



**STAFF REPORT
ACTION REQUIRED**

**Road Safety Plan (RSP) 2017-2021 – Supplementary
Report**

Date:	July 11, 2016
To:	City Council
From:	General Manager, Transportation Services
Wards:	All
Reference Number:	

SUMMARY

The Road Safety Plan is a comprehensive five year (2017-2021) action plan focused on reducing traffic-related fatalities and serious injuries on Toronto's streets. It gives consideration for all road users, but places particular emphasis on vulnerable road users. It also follows a widely accepted, holistic approach to improving road safety which includes engineering, education and enforcement solutions.

This report responds to request from the Public Works and Infrastructure Committee on June 20th, 2016 to provide additional information regarding the proposed Road Safety Plan, including: details of existing Transportation Services safety programs and initiatives; opportunities for new and enhanced funding; opportunities to coordinate and accelerate implementation of the RSP; and an examination of benchmarks and levels of investment in other comparable municipalities.

In order to enhance, expand, and accelerate the original Road Safety Plan, this report recommends the adoption of 4 new and 6 expanded or enhanced countermeasures, representing an additional investment of \$12.233 million.

RECOMMENDATIONS

The General Manager, Transportation Services recommends that City Council:

1. Endorse in principle the countermeasures and enhanced Road Safety Plan identified within this supplemental report;
2. To accelerate the Pedestrian Safety Corridor program, reallocate \$1.450 million in capital funds from Bridge Rehabilitation Program (CTP515-01) and \$0.893 million in capital funds from the Geometric Safety Improvements Program (CTP716-58) towards the Signs and Pavement Marking Asset Management (CTP716-27);
3. Approve an increase to the Transportation Services 2016 Operating Budget of \$0.223 million gross and \$0 net, fully recovered from a capital contribution (Signs and Pavement Marking Asset Management - CTP716-27) to fund the immediate hiring of 10 new staff, 4 of which would be created via conversion of existing positions and funded by in-year variances, 6 of which would be new on a temporary contract basis up to December 31, 2017;
4. Authorize the City Manager to include projects from the Road Safety Plan as part of the priority list of projects to be submitted to the Government of Canada and the Province of Ontario under phase one of the Federal Public Transit Infrastructure Fund.

FINANCIAL IMPACT

Public Works and Infrastructure Committee (PWIC) during the meeting on June 20th, requested the General Manager, Transportation Services to report on opportunities to accelerate implementation of the Road Safety Plan, as well as on opportunities for new and enhanced funding.

This report identifies opportunities to reallocate \$2.3 million in funds within the approved Transportation Services 2016 Capital Budgets towards expanding and advancing a number of the originally proposed countermeasures within the RSP. To further expand the RSP, an additional \$9.9 million in capital funding above the original RSP will be required from the years 2017 to 2021.

- There has been no change to the originally proposed operating costs of \$4.5 million required to implement the RSP from 2017 to 2021.

The newly proposed costs of \$75.9 million for the capital components of the RSP consist of the following:

Previously Identified (June 20th PWIC Report) RSP Costs

- \$28.165 million in previously approved RSP capital projects from 2017 to 2021; and

- \$35.435 million in additional capital funding to expand the RSP consistent with the June 20th PWIC report.

Additional Costs to Expand and Advance the RSP

- \$2.343 million in RSP capital cost advanced into 2016; and
- \$9.890 million in additional capital funding to further expand the RSP from 2017 to 2021.

Table 1 below illustrates the revised Road Safety Plan capital costs over the 2016 – 2021 planning period:

Table 1: Revised Road Safety Plan Capital Cost Summary

Year	Funds Reallocated To Accelerate Program	Capital RSP Increased Request	Capital Total Annual Commitment
2016	\$ 2,343,000		\$ 2,343,000
2017		\$ 1,050,000	\$ 12,814,000
2018		\$ 2,180,000	\$ 16,329,000
2019		\$ 2,200,000	\$ 15,049,000
2020		\$ 2,220,000	\$ 14,629,000
2021		\$ 2,240,000	\$ 14,669,000
TOTAL	\$ 2,343,000	\$ 9,890,000	\$ 75,833,000

2016 Reallocated Funding

It is recommended that \$2.343 million in approved cash flow be reallocated in 2016 to accelerate implementation of the RSP. These funds are available in the following 2016 Transportation Services approved capital projects based on anticipated under spending:

- Bridge Rehabilitation Program - \$1.450 million; and
- Geometric Safety Improvements Program - \$0.893 million.

