

## Calgary Safer Mobility Plan – Annual Briefing 2021

### Introduction

In October, the Decade of Action for Road Safety 2021-2030 has been proclaimed by UN General Assembly with a target to reduce road traffic deaths and injuries by 50% by 2030, recognizing the gravity of this global issue. The cornerstone of the Decade of Action for Road Safety is the Global Plan, which aims to inspire and guide national and local government, as well other stakeholders who can influence road safety. It advocates for the Safe System Approach and changes based on best practices and research.

In Calgary we are working towards the same goal. Our 2019-2023 Safer Mobility Plan (SMP) outlines the long-term vision of mobility free of major injuries and fatalities with the short-term target of 25% reduction by 2023. Reaching this target is dependent on many factors that influence the outcome and we are continuing to work towards reducing harm on our roadways through data driven and evidence-based approaches, collaboration across disciplines, and community-based programs. We are seeing improved safety outcomes for Calgarians with 128 fewer incidents resulting in life changing or ending injuries now, compared to five years ago. Nevertheless, the decreased travel and exposure during the pandemic likely contributed to this decrease, and more deliberate action is needed to maintain these levels as we move out of the pandemic.



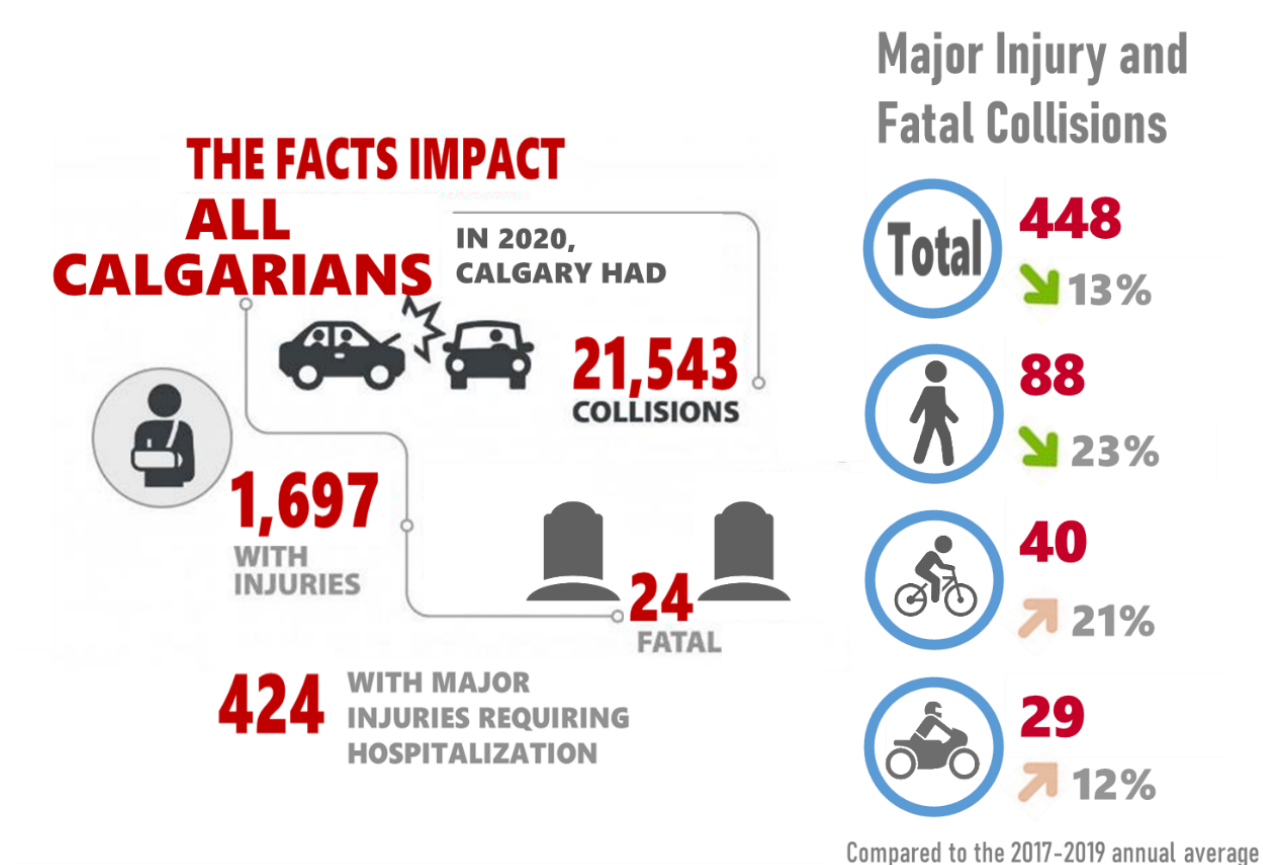
*...Mobility free of major injuries  
and fatalities*

