



OVERVIEW DOCUMENT #8:
2017 PAVEMENT EVALUATION AND RHVP-RELATED SAFETY INITIATIVES:
NOVEMBER 2017 – APRIL 2018

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A. *Introduction*

1. Between October 2017 and May 2018, the City of Hamilton undertook several studies related to road safety on the RHVP. Overview Document #8 will address the various projects, studies and reports relating to road safety initiatives undertaken by the City, internally and through its retained consultants, during this time period.
2. This Overview Document will largely be organized in chronological order, but some events will be grouped together, slightly out of chronological order, where doing so promotes clarity and ease of understanding.
3. Commission Counsel has endeavoured to confirm the names, organization, and position(s) held by the individuals referenced in this Overview Document. This information is provided in the body text where each individual is first referenced.¹ A complete list of the individuals and their respective information can be found at Appendix A of Overview Document #8.
4. The facts contained in Overview Document #8 have not been tested for their truth. Commission Counsel and the participants may call evidence from witnesses at the Inquiry that casts doubt on the truthfulness or accuracy of the content of the documents underlying this Overview Document. The participants will also be able to make submissions regarding what, if any, weight should be given to any of these documents.

¹ Where more than one position is held by an individual within the time frame covered in this Overview Document, the information in the body text will reflect the position held at the time of first reference. For a complete list of all positions held by all individuals referenced in Overview Document #8, see Appendix A.

B. October - November 2017

1. **Follow-up from 2015 CIMA Report and October 16, 2017 PWC Meeting**
5. On October 16, 2017, David Ferguson (Superintendent, Traffic Engineering, Traffic Operations & Engineering, Transportation, Public Works, Hamilton) emailed Brian Malone (Partner, Vice-President, Transportation, CIMA), Alireza Hadayeghi (Partner, Director, Transportation, CIMA) and Pedram Izadpanah (Senior Project Manager, Transportation, CIMA):

Apparently there was a presentation today by the public outlining issues with the RHVP/LINC, the GM's office has asked for copies of the reports that were completed. I am in Toronto and unable to access my files to send the reports, could you send me copies of them.²

6. Mr. Malone replied the same day, attaching the final versions of the two reports.³
7. On November 1, 2017, Nancy Wunderlich (Administrative Coordinator to the General Manager, Public Works, Hamilton) emailed a follow up notice with minutes from the Public Works Committee meeting on October 16, 2017. The minutes indicated that the meeting included a presentation by family members of deceased victims of RHVP collisions relating to safety concerns, and the installation of barriers on the RHVP and LINC.⁴
8. On November 8, 2017, Mr. Ferguson and Mr. Izadpanah exchanged a series of messages in response to Mr. Malone's email from October 16, 2017, regarding the RHVP and LINC reports.⁵ They wrote:

² [HAM0001050_0001](#)

³ [HAM0001044_0001](#) attaching [HAM0001045_0001](#) and [HAM0001046_0001](#)

⁴ [HAM0045911_0001](#) attaching [HAM0045912_0001](#) at images 5-6

⁵ [HAM0001050_0001](#)

[Mr. Ferguson]: By chance, do you guys have a separate working sheet in which you broke the collisions down by year? I'm working on an updated report to Committee and Martin is asking for a yearly breakdown of the incidents rather than how it is in the report.

If not, no worries, thought I would ask before I try doing it myself.

[Mr. Izadpanah]: We look into this and get back to you shortly.

[Mr. Ferguson]: Thanks Pedram

[Mr. Izadpanah]: We have the raw data. Can you please let me know exactly what you want and we can definitely create it?

Please call me on my cell if it is easier to discuss.

[Mr. Ferguson]: Thanks Pedram,

I had started putting the spreadsheet together, please see attached.

[Mr. Izadpanah]: These are traffic volumes right?

For collisions, as per your previous email, we can create a graph showing number of PDO and fatal+injury per year. It is also possible to break the collisions down to different types of collisions (e.g. rear-end, etc.) per year.

Please let me know how you would like to use volumes.

[Mr. Ferguson]: No I just need the collision info. Just need it broken down by year. In the report it says total collisions, then talks about crossover collisions. Martin wants it broken down by year to show smaller numbers.