2017 - 2021 Required Funding

This report identifies the need for \$9.890 million in increased capital funding to expand the RSP, in addition to the \$35.435 million additional capital (not included in the approved 10-Year Capital Plan) identified in the June 20th PWIC report.

- In total, an additional \$45.325 million in funding will be required to deliver the expanded RSP during the 2017 to 2021 period.

Infrastructure Canada has initiated the Public Transit Infrastructure Fund (PTIF) which can provide eligible projects up to 50% funding from the federal government for transit, active transportation, state of good repair, and system expansion. According to program

details announced by Infrastructure Canada, municipal infrastructure improvements geared towards pedestrian or cyclist safety, particularly those to access transit, would be eligible. City staff have identified that countermeasures within the RSP such as the introduction of new mid-block crossings, new corner radius designs, accessible pedestrian signals to support safe and convenient access to transit would all be eligible to receive funds from this federal program.

- \$5.3 million in PTIF funding may be eligible under the new federal Public Transit Infrastructure Fund.

Additional Positions to Implement the Road Safety Plan

In order to deliver on the proposed expanded program in an accelerated manner, Transportation Services would require 10 of the 13 additional staff originally proposed in the RSP staff report to be retained immediately upon acceptance of the Plan.

Of the 10 positions, 4 would be permanent and created through conversion of existing vacant positions and would be funded via the associated in-year variances. The remaining 6 positions would be temporary positions funded from a portion of the 2016 capital reallocations previously described.

- To fund position changes in 2016, it is recommended that the Transportation Services 2016 Operating Budget be increased by \$0.223 million gross and \$0 net, fully recovered from a capital contribution.

The Deputy City Manager and Chief Financial Officer has reviewed this supplemental report and agrees with the financial impact information.

DECISION HISTORY

At its meeting of June 20th, 2016, the Public Works and Infrastructure Committee directed the General Manager, Transportation Services to report directly to Council providing supplementary information relating to the Road Safety Plan, including:

- Funds within existing Transportation Services' programs and initiatives with road safety components;
- Opportunities for new and enhanced funding;
- Opportunities to coordinate implementation of the Road Safety Plan with capital work;
- Opportunities to accelerate implementation of the Road Safety Plan; and
- Further examination of benchmarks and levels of investment, including what types of programs and initiatives are included in this investment, in other comparable municipalities.

COMMENTS

JURISDICTIONAL COMPARISON

What each jurisdiction includes in their road safety budget varies greatly, making a true apples-to-apples comparison of programs challenging.

For instance, New York includes many large scale road projects and pedestrian plazas in their capital budget in their Vision Zero program. For instance, as stated in the NYCDOT Vision Zero Year-Two Report, there is "\$29.6 million for area-wide improvements in Long Island City; \$4.1 million in additional funds for the Brooklyn Waterfront Greenway project; and \$22 million for projects on Tillary Street in Downtown Brooklyn, 25th Street Plaza in Manhattan, Allen and Pike Street Pedestrian Malls in Manhattan, Mott Avenue in Far Rockaway and North Flatbush Avenue in Brooklyn." In addition, New York City's Vision Zero program includes their cycling capital program.

As a further example, the Edmonton's Vision Zero budget includes a number of programs that are part of Transportation Services' program to improve safety such as red light cameras, traffic signals and pedestrian cross-overs. These were omitted from the Toronto Road Safety to provide a clearer distinction between the new and expanded countermeasures being proposed in the plan from the regular on-going safety improvement projects.

If Toronto were to include all major road redesigns as safety projects, we could include projects such as Queens Quay, Front St. and Cherry St. as safety program investments, along with initiatives such as the on-going investment in Cycling Infrastructure.

Furthermore, while we do not believe that it would be appropriate to count all road resurfacing and reconstruction work as "safety" projects, there are clearly safety investments and enhancements within these projects are not included in the original Road Safety Plan report "existing programs" budget. While these that projects first-and-foremost provide improved road surface for safer walking, cycling and driving, road rehabilitation projects now include modified lane widths, modified curb radii, tactile warning surfaces, and the expanded use of durable pavement markings. In essence we are embedding new safety measures into all of our state of good repair projects. In addition, projects often include new signals or assessable pedestrian signals to assist those with additional mobility needs.