### Collision Statistics

Calgary Safer Mobility Plan Indicator Statistics 2020

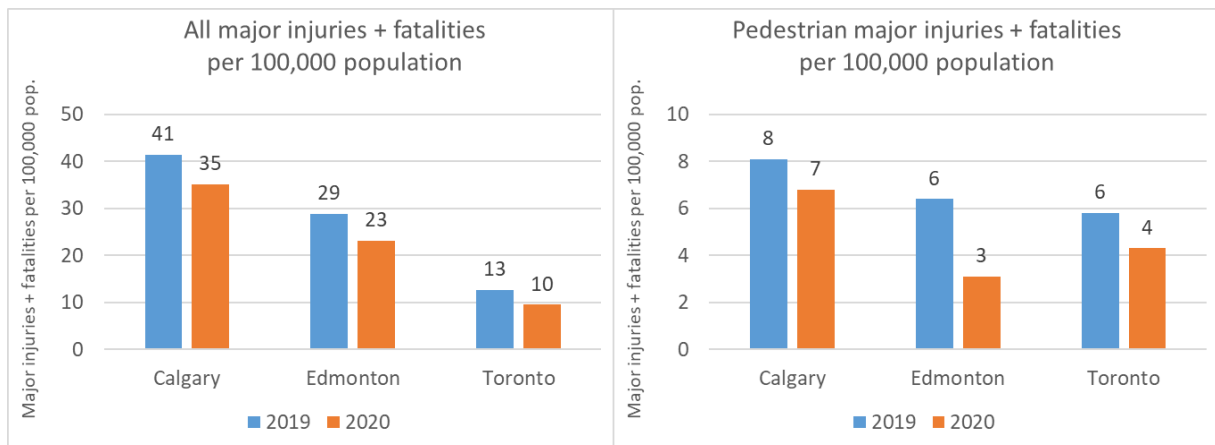
	2019	2020	% Change (Year over Year)	2017-2019 Average	2020	% Change (3-year Average)
Fatal Collisions	19	24	26	15	24	60
Major Injury Collisions	483	424	-12	502	424	-16
Pedestrian Involved Fatality+Major Injury Collisions	104	88	-15	114	88	-23
Bicyclist Involved Fatality+Major Injury Collisions	33	40	21	33	40	21
Motorcyclist Involved Fatality+Major Injury Collisions	28	29	4	26	29	12

In 2020, there were 24 fatal collisions (19 in 2019), 1,697 injury collisions (2,353 in 2019) and 19,822 property damage only collisions (35,393 in 2019) on Calgary roads. The societal cost of these collisions was estimated to be \$836 million in 2020. Pedestrians were involved in 4 fatal collisions (3 in 2019), and 84 major injury collisions (101 in 2019), while cyclists were involved in 38 major injury collisions (32 in 2019), with 2 fatal cyclist collisions (1 in 2019).