9. Mr. Izadpanah provided Mr. Ferguson with a spreadsheet later that afternoon, writing:⁶

Please see tabs designated LINC and RHVP in the attached spreadsheet. I hope this is what you want. If we can assist in any ways, please let us know.

2. City Contact with Golder

10. On November 2, 2017, Ludomir Uzarowski (Principal, Pavements and Materials Engineering, Golder) received an out of office alert from Marco Oddi (Manager, Construction, Engineering Services, Public Works, Hamilton). The Inquiry has not

⁶ [HAM0001050_0001](#) attaching [HAM0001051_0001](#)

received a copy of Dr. Uzarowski's original correspondence. The City has advised the Inquiry that it has not identified a copy of Dr. Uzarowski's original correspondence.⁷

3. November 5, 2017 Collisions

11. On November 5, 2017, Richard Boorsma (District Supervisor – Roads, District 7, Roads & Maintenance, Operations, Public Works, Hamilton) emailed Bob Paul (Manager, Roads & Maintenance, Operations, Public Works, Hamilton), Betty Matthews-Malone (Director, Operations, Public Works, Hamilton), Tammy Blackburn (Senior Project Manager, Roads & Maintenance, Operations, Public Works, Hamilton) and Terry McCleary (Superintendent – Roads, District North, Roads & Maintenance, Operations, Public Works, Hamilton) regarding a series of collisions that occurred on the RHVP.⁸ He wrote:

Just an FYI Police closing the Red Hill and the Linc 30+ accidents in the last couple hours
Advised Roads If Roads supervisor is required Police will call back to have them attend.
Police never did call for assistance but thought I would send you this info . The ramps
appeared to be closed for about an hour. HANSEN #14571912

12. On November 6, 2017, Ms. Matthews-Malone forwarded Mr. Boorsma's email to John Mater (Director, Transportation, Public Works, Hamilton) and Martin White (Manager, Traffic Operations & Engineering, Transportation, Public Works, Hamilton), "Don't know if this will get some coverage but just a heads up."⁹

⁷ [GOL0003010](#). The original folder path field of the document, "19-1824 - Golder RHVP/19-1824 - Golder RHVP/Hamilton_backup.pst/Top of Outlook data file/Inbox/Hamilton RHVP.

⁸ [HAM0026488_0001](#)

⁹ [HAM0026488_0001](#)

4. Speed Limit Reduction Study

13. On October 24, 2017. Stephen Cooper (Project Manager, Traffic Engineering, Traffic Operations & Engineering, Transportation, Public Works, Hamilton) emailed Mr. Malone (copying Robert Decleir (Senior Project Manager, ATMS and Signals, Traffic Operations & Engineering, Transportation, Public Works, Hamilton)) regarding the City retaining CIMA for a new study.¹⁰ He wrote:

We'd like to retain CIMA as a continuation of one of the recommendations provided in a previous safety report for the RHVP/ LINC which identified the need to study the roadways for a speed limit reduction (80k?). Also, one of our Councillors put forward a motion for the same.

Also, included in the study is some VMS information which was recommended in previous CIMA reports and should include the following:

- Confirm ideal locations for VMS signs
- Recommend the VMS mounting style – overhead, side mounted, pedestal mounted
- Recommend VMS size – width, height, letter height, rows of text, etc.

Can you please prepare a proposal for this study/report for us? What time frame is feasible?

14. Mr. Izadpanah replied the following day, suggesting they have a meeting to clarify the proposed objectives for the project “especially in relation to the queue end warning system project which [CIMA was] doing for Rob”. The City had retained CIMA to complete the queue end warning system project in August 2017. For this project, the City retained CIMA “to develop a concept of operations for Queue End Warning System for the Lincoln Alexander Parkway and Red Hill Valley Parkway to the City of Hamilton during 2017-2018”.¹¹ The basic purpose of a Queue End Warning System is to “notify road users of

¹⁰ [HAM0045935_0001](#)

¹¹ [HAM0045935_0001](#); [CIM0014752](#); [CIM0014751](#); [CIM0014748](#); and [CIM0010385](#)

the presence of downstream slow moving or stopped traffic (based on near real-time traffic detection).¹²

15. On November 8, 2017, Mr. Izadpanah emailed Mr. Cooper and Mr. Malone regarding speed data from the LINC and RHVP. He wrote:

While we are working on the proposal for the speed study, we reviewed the speed data available on the MS2 software as discussed.

