks.

Urban biodiversity, mode shift, and making energy efficient, sustainable choices will further Edmonton's goals to become more **climate resilient** as we adapt and respond to the risks and impacts of climate change. Preservation, protection and growth of Edmonton's urban forest increases canopy coverage, prevents erosion, improves livability, and supports the City's goal of zero net per-person greenhouse gas emissions.

As Edmonton grows from one to two million people, creating a safe, livable mobility network and open spaces remains our main priority.



BRANCH STRUCTURE



Parks and Roads Services supports five of the City of Edmonton's core services: Park and Open Space Access Service, Parking Service, Active Pathways Service, Road Service, and Traffic Safety Service; and 14 of the City's subservices. Our work is 24/7 and keeps Edmontonians safe, moving, and thriving.



Infrastructure Maintenance

Infrastructure Maintenance inspects and maintains public infrastructure to facilitate movement and universal accessibility. In addition to repairing roadways, sidewalks, and active pathways, staff also monitor and maintain vehicle and pedestrian bridges, playgrounds, spray parks, and site furnishings such as benches and picnic tables. The section also offers technical and engineering service. Infrastructure Maintenance supports delivery of the Park and Open Space Access, Active Pathways, Traffic Safety, and Road Services.

Infrastructure Operations

Infrastructure Operations ensures the City's open spaces and the mobility network are operational for year-round safety and livability of all users. Staff perform snow and ice control and sweeping on roadways and active pathways, site servicing, parkland permitting, turf and sports fields maintenance, horticulture, urban forestry and care of natural areas, integrated pest management, landscape services, open space construction, encampment response and downtown vibrancy. Staff also activate open spaces through programs like Partners in Parks, Communities in Bloom, Community and Pop-up Gardens, City Farm, Root for Trees, volunteer weed pulls, dogs off-leash areas and the Commemorative Program. The section also issues permits and agreements for various use and access of parkland for internal and external clients. Infrastructure Operations supports delivery of the Park and Open Space Access, Active Pathways, Traffic Safety, and Road Services.

Traffic Operations

Traffic Operations operates the mobility network to facilitate safe and inclusive transportation options for Edmontonians of all ages, abilities and incomes. Staff regulate and coordinate road use through right-of-way agreements, on-street construction and maintenance (road use) permitting, and traffic control services (detours, signs, pavement markings). Staff also optimize multi-modal travel on the existing mobility network through design, construction, maintenance, implementation and optimization of traffic signals, and provide real time travel messaging through the traffic management centre. They also operate the street lighting network and decorative lighting on the high level bridge, and electrical infrastructure in Business Improvement Areas. Additionally, Traffic Operations supports capital (IIS) and developer (UPE) projects through street lighting plan reviews, technical support during and post construction and the final acceptance of infrastructure into the City's inventory. Traffic Operations supports delivery of the Parking, Active Pathways, Traffic Safety, and Road Services.

Safe Mobility

Safe Mobility leads the City's commitment to achieve Vision Zero, zero traffic-related fatalities and serious injuries, through safe and livable streets in Edmonton. Staff support Traffic Safety Service through road safety engineering, automated enforcement, and planning and community activation programs and services. Safe mobility supports delivery of the Active Pathways, Traffic Safety, and Road Services.

Business Integration

Business Integration provides supporting services to enable effective and strategic operations within the branch. Business Integration staff support the various sections in the branch that deliver the Park and Open Space Access, Parking, Active Pathways, Traffic Safety, and Road Services by providing: financial analysis and reporting, budgeting and work planning, process improvement and analytics, procurement of new contracts, measuring contract performance, invoice processing, managing the mobility and hardware/software needs of the branch, and recruitment and training activities.

Operational Support: Occupational Health and Safety

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. 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.

Operational Support: Enviso

Enviso is the City's environmental management system, and helps guide our decisions and actions to meet the three commitments of the City's Environmental Policy (C512): to protect the environment, meet compliance obligations, and continually improve environmental performance. The environmental strategy involves planning for environmental risks and opportunities, and ensuring everyone is aware of how their work impacts the environment and what controls are in place to protect the environment.

It also involves supporting the branch in planning for and implementing the Climate Resilience Policy and the City's two climate strategies. *The Climate Resilience Edmonton: Adaptation Strategy and Action Plan* and the *Energy Transition Strategy*, call for fundamentally different approaches to City decision-making and leading climate solutions in service delivery.



Business Improvement Area Infrastructure Support

Embedded within Parks and Roads Services is infrastructure support for Edmonton's Business Improvement Areas (BIAs). There are 13 BIAs that represent business communities in specific geographic areas of the City – focused on main commercial streets and business districts. BIAs are key strategic and operational partners and play an important role in the economic health and vitality of Edmonton. The services provided by Parks and Roads Services directly impacts the experience of the public, investors, and employees in BIAs. The branch provides the largest range and number of City services that directly impact businesses in BIAs, with dedicated support to work with BIAs and meet local business needs.



Picture provided by Christine Mahlman

COVID-19 RESPONSE AND IMPACTS

The COVID-19 pandemic presented financial and operational challenges to the City of Edmonton. Parks and Roads Services has navigated through ongoing changes to operations, programming and services as a result of increased health and safety restrictions, financial constraints and reduced resources (including supply chain and staffing impacts). In the midst of these changes, frontline workers also faced increased incidents when interacting with residents. Employees did an exceptional job of pivoting and adjusting, remaining solution-minded, responding with courage and compassion, and finding new ways to operate differently or more efficiently to enable a better life for all Edmontonians.

COVID-19 has changed how we work, how we move and how we connect with our community. It has also highlighted how critical our services are. Here are some of the many ways Parks and Roads Services supported Edmontonians to create a safe, livable mobility network and open spaces during the pandemic:

- » Enabled physical distancing for pedestrians and active mode users by connecting commercial areas and the river valley through shared streets (5.5 km) on residential roads and mobility lanes (4.5 km).
- » Extended restaurant and retail operations into public space with 145 temporary patio expansions to keep residents safe and support economic resiliency, including 25 expansions through the winter. Streamlined permissions were provided through a declaration process for businesses for simple patio set-ups, licenses of occupations for more complex locations, traffic accommodation planning, and provision of traffic control materials.
- » Continued first 30 minutes free parking in ePark zones to support curbside pickups and deliveries in Business Improvement Areas.
- » Disabled push buttons at over 50 pedestrian-popular intersections to limit surface contact and improve the pedestrian experience.
- » Conveyed public health COVID-19 messaging to travellers via 100 active roadside dynamic message boards.

- » Produced over 20,000 signs and decals at the Sign Shop for messaging in open spaces, facilities, shared streets and mobility lanes including assisting school boards and community leagues in placing signage to communicate health measures.
- » Expanded our partnership with Boyle Street Ventures and increased washroom attendants to address undesirable behaviours, cleanliness and social distancing at public washrooms in Churchill Square, Louise McKinney Park, Borden Park, Queen Elizabeth Park and on Whyte Avenue.
- » Positioned mobile washrooms in key strategic areas downtown and on Alberta Avenue to ensure our vulnerable population had access to toilet facilities. Some locations were staffed with washroom attendants while others received enhanced cleaning services to offer safe, clean facilities to the public.
- » Supplied portable picnic tables to Boyle Street Ventures and other Business Improvement Areas to support outdoor physical distancing efforts.
- » Worked with civic and community partners to respond to and clean up vacant encampments on public land which ensured the well-being of people both in encampments and the surrounding communities. This increased support for downtown clean up efforts and helped struggling businesses.
- » Established a new pedestrian crossing and traffic safety measures to support the activation of the Edmonton Convention Centre as a temporary 24/7 vulnerable persons accommodation space.
- » Responded to public health restrictions by closing playgrounds across the city within 24 hours, and re-opened them as quickly when these restrictions were lifted. Similarly, we managed the complex process of opening spray parks in almost half the time.
- » Placed additional 'pop-up' temporary play locations where communities had shown inequitable access to safe, outdoor play locations (skate park equipment, basketball nets, etc.).



- » Kept community gardens open and continued the pop-up garden pilot program to provide more gardening spaces for families, in response to the pandemic and increased demand for garden space to grow food.
- » Harvested 52,000 lbs of produce from City Farm for Edmonton's Food Bank and partner agencies (up from 30,000 lbs in 2020).
- » Erected temporary security fencing around all City skateparks in 48 hours, and reopened them in a day when restrictions were lifted.
- » Expedited infrastructure repairs to support open space usage including carrying out necessary parking lot repairs at Jackie Parker Park to allow for overflow use.
- » Rehabilitated key accesses to recreational outdoor activities such as upgrading Whitemud Road at the Terwillegar Footbridge connection to a shared streets configuration.

BRANCH BY NUMBERS

Overview



1,900+ EMPLOYEES

1,100+ SEASONAL AND 850+ PERMANENT

5 of the city's services

14 of the city's subservices



13 business improvement areas

Mobility Network

11,833 KM
of paved roads



4,200 PAID PARKING STALLS

1,953 KM
of paths, bike lanes and trails

125,000

streetlights and 1,600 traffic signals

5,500 KM
OF SIDEWALKS

313 KM
of unpaved roads



1,201 KM
OF ALLEYS



150,000
traffic signs

100+ vehicular bridges and 200+ pedestrian bridges



560 MOBILE SPEED ENFORCEMENT LOCATIONS

105 intersection safety devices



212 permanent driver feedback signs and 24 temporary speed trailers

Open Spaces

10,000+
SITE FURNISHINGS



400+ PLAYGROUNDS



1,200+
SPORTS FIELDS

4,000+
HECTARES OF TURF

3,700+
SPORTS FIELD STRUCTURES



100+ COMMUNITY GARDENS
(INCLUDING 29 POP-UP GARDENS)



10,000+ ha parks and open spaces, including the River Valley



225,000+
SHRUB BEDS

980 PARKS



~400,000
OPEN SPACE AND BOULEVARD TREES

2.0 HIGHLIGHTS FROM 2021

SNOW AND ICE CONTROL

Snow plowing and blading, snow removal, anti-icing, de-icing, specialty snow removal and abrasive application on city streets and pathways.

Route Optimization Using GIS Routing

The complete digitization of the Snow and Ice Control Active Pathways Removal (APR) for both internal teams and external contractor routes was a priority for the 2021/2022 season. The data was compiled into a public-facing web map that shows the various assets APR maintains across the city, as well as service levels residents can expect for each asset.



Alternative Strategies for Snow and Ice Control

The updated Snow and Ice Control Policy and a new administrative procedure were approved by City Council in August 2021. Updates included definitions for categorizing priority roads and active pathways, and procedures to support the policy. Work is underway on enhanced service level options to present to Council in Q2 2022.



Citywide Parking Ban Implementation

The first citywide parking ban, approved by Council in 2020, was initiated in November 2021. A citywide parking ban prohibits parking on roads to support City staff and contractors as they deliver high quality snow clearing service more efficiently. A ban can be declared during the winter season with 8 hours notice during or after a major snow event or when the snowpack on the drive lanes of residential areas exceeds 5 cm deep. Phase 1 of the ban includes parking restrictions and snow clearing on major roads, core business areas and bus routes. Phase 2 includes parking restrictions and snow clearing on residential and industrial roads. Snow and Ice Control crews worked 24 hours a day battling constantly fluctuating weather patterns. They cleared 4,000 kms of snow and ice accumulation on residential streets in all 375 Edmonton neighbourhoods. Staff are working on a technology alert system for the 2022/2023 season.



STREET CLEANING AND SPRING SWEEP

Street cleaning and spring sweep maintenance of all hard surfaced roadways, sidewalks and alleys.

