



Calgary Safer Mobility Plan 2013 - 2017

Annual Report 2017

Transportation - Roads - Traffic

The City of Calgary

December 8, 2017

1. Introduction

The Safer Mobility Plan (SMP) Annual Report 2017 provides an update on the most recent collision data for Calgary and alignment with targets, a summary of actions the City and our partners have undertaken in each of the Strategies in the last year and what we plan to do over the coming year. 2017 was a busy year with significant achievements within the SMP. The Calgary Safer Mobility Plan 2013-2017 is available on Calgary.ca/trafficsafety. The actions in the 11 strategies are based on a Safer Systems approach and the five E's of traffic safety: Engagement, Engineering, Education, Enforcement, and Evaluation.

Strategies



Collision Data

The Transportation Department produces an annual collision data report which summarizes traffic collisions in Calgary. In 2016 there was a transition to a new data format with the introduction of eCollisions electronic reporting and The City has developed a 'Collision Dashboard' to allow city staff to query available data. While this change in data processing promises improved accuracy and streamlined data transfer from police, a significant effort was required to ensure data consistency with previous years.

The Dashboard presents information about collision trends, where and when collisions are happening and the road user groups involved. Key figures from a summary of that information are presented in Attachment 2. In 2016, there were 26 fatal collisions, 2,430 injury collisions and 33,098 property damage only collisions on Calgary roads. The societal cost of these collisions is estimated to be \$1.03 billion, however, Calgary is continuing to perform well compared to other major Canadian cities with an overall collision rate of 198.8 casualties per 100,000 population (casualty is a term used which combines fatal and injury collisions). For comparison purposes, a selection of cities are shown in the table below, using the most recently available comparable data. Pedestrians were involved in 10 fatal collisions, and 356 injury collisions, in 2016, while cyclists were involved in 179 injury collisions with no fatal cyclist collisions. The increase in pedestrian collisions appears to be the result of many factors including increases in walking, higher than average occurrences in May and November, record levels of motorist distraction and an increase in pedestrians struck mid-block or walking along the roadway. Preliminary collision data from 2017 indicates a significant decrease in fatal collisions with a total of 10 (two involving pedestrians and eight involving motorists) as of the end of November.

City	All casualty collision rate (Collisions/100,000 population)	Pedestrian casualty collision rate (Collisions/100,000 population)
Calgary (2016)	198.8	29.6
Edmonton (2016)	287.1	33.1
Ottawa (2016)	389.2	39.1
Toronto (2013)	530.0	49.9

Nonetheless, traffic collisions are a leading cause of death and injury for Albertans under the age of 30. Progress made on each of the focus areas in the SMP and key actions for 2018 to 'turn the curve' are discussed in Section 2. It is important to note that there is a lag between our activities and the resulting change in collisions. The trends in the most recent collision data are a result of activities completed during 2015 or earlier.

Engineering Activities

The Transportation Department has recently published, and continues to develop, guidelines to create safer roads in Calgary. This includes the development of a Pedestrian Strategy, the Complete Streets Guide, an update to the Calgary Temporary Traffic Control Manual, and a guideline for traffic safety processes in Calgary, including Road Safety Audits and In-Service Road Safety Reviews. Network screening processes are also employed and being refined to identify where there are high concentrations of collisions where we focus In-Service Road Safety Reviews and implementation of measures to mitigate the identified collision issues. Changes to strengthen how safety projects are delivered by Traffic Optimization, Traffic Calming and Traffic Safety will be established in 2018.

There are several methods to rank intersections, interchanges or corridors based on collisions by considering the number of collisions, severity of collisions, obtaining traffic volume based rates and looking at persistence of the issues. As an example, the ranking list for 2016 based on collision frequency (number of collisions) and collision rate (number of collisions normalized by traffic volume) are presented in TT2017-1121 Attachment 2. These lists and other resources are used to identify intersections where In-Service Road Safety Reviews are completed on an annual basis.

Traffic Safety Engineering work takes action on the selected intersections by identifying cost effective countermeasures to reduce collisions, as well as identifying supporting education/awareness activities that can be completed by The City or our partners such as the Calgary Police Service. Some of the highlights of our completed work in 2017 are presented in Table 1, grouped by 2017 focus area.

New technology continues to be used to improve traffic safety. Application of Rectangular Rapid Flashing Beacons (RRFB) continued in 2017 with the construction of more than 100 locations since 2016. City staff also chaired work at a national level, through the Transportation Association of Canada (TAC), to establish a formal warrant process for these devices, which is expected to be published in summer to fall of 2018. Over 600 crossing locations have been evaluated for RRFB based on an interim ranking tool that provides some guidance in the absence of a formal warrant. The conversion of streetlights to LED technology has been completed and provides improved visibility while using less energy. During the LED conversion process additional lighting was added in several locations with over-representation of night-time collisions.

The use of mobile Speed Limit Observation and Warning System signs (SLOWS) to target areas identified by citizens have been shown to result in lower vehicle speeds when present, and our expanded fleet resulted in the first year on record that all citizen requests were completed within the year they were requested. These electronic signs also support the Community Traffic Calming Program. Traffic signal operations and signal timing continue to be reviewed where safety issues have been identified.

Snow and Ice Control continues to provide safer travel during winter conditions on roads where those activities are completed. The severity of winter collisions is also lower, due in part to lower speeds, with one fatal collision in 2016 being related to snow/ice road conditions.