Below tallies some current Toronto programs that were not included in the Road Safety Plan report "existing programs" budget that are implemented *primarily* for safety purposes:

Table 2: Toronto Programs with Primary Safety Benefits Not Included in RSP

	Estimated Annual Budget
Cycling Infrastructure	\$16.0M
Line-striping and Signage	\$5.3M
New Traffic Signals and PXOs	\$3.0M
New 30kph Local Signage	\$1.2M (one time)
Red Light Cameras	\$2.6M
Uninterrupted Power Supply (UPS) at Signalized Intersections	\$0.5M
Installation of Reflective Backboards on Traffic Signal Heads	\$0.3M
Pedestrian Crossover Enhancements	\$0.5M
Total	\$29.4M

In addition, the major resurfacing and reconstruction projects are implemented with safety enhancements:

Table 3: Toronto Programs with Secondary Safety Benefits Not Included in RSP

	Estimated Annual Budget
Streetlighting	\$3.0M
Enhanced Winter Maintenance (Sidewalks)	\$2.9M
Enhanced Winter Maintenance (Cycle Lanes/Tracks)	\$0.7M
Bayview Ave Flood Mitigation Gates	\$0.4M
LED "No Left Turn" Signs (Transit)	\$0.3M
Total	\$7.3 M

Table 4: Other Toronto Programs with Some Safety Benefits

	Estimated Annual Budget
Road Resurfacing and Reconstruction	
Major Road Rehabilitation	\$58.1 M
Local Road Rehabilitation	\$54.4 M
Sidewalks	\$18.5 M
Sidewalk Repairs	\$4.0M
Retimed Traffic Signals	\$1.5M
Pothole Repair	\$4.7 M
Total	\$141.2 M

What should be clear is that while we attempted to keep the stated investment levels focused primarily on clear and dedicated safety programs, if we include other safety related investments in our annual safety investment, Toronto's number increases substantially. At a minimum, it would increase the 2017 annual "existing" program by \$29.4M from \$11.8M to \$41.2M.

Table 5 below provides a comparison of the base Road Safety Plan, Toronto's overall investment in safety initiatives (RSP + Programs with primary safety benefits), and those programs in comparable jurisdictions.

Table 5: Comparison of 2015 Traffic Related Deaths and Annual Road Safety Budgets

2015 Data	Toronto (RSP Programs)	Toronto (All Safety Programs)	New York	Boston	San Francisco	Washington D.C.	Edmonton
Estimated Population	2,826,498 ¹	2,826,498 ¹	8,550,405 ²	667,137 ²	864,816 ²	672,228 ²	895,000 ³
Traffic Related Fatalities	65	65	231 ⁴	23 ⁵	31 ⁶	26 ⁷	32 ⁸
Deaths/100,000	2.30	2.30	2.70	3.45	3.58	3.87	3.58
Average Annual Budget	\$16.1 M	\$41.2 M	\$115.0 M	\$3.1 M	\$31.0 M	\$37.1 M	\$17.3 M
Ratio of Budget to 100,000 population	0.57	1.46	1.34	0.46	3.58	5.52	1.93

Sources

- ¹ Statistics Canada, 2015 Population Estimates
- ² United States Census Bureau, 2015 Population Estimates
- ³ City of Edmonton, 2015 Population Forecasts
- ⁴ New York City – Vision Zero 2015 Year End Review Report
- ⁵ City of Boston – Vision Zero
- ⁶ City of San Francisco – Vision Zero
- ⁷ Washington DC, Metropolitan Police Department
- ⁸ City of Edmonton, Traffic Safety – 2015 Report on Motor Vehicle Collisions

Toronto RSP Countermeasures in Comparison to other Jurisdictions

Table 6 below lists all of the countermeasures covered within the Toronto RSP in comparison with those being provided in other cities with road safety plans. It also includes 4 additional new countermeasures to expand and accelerate the implementation of the RSP (#41-44), which are discussed later under "Opportunities for Enhanced Investment". The majority of countermeasures proposed in the Toronto RSP are common to other jurisdictions. Section D in this table identifies a number of countermeasures included within the road safety plans of other jurisdictions that are not included in the Toronto plan, but may be considered moving forward.