Spring Sweep

The Roadway Cleaning Policy C550 states that roadways are cleaned in such a manner as to prevent annoyance and injury arising from accumulation of street debris, facilitate collection of recyclable abrasives, minimize environmental impact of traffic generated dust, prevent clogging of catch basins, reduce obscuring of pavement markings, and to enhance the appearance of the city. The policy states that the annual spring sweep must be completed by June 1. In 2021, staff completed over 5,000 km of mixed residential roads, over 1,000 km of arterial roadways and over 50 parking lots at City facilities in a record breaking 28 days from April 6 to May 13. By completing spring sweep early, staff can transition to summer operations such as turf maintenance and potholes, getting a head start on preparing the mobility network and open spaces for spring use. 311 notifications about spring sweep decreased from 1,606 in 2020 to 409 in 2021.



TRAFFIC CONTROL

Traffic management through permanent and temporary traffic control design, pavement markings, as well as development and compliance of the City's traffic bylaws.

Regulated Road Use

By incorporating permit system user feedback through customer journey mapping, staff are modernizing the road use permitting system. This work will ensure liveability and accessibility of public infrastructure by coordinating over 10,600 on-street construction activities and traffic control services through the OSCAM Permit system. New e-learning tools were developed to support temporary traffic control guidance for City employees. Staff are exploring opportunities to introduce additional education tools to external partners like the Alberta Road Builders Association, utility companies and home builders.



Street Sign Manufacturing and Installation

Staff contributed to the successful launch of the Bus Network Redesign (BNR) by planning, designing, printing and implementing over 7,100 new signs and decals to replace existing bus signs. With a commitment to continuous innovation and creative thinking, the team designed temporary, removable decals containing information for residents about the changes for each stop, including old routes, new routes and effective dates. When the BNR was launched on April 25, 2021, the team removed the temporary decals to quickly reveal the permanent sign design underneath. In addition to the BNR, staff delivered the installation of the 40km/hr default speed limit signs, developing a refreshed approach that reduced the overall signs required to 1,500 new or updated speed limit signs.



Inclusive and Indigenous Commemorative Crosswalks

Crews brightened city streets by painting inclusive crosswalks at MacEwan University (109 Street and 104 Avenue), Ritchie (76 Avenue and 96 Street) and various intersections within Old Strathcona. As part of the City's ongoing commitment to building and shaping an inclusive and equitable city, this year's annual refresh of the Pride crosswalks includes the chevron of black, brown, light blue, pink and white, representing queer people of colour and transgender individuals. Inclusive crosswalks are located at:

- » 109 Street and 104 Avenue
- » 104 Street and 84 Avenue
- » 106 Street and 82 Avenue
- » 108 Street and 82 Avenue

In honour of National Day for Truth and Reconciliation, staff worked closely with the Indigenous Relations Office to connect with iHuman, a youth society that helps young people be creative and express their voices. The youth at iHuman created the crosswalk design which was installed downtown on 99 Street at 103A Avenue, on the steps of City Hall and the Royal Alberta Museum. A Knowledge Keeper performed a ceremony to commemorate the installation.

TRAFFIC SIGNALS AND STREETLIGHTS

Streetlight operations and maintenance and traffic signal engineering design, construction, operations and maintenance and mobility network management, decorative lighting operation and maintenance (high level bridge, electrical infrastructure in Business Improvement Areas).

Capital Construction Program Support

2021 was one of the City's most ambitious and busy capital construction programs. Staff supported the capital program and the Safe Crossings program:

- » Reviewed 260 street lighting design plans
- » Processed 180 street lighting project completion assessments and certificates
- » Modified 92 existing traffic signals for developer neighbourhood and arterial renewal projects
- » Designed, constructed, and activated 60 new traffic signals and traffic control devices
- » Supported LRT projects, including review and testing of 52 traffic signals for the SE Valley Line LRT

Maintenance and Operations

The traffic signals and street lighting team managed over 6,800 signal calls, 15,990 streetlight repairs, and 275 system damage (claim) repairs. The traffic signals team completed 120 legal inquiry reports, 2,929 citizen inquiries and implemented 440 operational timing changes. The street lighting team supported 270 third party and utility requests for support, temporary moves and modifications to the streetlight system.

ROAD AND MULTIMODE PATHWAY MAINTENANCE

Repairing transportation assets including paved and unpaved roads, lanes, and active pathways such as sidewalks, shared use paths and trails.



Pothole Material Evaluation to Minimize Rework

In 2021, Parks and Roads Services entered into a competitive procurement to pilot cold mix asphalt products. Bagged cold mix asphalt allows crews to complete pothole repairs without having to secure a hot asphalt supply, and when weather conditions are too wet for the use of hot mix asphalt. Through the procurement process, three types of bagged, proprietary cold mix asphalt products participated in a trial. Thirty potholes, on different classifications of roadway, were filled with each type of material, routinely inspected and rated for the amount of material remaining after two, four and six months. This pilot project resulted in the selection of the best proprietary blend of cold mix asphalt allowing us to have a more durable repair resulting in less rework.

Paving Operations Efficiencies

Employees made significant improvements to paving processes, saving \$1.2 million this year. Leaders, technologists, inspectors and front-line workers were all involved in identifying operational improvements and implementing changes.

- » Reduced trucking costs by balancing leased and City-owned vehicles.
- » Improved opportunities for skill building and cross training by assigning crews to different tasks across the team.
- » Cost savings of 35% on four-lane collector roads by using two pavers and one paving crew.
- » Reduced workplace injuries by using increased mechanical means.

10-Hour Shift Working Group and Pilot

In 2021, a ten-hour shift for the crews performing road and multimode repairs was piloted through a working group composed of 20 frontline staff and five out-of-scope supervisors. The group evaluated the overall impact to employees, financials, operational accomplishments, health and safety and associated risks. Through peer engagement, the group elicited feedback on the change and the impacts and determined that a ten-hour shift pilot had the potential to positively impact both the employee and operations. This pilot allowed for a full evaluation of all programs and saw a harmonized approach to the implementation; with some programs remaining on the eight-hour shifts, others adopting a hybrid model and others fully implementing the ten-hour shifts. Operational outputs were tracked throughout the season and improvements were noted across all programs including increased productivity, reduced reliance on overtime, and increased morale due to better work-life balance.

Alley Repairs

Alley repairs continued to be in high demand in 2021. To ensure efficient responses, all alley 311 notifications were grouped by neighbourhoods, then scheduling was completed by starting in the highest demand neighbourhood. 22,300 potholes were repaired in alleys in the Delwood neighbourhood and 8,197 potholes repaired in the Evansdale neighbourhood; 180 311 notifications were successfully addressed in a fraction of the time due to reduced mobilization. In order to ensure efficient approaches to the repairs, one alley in Evansdale was piloted to be fully paved instead of patched in multiple locations. This repair method was very successful and there will be an expansion of this type of repair to other alleys in 2022.



Completion of Winter Graveling Pilot

In 2021, a pilot was initiated in the Leduc annexed area to evaluate the effectiveness of winter graveling and to align with historical maintenance practices that were tailored to the unique construction methods used in the area. Re-gravelling helps maintain the road surface in a safe and defect-free manner for residents particularly during spring thaw. The team found that the need for graveling during the summer months was reduced, which also reduced our overall material requirements in 2021. Winter re-gravelling is now one more tool to address unpaved roads in a proactive way.



Infrared Technology for Asphalt

Staff use various techniques and materials to repair approximately 500,000 potholes and other pavement surface deficiencies to provide safer and smoother access for road users. In 2021, five infrared asphalt repair units were acquired to use in addition to our regular repair methods (cold or hot asphalt and spray patching). Infrared technology allows asphalt surfaces to be heated which loosens the asphalt surface, allowing the material to be released, and with the addition of new binder and material, it creates a more permanent repair. Infrared repairs are 1 x 1.9 metres and have a seamless joint with the existing asphalt because of the added heat. This new method is ideal where alligator cracking exists or where multiple potholes require a bigger repair area for a long lasting repair.

Impacts of Changing Climate – Heaved Sidewalk Response

As a result of the extreme heat wave experienced in the summer of 2021, City sidewalks buckled in many areas of the City. This resulted in the immediate closure of 89 sidewalk locations. All heaved sidewalk locations were inspected and identified within 24 hours and all repairs completed by September 2021.



BRIDGES AND STRUCTURES MAINTENANCE

Inspection, preventive maintenance (e.g. bridge washing), and repair of City-owned assets including bridges, playgrounds, open space structures (e.g. stairs, ball diamonds), and auxiliary structures (e.g. guard rails).

Drone Bridge Inspections

Regular detailed visual bridge inspections are an essential aspect of keeping our infrastructure safe and in serviceable condition. In 2021, staff introduced an enhancement to the visual bridge inspection program with the use of drone technology.

In 2021 the team got drone footage of four bridges: the Low Level, Hawrelak Park, Quesnell and James MacDonald. There are another four bridges planned for drone inspection in 2022. After review of the drone footage, the team was able to note deficiencies that were very hard to see with regular visual inspections. This innovative method will enhance regular inspections and monitoring of our bridges in a detailed way that was never possible before.



Playground Operation Safety Improvement: Sand Sifting Bucket

Foreign objects in playgrounds pose a significant safety hazard for children playing in the area as well as for the staff cleaning and inspecting. Historically, sand sifting was done using a manual sand sifter that required significant physical energy and was time consuming. Staff found a solution to this safety challenge by designing a skid steer bucket with a custom mesh lining. The new sifting bucket quickly sifts harmful objects hidden in the sand.

This innovation decreased the risk of injury from manual sand sifting, saved time, increased productivity, and improved safety for everyone using playgrounds.

OFF STREET AND ON STREET PARKING

City-owned/leased off street parking facility management, and curbside operations management.

City parkades slowly started filling up as parkers returned to the downtown. Parking adjustments to EPark zones citywide supported users by offering free 30 minute parking to facilitate curbside pickup and food delivery services.

With the upcoming launch of the Valley Line SE LRT in 2022, staff initiated conversations with ten communities that expressed concern over anticipated neighbourhood parking congestion. When the Valley Line SE is in operation, one community will operate on a Restricted Residential Parking Program while the others will have time restrictions. This will maintain liveability and neighbourhood accessibility.

Integration of Parking Services and Right-of-Way Management into Traffic Operations

Traffic Operations underwent a reorganization in the middle of the pandemic, incorporating Parking Services and Right-of-Way Management into the section. Despite unique challenges presented by the pandemic, teams integrated the transportation functions of their work seamlessly and collaborated to ensure an improved user experience for Edmontonians during periods of variability introduced by public health measures. This will lead to better integration of work processes, service design and delivery in 2022.



SAFE MOBILITY (TRAFFIC SAFETY)

Working to achieve Vision Zero through automated enforcement (in collaboration with EPS) to reduce risky traffic behaviour, evidence-based engineering solutions to increase safety and livability for all road users in all seasons, and Edmontonian-informed solutions to positively influence engineering, partnerships, traffic safety culture and road user behaviour.

40 km/h Default Speed Limit

On August 6, 2021, 40 km/h became Edmonton's new default speed limit, reducing speeds on most residential and downtown roads, as well as high pedestrian areas such as Whyte Avenue and Jasper Avenue. The public was invited to participate and encourage change in their neighbourhoods through the Safe Speed Toolkit, which included portable driver feedback signs, creative signage, educational information, and a mechanism to request automated enforcement presence at approved locations. Through this program, more than 3,500 community signs were distributed to Edmontonians and 24 portable driver feedback signs were deployed throughout the city to support the change. Staff supported Council reports, championed change with the public, and developed signage plans, automated enforcement warning notices and deployment strategies. This accomplishment will result in safer streets for all Edmontonians.

Vision Zero Street Labs

Fourteen Street Lab projects were launched across Edmonton in 2021, with five public project teams completing on-street installations and an additional nine teams in various stages of building their plans. By combining Edmontonians' lived experience with staff expertise, communities collaboratively identified and implemented temporary, adaptable measures that quickly and creatively addressed neighbourhood safety and livability concerns. Through this program, Edmontonians can transform their neighbourhood streets with tools such as shared streets, parklets, curb extensions and painted crosswalks. With these initiatives in place, streets are safer and can function as community hubs for people to move and connect.