We have the following speed data for the LINC and RHVP:

- Linc at Mohawk Road: latest data is from 2008
- Linc at Upper Wellington: permanent count station with data up to March 2017 (usable data)
- Linc at Upper Ottawa: latest data is from 2008
- RHVP at Queenston Road: permanent count station with data up to November 2015, however speed bins only go to 85+ km/h, so the data is not usable.

As you can see, in order to conduct a speed study, we need speed data at more locations.

To address this issue, we suggest the followings:

1. It appears that the City utilizes the radar technology which covers the LINC/RHVP. If that's the case, are you able to provide us with a location of the radar units and a sample of their data?
2. Hopefully, the radar speed data would provide a reasonable coverage of speed along these two highways. If not, we will have two options:
 - a. Use the City's Bluetooth detectors
 - b. Collect speed data at specific locations

Please let me know what you think so we can proceed with the proposal.¹³

16. On November 8, 2017, Mr. Izadpanah emailed Mr. Cooper, Mr. Malone, Mr. Decleir and Mike Barnet (Associate Partner, Senior Project Manager, Traffic Engineering, CIMA) regarding the Speed Limit Reduction Study, requesting additional speed data to prepare the project proposal. In his email, Mr. Izadpanah noted that the RHVP speed data from

¹² [HAM0012751_0001](#); [HAM0012753_0001](#); [HAM0012752_0001](#); and [HAM0012754_0001](#) at image 1

¹³ [HAM0045935_0001](#)

the permanent count station at Queenston Road did not differentiate speeds above 85km/h.¹⁴

5. Report PW18008

17. On November 9, 2017, Marlene Romanoski (Administrative Secretary, Traffic Operations & Engineering, Transportation, Public Works, Hamilton) emailed Mr. Ferguson a draft staff report for a PWC meeting scheduled for December 4, 2017, later rescheduled to January 15, 2018 ("Report PW18008"). The report included handwritten revisions from Mr. White.¹⁵

18. The draft of Report PW18008 was an update to the PWC regarding the status of prior safety recommendations and various other RHVP/LINC related initiatives, including an annual traffic count program, an annual collision analysis, and a discussion of installing barriers in tandem with future widening of those roads.¹⁶

¹⁴ [HAM0045935_0001](#); and [CIM0016045](#)

¹⁵ [HAM0045938_0001](#) attaching [HAM0045939_0001](#); and [HAM0052822_0001](#)

¹⁶ [HAM0045939_0001](#)

19. The draft, prepared by Mr. Ferguson and Mr. White, included the following regarding collisions:

MOTION about the cost of such measures.
Traffic Incidents on the LINC and Red Hill Valley Parkway (Public Works Committee, February 27, 2017)

That staff from Traffic Operations be directed to consult with the Hamilton Police Service to bring forward a plan to report yearly on fatal incidents on the LINC and Red Hill Valley Parkway and that the report identify causes of the incidents.

Both of these motions have been consolidated as they are both a result of concerns with safety and collision patterns along the facilities. In 2015 two detailed Traffic Safety reports were commissioned to study both facilities as a result of ongoing collision concerns, with a specific focus on median crossover collisions.

The reports identified that there is an over representation of incidents that occur on the LINC under dry road conditions and on the RHVP under **wet** road conditions. As a result of a number of cross-over fatal collisions, there has been public debate on the need to install median barriers along both the LINC and RHVP.

In order to provide a comparison of both facilities and to understand the cause of collisions, staff conducted a review of total collisions and crossover incidents during similar time periods:

Why bold?

Crossover Fatal?

Conclusion

on aggressive

Year	Total Collisions LINC	Fatal Collisions on LINC	Number of Crossover Collisions on LINC	Total Collisions RHVP	Fatal Collisions on RHVP	Number of Crossover Collisions on RHVP
2008	42	0	3	43	1	0
2009	54	1	6	37	0	1
2010	40	0	4	51	0	1
2011	60	0	1	71	0	3
2012	65	1	3	67	1	1
2013	67	0	2	80	0	1
2014	61	1	3	71	0	4

Both Safety reports identified that collisions are occurring as a result of speeding, aggressive driving, following to close, distracted driving and driving too fast for weather

**SUBJECT: Lincoln Alexander Parkway and Red Hill Valley Parkway
Transportation and Safety Update (PW16-016, PW16-019, PW17-001,
PW17-003) (City Wide)(Outstanding Business List Item's) (City Wide)**

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conditions. Recent enforcement completed by Hamilton Police Services identified that over ninety percent of all violations issued were directly related to speeding. In addition, the Police Chief and Ontario Provincial Police have identified that speeding, aggressive driving and distracted driving are the leading causes of fatal collisions.