Other simple engineering/community initiatives have been initiated in 2017. One example is the continuation of the Community Speed Watch, in partnership with the Calgary Police Service, which allows citizens to convey safety messages to Calgarians who are driving and to collect data that can be communicated back to communities. The application of Traffic Calming Curbs has allowed quick responses to traffic safety and traffic calming issues at a low cost and low impact to existing infrastructure. Evaluation of the effects of the Traffic Calming Curbs has shown improved safety in terms of improved stop compliance, reduced speeds, or increased yielding to pedestrians, depending on the configuration of the Traffic Calming Curbs. Maintenance during winter conditions is continuing to be monitored including hand clearing of crosswalks within the spaces protected by Traffic Calming Curbs. The pilot of reflective sleeves for crosswalks was evaluated by the University of Calgary and found that there was an overall increase in yielding performance; application criteria are under review based on the results of the study.

Table 1: Examples of Traffic Safety activities in 2017

Focus Area	Work Completed in 2017
Pedestrians and Cyclists	<ul style="list-style-type: none"> • 'Look And Look Again' and 'Stampede Safety' radio and social media campaign • Ladder crosswalks for high pedestrian collision locations (13 intersections) • Pedestrian Corridor side mount flashers along 4-lane undivided cross section • Collision Review of 10 high pedestrian collision locations to identify countermeasures to reduce collisions • Deployment of SLOWS trailers to encourage speeding drivers to slow down • Lighting improvements at crosswalks/signals with high nighttime collisions • Video based conflict analysis at high pedestrian and other road user collision locations (in progress) • 52 St NE corridor pedestrian safety improvements (left turn phasing and crosswalks, design/implementation in progress) • Leading Pedestrian Interval (LPI) trial at three locations • Traffic Calming Curb design and implementation
Engineering Treatment of High Collision Intersections	<ul style="list-style-type: none"> • Safety improvements identified through In-Service Road Safety Review's (ISRSR) and Safety Assessments in design (36 ST/16 AV SE, Memorial Dr/36 ST NE, 68 ST/16 AV NE, Edmonton TR/McKnight BV NE); (construction in 2018) • 2016 Left Turn Across Path Study – signal phasing improvement construction (68 ST/McKnight BV NE, Glenmore TR/Elbow DR SW, etc.) • Traffic Calming Curb installations at more than 30 locations (underway) • 2017 Left Turn Across Path Collision Reduction Study and signal phasing revisions • Right Angle Collision Reduction Study
Upgrade of Median Barriers	<ul style="list-style-type: none"> • Anderson Rd median cable barrier (completed) • Sarcee Tr barrier (in progress) • Additional locations including John Laurie Bv and Macleod Tr (in progress)
Traffic Safety Measure Development and Evaluation	<ul style="list-style-type: none"> • Review of School and Playground Zone Harmonization (U of C, complete) • Evaluation of Reflective Sleeves at Crosswalks (U of C, complete) • 70 RRFBs installations (in progress), selected based on the developed interim prioritization tool • Before-After study of RRFBs (U of C, in progress) • Fluorescent Yellow Green Crosswalk Sign Pilot (in progress) • Complete ISRSRs at 10 intersections and two corridors (130 AV between 46 ST and 52 ST SE, Saddletowne CI) • Before-After collision reviews (Southland DR/Macleod TR, 2016 Traffic Calming Curb locations)

Education and Awareness

A major focus of the department are public education programs focused on improving safety for motorists, pedestrians and cyclists. In 2017, these programs included:

- Educational component to Community Traffic Safety meetings,
- 'Look and Look Again' distracted mobility campaign,
- Continuation of education for cycle facilities,
- Educational materials regarding the Memorial Drive/Edmonton Trail Lane Reversal,
- Educational materials regarding the Macleod Trail/162 Av Diverging Diamond Interchange;

- 'Look Out for Each Other' pedestrian crossing and distracted driving campaign,
- Attendance at Mayor's Safety Expo,
- Safety of transit users at rail crossings and on train platforms,
- Update to Traffic Safety Tips for school bus safety,
- Scouts Canada Soapbox Rally day attendance with Calgary Police Service.

Support was also provided to our external partners including the Alberta Motor Association (AMA) School Patrol program (for which there have been no recorded motor vehicle collisions while patrollers are present during the history of the program), the MADD Report an Impaired Driver campaign and SADD outreach to High School Students. One example is that Roads is continuing to provide new traffic cones to all school patrol programs in the city. The City also extended support to the Calgary Safety Council and their 'Safety City' program, where thousands of first and second grade students go to learn about traffic safety, by updating all the traffic control devices on site.

The first round of public consultation around traffic safety through the Community Traffic Safety Meetings has been completed in partnership with the Calgary Police Service and direction from Communications and the Engage Unit. The first of these meetings, held on a Ward basis, were completed prior to October 2017 and will resume in 2018 with one meeting per month on a rotation basis through all Wards. The focus of the meetings was engagement with citizens to share traffic safety information and to get feedback from citizens to assist our engineering, enforcement and educational activities. More than 800 specific concerns were raised through this engagement that are being actioned through existing programs, many of which are underway for traffic control changes, use of Traffic Calming Curbs and enforcement support from CPS. The initial meetings were well attended and the information requested will be implemented through existing programs and processes with regular reports back to the Wards and updates at subsequent Community Traffic Safety Meetings.

Possible Future Direction

The need to develop a new traffic safety plan was identified in the 2016 Annual Report and a recommendation was made to return to the SPC on Transportation & Transit with a proposed plan for review in 2017 Q4. There have been several recent changes and opportunities for which continuation of engagement and development of the next plan would be a benefit. These conditions include:

- The upcoming provincial City Charter and opportunity to guide how we take advantage of new legislative powers;
- Update to the Calgary Transportation Plan and opportunity to embed long term vision for traffic safety principles and strategic direction in a more meaningful way;
- Direction from previous Council, through the Pedestrian Strategy, to adopt a Vision Zero mandate presents a need to engage with the current Council and citizens about Vision Zero to clarify understanding and direction for The City's approach; and
- The One Calgary business plan development provides an opportunity to clearly define resource needs for a new plan once focus areas and specific capital improvements have been identified to address safety issues.