Capital Project Completion

2021 saw the completion of a number of capital projects through the Safe Crossings and School Safety programs. This includes 46 safe crossings projects (one full signal, six overhead amber flashers, 13 pedestrian signals, and 26 rapid flashing beacons) and engineering upgrades to support safer streets around 50 schools with elementary students. Twenty schools each received a rapid flashing beacon as part of the improvements.

Strategic Partnership with Edmonton Police Service (EPS)

While the City and EPS each have unique roles to play in street safety, collaboration is critical for success. In 2021, Administration and EPS worked closely to expand their partnership to include exploring new technologies for data collection and future automated enforcement options (i.e. distracted driving), enhanced joint communications and media presence and integration at City Council, increased collaboration for key initiatives, projects, and Council-driven work (i.e. Safe Mobility Strategy development, 40 km/h default speed limit), integration on work directed by Government of Alberta (Justice Transformation Initiative, Automated Traffic Enforcement Guidelines Review), and fatal crash reviews.



Section Reorganization and Service Innovation

Effective February 2021, the Traffic Safety section restructured into the Safe Mobility section. The new structure ensured the section had the right people, roles and structure to effectively implement the newly adopted Safe Mobility Strategy, respond to fiscal pressure from declining Traffic Safety Automated Enforcement Reserve revenues, and align with the corporation's organizational design framework. Engagement with staff and unions informed the resulting structure, and each employee had the opportunity to review their position description and help refine and revise it prior to becoming official. Post-reorganization, staff worked to build and rebuild processes, relationships and systems to translate the Safe Mobility Strategy into action through their roles and teams. An evaluation of the project will take place in 2022 to make adjustments where necessary after the first year of implementation.



PARK AND OPEN SPACE MANAGEMENT

Maintenance and service of 10,300 ha of parkland (including the trail system connecting to the River Valley), including amenity buildings, toboggan hills, and cleanup including vacant encampments on public land.

City Farm

What began as a pilot project in 2020 as a response to pandemic food security concerns for vulnerable communities, is set to become a successful annual initiative known as City Farm. Staff transformed land on Old Man Creek Nursery into a garden to grow food for Edmonton's Food Bank and partner agencies. In 2021, crews harvested a total of 52,320 lbs of produce – a significant increase over 2020's 30,000 lbs. Harvest included swiss chard, kale, corn, carrots, beets, several varieties of squash, pumpkins and zucchini. In the fall, crews prepped land and planted garlic seed to provide an early-season crop of garlic scapes.



Integration of Pest Operations into Open Space Operations

Pest Operations was successfully integrated into Open Space Operations from the Community Standards and Neighbourhoods branch, resulting in greater collaborative work between these two areas who had worked together closely on managing pests and pesticide use in Edmonton's open spaces.

During the transition, the team responded quickly to constantly changing conditions, activating the aerial portion of the mosquito control program in a few weeks (a process that usually takes several months). They managed a significant increase in wasp nests on City property due to hot, dry weather. Staff also supported the 2021 World Triathlon Championship Finals by maintaining acceptable water conditions to provide a safe swimming environment for competitors.

Horticulture

Despite many challenges as a result of the pandemic, staff met all required service levels for shrub bed maintenance, looking after a total area of 4,826,552 square metres. They maintained regular standards for flower beds and planters to beautify the city, despite record-breaking heat waves and lack of precipitation.





URBAN FOREST MANAGEMENT

Maintenance and preservation of the City's tree canopy within parks and boulevards, natural areas, and naturalized areas.

Tree Preservation and Protection Bylaw

Trees sequester carbon, enhance biodiversity, provide habitat, retain water, offer shade and refresh the air we breathe. To protect trees and keep them as an integral part of our city, the Tree Preservation and Protection Bylaw will come into effect in May 2022, after receiving three readings from City Council in August 2021.

Anyone working near City-owned trees must submit a tree preservation or protection plan and obtain a permit prior to beginning their work. This bylaw will protect our urban canopy by ensuring accountability through all stages of construction projects so future generations can enjoy the benefits of mature trees in their neighbourhoods and open spaces.

Urban Forest Asset Management Plan

Work on the Urban Forest Asset Management Plan (UFAMP) was completed as a part of the City's effort to preserve, protect and grow Edmonton's urban forest. The UFAMP outlines activities and programs to manage the City's urban forest over the next 50 years, their forecasted costs, and describes the characteristics and condition of the City of Edmonton's

urban forest assets, levels of service expected from these assets, planned actions to achieve the recommended levels of service at the lowest possible life cycle cost; and the estimated costs and strategies to implement the planned actions.

Open Space and Maintained Tree Maintenance

In 2021, staff continued to provide tree care services to ensure the health, safety and sustainability of Edmonton's urban forest and pruned 41,903 trees for deadwood and form. As part of the annual tree assessment process, the service level was met and 221,086 trees were assessed for condition and 4,919 trees requiring removal were identified. There were 4,259 dead trees removed from open spaces and boulevards and over 2,200 stumps were ground. In the Business Improvement Areas, 1,600 trees had tree lights installed or maintained citywide. There were 24,773 mature trees watered in areas where trees were impacted by construction activities, which helped to preserve the tree canopy and the longevity of neighbourhood trees. Over 20,000 trees were watered as part of the three-year establishment period in order to ensure sustainability of newly planted trees.

Open Space and Boulevard Maintained Tree Renewal and Tree Canopy Expansion

The Tree Renewal Program has an annual target of replacing 3,000 trees. In 2021, 3,260 trees were replaced in open spaces and boulevards (including the replacement of over 200 trees in Business Improvement Areas). Tree renewal work involves identifying trees for removal, stump grinding, routing, and replacement planting.

The Tree Canopy Expansion Project contributes to meeting the City Plan goal of planting two million trees by the year 2050 and the Urban Forest Management Plan goal of growing Edmonton's forest canopy to 20% by the year 2071. In 2021, the growth target from the Urban Forest Asset Management Plan was to plant 1,500 net new open space and boulevard trees, with 1,335 trees successfully planted (165 trees were unable to be planted due to site design constraints).

Urban Forestry Education, Community Outreach, Root for Trees

Staff delivered over 30 educational presentations to community groups, schools, and other stakeholders to promote the benefits and preservation of the urban forest. Citizen-driven planting programs, such as the Commemorative Trees and Request to Plant programs, have also worked directly with communities to plant over 40 trees in 2021. The Root for Trees program reopened volunteer tree planting after the program was paused in 2020 due to the pandemic. Volunteers planted 18,651 tree and shrub seedlings and over 5000 wildflowers in naturalized areas. Over 1,400 volunteers worked 3,040 hours to help grow Edmonton's urban forest canopy.

Forestry Audit Recommendations Completion

Forestry Services was audited in 2020. Administration accepted all six recommendations made by the Auditor. Administration was asked to address four recommendations from the audit by November 30, 2021. Recommendations 2, 3 and 4 were addressed in 2021 and the deadline for recommendation 1 was extended to 2022. Recommendations 1, 4 and 6 will be addressed in 2022.

OPERATIONAL SUPPORT

Supporting services to enable safe, environmentally sustainable, effective, efficient and strategic operations within the branch.

Parks and Roads Services Peer Support Group

The Parks and Roads Services Peer Support Group was initiated in 2020, with the program launching in April 2021. So far, 15 employees from different sections have received training in suicide awareness, depression and anxiety, substance use, and domestic violence. They are equipped to offer guidance and mentoring to peers experiencing difficult situations, as well as provide information about mental health and wellness resources. The key objective in 2021 was to create awareness amongst staff and build trust.

The team created a toolbox talk to help leaders share information about the Peer Support Group. They also launched a Google Site to explain the concept of Peer Support, and to introduce each team member. The materials created by Parks and Roads Services Coordinators were also shared with other branches in the City seeking to initiate their own Peer Support programs.

SAP Mobility Implementation in Maintenance Crews

Parks and Roads Services partnered with the SAP team in Open City and Technology to roll out the SAP Work Manager mobile technology tool (or SAP Mobility). It helped crews working on bridge maintenance, pothole repairs, auxiliary structures maintenance and sidewalk maintenance receive their schedule of daily notifications requiring field work, update work orders, and change work plans electronically while in the field. Crews entered timesheet data directly, increasing capacity for administrative staff. In addition to the time and cost savings, residents benefited from more timely updates to requests.

Finance and Contract Management

Staff ensured greater accountability and hit all their targets for contracts and procurement. Staff also created new dashboards to provide visibility and they streamlined data for all contracts expiring, or due for renewal, in the current and upcoming two years. This will help the corporation and business areas to plan workloads and allocate resources proactively.

Strategic Partnerships with EPCOR

Staff closed the Transportation Systems Electrical Services Agreement (TSESA) contract and saved the branch \$2M by resolving invoice discrepancies with EPCOR. They partnered with EPCOR to review processes, streamline margins to ensure all funds are collected fully and on time, and help design and implement a new invoicing system.

Staff executed an Operations and Maintenance Agreement for Drainage and Wetlands which increased accountability, established clarity and improved relationships. They have also partnered with EPCOR Drainage to develop a Service Level Agreement to address overland drainage challenges across the city.

Streamlined Processes

Staff have thoughtfully and creatively streamlined several processes:

- » Introduced an advanced review of driver abstracts for new hires, which improved the seasonal hiring process.
- » Reduced the branch's retained fleet, resulting in a savings of \$1.5M since 2019.
- » Audited staff software requirements to reduce the number of software licenses and ultimately generate savings for the branch.
- » Managed policies and procedures to reduce unused and duplicate hardware devices such as desktops, laptops, and mobility devices, thereby reducing our monthly/annual fixed costs.





ENVIRONMENTAL MANAGEMENT AND PROGRAMS

The City's Environmental Management System (Enviso) is designed to protect the environment, meet compliance obligations and continually improve the City's Environmental Performance. Enviso resources support Parks and Roads Services to ensure the system is implemented within its operations, and helps align branch activities with environmental policies and priorities.

The City's Environmental Management System is ISO 14001 certified, which involved a third party auditor to confirm the system conforms to the 14001 standard, in addition to annual internal and compliance audits. In 2021, the system was successfully recertified.

BUSINESS IMPROVEMENT AREA (BIA) INFRASTRUCTURE SUPPORT

Working with 13 BIAs to enhance the public, investor, and employee experience of Edmonton's main streets and commercial districts. Dedicated support is provided to BIAs for a coordinated approach from across the City in the planning, operations, maintenance, and renewal of infrastructure assets and services on the mobility network and open spaces.

Baseline Services Definitions

Maintenance and operational services levels in BIAs have been outlined for 26 services that most directly impact BIAs. Examples include snow removal, pothole repairs, litter bin emptying, tree light repairs, and streetlight repairs. The majority of services are provided by PARS with some services provided by Waste Services and Capital City Clean Up. This baseline assessment helps with an understanding of service levels and will allow for PARS and BIAs to determine how services are enhanced to meet the needs of BIAs.

Proactive Inspections

Through the support of the Indigenous Peoples Summer Student Program, over 50 site inspections were conducted in BIAs. Streetscape deficiencies were proactively documented and reported on various road, sidewalk, street furniture, and open space assets. Examples of items that were reported and resolved include sidewalk trip hazards, damaged street signs, and dead trees.

Three walkabouts were led by the Downtown Business Association and the City Manager in the summer of 2021 to hear directly from stakeholders on their challenges and opportunities.

BIA Activations

As COVID-19 restrictions were often changing, the usual event and festival programming in BIAs was adapted in the interest of public health. PARS provided operational support for 10 BIA street and park activations and decorative installations, including banners, signs, traffic control measures, decorative tree lighting, and snow and ice control.