The report identified that the installation of short, medium, and long term collision counter measures (Appendix A) could address some of the driver behaviour issues that are causing collisions to occur. The City of Hamilton is in the process of obtaining Variable Message Board signs (VMS) which will be placed on the LINC and RHVP and will allow staff to display messages to raise awareness of the posted speed limit and operating conditions. In addition, staff have begun the process for the review and design of a que-end warning system which will assist in notifying motorists when slower moving traffic is ahead and provide a warning to reduce speed.

Staff recommends that median barriers be installed in co-ordination with future reconstruction and widening of both the LINC and RHVP. Further it is recommended that with any future widenings, the implementation of a Freeway Traffic Management System (FTMS) be included to properly control and manage traffic on both the LINC and RHVP.

Staff recommends continued implementation of the short-term and medium-term collision counter measures as identified in Appendix (B), and the monitoring and messaging through the VMS program. It is further recommended that the Hamilton Police Services continue regular enforcement on both facilities, and that collision and enforcement statistics specific to these facilities be included in the annual Hamilton Strategic Road Safety Annual Report.

There are two additional outstanding motions.

- Speed Limit Reduction Feasibility Study on the Lincoln Alexander Parkway (LINC) and the Red Hill Valley Parkway (RHVP) (Item 9.3) (Public Works Committee, August 17, 2017)

That staff from Traffic Operations and Engineering be directed to study the

Feasibility and safety benefits of reducing the speed limit on the Lincoln Alexander Expressway (LINC) and the Red Hill Valley Parkway (RHVP) from 90 km/h to 80km/h and report the finding back to the Public Works Committee in one year's time.

This work is planned to be reviewed and completed in conjunction with the review and design of a queue end warning system. It is expected that Public Works will report back to Public Works Committee in 2018.

- Photo Radar on the Lincoln M. Alexander Parkway and the Red Hill Valley Parkway (Added Item 10.1) (Public Works Committee, November 14, 2016)

**SUBJECT: Lincoln Alexander Parkway and Red Hill Valley Parkway
Transportation and Safety Update (PW16-016, PW16-019, PW17-001,
PW17-003) (City Wide)(Outstanding Business List Item's) (City Wide)**

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What was
a+b?

- (c) That consideration be given to making the Lincoln M. Alexander Parkway and the Red Hill Valley Parkway a Community Safety Zone for the purpose of establishing photo radar speed enforcement.

Discussions on the development of the Provincial Regulations associated with the implementation of Automated Speed Enforcement are ongoing with the Province of Ontario and other Provincial Municipalities. When details of the program become available from the Province, staff will follow up with a report to Public Works Committee in 2018.

¹⁷ [HAM0045939_0001](#)

20. On November 9, 2017, Mr. White sent an email to Mr. Ferguson, requesting that he add a sentence or two relating to “paving with cats eyes” writing “the paving will make a big difference in the collision rate and loss of control type collisions and wet ones too”¹⁸ A draft circulated that day included handwritten markups from Mr. White suggesting that he intended his comment to relate to the paragraph regarding crossover collisions.¹⁹

21. On November 14, 2017, Lauri Leduc (Legislative Coordinator, Office of the City Clerk, Corporate Services, Hamilton) emailed Mayor Fred Eisenberger (Mayor of Hamilton) and Council, attaching an outstanding business list for the PWC. In her email, she wrote that Report PW18008 was being postponed until 2018.²⁰

22. The same day, Mr. Ferguson emailed Mr. White an updated draft of the Report PW18008.²¹

23. Mr. White then forwarded the report to Ms. Matthews-Malone and Gary Moore (Director, Engineering Services, Public Works, Hamilton):

Morning Betty and Gary. The attached is a final draft of the report and will be sent to John for review. Please provide any comments you may have as soon as possible. This was to go to Dec 4 PW but we are a bit late so I think it will have to go in January. Thanks.²²