Table 6: Comparison of Countermeasures between Jurisdictions

No.	Projects / Initiatives	Toronto	New York	Boston	San Francisco	Wash D.C.	Edmonton
A. Existing Road Safety Countermeasures							
1	Geometric Safety Improvements	✓	✓	✓	✓	✓	✓
2	Transportation Safety Local Improvements Program	✓	✓	✓	✓	✓	✓
3	Accessible Pedestrian Signals (APS)	✓	✓	✓	✓	✓	✓
4	Traffic Calming	✓	✓	✓	✓	✓	✓
5	Annual Sidewalks Capital Program	✓				✓	
6	Reduced Speed Limits and Local and Collector Roads in TEY	✓					
B. Proposed New Countermeasures							
7	Pedestrian Safety Corridors – Reduced Speed Limits (Targeted)	✓	✓	✓	✓	✓	✓
8	Pedestrian Street Lighting Improvements	✓	✓				
9	Automated Pedestrian Detection	✓					
10	Pavement Marking Improvements	✓	✓	✓	✓		✓
11	Accessibility Improvements	✓	✓	✓	✓	✓	✓
12	Automated Enforcement Advocacy and Pilot	✓	✓	✓	✓	✓	✓
13	Creation of "School Safety Zones"	✓	✓	✓	✓	✓	✓
14	School Zone Reviews and Enhancements	✓		✓	✓	✓	✓
15	Increase (Older Adult) Crossing Times	✓	✓	✓	✓		
16	Support New Senior Citizens Strategy	✓			✓		
17	Advanced Green for Cyclists (Leading Cyclist Interval)	✓					
18	Transportation Services Program Delivery Team	✓	✓	✓	✓	✓	✓

No.	Projects / Initiatives	Toronto	New York	Boston	San Francisco	Wash D.C.	Edmonton
C. Proposed Enhanced Countermeasures							
19	Education and Awareness Initiatives	✓	✓	✓	✓	✓	✓
20	Advance Green for Pedestrians (Leading Pedestrian Intervals)	✓	✓	✓	✓		
21	New Corner Radius Design	✓	✓				
22	No Right-Turn-On-Red Prohibition	✓	✓	✓			
23	Accessible Pedestrian Signals (APS) - Enhanced	✓	✓	✓	✓	✓	✓
24	Missing Links Sidewalk Program	✓				✓	
25	School Watch Your Speed Signs (Speed Radar Signs)	✓	✓	✓			✓
26	School Crossing Guard Program	✓	✓		✓		
27	School Travel Planning (STP) and Active and Safe Routes to School	✓	✓	✓	✓		
28	New Mid-Block Crossings	✓	✓				✓
29	Reduced Crossing Distance	✓	✓	✓	✓		
30	Sidewalk Extensions	✓			✓		
31	Automated Cyclist Detection	✓					✓
32	Signalized Crossings for Cyclists	✓	✓	✓	✓	✓	
33	Enhanced Cycling Facilities	✓	✓	✓	✓	✓	✓
34	Traffic Calming Guide for Residents	✓					
35	Mobile "Watch Your Speed" Program	✓	✓	✓			✓
36	Geometric Safety Improvements(Data Driven)	✓	✓	✓	✓	✓	✓
37	LED Blank Out Signs	✓					

No.	Projects / Initiatives	Toronto	New York	Boston	San Francisco	Wash D.C.	Edmonton
38	Road Safety Audits at High-Risk Locations	✓	✓	✓	✓	✓	✓
39	Enhanced Data Analysis and Reporting	✓	✓	✓	✓	✓	✓
40	Enhanced Data Collection (Permanent Count Stations)	✓		✓		✓	
41	Creation of "Senior Priority Zones"	✓					
42	Motorcycle Warning Signs	✓					
43	Creation of Road Safety Committee	✓	✓	✓	✓	✓	✓
44	Flexible In-Road Pedestrian Warning Signs and Local Road Pedestrian Crossovers Pilot	✓	✓				
D. Countermeasures From Other Jurisdictions							
--	Additional Policing Initiatives		✓	✓	✓	✓	✓
--	Reduce Default Speed Limits		✓	✓	✓		
--	Taxi and Limousine Safety Initiatives		✓		✓	✓	
--	Public Transit Safety Initiatives		✓	✓	✓	✓	
--	Fleet Services Safety Initiatives		✓	✓	✓	✓	
--	Additional Public Health Initiatives		✓			✓	
--	Expanded/Enhanced Signage on Priority Corridors		✓			✓	✓
--	Commercial Deliveries/Parking Initiatives		✓			✓	
--	Truck/Large Vehicle Safety Initiatives		✓	✓	✓	✓	
--	Safe Left-Turn Design (New York City Pilot)		✓				
--	Connected and Autonomous Vehicle		✓			✓	✓

No.	Projects / Initiatives	Toronto	New York	Boston	San Francisco	Wash D.C.	Edmonton
	Technology						
--	Separated/Protected Turning Movement Phasing			✓			✓
--	Raised Crosswalks			✓	✓		
--	Daylighting Corners			✓	✓		
--	Median/Refuge Islands				✓		

There are a number of initiatives in Section D above that would be considered for use in Toronto in subsequent updates to the plan such as: fleet services safety initiatives, expanded signage on priority corridors, New York's pilot on new safe left turn designs, and separated/protected turning movement phasing.