- » Lunar New Year (Chinatown)
- » Whyte Avenue Curb Lanes (Old Strathcona)
- » Root 107 (Downtown)
- » Re-Branding Project (Beverly)
- » Mid-Autumn Festival (Chinatown)
- » Remembrance Day Ceremony (Beverly)
- » Downtown Light Up (Downtown)
- » Winter Whyte Light Up (Old Strathcona)
- » All is Bright (124 Street)
- » Holiday Parade (Kingsway)

3.0 SERVICE PLAN 2022

Parks and Roads Services work is 24/7 and creates a safe, livable mobility network and open spaces. The safety, cleanliness, reliability and maintenance of the City's mobility and open spaces assets enable a better life for all Edmontonians. Looking forward through 2022, and in the spirit of continuous improvement, Parks and Roads Services has a number of important changes that will directly impact how Edmontonians experience their city.



SNOW AND ICE CONTROL

Snow plowing and blading, snow removal, anti-icing, de-icing, specialty snow removal and abrasive application on city streets and pathways.

Snow and Ice Control Audit

Six out of twelve Snow and Ice Audit recommendations were completed in 2021. The remaining six recommendations are expected to be completed and responded to in 2022, including improvements to decision making and change management processes, a cost analysis of in-house versus contracted services, documenting service level commitments for servicing equipment, a review of the Community Sandbox Program, and investigating the potential to implement tipping fees at snow storage sites.

Options to Increase Service Standards

Work is underway to present enhanced service level options to Council in Q2 of 2022. Staff are researching, analyzing data, and developing options for Snow and Ice Control enhanced service standards that take into consideration equity, inclusion,



accessibility, safety, efficiency and connectivity. The options will also take into account how Edmonton's climate has changed in the last decade, and will set us up to be better positioned for potential climate change in the future. The work will include current and future state analyses, and resource requirements (equipment, staffing, budget changes) needed to support proposed options. Engagement with key stakeholders is under way.

STREET CLEANING AND SPRING SWEEP

Street cleaning and spring sweep maintenance of all hard surfaced roadways, sidewalks and alleys.

This year's planning included some unique challenges due to supply chain issues in manufacturing of new equipment. Operational teams have been working closely with Fleet Services to ensure these supply chain issues do not impact the ability to meet planned spring sweep and street cleaning targets. Three retained sweepers will be used to ensure that there is enough equipment on the road to complete spring sweep by June 1 (Policy C550).



Although boulevard and roadway sweeping has been completed by two different teams in the past, this year the Open Space Operations team that sweeps boulevards, and the District Roadways teams that clean the roads, will integrate into one team to ensure the entire inventory is swept efficiently and effectively. These teams will operate out of the district roadway yards and take an integrated approach to sweeping inventory. Our target is to complete the program in 30 operational days prior to June 1, 2022.

TRAFFIC CONTROL

Traffic management through permanent and temporary traffic control design, pavement markings, as well as development and compliance of the City's traffic bylaws.

Detour Service Design Project

The Detour Service Design Project will refine the core service model for the provision of temporary traffic control service in Traffic Control and Parking. A core service model will define the types of traffic control support that the branch should be providing to create safe and accessible traffic management for all road users. Well-defined core services and service levels will provide clarity for employees and help manage expectations of Council and Edmontonians. It will also help us understand where we need to focus services to ensure we are aligned with City Plan goals by creating a safe, efficient and liveable City and by ensuring we have the right kind of resources and expertise to do the valuable work we need to do.

ROAD AND MULTIMODE PATHWAY MAINTENANCE

Repairing transportation assets including paved and unpaved roads, lanes, and active pathways such as sidewalks, shared use paths and trails.

Artificial Intelligence for Pothole Detection

Proactive pothole inspection is essential to improve customer service and to prevent property damage caused by potholes. In 2022, video recordings from cellphones will be used along with artificial intelligence algorithms to proactively and automatically detect potholes. This initiative will:

- » Increase customer service by proactively identifying areas of repair, before they become substantial enough to warrant a resident notification.
- » Allow us to continually monitor the roads and adapt to any changing road conditions.
- » Allow us to adequately schedule based on priority, volume, and concentration of repair.
- » Extend the life cycle and quality of the roads through early interventions rather than large scale repairs.

Paved Roads Asset Management Plan

The Paved Roads Asset Management Plan is a plan developed by Integrated Infrastructure Services, in collaboration with Parks and Roads Services, that describes how the paved road network will be managed over the medium and long-term. The Paved Roads Asset Management Plan will be completed and implemented in early 2022 and will outline the characteristics and condition of infrastructure assets, the levels of service expected from them, and planned actions to ensure the assets are providing the expected levels of service at the lowest possible life cycle cost.



Asphalt Plant Decommissioning

The City's asphalt plant started operating in 1964 and in 2017, a Program Service Review recommended the closure of the plant, contingent on having an alternate source of asphalt during winter months. The contract for winter supply was completed in 2020 and the plant was put into a dormant state until 2023. At that time the plant will be decommissioned either through demolition, sale of the plant or leasing it to a third party. As the end of the dormant stage approaches, resources need to be allocated to advance the development of a decommissioning plan and implementation.

Stone Mastic

Stone mastic repair is considered a long-lasting and efficient pavement repair method. Mastic is a relatively new technology (a blend of emulsified asphalt, rubber and small aggregate) with considerable potential for municipal roadway maintenance uses. In 2022, Parks and Roads Services will undertake a pilot to repair roadways made of stone mastic asphalt with the same material instead of the regular asphalt patch. This pilot has the potential to extend the life of asphalt repairs, offering long-lasting repairs to road surface distresses. Industry partner experience will be leveraged, and results assessed with internal operations and engineering experts.

Sidewalk Maintenance Strategy

The City of Edmonton has a mature asset maintenance process to address sidewalk issues, however, opportunities exist to update the process in a way that would impact the most vulnerable sidewalk users. Throughout 2022, a new Sidewalk Maintenance Strategy will be developed with the objective to take a more proactive, equitable and impactful approach to maintaining the City's sidewalk infrastructure. The strategy will consider where people walk the most (i.e. demand), where people need sidewalks the most (i.e. density/ social vulnerability) and overlay this information with asset condition to determine priority areas for targeted sidewalk maintenance. In April 2022, a draft framework for the Sidewalk Maintenance Strategy will be presented to Council along with options for a sidewalk maintenance renewal process separate from Neighbourhood Renewal. In June 2022, a progress report will be presented to Council along with the budgetary requirements to fund the current service gaps and backlog associated with the existing repair methodology (which is driven by 311 requests). Throughout the remainder of the year, a high-walk network prioritizing the most vital accessibility corridors will be identified and validated through public engagement. The final Sidewalk Maintenance Strategy will be presented to Council in January 2023.

Rubberized Sidewalks

Rubberized sidewalks will be piloted as an innovative solution to ensure a transportation network that is safe, efficient and environmentally sustainable. They create less disruption from tree roots protruding into sidewalks, offer a flexible landing for potential trip hazards particularly protecting seniors from fall-related injuries, and provide an additional tool to replace sidewalk panels given Edmonton's variable weather. The team will leverage industry partner experience and assess results with internal operations and engineering experts. The work will be executed during the 2022 operating season; with the product being installed in various locations and scenarios, such as arterial sidewalks, multi-use paths, collector sidewalks, etc.



BRIDGE AND STRUCTURE MAINTENANCE

Inspection, preventive maintenance (e.g. bridge washing), and repair of City-owned assets including bridges, playgrounds, open space structures (e.g. stairs, ball diamonds), and auxiliary structures (e.g. guard rails).

Bridge Asset Management Plan

The City's Infrastructure Asset Management Policy will be reinforced through the completion of the Bridge Asset Management Plan under the guidance of the Asset Management Working Group. Implementation of this Asset Management Plan will be initiated upon completion. A bridge asset management plan would integrate our maintenance plan with other life cycle interventions to provide a holistic view of how bridges would be managed throughout their life cycle.

Bridge Review Project Implementation

This project was initiated by Parks and Roads Services and Integrated Infrastructure Services in 2020 to ensure that all stakeholders who maintain, rehabilitate and renew the City's bridge assets are well coordinated. In 2022, the initiative will result in a single governance policy, and joint responsibility matrix that will guide all stakeholders. This collaborative initiative ensures optimized use of all City resources, while effectively supporting the bridge assets throughout their life cycle.

OFF STREET AND ON STREET PARKING

City-owned/leased off street parking facility management, and curbside operations management.

Parking Services Strategy

The Parking Services Strategy is focused on best practice curbside management, facility operations, and technology enhancements to ensure a reliable, efficient and effortless customer experience, and strategic management of City-owned curbside assets. The strategy targets continued deployment of time restricted and paid parking where congestion management is necessary, license plate recognition technology to support efficient and effective enforcement, upgrade of EPark units to meet PCI compliance for payment systems and a modernized Residential Parking program to support the City Plan. In 2022, staff will focus on recovering from pandemic impacts (such as occupancy rates) and optimizing services to align with outcomes of the Public Parking Action Plan.



SAFE MOBILITY (TRAFFIC SAFETY)

Working to achieve Vision Zero through automated enforcement (in collaboration with EPS) to reduce risky traffic behaviour, evidence-based engineering solutions to increase safety and livability for all road users in all seasons, and Edmontonian-informed solutions to positively influence engineering, partnerships, traffic safety culture and road user behaviour.

Community Activation Programming

2022 will see the continued growth and expansion of the popular Community Activation programs launched in 2021: Vision Zero Street Labs, the Safe Speeds Toolkit, and the Vision Zero School Kit program. Each program provides opportunities for the public to get involved and partner with the City to make Edmonton's streets safer and more livable. This work will continue to evolve through incorporating external partnerships to champion projects in equity-seeking spaces, expanding the resources and program options available, and working closely with Communications and Engagement to share success stories to influence traffic safety culture and behaviours. In February 2022, 16 Street Labs have already been confirmed for the spring/summer season, more than 100 classrooms are participating in an educational outdoor signage activity, and at least 25 schools will be partnering with the City to install vibrant crossings.

Work is also underway with external stakeholders to identify and action projects in equity-seeking areas that are currently underrepresented in programming, such as organizations and areas serving houseless Edmontonians. Staff continue to receive applications for Street Labs and will work to accommodate as many projects as possible as public project teams complete their plans.

Government of Alberta Automated Traffic Enforcement Guideline

In December 2021, the Government of Alberta (GoA) released a new Guideline for Automated Traffic Enforcement. While the City is in compliance with much of the guideline, significant changes to the automated enforcement program are required to be in alignment with new requirements by the end of 2022. With the exception of mobile automated enforcement locations with a 40 km/h speed limit, which the Guideline restricts from enforcement, 99% of Edmonton's existing active sites meet new criteria and expectations. However, the Guideline has extensive new data gathering and proactive measure expectations that will increase operating costs required to both establish and maintain mobile automated enforcement locations. Parks and Roads Services is currently working with the GoA to understand these changes and the specific impacts for Edmonton's program in order to implement requirements. An update on program changes will be provided to Council by Q3 of 2022.

Equitable Safety: Proactive Safety Reviews

The Safe Mobility Strategy's crash and equity technical analysis identified that residents living in neighbourhoods that experience the highest crash rates are least likely to report their concerns through traditional City processes, such as 311. As a result, problem locations and residents' lived experience are not influencing safe mobility programs, and existing processes are inadvertently contributing to systemic inequities. Proactive safety reviews will be conducted in five of these neighbourhoods in 2022, and priorities identified as a result will be integrated for action through programs across the corporation to support equitable safety and livability.