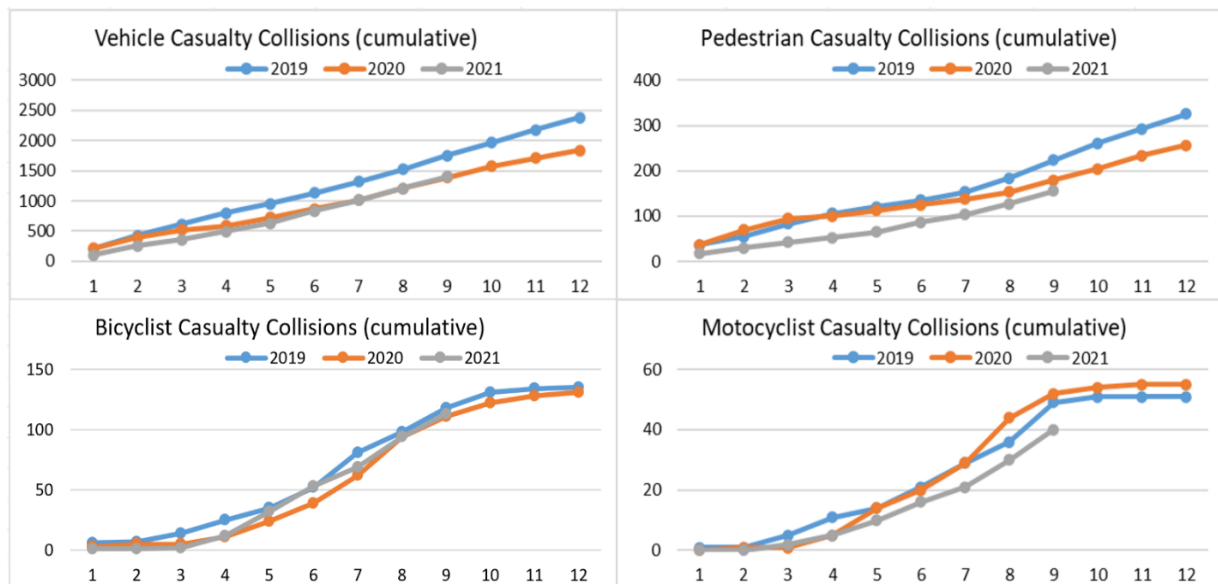
For comparison purposes, selected cities are shown in the table below, using the most recently available comparable data. While Calgary is continuing to improve its performance year over year, further action is needed to close the gap to other major Canadian cities.

### Summary of Traffic Injuries and Fatalities for Various Canadian Cities



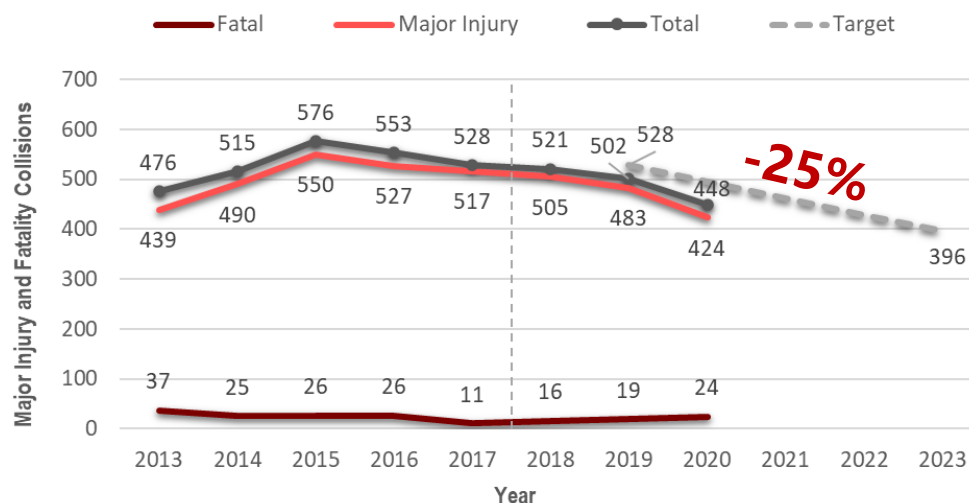
Based on preliminary data for the current year (2021), casualty collisions are generally trending similarly to 2020 for vehicle and bicyclist categories. Pedestrian and motorcyclist casualty collisions are slightly below previous years. This may be related to decreased travel demand during the pandemic.