24. Mr. White attached several documents to his email in addition to the draft Report PW18008. The attachments included two letters, both dated March 21, 2017, from the MTO to Mayor Eisenberger regarding the widening of Highway 403 and a document titled

¹⁸ [HAM0045941_0001](#)

¹⁹ [HAM0045944_0001](#) attaching [HAM0045945_0001](#)

²⁰ [HAM0005531_0001](#)

²¹ [HAM0045964_0001](#)

²² [HAM0026490_0001](#)

“Appendix A” which listed collision countermeasures on the RHVP and LINC, and the respective status of the countermeasures.²³

25. The draft Report 18008 included the following regarding the planned resurfacing of the RHVP and LINC. Safety concerns were not referenced.

The Engineering Division has scheduled the repaving of the LINC and RHVP between 2018-2021, Traffic Operations and Engineering staff has submitted scope to the project to include recessed reflective markers (cats eyes), plastic and wider pavement markings and shoulder rumble strips.²⁴

26. Ms. Romanoski asked Mr. Ferguson whether there were “any additions in terms of Legal or Financial along with the need to have Betty and Gary added as Internal Discussions on the Tracker?” Mr. Ferguson replied that he did not believe there were any such additions.²⁵

27. Also on November 14, 2017, Ms. Romanoski sent Mr. Ferguson a report tracking form for Report PW18008. The form identified Mr. Ferguson as the author of the report, and listed Mr. Moore and Ms. Matthews-Malone as having been consulted in its preparation. It also listed “MTO- (Facilities), Province (Speed Controls)” under external discussions.²⁶

28. On November 14, 2017, Ms. Matthews-Malone responded to Mr. White’s email:

Only comment is to change Roads to Operations or Operations Division. Tough one to write but an easy read. I’ll have to make sure I’m on vacation the day it goes as it will be a long meeting..... Thanks for the opportunity to review.²⁷

²³ [HAM0026491_0001](#); [HAM0026492_0001](#); [HAM0026493_0001](#); [HAM0026494_0001](#),

²⁴ [HAM0026494_0001](#) at image 6

²⁵ [HAM0045969_0001](#)

²⁶ [HAM0045970_0001](#) attaching [HAM0045971_0001](#)

²⁷ [HAM0026505_0001](#)

29. Mr. White emailed Mr. Ferguson in response to Ms. Matthews-Malone's email, writing, "[g]reat and she will be the director when it goes in Jan and she is bailing already!"²⁸

6. RHVP Rehabilitation and Hot in-Place Recycling

30. RHVP resurfacing was referenced at a City/MTO Liaison Committee meeting on November 8, 2017. City attendees included Dan McKinnon (General Manager, Public Works, Hamilton), Ms. Matthews-Malone, Mr. Moore, Mr. White and Joel McCormick (Senior Project Manager, General Manager's Office, Public Works, Hamilton). Attendees from the MTO included Teepu Khawja (Regional Director, Central Region, Provincial Highways Management Division, MTO), Jason White (Manager, Engineering, Central Region, Provincial Highways Management Division, MTO), Andrew Beal (Manager, Traffic Office, Central Region, Provincial Highways Management Division, MTO), Lance Dutchak (Traffic Supervisor, Traffic Office, Central Region, Provincial Highways Management Division, MTO), Rita Venneri (Section Head, Planning and Design (Hamilton/Niagara), Corridor Management, Central Region, Provincial Highways Management Division, MTO), Tom Hewitt (Head, Corridor Management, Central Region, Provincial Highways Management Division, MTO), Joe Costantino (Area Contracts Engineer, Central Region, Provincial Highways Management Division, MTO) and Nancy Adriano (Traffic Area Manager, Traffic Office, Central Region, Provincial Highways Management Division, MTO). The minutes included the following regarding Hamilton construction:

²⁸ [HAM0045972_0001](#)

Update of City of Hamilton Construction and Maintenance Projects (*attached*).