Public Transparency and Communication

The Safe Mobility Strategy emphasizes the role that each and every Edmontonian plays in creating safe and livable streets as we work to achieve Vision Zero. To support this, numerous communications and engagement projects are planned for 2022 to build public awareness of how the City is making streets safer and more livable, educate key traffic safety priorities, and create opportunities for people to get involved and be part of the change. Projects include:

- » Integrated Safe Mobility map for the public to quickly and easily explore all the ways (past and present) the City is improving street safety and livability (Q2 2022).
- » Annual Vision Zero Report, which provides City Council and the public with a detailed summary of crash information from 2021 and work completed to advance progress toward Vision Zero (Q2 2022). This year's report is being redesigned with an interactive format rather than the previous PDF approach.
- » Behaviour change communications campaign to support the new Charter Bylaw 19642 Safe Passing Distance (Q3 2022).

PARK AND OPEN SPACE MANAGEMENT

Maintenance and service of 10,300 ha of parkland (including the trail system connecting to the River Valley), including amenity buildings, toboggan hills, and cleanup including vacant encampments on public land.

Public Washroom Strategy: Safe, Clean, Accessible

Working with several Branches and Departments across the City, staff implemented and expanded the citywide Washroom Strategy. The goal is to ensure washrooms are safe, clean and accessible. An attendant pilot program, working with Boyle Street Ventures, was introduced at the Whyte Avenue public washroom building, and in Churchill Square, Borden Park, Queen Elizabeth Park, and Louise McKinney Park washrooms. The successful project was expanded in 2021 to include attendants on-site at summer mobile washrooms in the Downtown and Alberta Avenue Business Improvement Areas.

The project team created a project charter that consolidates all previous, ongoing and future work on the Public Washroom Strategy. Work in 2022 will include developing criteria for identifying locations for temporary or permanent washrooms, creating a governance structure for washrooms citywide, reviewing standard operating procedures for washrooms, as well as documenting an overall implementation plan for a ten-year period.



Dogs in Open Spaces

In 2022, Parks and Roads Services will continue to champion the implementation plan associated with the Dogs in Open Spaces Strategy. In 2021, standards for dog off-leash areas were integrated into the Design and Construction Standards for Landscaping. In the first quarter of 2022, a digital manual for developer establishment for off-leash areas was published. These guidelines have already been used by a developer to establish new off-leash areas in The Orchards. In Q4 of 2022, the temporary off-leash rink pilot that has been running since 2017 will be evaluated. The evaluation of the Dog Off-leash Ambassador volunteer program will also be completed in 2022, with recommendations to continue or adapt the program. With new funding received in 2022, a new position will be created that will be responsible for increasing and enhancing the work the City is doing with developers to include off-leash areas in newly developed areas, and advancing other elements of strategy implementation. So far, all capital design and delivery projects budgeted for off-leash areas for 2019–2022 are considered on-time and on-budget. In 2022, planning will be completed to inform capital requirements for 2023–2026. More detail on capital projects implemented as part of the Dogs in Open Spaces Strategy is included in the Projects and Infrastructure section of this plan.



URBAN FOREST MANAGEMENT

Maintenance and preservation of the City's tree canopy within parks and boulevards, natural areas, and naturalized areas.

Root for Trees and Naturalization

Naturalization, the transformation of previously maintained open space land to a more natural state, is one of the leading actions the City is taking to meet the City Plan's goal of planting two million trees by 2050. In 2021, staff began the process of naturalizing 150 hectares of Stormwater Management Facilities (SWMFs) and oversaw the successful planting of 93,711 seedlings and 7,880 wildflowers. This year's targets include volunteers planting 45,000 trees and shrubs, planting an additional 60,000 trees and shrubs, leveraging a naturalization plug planting contractor, and planting 5,000 wildflowers in naturalized areas.

Staff are developing a plan that will provide direction for naturalization, restoration and reclamation over the next ten years. This plan will align with the various City plans and initiatives, including the Greener As We Grow priority of The City Plan, the Urban Forest Asset Management Plan, and the Urban Parks Management Plan. The plan will also align and integrate with the capital planning for the Greener As We Grow project which will identify park, boulevard, natural area, and naturalization tree planting opportunities citywide.



As this project moves forward in 2022, staff will engage with interested stakeholders and the public to gather feedback on overall support for naturalization, restoration and reclamation in Edmonton and the City's approach to these initiatives. Public engagement will be completed in two phases in 2022, with the What We Heard Report planned for completion in Q2 2023, recommended changes to the City's landscape standards due in Q2 2023, and the overall naturalization plan due to be completed in Q3 2023.

Public Tree Bylaw Implementation

In fall 2021, Council approved the Public Tree Bylaw, effective May 1, 2022. Under the bylaw, anyone working within five metres of a boulevard or open space tree, or ten metres of a natural stand will need to obtain a tree permit from the City of Edmonton. Teams are currently working to create the online permit application process with Open City Technology, develop educational material and tutorials, and conduct meetings with stakeholders to streamline final process details. Educational workshops are scheduled for delivery in March, POSSE application development is expected to be completed in April, and user acceptance testing will be completed before the new process and system go live in May. Annually, an estimated 7,000 tree protection plan permits, 28 blanket tree protection

permits, 2,400 tree preservation permits, and 35 tree preservation blanket permits are expected. Actual permit numbers and fees collected will be tracked and reported after the first year of implementation.

Open Space and Boulevard Maintained Tree Maintenance

Forestry Operations has developed service delivery targets for 2022 in alignment with the service levels identified in the Urban Forest Asset Management Plan. The targets for tree pruning in 2022 are 47,284 trees to be pruned. The target for tree removal is to remove all trees that were marked for removal through the annual assessment process in 2021. The target in 2022 for stump grinding is to grind all existing elm stumps, stumps at locations where trees are scheduled to be replanted in 2021, and all stumps where the removal has taken place within the last 24 months. The tree lighting target in 2022 is to maintain the tree lights within all Business Improvement Areas, by visually inspecting each tree three times throughout the year and rewrapping and installing new lights as required. All maintained trees in the South East and North East quadrants of Edmonton will be assessed in 2022. Over 20,000 mature trees impacted by construction activities have been identified for tree watering in 2022 and over 20,000 additional trees will be watered as part of the tree planting establishment period process.

OPERATIONAL SUPPORT

Supporting services to enable safe, environmentally sustainable, effective, efficient and strategic operations within the branch.

Foundational Assessment

The Parks and Roads Services Foundational Assessment project, which began in 2021 and wraps up in 2022, will improve planning and services by helping the branch become more aligned with principles set out in corporate initiatives such as Enterprise Performance Management and Reimagine, which form part of the Municipal Reference Model Framework. The Foundational Assessment will also map the growth that has happened, examine how teams are set up for success, and consider areas where we can improve.

Service Location Strategy

In 2022, implementation of the optimized deployment locations, as recommended by the Service Location Strategy, will begin. In particular, we will evaluate relocation options for leased locations expiring in 2023 (i.e. Lamba building).



Seasonal Workforce Project

In 2022, Parks and Roads Services is contributing to the Corporate Seasonal Workforce project which is exploring new opportunities on how to better manage seasonal workforce to support and align the operational needs of the branch, goals of the City and associated budgets. This project will focus on the following outcomes:

- » Build a recall and seasonal hiring process with a focus on client, candidate and employee experience that aligns with the needs of the business, provides clarity to candidates and outlines clear accountabilities with strong governance.
- » Create a standardized corporate process that eliminates redundant practices and fully supports operational delivery by defining roles and responsibilities and describing the work that will be delivered by Talent Acquisition and the work that will be delivered by the business areas.

- » Create processes and practices to allow for flexibility to easily adapt to changing service levels (scalable approach) with a clear line of sight to budget, ability to track and measure work/services performed.
- » Enable accurate reporting (budget, FTE, headcount, organizational structure – hierarchy, reporting to relationships, and position and vacancy management, etc).

Enterprise Commons

Enterprise Commons, our new cloud-based Enterprise Resource Planning (ERP) solution, will be deployed across the City of Edmonton in 2022 and is undertaking three broad areas of work in order to:

- » Simplify how the City works with respect to its core services including finance, human resources, and supply chain management;
- » Standardize systems and align processes;
- » Adopt industry leading practices for all human resources, finance, and inventory and warehouse management functions as well as enterprise asset management and workflow practices; and,
- » Focus on solutions with minimal customization to reduce the costs of upgrading, maintaining, and supporting enterprise systems.

Task Standards Review in Infrastructure Operations

A Parks Operations Task Standards Manual exists already but was last updated on June 27th, 2012, with another partial update in 2016. No task standards manual exists for Snow and Ice operations but a comparable document – the Snow and Ice Manual – exists and is updated annually. Having an updated and consolidated task standards manual for all Infrastructure Operations teams is beneficial as it can be used for budgeting, accounting, operations planning, operations performance target setting, benchmarking, a consistent WBS/ order number structure, communications and training. The completed Foundational Assessment will be leveraged as a starting point for this work, with four phases of the project including a complete description and breakdown of all tasks, documentation of supporting operational quality



and productivity standards to support why we are providing services at the current levels or identifying when more resources may be required, creating a resource breakdown to determine what labour, equipment and materials are required for each task, and a review of the cost centre, order number and WBS structure being used by each team.

311 Enhancements

The 311 Short Code project was initiated in late 2019 out of a need to update active codes used by 311 agents to route notifications and align them to current branch structure. The enhancements create consistency in language used across maintenance programs through the use of a Main Work Centre that represented the program, a Planner Group that represented a geographic area, an Object Code that represented the asset, and a Damage Code that represented the deficiency/damage, for every notification. They also resulted in refreshed scripts for 311 Agent use and also added interim status SLAs (Time to Inspect and Time to Repair) for all codes to measure our ability to deliver effective communication and meaningful updates to residents.

In 2022, the second phase of the project will be implemented to ensure residents have access to more detailed status updates through the various external platforms currently in use such as the 311 app or OpenCity. These additional statuses will update residents on when their reported deficiency

has been scheduled for an inspection and when it has been inspected and placed in the queue for repair, and are anticipated to result in fewer calls to 311 for status updates. It will also ensure inspectors are retrained on the defined SAP process, compliance reporting is in place, and Time to Inspect and Time to Repair measures align across 311 and the operational areas. Additional enhancements for maintenance related notifications include:

- » **311 App Review** – The 311 App is a direct mechanism for notifications. A review is required to ensure the most appropriate options are available to Edmontonians when they self-route a concern. Updates to the App will ensure notifications are properly routed from notification creation stage resulting in improved customer service through quicker response times and data accuracy to support internal reporting.
- » **Standardized 311 re-routing process** – Currently, when incorrect notifications are assigned to business areas, inspectors can informally redirect them to the appropriate area, however, shortcodes do not get updated in the SAP or Customer Relationship Management (CRM) systems. The lack of a feedback mechanism to the CRM system and 311 agents when re-routing is required as it results in incorrect SLA reporting at both the corporate and business area level. A standardized re-routing process will result in improved data accuracy to support internal and external reporting.

ENVIRONMENTAL MANAGEMENT AND PROGRAMS

The City's Environmental Management System (Enviso) is designed to protect the environment, meet compliance obligations and continually improve the City's Environmental Performance. Enviso resources support Parks and Roads Services to ensure the system is implemented within its operations, and helps align branch activities with environmental policies and priorities.

ISO 14001 and Compliance Audits

The City's Environmental Management System is ISO 14001 certified, which involves a third party auditor to confirm the system conforms to the 14001 standard, in addition to annual internal and compliance audits. Internal and compliance audits, as well as the external verification audit will occur in 2022.

Risk Management of Contamination from District Yards and Snow Melt Facilities

Risk management for contamination will continue in 2022 at the five active and one former snow melt sites, and the five district yards. Risk management includes monitoring and in some cases, extracting associated pollutants, such as chlorides, from these sites, monitoring discharges and preventing further impacts from our operations or through infrastructure improvements that prevent pollution, such as hard surfacing snow melt sites and covering salted sand piles.