### Cumulative Casualty Collisions (Fatal, Major and Minor Injury), 2019 to 2021 To Date



## Focus Area Targets

### Target #1: Major Injury and Fatality Collision Target



Target: 25% reduction in major injury and fatality collisions

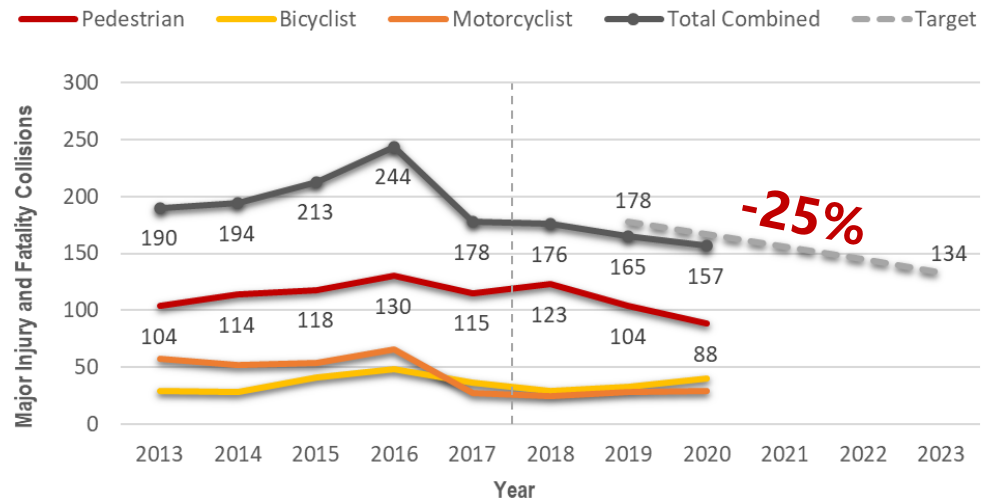
Baseline: 528 major injury and fatality collisions (2017)

Progress summary: In 2020, we had five more fatal collisions compared to the previous year. Major injury collisions continued the downward trend initiated in 2015. Overall, major injury and fatal collisions combined decreased by 10.8% compared to the previous year and by 22.2% since the peak in 2015. This report presents 2020 collision statistics and progress towards the targets for actions taken in 2019 and before.

#### Key Actions:

- Undertake a fatal collision review (10 years of data) to investigate causal factors from a safe system perspective
- Implementation of network improvements focused on reducing most severe collisions
- Speed-related engagement, education, and speed reductions, where appropriate
- Calgary Police Service (CPS) targeted enforcement activities



**Target #2: Vulnerable Road User Collision Target**

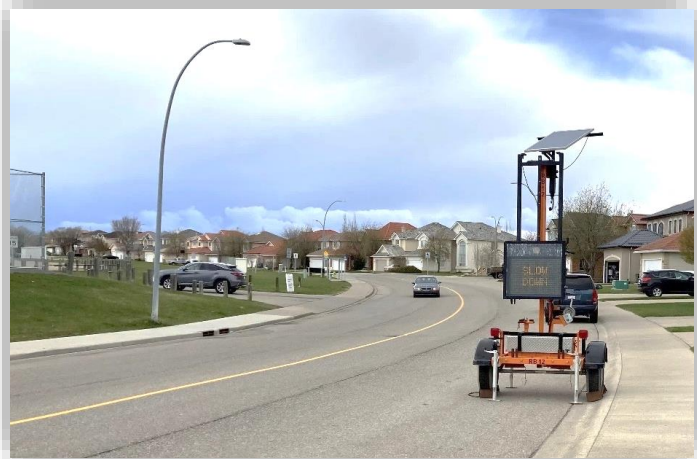
Target: 25% reduction in major injury and fatality collisions

Baseline: 178 major injury and fatality collisions (2017)

*Progress summary:* Major injury and fatality collisions involving vulnerable road users decreased by 4.8% in 2020 compared to 2019. This is mainly driven by a decrease in pedestrian collisions, with slight increases among bicyclist and motorcyclist collisions where more effort is required.