Adopting a Vision Zero approach in Calgary is consistent with the SMP mission of “Striving for zero... pursuing transportation completely free of fatalities and injuries” and our activities and targets are consistent with other plans in North America which have been branded as Vision Zero. Establishing more aggressive casualty reduction targets than those set out in the SMP will require additional resources beyond what is (and historically has been) dedicated specifically to the improvement of traffic safety. In addition to these potential changes the Transportation Department already intends to better align the work of our traffic safety, traffic optimization and traffic calming groups to implement improvements.

A key step toward a true Vision Zero approach is achieving operating speeds that reduce the likelihood of fatality or serious injury for all users by reducing impact energy. There has been a lot of discussion recently about reducing unposted speed limits in urban areas to 30 km/h or 40km/h. The City will have the ability to make these changes more easily with the enactment of the City Charter. This would not apply to all roads but rather a selection of residential roads with no posted speed limit; a typical trip would be on those lower speed limit roads for 10-15% of the length of the trip with a travel time difference of a minute or two. There are many factors that influence operating speed, of which posted speed limit is only one, other factors include the geometry of the roadway, perceptions of enforcement and likelihood that speeding infractions will be upheld in court; this involves many stakeholders’ external to The City. Furthermore, the discussion of safer speeds needs to be expanded so that Calgarians who drive understand that a reduction to 10% risk of fatality (equivalent to an impact of 30 km/h for a pedestrian or cyclists) is possible by reducing speeds to 50 km/h where there is a risk of side impact collisions and 70 km/h where there is a risk of head-on collisions. Clarity is required on how Calgary could transition to lower speeds in a way that is credible and supported by Calgarians.

Summary

Due in part to our efforts and new activities, two of the five targets set out in the SMP were on track in 2017 to achieve the targets. Discussion of each target and the related actions for 2018 to ‘turn the curve’ are outlined in Section 2. The 11 Safer Mobility Strategies of the SMP are discussed in Section 3, with a summary of actions initiated or completed in 2017 and the planned actions for 2018.

Overall, the City of Calgary has a sound safety record and compares well with other jurisdictions across Canada despite a short-term setback with a trend of increased collisions of certain types in 2016. The actions we are taking to implement the Safer Mobility Plan 2013-2017 will continue to improve traffic safety in our city. However, additional resources could enhance progress toward the established targets and further investigation will be put forward in the next iteration of the SMP to look at potentially accelerating our efforts and establishing more aggressive targets from 2018 to 2022.

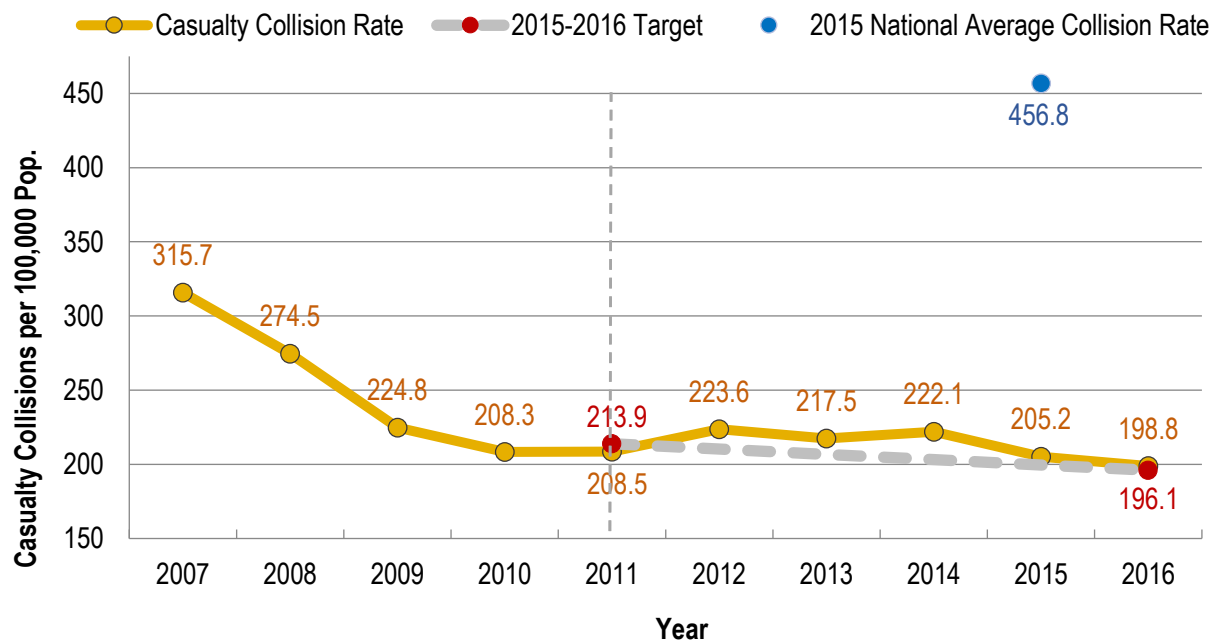
2. Progress on Focus Area Targets and Key Actions for 2017

Although an overall casualty collision reduction was observed in 2016, two of the five targets set out in the SMP were on track to achieve the targets of the plan. Increases in casualties involving right angle collisions, struck object collisions, pedestrian collisions and motorcyclist collisions were reported in 2016. Preliminary data from 2017 indicate that these trends have been reversed but discussion of each focus area and actions for 2018 to 'turn the curve' for these areas are presented in this section.