- MTO and City need to coordinate because of common construction in the area.
- Most of the city projects are surface treatment.
- Traffic signal at Fruitland Rd. and North Service Rd. small project.
- Traffic signal and underground at Fifty and North Service Rd.
- North bound in 2018 and south bound in 2019 of the Red Hill. Not sure if night work yet, may be weekend work.
- Linc will be in 2020 & 2021 resurface work.²⁹

31. On November 10, 2017, Charlene Hands-Lourie (Senior Project Manager, Transportation, Public Works, Hamilton) emailed Mr. Ferguson with the subject line "CPMS 11058 – RHVP Rehab". She asked him to confirm that the budget for the project was \$3,625,000. She also attached a Transportation Division Capital Project Scope form identifying the project as "RHVP Rehab – Phase 2."³⁰

32. The form identified 2019 as the relevant budget and construction year for RHVP rehabilitation. It also included a checkbox section with road safety, transportation planning, cycling and traffic signals as options. Road safety was selected.³¹

33. On November 10, 2017, Dr. Uzarowski emailed Mr. Moore regarding hot in-place recycling ("HIR"), informing Mr. Moore regarding a discussion he had with Patrick Wiley (President, Ecopave Asphalt Recycling Inc.).³² He wrote:

I talked to Pat Wiley, the President of Ecopave, the company in BC that does Hot In-Place Recycling. Pat will be in Halifax at the CCAA conference and I will meet with him. He is very interested in doing HIR in urban environment in Ontario, although, he says Ecopave does it on arterial roads not on residential streets due to the size of the equipment and space required. They did HIR in-town in Courtney, BC on an arterial road this year.

MTO is interested in HIR. Pat is bidding on a big MTO project in Thunder Bay in 2018.

²⁹ [HAM0052835_0001](#) at images 3-4

³⁰ [HAM0045947_0001](#) attaching [HAM0045948_0001](#)

³¹ [HAM0045948_0001](#) at image 1

³² [GOL0002852](#). Now known as RecyclePave Asphalt Systems.

If you are interested we can organize a meeting with Pat together and discuss the opportunity.

See you in Halifax. I am going there on Monday early morning.

34. On November 16, 2017, Richard Andoga (Senior Project Manager, Infrastructure Programming, Asset Management, Engineering Services, Public Works, Hamilton) emailed Michael Becke (Senior Project Manager, Design, Engineering Services, Public Works, Hamilton) under the subject line “Redhill core samples”.³³ He wrote:

Do we have any core information for the Redhill?

If so send it to Gary please

35. Mr. Becke replied the same day:³⁴

Not yet... they are still working on everything... I expect we will have something before Christmas

36. On November 21, 2017, Kris Jacobson (Transportation Lead – Light Rail Transit, LRT Project, Public Works, Hamilton) replied to an email he received from Mr. Mater with a link to a website discussing road weather information systems, under the subject line “linc and red hill”. Mr. Jacobson commented that being able to adjust speed limits based on traffic and weather “is a game changer; especially on roads that experience weather related incidents”.³⁵

7. Evaluation of Pavement Surface and Aggregates

37. On November 21, 2017, Mr. Moore emailed Dr. Uzarowski under the subject line “Red Hill - testing for possible Hot in place”, writing:

³³ [HAM0005533_0001](#)

³⁴ [HAM0005533_0001](#)

³⁵ [HAM0026527_0001](#)

Ludomir.

I was expecting to see a proposal and timeframe for cores, BPT and PSV testing for the Red Hill. This has to get done before snow fall and freeze-up.³⁶

38. Mr. Uzarowski's notebooks contain an entry for the same day where it is written "Gary Moore".³⁷

39. On November 22, 2017, Mr. Mater sent Mr. White a calendar invitation for a meeting the following day regarding the "LINC/RHVP Report".³⁸

40. Also on November 22, 2017, Rabiah Rizvi (Pavement and Materials Engineering Analyst, Golder) emailed Dr. Uzarowski attaching a draft proposal for the RHVP testing requested by Mr. Moore ("2017 Golder Pavement Evaluation").³⁹ Ms. Rizvi sent the draft to Vimy Henderson (Pavement and Materials Engineer, Golder) the same day.⁴⁰

41. The proposal described the scope of work as follows:

Golder Associates Ltd. (Golder) is pleased to present this proposal to the City of Hamilton (City) to investigate the skid resistance of the existing pavement surface on the Red Hill Valley Parkway (RHVP), located in the City of Hamilton. As part of this assignment, Golder will also provide recommendations for methods to improve the skid resistance, if such improvement is required. This proposal details are scope of work for this assignment, and the associated cost estimate.