Environmental Permits and Compliance Obligations

Enviso will support Parks and Roads Services in the management of their environmental permits and associated disclosures to regulators. These include commitments outlined in existing permits to operate, including hydrant use and discharge permits associated with recovery wells and snow sites from EPCOR.

This also includes permits and registrations required under legislation including the Environmental Protection and Enhancement Act and Public Lands Act, specifically the reporting of spills and releases, the Pesticide Service Registration, Snow Site

Service Registration, the Hazardous Waste Storage Permit and the Department License of Occupations, associated legislated environmental commitments from the asphalt decommissioning.

Emissions Neutral and Climate Ready Infrastructure Program

The Sustainable Building Policy (C532) sets ambitious standards for the City to lead by example in sustainable building practices for City-owned and leased buildings, that includes climate resilient infrastructure upgrades and deep retrofits.

Design has been completed for installation of solar panels on two PARS buildings in 2021: the Northeast Pavement Management Garage, and the Northeast Traffic Operations Facility. Installation is expected to start in 2022.

In 2021, climate risk assessments for urban forest assets were completed as part of the Public Infrastructure Engineering Vulnerability Committee and in 2022, they will be completed for roads and bridges for the respective asset management plans.

GHG Management Plan for City Operations

The Greenhouse Gas Management (GHG) Plan for City Operations 2019–2030, approved by Council, outlines the strategy for City Operations to achieve a 50% reduction in GHG emissions by 2030 (from 2005 levels). The plan works in conjunction with the Energy Transition Strategy in leading by example. Both plans were updated in 2021 to align with international targets of limiting global temperatures below 1.5 °C.

There are 105 corporate actions in Edmonton's Community Energy Transition Strategy and Action Plan, and additional actions in the Climate Resilient Edmonton: Adaptation Strategy and Action Plan and the Corporate Climate Action Plan. Enviso will support Parks and Roads Services in the assessment and implementation of the branch actions in 2022. For example, this will include the streetlight conversion targets of converting 46,000 (82%) of existing high-pressure sodium streetlight to Light-Emitting Diodes (LEDs) by 2022.

OCCUPATIONAL HEALTH & SAFETY

Occupational Health & Safety (OHS) Services advance the objective to create a safe and effective work environment by supporting operations to consistently respond and to take a proactive approach to minimize the occurrence of injury and illness to employees.

2022 OHS Services Business Plan

The 2022 OHS Services Plan outlines the major initiatives and priorities of the OHS Services Team. Together, we aim for focused improvements to the

safety and employee health management system and the way we work with our business partners to operationalize it in their areas. The plan incorporates input from our team, clients and stakeholders. Creating it together enables us to work with a shared and common purpose towards achieving this year's goals:

- » To build organizational OHS and team capacity
- » To seek to understand our clients and to operationalize safety into business processes
- » To continue to create, implement and nurture a culture of planning

	OBJECTIVE	TARGET
COR Audit	To transition the post-audit report recommendations into branch action plans for the completion of safety program improvements in 2023 with support from OHS Services.	70% of OHS Services client branches have been assisted in developing a SMART action plan specific to their audit recommendations.
Enterprise Commons	Promote and support the Enterprise Commons (health and safety software application) by ensuring the OHS Services Team is trained on the new system and is able to support basic client questions.	90% of OHS Services team members have completed Enterprise Commons (health & safety software application) training (25 people).
ISNetworld	Promote and support the implementation of ISNetworld into all City Operations High/Medium Risk contracts by the end of 2022 for improved safety pre-qualification of contracted services.	80% of known contractors to be subscribed to ISNetworld by the end of 2022.
Hazardous Work Locations	To address organizational safety program gaps through the revision and creation of hazardous work location standards and to promote and implement them across the applicable business areas, and in accordance with the High-Risk Work Permitting Standards. <i>*Hazardous Work Locations Original Scope: Confined Space Entry, Ground Disturbance, and Safe Work at Heights</i>	Two of the three Standards have been created and/or revised, embedded into the OHS Standards and Programs Manual, and communicated across business areas by the end of 2022.
Safeguarding	To promote the new safeguarding standard throughout operations and support the implementation of the project recommendations into client business processes for managing and reducing equipment and machinery safeguarding risks and liabilities.	Safeguarding standard developed and embedded into the programs and standards manual and communicated across 70% of business areas by end of 2022.
Safety Document Management	To improve and systemize OHS Services Team safety document management practices by developing safety document records and management processes including governance.	To determine one priority safety document management process, and develop and implement it across the OHS Services Team by the end of 2022.

Occupational Health Surveillance

Health surveillance is an important part of our Occupational Health Management program at the City of Edmonton, and is required when employees are determined to be exposed to noise and/or silica as a result of their work functions. The two main surveillance programs for PARS include the Audiometric Testing Program and the Fibrosis Surveillance Program. Testing for PARS is tentatively scheduled between July and September 2022.

Occupational Hygiene Projects for PARS Operations

The following table indicates the 2022 Occupational Hygiene priorities decided upon through consultation and collaboration between the business area and Occupational Hygiene in Q4 of 2021.

	AREA – GROUP (TASK/HAZARD)
Q1 January – March	None
Q2 April – June	Qualitative Assessments/ "Field Checks" <ul style="list-style-type: none"> · Crack Seal Crew · Library Parkade · Spray Injection Machine (New)
Q3 July – September	Bridge Crews Asphalt Grinding Pesticides
Q4 October – December	None

This table presents an estimated timeline for project start. If projects are completed ahead of schedule, additional projects may be completed from the remaining project request list:

- » Wet Cutting on Concrete
- » Zipper Crew
- » Pothole Trucks (Hot and Cold)



BUSINESS IMPROVEMENT AREA INFRASTRUCTURE SUPPORT

Working with 13 BIAs in enhancing the public, investor, and employee experience of Edmonton's main streets and commercial districts. Dedicated support is provided to BIAs for a coordinated approach from PARS and with other Branches across the City in the planning, operations, maintenance, and renewal of infrastructure assets and services on sidewalks, roads, and open spaces. The plan for working with BIAs has been outlined through the 2022 BIA Annual Operational Plan, with specific consideration to the seasonality of services and BIA events as important drivers for attracting the public.

Service Standards

Having identified the baseline of 26 services in BIAs, the focus in 2022 is ensuring that service standards meet BIA expectations. Four key services have been identified for priority review and discussion with BIAs. Through the BIA Council, PARS will engage with the BIAs on:

- » Snow and Ice Control
- » Street, sidewalk, and alley sweeping/cleaning
- » Sidewalk, curb, and road repairs
- » Graffiti removal on public property

Where current service levels do not match BIA expectations, sessions will focus on discussing options for potential service enhancements, budget implications, pilot projects, and partnership opportunities.

Business Improvement Area Engagement

In the summer of 2022, Walk Abouts/Drive Abouts will be scheduled in each BIA with City leadership to hear first-hand from each BIA and their members about their area's priorities. Further, throughout the year, PARS will engage and consider feedback from BIAs on the following initiatives they have identified as being important to their business members:

- » Bloomin' Boulevards
- » Temporary Patios and Outdoor Retail Spaces
- » Public Washrooms
- » Encampment Clean-Ups

- » Safe Mobility (including Vision Zero Street Labs, Shared Streets, Safe Crossings, and Speed Limits)
- » Scooters, Bike Share, and Bike Parking
- » Public Parking Action Plan (with Urban Planning and Economy)
- » Private property, vandalism, graffiti, murals (with Capital City Clean Up)

Proactive Inspections

While BIAs are encouraged to report streetscape deficiencies and repair requests through 311, the large geographic size of BIAs makes it challenging for BIAs with limited staff resources to dedicate time to reporting on a regular basis. In 2022, PARS and BIAs will benefit from the return of the Indigenous Summer Student Program, which will provide a proactive ability to problem solve and report items of concern in BIAs. Consideration is also being given to engaging the services of YEG Ambassadors in partnership with the North Edge BIA and REACH Edmonton, during the fall/winter months. Regular site visits will include inspecting, reporting and following through on resolution on items related to, but not limited to:

- » Street lighting
- » Abandoned traffic control materials
- » Sidewalks, streets, and curb deficiencies
- » Graffiti concerns
- » Parks and open spaces maintenance items
- » Partnership opportunities

While BIAs have a collective interest in well managed streets, sidewalks, and open spaces, they also have individual interests in creating unique identities and destinations. In 2022, PARS will work with BIAs in formalizing a range of partnership opportunities, which may include cost sharing on specific initiatives of each BIA's choosing. The following opportunities are identified and offered as potential partnership initiatives:

- » BIA Activations and Event Support
- » Banners Projects
- » Decorative Lighting Projects
- » Street Identification Signs Projects
- » Painted Crosswalks

4.0 PROJECTS AND INFRASTRUCTURE 2022

Each year Parks and Roads Services embraces a range of projects that support its operations and the services it provides. Many of these projects and infrastructure improvements are not public-facing, but are necessary for Parks and Roads Services to continue to innovate and strengthen service delivery in Edmonton.

SNOW AND ICE CONTROL

Snow plowing and blading, snow removal, anti-icing, de-icing, specialty snow removal and abrasive application on city streets and pathways.

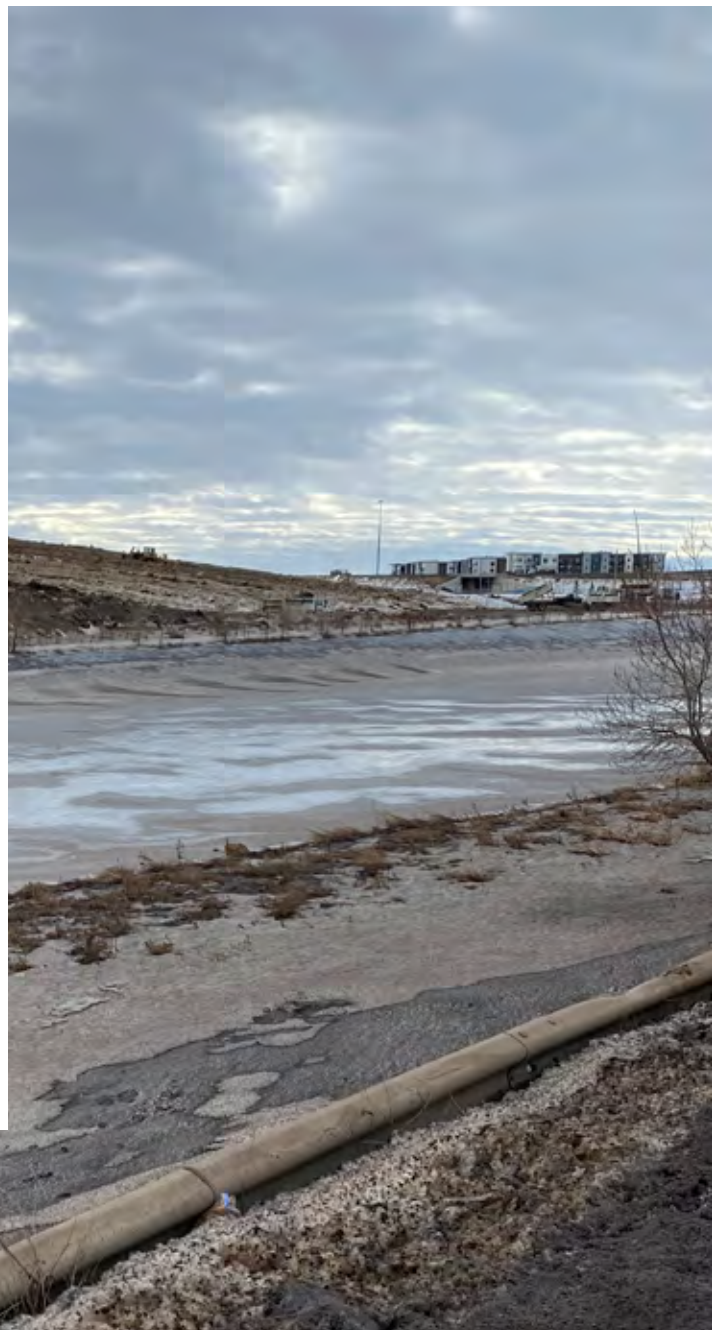
Snow Storage Sites

The Ellerslie snow storage site upgrade project, CP-9254, includes the following components:

- » Development of design alternatives for hard surfacing
- » Improvements to the settling pond design to allow for lower operating costs
- » Design alternatives for clean-up and discharge of the run-off from the sites
- » Design telecommunications infrastructure capable of monitoring and controlling site access along with vehicle recognition.