2.1 Overall Casualty Collision Target

Target: 10 percent reduction in casualty collision rate (fatality and injury combined) per 100,000 population, based on a 3-year rolling average (2015-2017)

Baseline: Casualty (fatality and injury combined) collision rate of 213.9 per 100,000 population, based on a 3-year rolling average (2009-2011)



Progress summary: The overall casualty collision rate for 2016 experienced a reduction compared to the previous year and trending toward the target, however, the projected three year rolling average targets were not met. The 2015 National Average, the most recent available, was 456.8 casualty collisions per 100,000. Although this indicator is trending in the right direction, intensified effort is required to achieve this target.

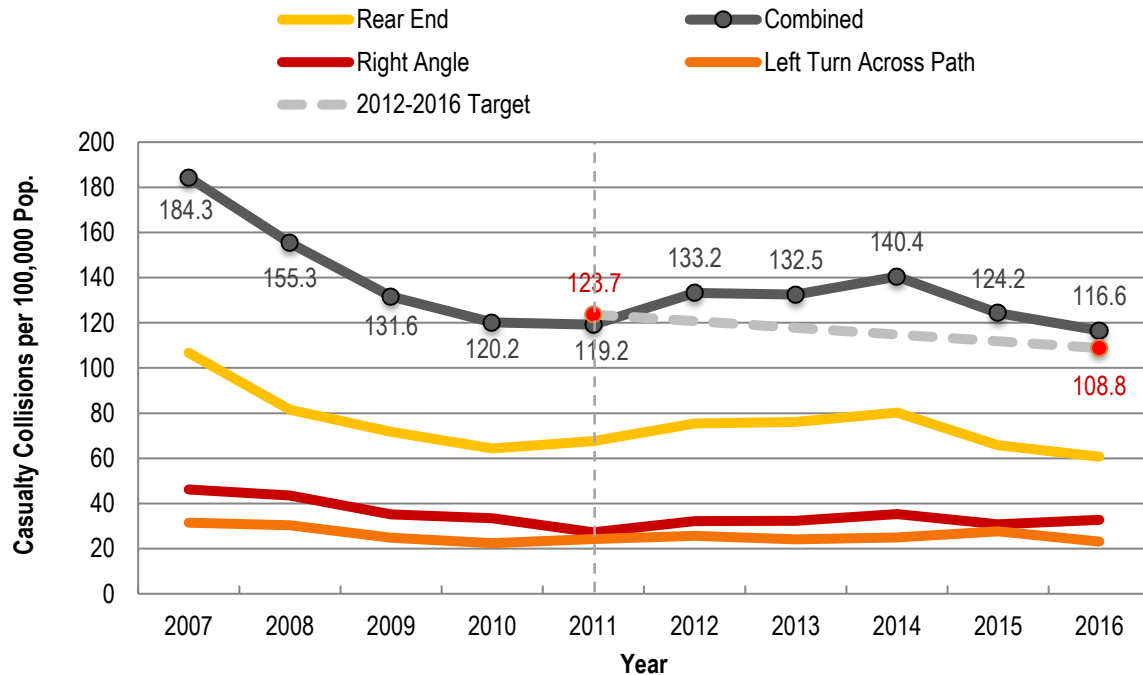
Key Actions to 'turn the curve':

- In-Service Road Safety Reviews/Road Safety Audits/focused infrastructure improvements.
- Engagement and awareness activities related to speed.
- Continued/expanded education and awareness.
- Support of Calgary Police Service (CPS) targeted enforcement activities.

2.2 Intersection Collision Target

Target: 12 percent reduction in combined rear end, right angle and left turn across path casualty collision rate per 100,000 population, based on a 3-year rolling average (2015-2017)

Baseline: Combined rear end, right angle and left turn across path casualty collision rate of 123.7 per 100,000 population, based on a 3-year rolling average (2009-2011)



Progress summary: The intersection casualty collision rate for 2016 decreased compared to 2015 and is moving towards the target. Casualty rates for right angle collisions have increased slightly, but decreases were observed in rear end and left turn collisions. Continued effort is required to achieve this target. National averages are not available for intersection collisions.

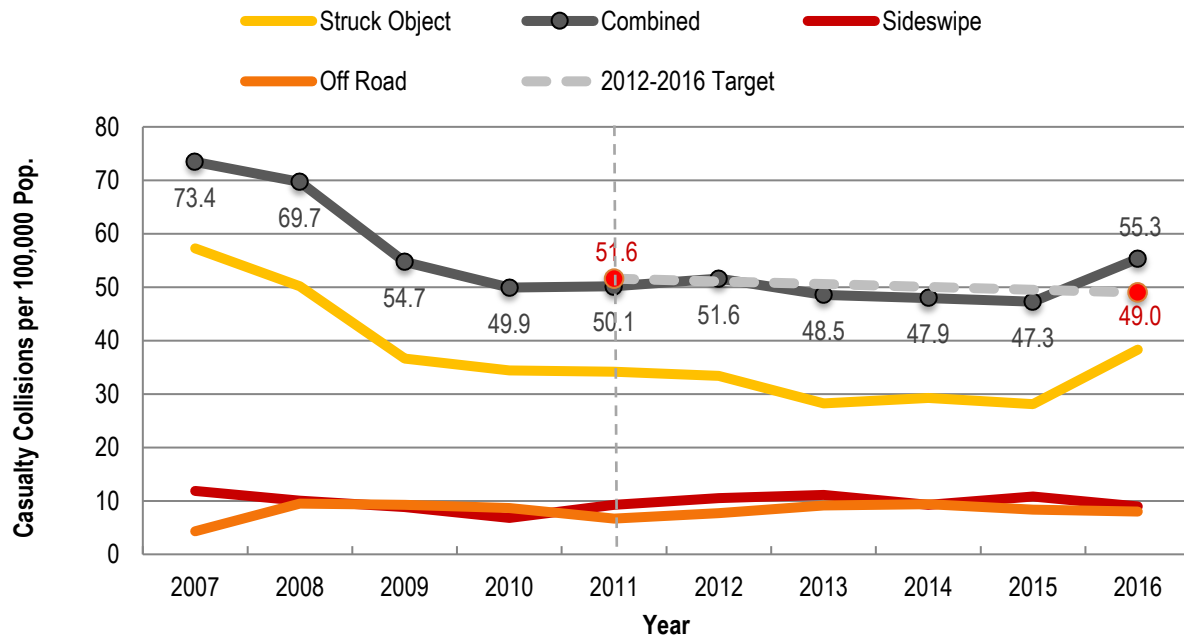
Key Actions to 'turn the curve':