Two of the initiatives in Section D are not included in the RSP however, are already being undertaken by Transportation Services as independent initiatives. Transportation Services already has a number of initiatives associated with improving commercial deliveries. Similarly, Transportation Services has an ongoing committee focused on Autonomous Vehicle (AV) Technology. It is expected that many of the new technologies being developed as part of AVs, such as automatic braking, will serve greatly to improve safety for out-of-vehicle road users.

Opportunities for New, Expanded and Accelerated Investment

The following sections provide a summary of opportunities for accelerated and additional funding for the Road Safety Plan.

New Investment in Proposed Countermeasures

New Countermeasure 41 – Creation of "Senior Safety Zones"

Safety zones for older adults will be created, which could include such elements such as lower speed limits, increased enforcement, improved pavement markings, additional crossing opportunities, and increased crossing times during certain times of day. The combined use of these measures is intended to promote driver recognition of these "senior safety zones" as sensitive areas that require greater attention and respect for traffic laws. While these zones will be initially created as advisory areas, the RSP team will investigate benefits and options for establishing these zones with legal standing.

New Countermeasure 42 - Motorcycles

Motorcyclists are vulnerable road users. The original RSP submission identified the need for education and awareness campaigns directed at motorcyclists on safety risks and the challenges associated with navigating through certain corridors within the City. As a pilot

project, Transportation Services staff will be working with the MTO and the Rider Training Institute in the deployment of road safety signs in high-crash locations targeting the specific risks faced by motorcyclists.

New Countermeasure 43 - Formation of a Road Safety Committee

The RSP proposes the creation of a Road Safety Committee which will consist of representatives from key partner agencies such as Transportation Services, Toronto Public Health and Toronto Police Service as well as a number of key external stakeholders and advocacy groups.

The Road Safety Committee will oversee the rollout of the plan, and meet periodically to provide updates, review progress, re-assess priorities, plan future actions and discuss/resolve issues.

It is anticipated that at least three sub-committees would be formed immediately out of the Road Safety Committee to specifically focus on the education and awareness campaigns as well as in the creation of "School Safety Zones" and "Senior Safety Zones". The sub-committees will report back to the Road Safety Committee regularly with updates and recommendations as required.

The Traffic Safety Unit in Transportation Services will organize the creation of and lead the Road Safety Committee and the associated sub-committees.

New Countermeasure 44 – Flexible In-Road Pedestrian Warning Signs and Local Road Pedestrian Crossovers Pilot

Transportation Services staff will seek permission to pilot the use of flexible, in-road pedestrian warning signs at up to 20 locations on local roads, including some in Ward 34. The pilot will include a strategy for evaluating effectiveness. As part of the pilot, staff will develop guidelines around the selection and identification of suitable locations.

The Province has made available to municipalities, additional pedestrian crossover types that are suitable for lower volumes roads which are legislated and regulated under the Highway Traffic Act. These official traffic control devices offer greater protection for pedestrians through standardized pavement markings, roadside signage and rapid flashing beacons and are enforceable by police.

At the same time that staff undertake a pilot of flexible in-road pedestrian warning signs, staff will also pilot the installation of pedestrian crossovers on local roads and develop policies and guidelines around their use.

Expanded Investment in Previously Proposed Countermeasures

A number of the countermeasures proposed within the RSP are scalable. The specific programs identified below are being proposed for expansion. Some of these investments will be made along high demand transit facilities, the highlighted projects and initiatives (i.e. marked with an asterisk*) are being proposed to be including in the City's Federal

Transit Infrastructure submission, in order to provide safe and convenient access to public transit.

Expansion of Countermeasure 21 - New Corner Radius Design

The RSP originally committed to reducing the corner radii at 2 intersections per year. The plan now proposes a program to identify, prioritize and coordinate construction at 5 intersections per year. Reducing the corner radii results in shorter pedestrian crossing distances and times and also deters drivers from making right turns at higher speeds.