**Key Actions:**

- Implement collision reduction measures based on network screening, video-based conflict analysis
- Downtown bicyclist collision review
- Continued application of Traffic Calming Curbs to address collision issues
- Engagement and awareness activities related to speed
- CPS targeted enforcement activities



## 2021 Accomplishments and Planned Actions for 2022

2021 was a busy year with several significant achievements by many groups throughout the organization. Some highlights are outlined below:

- **Residential speed reduction.** Speed, and the perception of speeding, has been a consistent concern we have heard from residents. On May 31, 2021 the default unposted 40 km/h speed limit came into effect on both residential and collector roads in neighbourhoods. The collision reductions of this change have been estimated at \$8.1 Million per year.
- **Joint Mobility Safety Forum.** Initiated new partnership between CPS and City of Calgary focused on working together towards the Vision Zero goal by expanding collaboration opportunities and working relationship between CPS and City of Calgary Transportation, and other partners, aimed at creating a safer city for all Calgarians (more information in Appendix A).
- **Traffic Tuesday.** Every Tuesday humorous or topical traffic safety messages are posted on Electronic Message Boards or Dynamic Message Signs throughout the city. These humorous and light-hearted messages aim to inspire a positive mindset while moving around the city and engage meaningful discussions on social media platforms.
- **Safer mobility and equity.** We have begun some important conversations to ensure that our journey towards Vision Zero is rooted in equity. We are partnering with York University to identify barriers to built environment change based on locally collected data and help us improve our programs.
- **Fleet Compliance Dashboard.** A new reporting tool to view statistics on collisions and inspections involving City of Calgary vehicles and powered mobile equipment. Reducing fleet collisions improves the safety of employees and citizens and can save The City money while helping to steer operators into safer driving behaviors.



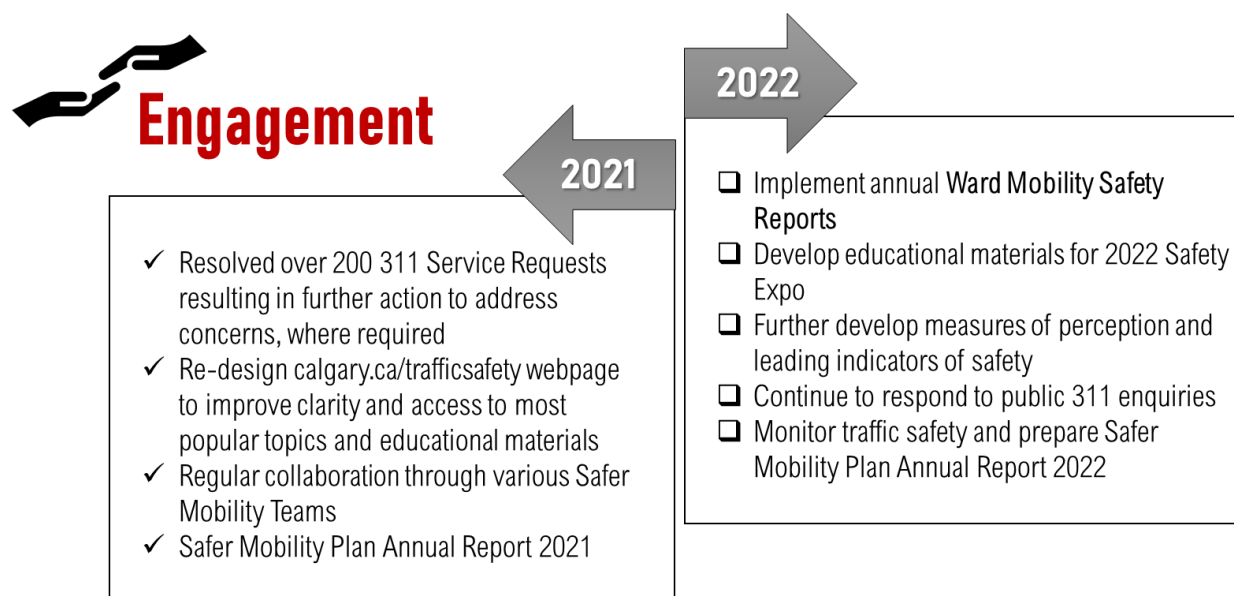
Below subsections highlight a selection of actions that have been undertaken in 2021. Some of these have been completed while others are ongoing. The planned actions for 2022 are also identified for each area of focus. With more work to do, our focus in 2022 will be on implementing proven safety countermeasures, collaborating with our partners, and identifying new programs to create systemic change and gain momentum towards Vision Zero. Some new initiatives and upcoming actions include:

- **Ward Mobility Safety Reports.** We will produce a report for each Ward to facilitate discussion on priorities towards Vision Zero and collaborate on implementation of targeted improvements.