- In-Service Road Safety Reviews/Road Safety Audits/focused infrastructure improvements.
- Network screening and focused application of mitigation measures for left turn collisions.
- Continued application of Traffic Calming Curbs to address collision issues.
- Focused application of mitigation measures for rear end and right-angle collisions.
- Engagement and awareness activities related to speed.
- Engagement and awareness activities related to distracted driving.
- Support of CPS targeted enforcement activities.

2.3 Non-Intersection Collision Target

Target: 5 percent reduction in combined struck object, sideswipe and off-road casualty collision rate per 100,000 population, based on a 3-year rolling average (2015-2017)

Baseline: Combined struck object, sideswipe and off-road casualty collision rate of 51.6 per 100,000 population, based on a 3-year rolling average (2009-2011)



Progress summary: The non-intersection casualty collision rate for 2016 experienced a dramatic increase compared to 2015 and is not meeting the projected target. Sideswipe and off-road collisions casualty rates for sideswipe collisions increased slightly, but there was a similar decrease in struck object off-road collisions showed modest decreases but there was a significant increase in struck object collisions which is being investigated to determine factors influencing this increase. Continued effort is required to maintain achievement for this target. National averages are not available for non-intersection collisions.

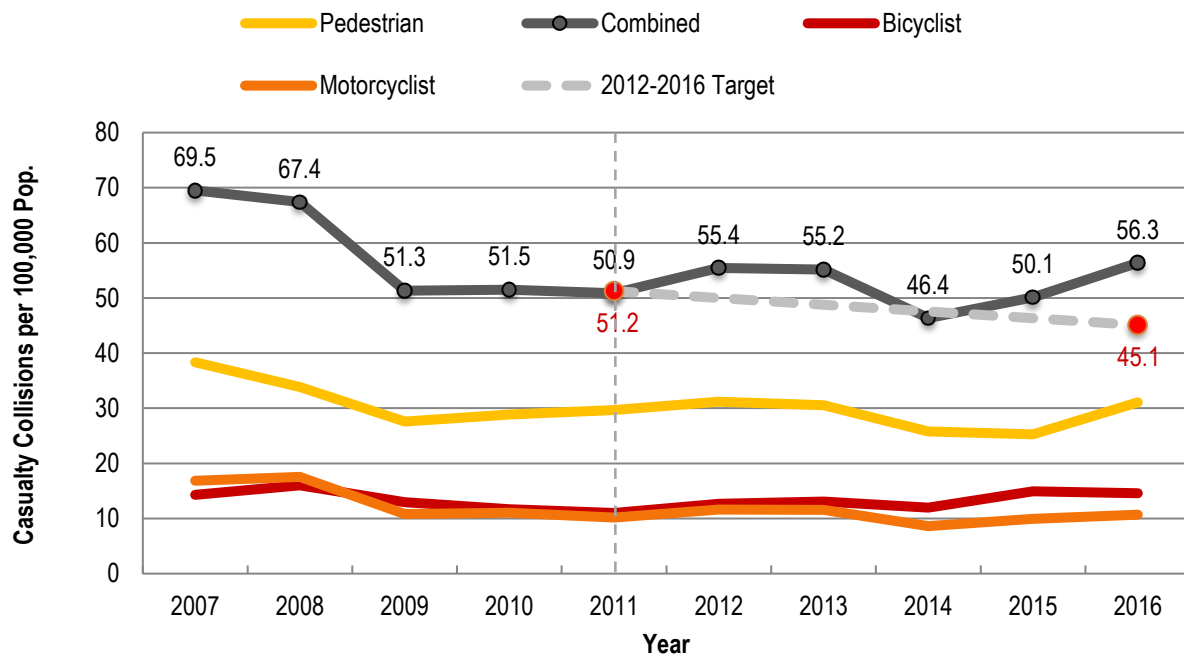
Key Actions to 'turn the curve':

- Prioritization and strategic implementation of median and roadside barriers.
- Focused application of mitigation measures for struck object and off-road collisions.
- In-Service Road Safety Reviews/Road Safety Audits/focused infrastructure improvements.
- Engagement and awareness activities related to speed.
- Engagement and enforcement activities related to distracted driving (Sideswipe collisions).
- Support of CPS enforcement activities.

2.4 Vulnerable Road Users Collision Target

Target: 12 percent reduction in vulnerable road user casualty collision rate per 100,000 population, based on a 3-year rolling average (2015-2017)

Baseline: Vulnerable road user casualty collision rate of 51.2 per 100,000 population, based on a 3-year rolling average (2009-2011)



Progress summary: The vulnerable road user casualty collision rate for 2016 increased compared to 2015 for the second year in a row and is not meeting the projected target. While cyclist collision rates showed a decrease, a small increase was reported for motorcyclists and a larger increase was experienced by pedestrians. Intensified effort is required to achieve this target. National averages are not available for vulnerable road user collisions.

Key Actions to 'turn the curve':

- Continued application of enhancements for pedestrian crossings including RRFBs, pedestrian corridor improvements, Traffic Calming Curb application.
- Application of mitigation measures for pedestrian collisions including targeted lighting improvements.
- Identification of downtown pedestrian collision clusters, solutions and application of mitigation measures.
- Continued implementation of measures identified in the Pedestrian Strategy and various infrastructure improvement projects to incorporate safety improvements.
- Engagement and awareness activities related to vulnerable road user safety.
- Support of CPS enforcement activities related to vulnerable road users.