Expansion of Countermeasure 23 – Accessible Pedestrian Signals (APS)

The original RSP submission included expanding the current APS installation program to install APS at an additional 5 intersections per year. The plan now expects to install APS at an additional 20 intersections per year. APS is an imperative safety measure at signalized intersections for pedestrians who are visually impaired or deaf-blind because it advises when they have the right of way to cross the intersection and in which direction they may cross.

Expansion of Countermeasure 25 – School "Watch Your Speed" Program

The RSP initially recommended the installation of permanent radar speed signs at 10 schools per year which satisfy the mandatory requirements and in accordance with the prioritization guidelines. The enhanced program will install radar speed signs at 20 schools per year. The pilot evaluation of the signs revealed they are an effective tool in reducing operating speeds and excessive speeding in school zones.

Expansion of Countermeasure 28 – New Mid-Block Pedestrian Crossings

The RSP originally suggested identifying and installing 5 new mid-block crossing opportunities per year. The plan now recommends identifying and installing 10 new controlled pedestrian crossings per year. Controlled crossings such as mid-block pedestrian signals and pedestrian crossovers provide greater opportunity to safely cross major roadways.

Acceleration of Previously Proposed Countermeasures

Acceleration of Countermeasure 7 – Pedestrian Safety Corridors

In the first phase of the Pedestrian Safety Corridors countermeasure, Transportation Services will begin implementing speed limit reductions from 60 km/hr to 50km/hr, and 50 km/hr to 40 km/hr along 14 corridors listed below in 2016, with the remainder to be completed in 2017.

Table 7: List of Corridors with Proposed Speed Limit Reductions for 2016

Street	From	To
Steeles Ave E	Warden Ave	Brimley Rd
Bathurst St	Lake Shore Blvd W	St. Clair Ave W
Bloor St	Keele St	Don Valley Pkwy
Danforth Ave	Don Valley Pkwy	Dawes Rd
Dundas St W	Humberside Ave	Broadview Ave
Dupont St	Dundas St W	Avenue Rd
Yonge St	Queens Quay	Bloor St
Richmond St E/ Richmond St W	Parliament St	Bathurst St
Adelaide St W/ Adelaide St E	Bathurst St	Parliament St
Albion Rd	Armel Crt	Bankfield Dr
Islington Ave	Beaumonde Heights Dr	Steeles Ave W
Kipling Ave	Annabelle Dr/ Rowntree Rd	Steeles Ave W
Weston Rd	Finch Ave W	Steeles Ave W
Steeles Ave W	Albion Rd	300m West of Martin Grove Rd

This effort includes installing and/or removing regulatory speed limit signs, making the necessary changes to the city By-law, re-timing traffic signals along the corridor.

As part of the Pedestrian Safety Corridors countermeasure, Transportation Services will review the pavement markings along the 14 aforementioned pedestrian safety corridors in order to identify locations with diminished pavement markings that require repainting, at locations with signals where the zebra crossing is missing and also to identify and implement new zebra crossings on side streets with a stop control. Additional and improved pavement markings will provide better visibility of vulnerable road users.

Acceleration of Countermeasure 35 – Mobile "Watch Your Speed" Program

The RSP initially proposed expanding the current mobile "Watch Your Speed" Program by acquiring an additional 12 mobile radar speed display signs in 2017 whereas, this is now being advanced to 2016. As discussed above, the ultimate number of signs to be purchased has been enhanced to 20. The program addresses speeding behaviour by reminding drivers to be mindful of their speed as they travel through local neighbourhoods.

CONTACT

Myles Currie, Director
Traffic Management Centre
Transportation Services Division
Telephone: 416-392-5372
Email: mcurrie@toronto.ca

Roger Browne, Manager
Traffic Safety Unit, Traffic Management Centre
Transportation Services Division
Telephone: 416-397-5016
Email: rbrowne@toronto.ca

SIGNATURE

Stephen Buckley, General Manager
Transportation Services

ATTACHMENTS

Appendix 1 – Updated RSP (2017-2021) – Detailed Capital and Operating Cost
Summary Table