Ellerslie will be the pilot for a design solution to be used at other snow storage sites, subject to site specifics at the other locations.

In parallel to the snow storage site upgrades, staff are addressing the findings of the Snow and Ice Control audit. Recommendation Eight of the audit includes reevaluating and analyzing cost reduction and/or revenue opportunities including tipping fees at snow storage sites. This recommendation is scheduled to be completed by December 2022.





TRAFFIC CONTROL

Traffic management through permanent and temporary traffic control design, pavement markings, as well as development and compliance of the City's traffic bylaws.

As an outcome of customer journey mapping and Transportation Association of Canada alignment to temporary traffic control guidance, an extensive update to the Manual of Temporary Traffic Control was released in April of 2021. The manual was updated with a GBA+ lens and provides guidance to internal and external users whose roadwork disrupts the regular operation of the mobility network. The guide incorporates modal priority to ensure most vulnerable road users are planned for and accommodated during periods of disruption. In 2022 engineering and education efforts will be focused at the neighbourhood renewal level to ensure the City's successful delivery of neighbourhood construction that accommodates disruptions in the community and ensures we effectively introduce changes to the active transportation network with new or upgraded infrastructure. An e-learning module on temporary traffic accommodations is being released to internal audiences as part of this ongoing education effort to ensure accommodations for all users of the mobility network. Staff are working toward an external version of the e-learning module to continue education efforts with industry as we build toward targets set in the City Plan of 50% of trips being made by transit and active transportation and build confidence with industry and road users on the reliability of the mobility network.

TRAFFIC SIGNALS AND STREETLIGHTS

Streetlight maintenance and traffic signal design, construction, maintenance and mobility network management, decorative lighting operation and maintenance (high level bridge, electrical infrastructure in Business Improvement Areas).

LED Streetlight Conversion

Converting 46,000 (82%) of existing high-pressure sodium streetlights to Light-Emitting Diodes (LEDs) by 2022 will use less energy, save taxpayers \$1.2M each year in reduced power and maintenance costs, and help advance the City's strategic goal of climate resilience. It will also decrease overall greenhouse gas emissions by 5,500 tonnes annually and reduce light pollution and intrusion on private property.

Due to the pandemic, the streetlight industry experienced material shortages and delays in 2020 and 2021. In 2022, the goal is to continue progress on an aggressive schedule to target completion, however this may be impacted by material supply.

ROAD AND MULTIMODE PATHWAY MAINTENANCE

Repairing transportation assets including paved and unpaved roads, lanes, and active pathways such as sidewalks, shared use paths and trails.

Neighbourhood Renewal Program

Operations staff perform cold milling and asphalt overlay work, which is critical to extending the lifespan of the asset, allowing it to age at the same rate as the surrounding infrastructure, such as sidewalks. This work has an annual budget of \$9.5M. This equates to approximately 216,000 square metres of residential and collector road paving.

Neighbourhood Operating Reserve

A critical component to extending the life cycle of an asset is preventative maintenance. The Neighbourhood Operating Reserve allows for large scale application of preventative maintenance practices such as microsurfacing and slab leveling of sidewalks. In 2022, 840,504 square metres of road surface is expected to be microsurfaced.

Capital Profile Detail: Road and Multimode Service

CAPITAL PROFILE	PROFILE NUMBER	PROGRAM	2022 BUDGET
Neighbourhood Renewal Program	CM-25-0000	Paving Operations	\$9.5m
Neighbourhood Operating Reserve - IIS	N/A	Microsurfacing (including slab leveling) Curb Ramp	\$10m

BRIDGE AND STRUCTURE MAINTENANCE

Inspection, preventive maintenance (e.g. bridge washing), and repair of city-owned assets including bridges, playgrounds, open space structures (e.g. stairs, ball diamonds), and auxiliary structures (e.g. guard rails).

Playground Conservation Program

The Playground Conservation Program is a capital renewal program that rehabilitates existing playgrounds by performing targeted major component replacements (i.e. new equipment or surfacing). The playspace maintenance crews have specialized skills and equipment, as well as open order contracts for playground equipment procurement that make playground renewals much more efficient to deliver by using these in-house crews. In 2022, the playground maintenance team plans to execute \$830,000 worth of the Playground Conservation capital profile across 35 playgrounds.



Open Space Renewal Profile

In 2022, plans to build and install about \$360,000 worth of recoverable work for auxiliary renewal projects includes approximately:

- » 337 metres of new chain link fence
- » 141 deterrent post installation
- » 95 metres of new wood fence construction
- » 313 needle box and ashtray installation locations
- » 1,066 Graffiti removal locations.

CAPITAL PROFILE	PROFILE NUMBER	PROGRAM	2022 BUDGET
Open Space: Parks Renewal	CM-32-0000	Playground Conservation	\$830,000
Open Space: Parks Renewal	CM-32-0000	Open Space Renewal	\$360,000



SAFE MOBILITY (TRAFFIC SAFETY)

Working to achieve Vision Zero through automated enforcement (in collaboration with EPS) to reduce risky traffic behaviour, evidence-based engineering solutions to increase safety and livability for all road users in all seasons, and Edmontonian-informed solutions to positively influence engineering, partnerships, traffic safety culture and road user behaviour.

Safe Crossings Program

The Safe Crossings Program (formerly the Crosswalk Improvement Program) relaunched in Q1 2022 after significant evolution to align with the Safe Mobility Strategy. Changes to the program include location identification methods, prioritization criteria, infrastructure upgrade options, corporate integration, and public transparency and communication. As a result of this relaunch, more locations will be addressed without increasing costs through creative, equitable, efficient, and proactive infrastructure upgrades that protect vulnerable road users. 48 new locations are identified for active control (signalized) and adaptable measures (temporary curb extensions, pedestrian medians) upgrades in 2022. The public can view previous and upcoming projects through an interactive map, and the remaining known locations requiring upgrades that have not yet been funded for construction will be added in Q2 2022. More than 300 locations have been upgraded through this program since 2015.

School Safety Program

The School Safety Program was established to implement traffic safety upgrades around elementary schools. This program's mandate will be completed at the end of 2022, with the final 28 school projects scheduled for construction. This work is undertaken through close partnership with the City's School Safety Committee, which includes representatives from Edmonton's three school districts (transportation planners), Alberta Motor Association, and the Edmonton Police Service. More than 235 schools have received upgrades through this program since 2015.

PARK AND OPEN SPACE MANAGEMENT

Maintenance and service of 10,300 ha of parkland (including the trail system connecting to the River Valley), including amenity buildings, toboggan hills, and cleanup including vacant encampments on public land.

Benchmark Program and Furniture Renewal Projects

This capital profile addresses work focused on improving outdoor amenities through the Benchmark Commemorative Program. This program is fully partner-funded and was established to offer citizens the opportunity to honour loved ones, or to celebrate special events. This is done through the refurbishment of an existing park bench or the installation of a new bench and installation of a bronze plaque on the bench to serve as a commemoration.

Since the review of the Benchmark Commemorative Program was completed in 2020 – before reopening completely for the 2021 season with updates to procedures and donor terms – the number of donations is comparable to levels prior to the program review. The current focus of this profile is on the refurbishment of existing benches, with 52 existing benches refurbished and six new benches installed in 2021, for a total of 58 donors. The annual target (including for 2022) for the number of donors is 50.

The Commemorative Program review included a number of recommendations for enhancing program coordination, customer service and donor experience including the following which will be worked on in 2022:

- » An interactive map of benches available citywide for donors to request for commemoration
- » A citywide inventory of plaques and improved record keeping
- » Participation in the Commemorative Asset Policy project
- » Reviewing other opportunities for assets to be included in the donor program for the next budget cycle



- » Hiring a student through the Sustainability Scholar program to examine the actual deficiency of seating in parks as outlined in the City's Accessibility Guidelines, and create recommendations for future placement of benches.

In 2022, about \$320,000 worth of recoverable building and installation work is planned on benches, primarily for renewal work and for the Benchmark Commemorative Program.

Dogs Off-leash

In 2022, staff will identify priority areas for off-leash (new or enhancements to existing) and help inform capital requirements for 2023–2026. The following work is also scheduled:

- » Continue to enhance Eastwood Park and Inglewood off-leash areas to contain recommended standard amenities for off-leash areas. Installation work in Inglewood is complete, and needs to be taken into City inventory in 2022. Eastwood enhancements are scheduled to be installed in 2022.
- » Final design for enhancement of Callingwood Park off-leash area in alignment with both public engagement and the Strategy. This project will be presented for funding to Checkpoint 5 in the 2023–2026 capital budget.



- » Public engagement sessions will be conducted to enhance the Keheewin/Bearspaw off-leash area in line with the Strategy. This project will be presented for funding to Checkpoint 5 in the 2023–2026 capital budget.
- » Installation of new etiquette and boundary signage for all off-leash areas started in 2021, and is scheduled to be completed in Q1 2022.
- » New off-leash areas are in the process of being developed in Alberta Avenue, Pleasantview, Garneau and Glengarry. Alberta Avenue, Glengarry and Garneau are scheduled for construction in 2022. Construction for Pleasantview has not yet been scheduled.
- » A new off-leash area is also being constructed by a developer in The Orchards. Construction is planned for 2022.
- » Public engagement is being conducted through Building Great Neighbourhoods to see if there is community support to add new off-leash areas within all neighbourhoods in the renewal process. A schedule for design and construction in each area will depend on the results of public engagement. Each project has a unique schedule.

Open Space and Boulevard Maintained Tree Canopy Expansion

The 2022 target for net new trees to be planted by Forestry Operations is 1,500 maintained trees.

URBAN FOREST MANAGEMENT

Maintenance and preservation of the City's tree canopy within open spaces and boulevards, natural areas, and naturalized areas.

Urban Forest Canopy Expansion Profile

In 2021, staff planned, designed and executed tree planting on multiple sites citywide to expand the urban forest. The project scope was developed from the growth targets outlined in the Urban Forest Asset Management Plan, and includes the planning and design of both open space and boulevard and naturalization tree planting site details. The goal of the project is to plant 6,000 net new maintained trees in open spaces and boulevards and plant three ha of naturalized areas from 2021 to 2022. Parks and Roads Services is responsible for planting 50% of the maintained trees (3,000) and for the inspection of all tree plantings. There were 1,335 trees successfully planted in 2021 (165 trees were unable to be planted due to site design constraints). In 2022, the growth planting target is 1,500 net new open space and boulevard trees.

Open Space and Boulevard Maintained Tree Renewal

In 2022, the tree replacements will be in the South West and North West quadrants of Edmonton and locations where tree renewal is required along collector and residential boulevards, centre medians and service lanes is being prioritized, along with the replacement of dead trees or vacant locations in Business Improvement Areas. Forestry Operations's planting target for 2022 is to replace 1,700 open space and boulevard maintained trees.