- **Safe Collector Framework.** Collector roadways often see frequent interaction between vehicle and pedestrian traffic accessing schools, transit, and other community amenities. A city-wide retrofit of collector roads was identified during the review of safer neighbourhood speeds and recent 40 km/h speed limit change. An implementation strategy would likely involve a long-term staged approach and the details/proposal will be presented to Council by the end of Q2 2022.
- **Vision Zero Focus Network/Map.** We will develop a network map outlining areas of focus for Vision Zero action aligning with locations where there is a high risk of severe collisions. This will help to inform decisions on priorities and improvement options.
- **Collaborations and Partnerships.** We are also partnering with York University to identify barriers to built environment change based on locally collected data and help us improve our programs so our journey towards Vision Zero is rooted in equity.

### Engagement

The management of the SMP is primarily done through the collaborative teams of the SMP. One of the main actions is to report on the progress of the plan annually and to re-assess the SMP at the end of the 2019-2023 period, once data is available.



### Engineering

In 2021 we were able to make progress on a number of important projects that alter the road environment to reduce collisions. Projects with highest collision reduction potential particularly among more severe collisions were prioritized, including roadway geometry improvements, high entry angle right turns (smart rights), and pedestrian safety improvements. Below are some highlights.





## Engineering

2021

Studies to support evidence-based approach:

- ✓ 10 Safety Reviews based on video-based conflict analysis at top severe injury locations
- ✓ Collision Reviews, Safety Assessments, and checks
- ✓ Lighting review at 20 locations with night-time pedestrian collision trends

Pedestrian crosswalk improvements:

- ✓ 23 new traffic signals
- ✓ 9 Rectangular Rapid Flashing Beacons (RRFBs)
- ✓ 4 overhead and side-mounted flashers
- ✓ 25 marked/signed crosswalks
- ✓ 247 temporary curbs

Targeted, cost effective geometric safety improvements (Safety Improvements Capital Program) for example:

- ✓ McKnight Blvd & 68 Street NE
- ✓ Glenmore Tr & 5 Street SW (north intersection)
- ✓ 17 Avenue & 69 Street SW
- ✓ 34 Avenue & 69 Street SW
- ✓ Blackfoot Tr & 58 Avenue SE
- ✓ 40 AV & Market Mall Access NW

Implementation of roadside improvements including median barriers and bridge pier protection:

- ✓ 16 Avenue west of Home Road NW
- ✓ John Laurie Blvd NW
- ✓ Barlow Trail & 16 Avenue NE

Signal phasing and timing improvements:

- ✓ Signal phasing changes targeting right angle collisions (Glenmore Trail & 5 Street SW, Glenmore Trail & Elbow Drive SW, etc.)
- ✓ Leading Pedestrian Intervals

- ✓ Ongoing traffic safety support and coordination of programs.

2022

- ☐ City-wide prioritization of locations for countermeasures including Advanced Warning Flashers and high friction surface treatment.
- ☐ Identify high severity injury corridors and improvement options.
- ☐ Continued implementation of geometric improvements:
  - 16 Avenue & Shaganappi Trail NW
  - 16 Avenue & Bowness Road NW
  - Deerfoot Trail & Memorial Drive NE
  - Metis Trail & 80 Avenue NE
  - Memorial Drive & 36 Street NE
  - Barlow Trail & 39 Avenue NE
  - Blackfoot Trail & Heritage Drive SE
  - Heritage Meadows Way & 11 Street SE
- ☐ Traffic signal improvements with focus on vulnerable road users.
- ☐ Implementation of improvements identified through safety reviews at top severe injury locations using video analytics through the Aviva MicroTraffic Grant Program.