**Appendix 1
Updated RSP (2017 - 2021)
Detailed Capital and Operating Cost Summary Table**

No.	Projects / Initiatives	2016		2017		2018		2019		2020		2021		Total Estimated Cost		
		Capital Cost	Operating Cost	Capital Cost	Operating Cost	Capital Cost	Operating Cost	Capital Cost	Operating Cost	Capital Cost	Operating Cost	Capital Cost	Operating Cost	Capital Cost	Operating Cost	
A. Key Existing Road Safety Countermeasures																
1	Geometric Safety Improvements (Traffic Safety Unit)			\$ 2,000,000										\$ 2,000,000	\$ -	
2	Transportation Safety and Local Improvements Program (TSLIP)			\$ 1,050,000		\$ 1,050,000		\$ 1,050,000		\$ 1,050,000		\$ 1,050,000		\$ 5,250,000	\$ -	
3	Accessible Pedestrian Signals (APS)			\$ 2,003,000		\$ 2,003,000		\$ 2,003,000		\$ 2,003,000		\$ 2,003,000		\$ 10,015,000	\$ -	
4	Traffic Calming			\$ 280,000		\$ 280,000		\$ 280,000		\$ 280,000		\$ 280,000		\$ 1,400,000	\$ -	
5	Annual Sidewalks Capital Program			\$ 1,900,000		\$ 1,900,000		\$ 1,900,000		\$ 1,900,000		\$ 1,900,000		\$ 9,500,000	\$ -	
6	Reduced Speed Limits on Local and Collector Roads in TEY *													\$ -	\$ -	
B. Proposed New Countermeasures (RSP 2017-2021)																
7	Pedestrian Safety Corridors	\$ 330,000		\$ 660,000		\$ 660,000								\$ 1,650,000	\$ -	
8	Pedestrian Street Lighting Improvements					\$ 725,000	\$ 20,000	\$ 725,000	\$ 40,000	\$ 725,000	\$ 60,000	\$ 725,000	\$ 80,000	\$ 2,900,000	\$ 200,000	
9	Automated Pedestrian Detection			\$ 180,000		\$ 100,000		\$ 100,000		\$ 100,000		\$ 100,000		\$ 580,000	\$ -	
10	Pavement Marking Improvements	\$ 1,450,000		\$ 200,000		\$ 200,000		\$ 200,000		\$ 200,000		\$ 200,000		\$ 2,450,000	\$ -	
11	Accessibility Improvements					\$ 150,000		\$ 150,000		\$ 150,000		\$ 150,000		\$ 600,000	\$ -	
12	Automated Enforcement Advocacy and Pilot			\$ 200,000										\$ 200,000	\$ -	
13	Creation of "School Safety Zones"			\$ 150,000										\$ 150,000	\$ -	
14	School Zone Reviews and Enhancements			\$ 200,000		\$ 200,000		\$ 200,000		\$ 200,000		\$ 200,000		\$ 1,000,000	\$ -	
15	Increase Older Adult Crossing Times			\$ 60,000		\$ 160,000		\$ 100,000						\$ 320,000	\$ -	
16	Support New Senior Citizens Strategy					\$ 100,000		\$ 100,000		\$ 100,000		\$ 100,000		\$ 400,000	\$ -	
17	Advanced Green for Cyclists (Leading Cyclist Interval)			\$ 100,000										\$ 100,000	\$ -	
18	Transportation Services Program Delivery (13 FTEs)	\$ 223,000		\$ 1,020,600	\$ 371,700	\$ 1,020,600	\$ 623,700	\$ 1,020,600	\$ 623,700	\$ 1,020,600	\$ 623,700	\$ 1,020,600	\$ 623,700	\$ 5,326,000	\$ 2,866,500	
C. Proposed Enhanced Countermeasures (2017-2021)																
19	Education and Awareness Initiatives (All Emphasis Areas)	\$ 130,000				\$ 200,000		\$ 200,000		\$ 200,000		\$ 200,000		\$ 130,000	\$ 800,000	
20	Advance Green for Pedestrians (Leading Pedestrian Intervals)			\$ 120,000		\$ 120,000		\$ 120,000		\$ 120,000		\$ 120,000		\$ 600,000	\$ -	
21	New Corner Radius Design					\$ 600,000		\$ 600,000		\$ 600,000		\$ 600,000		\$ 2,400,000	\$ -	
22	No Right-Turn-On-Red Prohibition *													\$ -	\$ -	