2.5 Impaired and Distracted Driving (Mobility) Support Target

Targets: Share data analysis and mapping related to impaired driving with CPS to aid with targeted enforcement efforts.

Form/maintain partnerships with CPS and other stakeholders and provide support in educating and engaging the public.

Progress summary: The impaired and distracted driving targets are currently qualitative. Discussions are underway to establish quantitative baseline values and targets despite the lack of direct control. Continued effort is required to maintain achievement for this target.

Distracted driving was shown to have reached an all-time high in 2016 despite the introduction of demerit points on January 1, 2016. CPS carried out extensive enforcement efforts and, despite a lag in behavior change, a reduction of 8.9 percent in summons in 2017 to the end of November was observed compared to the same time in 2016. This indicates that distracted mobility is on the decline, although still unacceptably high. The highest level of distraction recorded in 2016 likely contributed to fatal collisions since national studies show that up to 30% of collisions are a result of distraction.

Key Actions to ‘turn the curve’:

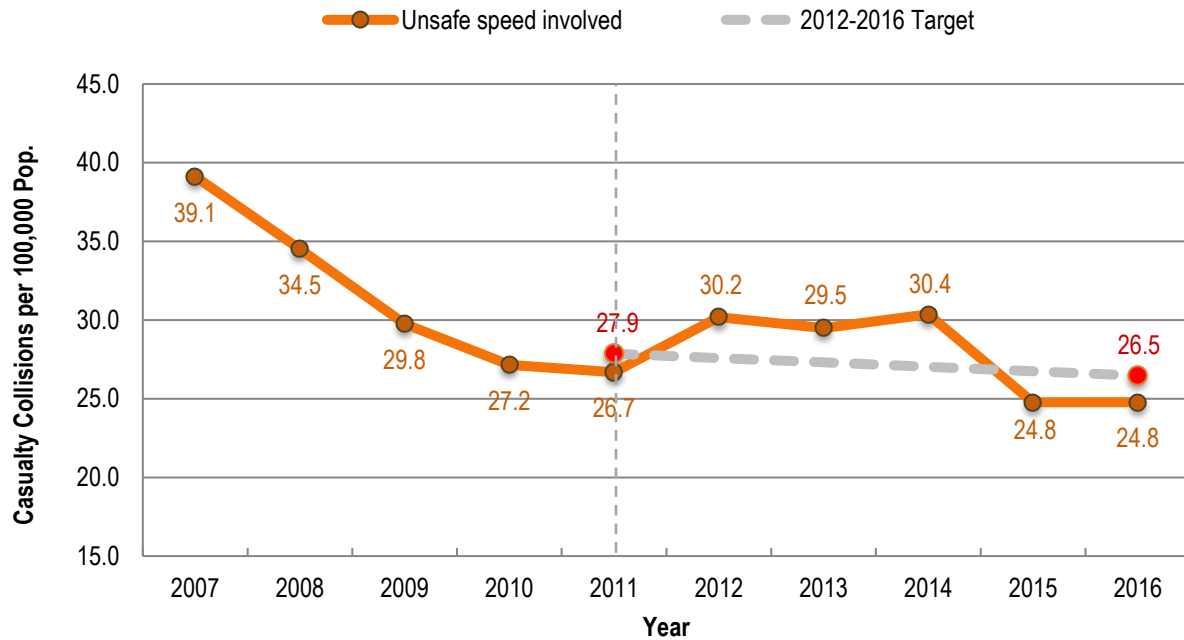
- Engagement and awareness activities related to distracted and impaired mobility.
- Establishment of quantified baseline and target values in collaboration with CPS.
- Support of CPS enforcement activities related to impaired and distracted mobility.
- Support CPS in the year ahead with messaging regarding drug impaired mobility.



2.6 Speeding Involved Collision Target

Target: 5 percent reduction in speeding involved casualty collision rate (fatality and injury combined) per 100,000 population, based on a 3-year rolling average (2015-2017)

Baseline: Speeding involved casualty collision rate of 23.8 per 100,000 population, based on a 3-year rolling average (2009-2011)



Progress summary: The speeding involved casualty collision rate for 2016 was stable compared to 2015 and is trending to achieve the projected target. National averages are not available for speeding involved collisions.

Key Actions to 'turn the curve':

- In-Service Road Safety Reviews/Road Safety Audits/focused infrastructure improvements.
- Application of design guidelines such as Complete Streets to encourage lower speeds.
- Traffic Calming Curb pilot aimed at reducing speeds in neighborhoods.
- Network screening and application of mitigation measures for speeding involved collisions.
- Engagement and awareness activities related to speed, including SLOWS and Community Traffic Calming and Community Speed Watch.
- Support of CPS speed enforcement activities collaboration regarding SLOWS requests and Traffic Service Requests (CPS equivalent of 311 for traffic issues).

3. Progress on SMP Strategies in 2017 and Planned Actions for 2018

This section highlights a selection of actions that have been undertaken in 2017 by various groups. Some of these have been completed while others are ongoing. The planned actions for 2018 are also identified for each strategy. A description of each of the strategies is provided in the Safer Mobility Plan 2013-2017.