### Education

Public education and communication are needed to raise awareness of road safety issues and promote safe behaviours, with the goal of reducing frequency and severity of collisions.



## Education

2021

- ✓ Residential Speed Limit Reduction incorporating educational components into Calgary.ca/trafficsafety webpage
- ✓ Residential Sandwich Board program
- ✓ 185 SLOWS speed trailer deployments
- ✓ Various awareness campaigns and social media messaging
- ✓ Ongoing support for “Report Impaired Driving” signage.

2022

- ❑ Identify and create an educational campaign about blind spots/common errors that road users make and strategies to change the related habits
- ❑ Development of traffic safety factsheets, to disseminate traffic safety research and initiatives (including Vision Zero) to the public and Safer Mobility Teams.
- ❑ Develop technical bulletins on best performing design components for distribution to design teams

### Enforcement

We continue to work closely with Calgary Police Service as a key partner to achieve our traffic safety targets.



## Enforcement

2021

- ✓ Calgary Police Service deployment of high-visibility targeted enforcement
- ✓ Participation in CPS Collision Reconstruction review meetings and sharing of collision data analysis
- ✓ Safer Mobility Operations Team meetings to facilitate collaboration and coordination in the delivery of community improvements and initiatives
- ✓ Begun to coordinate the deployment of speed trailers with speed enforcement

2022

- ❑ Emergency response coordination improvements between CPS and Traffic Management Centre (TMC) and information sharing
- ❑ Continued Safer Mobility Operations Team meetings to facilitate coordinated community response.
- ❑ meetings to facilitate knowledge sharing, collaboration, and coordination of activities
- ❑ Reintroduce Community Speed Watch initiative to support community volunteers and engage with the community

### ***Evaluation and Innovation***

Evaluation and innovation are key components of traffic safety and enable evidence-based assessment of the effectiveness of strategies and help in finding new solutions to longstanding problems.



## **Evaluation & Innovation**

**2021**

- ✓ Trial of Pedestrian Crosswalk signs with fluorescent yellow-green retro-reflective border (in progress)
- ✓ Trial of blank out signs on cycletracks (in progress)
- ✓ Pilot Centreline Hardening at signalized intersections (in progress)
- ✓ Application of Video Analytics for proactive evaluation of pedestrian related safety countermeasures.
- ✓ Exploring opportunities to collaborate with internal groups and external partners to broaden safety data and understanding of incidents and near misses for all modes of travel that are not reported to police, e.g. Calgary Transit near miss data, Fleet near miss data, Alberta Health Services Ambulance and Emergency Room Data etc.)
- ✓ Collision reduction evaluations to understand the impacts of countermeasures

**2022**

- ☐ Regular meetings of the Safer Mobility Research Team
- ☐ Safety review of downtown cyclist involved collisions to implement targeted improvements and identify lessons learned
- ☐ Continue to evaluate collision reduction of mitigation measures and elements of the roadway environment to better understand their impact on safety

Appendix A

Joint Mobility Safety Forum (JMSF) Supplementary Information



## Joint Mobility Safety Forum (JMSF)

June 21, 2021

### Background

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In the recent years, strides have been made to improve Calgary's traffic safety record by raising the profile and public awareness of traffic safety, working closely with our partners, and identifying innovative and cost-effective improvements. Over 500 collisions resulting in life altering injuries and deaths continue to occur every year, but this number has seen a downward trend since 2015.

In alignment with the 5 Es of transportation safety (Engagement, Engineering, Education, Enforcement, Evaluation) and the implementation of the Safe Systems Approach, Calgary Police Service (CPS) and City of Calgary Transportation are key partners, both committed to improving safety for all Calgarians and reducing harm on our roadways. Collaboration has been an important element of safety activities several initiatives outlined below including:

- *Safer Mobility Operations Team (SMOT)*: Bi-monthly meeting where City staff and CPS along with other stakeholders discuss emerging issues and work together to address community safety concerns.
- *Recon Meetings*: Quarterly meeting with the reconstruction team to review recent incidents and identify potential solutions where engineering related countermeasures are appropriate. The team often provides assistance with information sharing for purpose of communications.
- *Ward Safety Meetings*: Community outreach and engagement events organized in partnership with area Councillors in 2018. City staff and CPS officers delivered a joint presentation which was followed by an opportunity for citizens to speak to staff and bring forward specific concerns.
- *Emergency Response Coordination*: CPS and the Traffic Management Centre work together in coordinating emergency response and incident clearance activities.
- *Community Speed Watch*: a popular program where CPS officers and Traffic Safety group staff join community volunteers at a location of concern. Volunteers can use the laser speed gun to measure the speed of oncoming vehicles and communicate a message to the driver using a paddle ('Thank you' or 'Please Slow Down').

Nevertheless, there are many ways where the partnership between Transportation and CPS can be strengthened and expanded to aid in achieving maximum impact campaigns and initiatives to achieve our traffic safety targets and bring us closer towards the vision of a transportation network free of fatalities and major injuries.

### Objectives

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In line with the **Vision Zero** goal of a transportation network free of fatalities and major injuries, the mission of the Joint Mobility Safety Forum is to take strides towards this goal through collaboration and strengthened working relationship between CPS and City of Calgary Transportation, and other partners, aimed at creating a safer city for all Calgarians. The underlying theme will be working together will gain results (#StrengthInNumbers).

The new group is to serve as a platform for dialogue about safer mobility and explore opportunities for increased collaboration and coordination in the areas of strategic planning, communication, data sharing, education and engagement.

## Strategic Focus Areas and Opportunities

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In line with Council Priority #3: A City that Moves, the [2016 Residential Traffic Safety Strategy](#) committed to reduce injury and fatality collisions through education and targeted enforcement.

Based on the CPS 2020 [Crime and Safety – Traffic Safety Plan](#), CPS is evaluating and expanding the photo radar sites, engaging and educating with the public through Community Association meetings and school visits. In response to the changes in impaired driving laws, increased training of members in Standardized Field Sobriety Testing and Drug Recognition Experts was undertaken.

According to the current version of the [Safer Mobility Plan](#) 2019-2023, 5 year collision reduction targets were set at 25% for major injury and fatality collisions and 25% for vulnerable road user major injury and fatality collisions. Vulnerable road users include pedestrians, bicyclists, and motorcyclists. To make progress towards the targets, main areas of focus have been framed through the five E's of Engagement, Engineering, Enforcement, Education, Evaluation, and Innovation.

The most recent Safer Mobility Plan [Annual Report 2020](#), outlines several short term actions noted below with additional opportunities to identified through . The strategic opportunities for the JMSF lie on the crossroads of Enforcement, Engagement and Education, but potential for increased collaboration would touch on all areas.

### Enforcement:

- a. Support for CPS deployment of high-visibility targeted enforcement, including “Report Impaired Driving” signage placement, and further dialogue on how Transportation can better support these activities, for example: (a.) deployment of traffic speed data collection devices to assist CPS in targeted speed enforcement, beyond what is currently available; (b.) sharing results of collision analysis, network screening results, high injury network review findings, etc.

### Engagement:

- a. Outreach to communities through another round of Ward Community Safety Meetings or other means. Additional opportunities exist in terms of evaluation of the process and results of the previous set of meetings as well as outcomes (collision risk, citizen perception of safety, and others).
- b. Knowledge sharing and improved customer service streamlining CPS Traffic Service Request and 311 Service Request response.
- c. Identify opportunities for increased collaboration in public communication and perception of safety.

### Education:

- a. Content to educate the public on blind spots – common errors that road users make and strategies to improve the related habits. Themes of speed and collision risk, vulnerable road user safety, and perception of distraction can be further investigated.
- b. Coordinate SLOWs speed trailer deployment with enforcement activities. Attachment 2 includes the June rotation schedule and future versions will be forwarded as they become available.
- c. Identify potential opportunities to combine enforcement programs with public education (i.e.: pamphlets for distribution to violators, online quiz, etc.)

Stakeholder consultation can be undertaken to identify additional opportunities and jurisdictional review can investigate noteworthy strategies employed by other cities for coordinated action