Capital Planning for Greener As We Grow

Leveraging the direction and tree planting targets from the Urban Forest Asset Management Plan, staff are creating citywide and district planning levels maps that will inform suitable areas for turf conversion, naturalization, natural area and park and open space and boulevard tree planting for the next two budget cycles. Estimates for capital and operating impacts will be included in this project. This project is being managed parallel to work on the Naturalization Plan which will provide direction for naturalization, restoration and reclamation for the next 10 years. Both projects will leverage the same consultant and project teams will coordinate on public engagement efforts.

Maintained Tree Renewal (soft landscaping capital profile)

This capital profile addresses the annual replacement planting of open space and boulevard maintained trees. The current project timeline (existing funding) is 2019 to 2022. To date, 9,470 trees have been renewed through this project, from 2019 to 2021. In 2022, the target is to plant 1,700 more trees.

Root for Trees

This capital profile has an annual target of planting 45,000 native trees and shrubs by volunteers, 60,000 trees and shrub plugs planted by contractors along roadways, as well as 5,000 native flowering perennials in parks and roadways throughout the city with continued partnership with businesses, residents and community groups. The goal in 2022 is to meet annual planting targets.

ENVIRONMENTAL MANAGEMENT AND PROGRAMS

Environmental management programs and process improvement for PARS will focus on the following key areas in 2022.

- » Breeding Bird Discovery Protocol, to reduce potential risks to breeding birds, nests and young that can occur as a result of our services.
- » Update to the Salt Management Plan, to maintain compliance with the associated Code of Practice.
- » Development of Integrated Pest Management (IPM) Action Plans to document the evidence-based decision making process in alignment with the IPM Policy C501A, contribution to the annual report on policy implementation and annual pesticide usage.
- » Renewal of expired and expiring Department License of Occupations for assets, primarily bridges and boat launches, on public lands that interact with water bodies.
- » Renewal of the Hazardous Waste Permit, for the temporary storage of hazardous wastes and recyclables generated as a result of provided services.

BUSINESS IMPROVEMENT AREA INFRASTRUCTURE SUPPORT

Working with 13 BIAs in enhancing the public, investor, and employee experience of Edmonton's main streets and commercial districts. Dedicated support is provided to BIAs for a coordinated approach from PARS and with other Branches across the City in the planning, operations, maintenance, and renewal of infrastructure assets and services on sidewalks, roads, and open spaces.

The following are the project-focused supports to be provided to BIAs in 2022, separated into projects that are ready for implementation, pilot projects, and planning for emerging projects.

Project Implementation

These projects are to be delivered in 2022, having undergone project planning and design. The target is to complete these projects on budget and within the timeframes outlined.

- » Crosswalk Installation and Pole Replacements (The Crossroads) – Q2 2022
- » Poster Fixture Refurbishments (All BIAs) – Q2 2022
- » Banner Installations (Chinatown, Downtown) – Q2, Q3 2022
- » Bike Parking Installations (All BIAs) – Q3 2022
- » Brick Paving Repairs (Various BIAs) – Q3 2022
- » Decorative and Tree Lighting Installations (124 St, Downtown, Old Strathcona) – Q3 2022

Pilot Projects

These projects are to be trialed in 2022. The target is to complete these three pilots in Q3 2022, with recommendations being made to BIA partners in Q4 on partnership opportunities in 2023 and beyond.

- » Streetlight Pole Painting Pilot (The Crossroads)
- » Utility Box Wrap Pilot (Beverly)
- » Bench Refurbishment Pilot (Old Strathcona)

Planning for Emerging Projects

The following projects will be advanced through development of project plans and detailed designs, targeted for Q3 completion. Following the planning stage, consideration will be given to implementation in 2023.

- » Tree Lighting Projects (124 St, Stony Plain Road, The Crossroads, Alberta Ave, Old Strathcona, French Quarter)
- » Decorative Lighting Projects (North Edge, Alberta Ave, Old Strathcona)
- » Space Animation Projects (Stony Plain Road, Beverly)
- » Decorative Installations Bridge (French Quarter)
- » Parklet Project (Old Strathcona)

5.0 PERFORMANCE TARGETS

The City of Edmonton continuously monitors and routinely reports on 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

Parks and Roads Services has identified the following performance measures to demonstrate accountability that goals are being achieved, targets are being met and residents are getting good value for their tax dollar. These performance measures also allow employees to see the positive impact that their work has on the people they serve every day.



PARKS AND ROADS SERVICES KEY PERFORMANCE MEASURE(S)

SERVICE	MEASURE	MEASURE DESCRIPTION AND NARRATIVE	TRENDING STATUS
Road Service	Cost per Adjusted Lane Kilometre of Roadways	Ratio of total direct operational and maintenance cost per kilometre of inventory. To ensure efficient and effective value for tax dollars. The 2019–2021 results have a downward trend in part to the favourable weather conditions to maximize opportunities in Snow and Ice Control and Spring Sweeping.	
	Number of Potholes and Asphalt Repairs (IM)	Number of potholes and asphalt repairs completed throughout our road network.	
	Number of Bridges Inspections (IM)	Number of formal visual inspections of critical engineered structures, such as: » Roadway bridges » Pedestrian bridges » Major culverts » Major retaining walls	
	Number of Structure Inspections (IM)	Specialized structure inspections encompasses the annual plan for visual inspections of: » Playgrounds » Skate Parks » Spray Parks » Outdoor Fitness » Noise Walls » Staircases » Guard Rails » Minor Retaining Walls » Jersey Barriers	
Parking Service	E-Park Occupancy Rate	Allows Parking Services to effectively manage parking and decrease vehicle congestion. Epark on-street only. The downtrend from 2019 onward for this measure is connected to provincial and municipal COVID-19 restrictions as recovery is starting to be seen.	
Traffic Safety Service	Fatalities and Serious Injuries (All Road Users)	Cumulative Monthly Total number of fatalities and serious injuries due to vehicle collisions on Edmonton public roadways. To measure the effectiveness of traffic safety programs. From 2019 through 2021, this measure has trended down when compared to the previous year's same quarter.	

SERVICE	MEASURE	MEASURE DESCRIPTION AND NARRATIVE	TRENDING STATUS
Park and Open Space Access Service	% Growth of Tree Canopy (Size Year-Over-Year)	When the Urban Forest Management Plan was published in 2012, urban forest canopy was estimated to be at 10%. In 2020, LIDAR measured Edmonton's forest canopy at approximately 13%. This measure is trending up.	
	To evaluate the growth of our already established tree inventory.	On average, 8,667 new maintained trees are accepted into the Open Space and Boulevard tree inventory per year, the majority coming from development planting.	
	Proposed measure that is currently not within Enterprise Performance Management.	An average of 93,000 trees and shrubs are planted in naturalized areas annually by Parks and Roads Services. Note that the numbers stated here do not include naturalization areas planted by developers or through capital projects yet. A cross-corporate committee is currently working on defining measures and tracking mechanisms as the City prepares to meet the Urban Forest Asset Management Plan planting goals, including the City Plan goal of 2 million trees planted.	
Active Pathways Service	Number of new trees accepted into inventory annually (includes city-planted, volunteer planted, and developer planted trees)	On average, 8,667 new maintained trees are accepted into the Open Space and Boulevard tree inventory per year, the majority coming from development planting.	
	Proposed measure that is currently not within Enterprise Performance Management.	An average of 93,000 trees and shrubs are planted in naturalized areas annually by Parks and Roads Services. Note that the numbers stated here do not include naturalization areas planted by developers or through capital projects yet. A cross-corporate committee is currently working on defining measures and tracking mechanisms as the City prepares to meet the Urban Forest Asset Management Plan planting goals, including the City Plan goal of 2 million trees planted.	
	Proposed measure that is currently not within Enterprise Performance Management.	An average of 93,000 trees and shrubs are planted in naturalized areas annually by Parks and Roads Services. Note that the numbers stated here do not include naturalization areas planted by developers or through capital projects yet. A cross-corporate committee is currently working on defining measures and tracking mechanisms as the City prepares to meet the Urban Forest Asset Management Plan planting goals, including the City Plan goal of 2 million trees planted.	
Active Pathways Service	Cost per kilometre of Active Pathways (EPM)	Ratio of total direct operational and maintenance cost per kilometre of inventory. To ensure efficient and effective value for tax dollars.	
	Number of Sidewalk Panels Replaced (IM)	This measure has seasonal fluctuations from snow clearing and sidewalk maintenance. The trend upward in results from 2019 through 2021 can be attributed to bigger than planned accomplishment of sidewalk maintenance.	
	Number of Trip Hazards Addressed (IM)	Number of sidewalk panels requiring replacement due to very poor condition (inability to repair effectively).	
Active Pathways Service	Number of Trip Hazards Addressed (IM)	Total number of trip hazards removed.	

APPENDIX A: FINANCIAL SUMMARY OF PARKS AND ROADS SERVICES

2022 BUDGET (000s)

Expenses	\$ 266,373
Revenue and Recoveries	\$ (64,141)
Net (Income)/Loss	\$ 202,232

SERVICES	EXPENSES	RECOVERY	REVENUE	NET
Snow and Ice Control	\$ 57,952	\$ (762)	\$ (63)	\$ 57,127
Spring Sweep	\$ 17,529	\$ 2	\$ (1)	\$ 17,530
Traffic Control	\$ 19,535	\$ (7,203)	\$ (12,804)	\$ (472)
Traffic Signals and Streetlights	\$ 19,809	\$ (259)	\$ (118)	\$ 19,432
Bridge and Structure Maintenance, Road Maintenance, Multimode Pathway Maintenance	\$ 62,701	\$ (12,688)	\$ (4,864)	\$ 45,149
Parking – On Street / Off Street	\$ 7,641	\$ (3,003)	\$ (8,025)	\$ (3,387)
Safe Mobility (Traffic Safety)	\$ 13,377	\$ 0	\$ (10,473)	\$ 2,904
Parks and Open Space Management	\$ 51,469	\$ (198)	\$ (520)	\$ 50,751
Urban Forest Management	\$ 16,360	\$ (2,379)	\$ (783)	\$ 13,198
TOTAL (000s)	\$ 266,373	\$ (26,490)	\$ (37,651)	\$ 202,232

YEAR END FINANCIALS (2021)

Net Position Budget Variance



(000s)	BUDGET	ACTUAL	YEAR END VARIANCE
Expenses	\$ 262,783	\$ 268,381	\$ (5,598)
Revenue and Recoveries	\$ (69,482)	\$ (75,473)	\$ 5,991
Net Position	\$ 193,301	\$ 192,908	\$ 393

APPENDIX B: SERVICE STANDARDS

Parks and Roads Services operates in accordance with the following City of Edmonton policy and plans. These plans ensure the work of Parks and Roads Services is in alignment with broader goals and strategic objectives of the City of Edmonton, and at a consistent standard across the City.

- » [Snow and Ice Control Policy C409K and Procedure](#) (contains snow clearing priorities)
- » [Active Transportation Policy C544](#)
- » [Urban Parks Management Plan](#)
- » [Turf Management Policy C614](#)
- » [Natural Areas Systems Policy C531](#)
- » [Natural Areas Management Plans](#)
- » [Corporate Tree Policy C456C](#)
- » [Integrated Pest Management Policy C501A](#)
- » [City of Edmonton Design and Construction Standards](#)
- » [Joint Use Agreement](#)
- » [Traffic Bylaw 5590 \(multimode pathways maintenance\)](#)
- » [Public Tree Bylaw 18825](#)
- » [Roadway Cleaning Policy C550](#)
- » [Dogs in Open Spaces Strategy and Implementation Plan](#)
- » [Commemorative Program Guidelines](#)
- » [Parkland Bylaw C2202](#)
- » [Open Space Policy C594](#)
- » [Asphalt Repair Timelines](#)
- » [Infrastructure Management Policy C598](#)
- » [River Valley Planning Modernization Project](#)



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