Strategy 1: Safer Mobility Plan Management Strategy

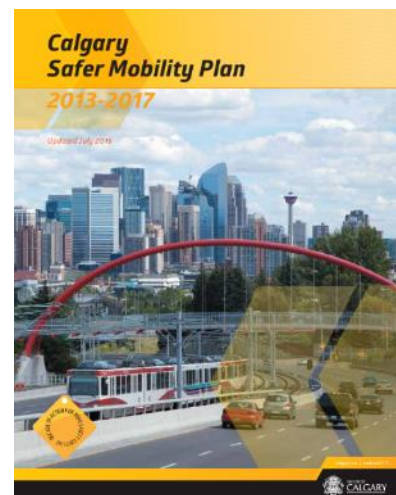
The management of the SMP is primarily done through the collaborative teams of the SMP. One of the main actions in this strategy is to report on the progress of the plan annually and to re-assess the SMP at the end of the 2013-2017 period, once data is available.

Actions initiated /completed in 2017

- Ongoing collaboration through the Safer Mobility Leadership Team and the Safer Mobility Operations Team including regular meetings to guide the plan.
- Continued meetings with the Safer Mobility Communities Team and Community Traffic Safety Meetings.
- Production of the 2017 Safer Mobility Plan Annual Report.

Planned actions for 2018

- Ongoing meetings and collaboration through various Safer Mobility Teams.
- Investigation of possible organizational changes and funding needs/opportunities.
- Production of the 2018 Safer Mobility Plan Update and Annual report.
- Production of the 2018-2022 traffic safety plan for presentation in 2018 Q3.



Strategy 2: Transportation Safety Data Management Strategy

Actions initiated /completed in 2017

- Transition to eCollisions, an enhanced process of input and transfer of collision data.
- Ongoing discussions through the Collision Data Working Group to improve the data collection process and quality.

Planned actions for 2018

- Continued evaluation of existing data and opportunities for enhancement of data quality.
- Develop use based measures to monitor pedestrian, bicycle and motorcycle collisions.

Strategy 3: Vulnerable Road User Safety Strategy

Actions initiated /completed in 2017

- Identification, prioritization, and implementation of RRFBs, including 600 locations reviewed and more than 100 installed since 2016. Continuous work with Transportation Association of Canada (TAC) to develop new warrant for application nationally.
- Installation of supplementary side-mounted flashers at pedestrian corridors to improve conspicuity and reduce collisions.
- Traffic Calming Curbs – implementation at crosswalks with quantified safety concerns to reduce speeds and crossing distance, proactive safety enhancements such as along 14 Av / 15 Av SW for 17 Av SW one-way couplet detour.
- Implementation of traffic safety related actions identified in the Step *FORWARD* pedestrian strategy including Leading Pedestrian Interval, review of top pedestrian collision locations and support for tactical urbanism and traffic calming activities.



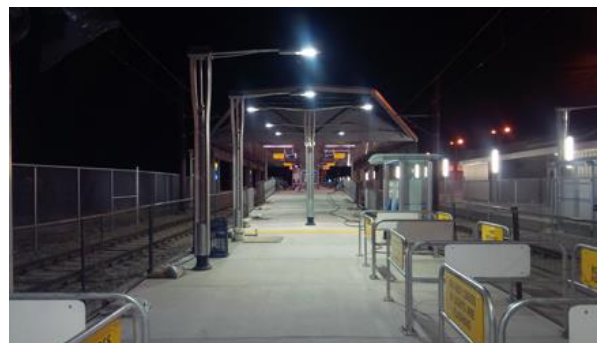
Planned actions for 2018

- Continued support of RRFBs implementation process.
- Continued implementation of actions in Step *FORWARD* pedestrian strategy.
- Completion of Video Based Conflict Analysis and implementation of mitigation measures.

Strategy 4: Safer Transit Strategy

Actions initiated /completed in 2017

- At-Grade Light Rail Transit (LRT) Crossing Committee operational, resulting in implementation of cost effective measures to improve safety at identified locations.
- Development of training programs for transit operators.
- Road Safety Audits (RSA) of Green Line and Bus Rapid Transit plans.



Planned actions for 2018

- Formal review of pedestrian crossings of LRT system.
- Assessment and implementation of engineering controls at LRT crossings.
- Road Safety Audits (RSA) of Green Line and safe accommodation of transit users.
- Continued enforcement of safe pedestrian crossings of LRT system.
- Launch of new or revitalized transit safety campaigns.

Strategy 5: Transportation Network Screening Strategy

Actions initiated /completed in 2017

- Completion of 2016 Collision Data Summary and Development of Collision Dashboard.
- Various additional network screening analysis of collisions including left turn, pedestrian, roundabout and snow and ice.

Planned actions for 2018

- Work with the Calgary Police Service and the Provincial Government to move toward an open data model for collision data which is currently not publicly available.
- Network review of identified safety issues or design elements (e.g. right turn channelization/rear end collisions, review of roadside barriers {such as High-Tension Cable Barrier shown to right} and run off road collisions).
- Develop Safety Performance Functions (predictive models) to support network screening using latest methods.



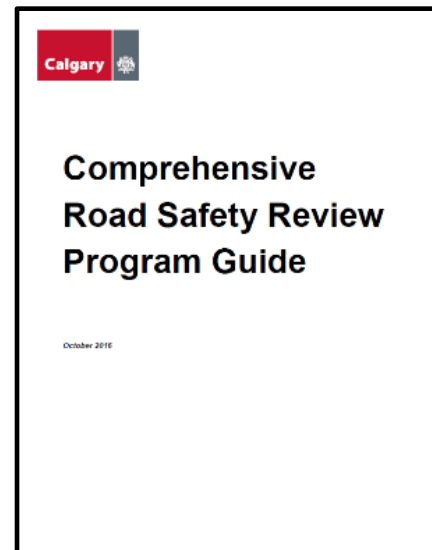
Strategy 6: Road Safety Audit Strategy

Actions initiated /completed in 2017

- Review and use of Road Safety Review Guidelines, including Road Safety Audits (RSA) for City Projects.
- Formal RSAs completed for Trans-Canada/Bowfort Road, Trans-Canada/Sarcee Trail, Shaganappi Trail/Stoney Trail and Glenmore Trail/Ogden Road interchanges, Southwest BRT, 17 Avenue SE Transitway and Stoney Trail and Sarcee Trail interchange upgrades.
- Pre-opening RSAs for Crowchild Trail/Flanders Avenue and Macleod Trail/162 Avenue interchanges.