23	Accessible Pedestrian Signals (APS)			\$ 1,200,000		\$ 1,200,000		\$ 1,200,000		\$ 1,200,000		\$ 1,200,000		\$ 6,000,000	\$ -	
24	Missing Links Sidewalk Program					\$ 500,000		\$ 250,000		\$ 250,000		\$ 250,000		\$ 1,250,000	\$ -	
25	School "Watch Your Speed" Program			\$ 300,000		\$ 340,000		\$ 380,000		\$ 420,000		\$ 460,000		\$ 1,900,000	\$ -	
26	School Crossing Guard Program *													\$ -	\$ -	
27	School Travel Planning (STP) and Active and Safe Routes to School *													\$ -	\$ -	
28	New Mid-Block Pedestrian Crossings			\$ 80,000		\$ 1,500,000		\$ 1,500,000		\$ 1,500,000		\$ 1,500,000		\$ 6,080,000	\$ -	
29	Reduced Crossing Distance					\$ 180,000		\$ 180,000		\$ 180,000		\$ 180,000		\$ 720,000	\$ -	
30	Sidewalk Extensions					\$ 150,000		\$ 150,000		\$ 150,000		\$ 150,000		\$ 600,000	\$ -	
31	Automated Cyclist Detection			\$ 80,000		\$ 100,000		\$ 100,000		\$ 100,000		\$ 100,000		\$ 480,000	\$ -	
32	Signalized Crossings for Cyclists					\$ 180,000		\$ 180,000						\$ 360,000	\$ -	
33	Enhanced Cycling Facilities					\$ 180,000		\$ 180,000						\$ 360,000	\$ -	
34	Traffic Calming Guide for Residents *													\$ -	\$ -	
35	Mobile "Watch Your Speed" Program (WVSP)			\$ 120,000			\$ 150,000		\$ 150,000		\$ 150,000		\$ 150,000	\$ 120,000	\$ 600,000	
36	Geometric and Operational Safety Improvements at Intersections					\$ 1,800,000		\$ 1,800,000		\$ 1,800,000		\$ 1,800,000		\$ 7,200,000	\$ -	
37	LED Blank Out Signs			\$ 380,000		\$ 380,000		\$ 380,000		\$ 380,000		\$ 380,000		\$ 1,900,000	\$ -	
38	Road Safety Audits at High-Risk Locations			\$ 200,000		\$ 200,000		\$ 200,000		\$ 200,000		\$ 200,000		\$ 1,000,000	\$ -	
39	Enhanced Data Analysis and Reporting			\$ 180,000		\$ 200,000								\$ 380,000	\$ -	
40	Enhanced Data Collection (Permanent Count Stations)			\$ 150,000		\$ 150,000								\$ 300,000	\$ -	
41	Creation of "Senior Priority Zones" *	\$ 100,000												\$ 100,000	\$ -	
42	Motorcycle Warning Signs *	\$ 15,000												\$ 15,000	\$ -	
43	Creation of Road Safety Committee *													\$ -	\$ -	
44	Flexible In-Road Pedestrian Warning Signs	\$ 15,000												\$ 15,000	\$ -	
45	Local Road Pedestrian Crossover Pilot *	\$ 80,000												\$ 80,000	\$ -	
TOTALS																
A	Key Existing Road Safety Countermeasures	\$ -	\$ -	\$ 7,233,000	\$ -	\$ 5,233,000	\$ -	\$ 5,233,000	\$ -	\$ 5,233,000	\$ -	\$ 5,233,000	\$ -	\$ 28,165,000	\$ -	
B	Proposed New Countermeasures	\$ 2,003,000	\$ -	\$ 2,770,600	\$ 371,700	\$ 3,315,600	\$ 643,700	\$ 2,595,600	\$ 663,700	\$ 2,495,600	\$ 683,700	\$ 2,495,600	\$ 703,700	\$ 15,676,000	\$ 3,066,500	
C	Proposed Enhanced Countermeasures	\$ 340,000	\$ -	\$ 2,810,000	\$ -	\$ 7,780,000	\$ 350,000	\$ 7,220,000	\$ 350,000	\$ 6,900,000	\$ 350,000	\$ 6,940,000	\$ 350,000	\$ 31,990,000	\$ 1,400,000	
Total Proposed New and Enhanced Countermeasures		\$ 2,343,000	\$ -	\$ 12,813,600	\$ 371,700	\$ 16,328,600	\$ 993,700	\$ 15,048,600	\$ 1,013,700	\$ 14,628,600	\$ 1,033,700	\$ 14,668,600	\$ 1,053,700	\$ 75,831,000	\$ 4,466,500	
														New Program Total:		\$ 80,297,500

* Funding is either (a) already included within 2016 budget, (b) funded by others, or (c) accommodated through existing program.