Planned actions for 2018

- Uniform application of Road Safety Review Guidelines, including Road Safety Audits (RSA) for City Projects.
- Ongoing implementation of Safety Review Guidelines and use of Road Safety Audits.
- Training of City staff in Road Safety Audits.



Strategy 7: In-Service Road Safety Review Strategy

Actions initiated /completed in 2017

- Review and use of Road Safety Review Guidelines, including In-Service Road Safety Reviews (ISRSR) for City Projects.
- Completion of In-Service Road Safety Reviews at 11 intersections and two corridors:
 - Anderson Rd & Acadia Dr SE
 - Canyon Meadows Dr & Bow Bottom Tr SE
 - 10 St & 16 Av NW
 - Macleod Tr & 9 Av SE
 - Shaganappi Tr & Dalhousie Dr NW
 - Shaganappi Tr & John Laurie Bv NW
 - 17 Av & 69 St SW
 - 37 St & 17 Av SW
 - 50 Av SE (23 St – 25 St)
 - Saddletowne Circle NE
 - 130 Av SE (46 St - 52 St)
- Implementation of roadside improvements including at bridges and cable barriers on Sarcee Trail.
- Coordination and implementation of cost effective measures identified through the ISRSR process to improve safety under the Safety Improvements Capital Program (\$1 million) and other related capital programs.
- Evaluated effect of changes at previous treatment sites (e.g. Macleod Tr and Southland Dr SE experienced a 61% reduction in total collisions as a result of left turn signal work and geometric changes to the right turn channelization).



Planned actions for 2018

- Completion of In-Service Road Safety Reviews at four or more intersections or road segments.
- Implementation of recommendations from previous In-Service Road Safety Reviews.
- Evaluate the effects of previous mitigation measures that have been applied.

Strategy 8: Public Response Strategy

Actions initiated /completed in 2017

- Completion of over 35 Collision Reviews and Safety Assessments based on concerns raised by members of the public or Administration.
- Development of Calgary.ca/safety webpage to improve the dissemination of traffic safety related information to the public.

Planned actions for 2018

- Ongoing public response to Service Requests through 311.
- Responding to citizens regarding concerns raised at Community Traffic Safety meetings.

Strategy 9: Public Education and Communication Strategy

Actions initiated /completed in 2017

- Ongoing implementation and support of community communication and education programs such as Residential Area sandwich boards and Community Speed Watch.
- Development and dissemination of educational materials (for cyclists, motorists and pedestrians) including the Pedestrian Safety pamphlet and pedestrian education at signals.
- Consultation with Engage! unit in the development of Community Traffic Safety Meeting campaign and planning for next traffic safety plan.
- Ongoing awareness campaigns regarding pedestrian safety, back to school, Look Out for Each Other, Don't RIP etc.
- Support for 'Safety City' with new signs and traffic control devices.



Planned actions for 2018

- Continued use of existing programs and expanded education regarding pedestrian safety.
- Development of traffic safety factsheets, awareness of traffic safety initiatives (including Vision Zero) to the public.
- Continued engagement through the Community Traffic Safety Meetings.

Strategy 10: Targeted Enforcement Support Strategy

Actions initiated /completed in 2017

- Continuation of Community Speed Watch, volunteer lead speed awareness program.
- Ongoing coordination of the SLOWS Trailer (mobile) program and deployment of iSLOWS (pole mounted) signs.
- Ongoing support for "Report Impaired Driving" signage.
- Update of speed compliance map based on collected traffic data.
- Participation in CPS Collision Reconstruction review meetings and sharing of data/analysis of collisions.

Planned actions for 2018

- Deployment of traffic speed data collection devices to assist CPS in targeted speed enforcement.
- Review of traffic collision/incident management practices and reduction of secondary collisions, renewal of 'Take It Off the Road' campaign.



Strategy 11: Safety Research and Innovation Strategy

Actions initiated /completed in 2017

- Initiation of the Safer Mobility Research Team.
- Trial and evaluation of innovative countermeasures such as Leading Pedestrian Interval at signalized intersections, Traffic Calming Curbs, reflective sleeves, lane reversals, Diverging Diamond Interchange (DDI), lighting enhancements at pedestrian corridors, LRT crossing improvements for pedestrians, right turn arrow and high-friction surface pavement treatment.
- Support with University of Calgary's research comparing effectiveness of RRFB devices and overhead flasher devices.
- Evaluation of School and Playground Zone Harmonization (improved compliance, reduced speeds and reduced collisions in new times as well as times when zone was in effect in both the before and after periods). Report is available on Calgary.ca/trafficsafety.
- Traffic safety knowledge exchange with the City of Edmonton and Alberta Transportation.
- Identification of lead individuals within the City for traffic safety related technical organizations.
- Active participation on TAC committees guiding projects to develop application guidance for the use of RRFBs, Safety Impacts of Bicycle Infrastructure, Right Turn Arrows and to investigate the use of reflective material on sign posts and fluorescent-yellow green crosswalk signs.
- Application of video based conflict analysis for proactive evaluation of pedestrian related safety countermeasures measures.



Planned actions for 2018

- Formalize traffic safety knowledge exchange within the Safer Mobility Teams.
- Continued pedestrian signal changes at intersections (leading or lagging interval, phasing & timing changes) and evaluation of enhanced pedestrian lighting pilot program.
- Formal evaluation of engineering measures implemented in response to findings of In-Service Road Safety Reviews.