Scope of Work

Golder's scope of work for this assignment will include first carrying out a field investigation program which will include the following testing:

- Surface frictional properties using the British Pendulum Tester in accordance with ASTM E303; and
- Pavement texture measurements using a volumetric technique in accordance with ASTM E965; and

³⁶ [GOL0002851](#)

³⁷ [GOL0007414](#) at image 54

³⁸ [HAM0026535_0001](#)

³⁹ [GOL0005923](#) attaching [GOL0005925](#)

⁴⁰ [GOL0005923](#)

- Coring of the surface course asphalt layers.

Both the friction testing and the texture measurements will be carried out during one night. Golder will retain the services of a qualified traffic control subcontractor to provide the required traffic control for the testing. In each direction of the RHVP the friction and texture measurements will be made at 15 locations, with both tests being carried out at each location.

At each location that is tested for friction and texture, Golder will obtain a core of the surface course asphalt layer. A 150 mm diameter core barrel will be used to obtain the asphalt core, and the coring machine will be operated by a Golder representative. After the core at each location is extracted, the core hole will be filled with cold-patch asphalt.

The asphalt cores will be brought to Golder laboratory to Whitby, Ontario. The cores will be broken down and the aggregates from the surface course asphalt layers will be extracted from each core. The extracted aggregates will then be sent to a laboratory in Ireland for testing of Polished Stone Value in accordance with British Standard 812. The laboratory to be used to carry out the testing will be Testconsult Ireland Limited, located in Ireland.

The results of the field investigations and laboratory testing will be used to determine whether the pavement surface on the RHVP has sufficient frictional resistance, and if not then the cause for the low frictional number will be ascertained. Additionally, based on the causes for the potentially low skid resistance, Golder will provide recommendations for methods that may be implemented to improve the pavement frictional numbers. Golder will also evaluate the potential of using hot-in-place recycling to restore the pavement friction.

The findings of our investigations and analysis will be presented to the City in the form of a draft report. Upon receipt of comments on the draft report, Golder will make necessary updates and the report will be finalized.⁴¹

42. The cost for the work outlined in the proposal was estimated at \$18,100.⁴²

43. Dr. Uzarowski replied to Mr. Moore's email, and attaching a draft proposal for the 2017 Golder Pavement Evaluation. The proposal attached by Dr. Uzarowski was revised from the draft he received earlier that day from Ms. Rizvi. He wrote to Mr. Moore:

Please find attached the initial version of the proposal for pavement surface and aggregates evaluation on the Red Hill Valley Parkway in Hamilton.

Sorry that I did not included a proper proposal number. I have requested it here but will get it tomorrow. Since I have promised you the proposal today I am sending it without the official number. I will send you the official version tomorrow.

⁴¹ [GOL0005925](#) at images 1-2

⁴² [GOL0005925](#) at images 2

We would like to do the field testing ASAP. I will confirm the timeframe tomorrow.⁴³

44. The title of the proposal sent to Mr. Moore was “Evaluation of Pavement surface and aggregates”, revised from “Evaluation of Pavement surface Skid Resistance”.⁴⁴ Other revisions between the two draft proposals are noted below:

[Page 1, paragraph 1]: Golder Associates Ltd. (Golder) is pleased to present this proposal to the City of Hamilton (City) to investigate the skid resistance surface of the existing pavement surface on the Red Hill Valley Parkway (RHVP), located in the City of Hamilton. ~~As part of this assignment, Golder will also provide recommendations for methods to improve the skid resistance, if such improvement is required.~~ This proposal details are scope of work for this assignment, and the associated cost estimate.

[Page 2, paragraph 2]: The results of the field investigations and laboratory testing will be used to determine ~~whether if the current material in the RHVP pavement surface on the RHVP has can provide sufficient frictional resistance, and if not then the cause for the low frictional number will be ascertained characteristics.~~ Additionally, based on the causes for the potentially low skid resistance, Golder will provide recommendations for methods that may be implemented to improve the pavement frictional numbers. Golder will also evaluate the potential of using ~~the existing surface course SMA and underlying SP 19 mm binder course in hot-in-place recycling to restore the pavement friction(HIP).~~ We understand that ~~the objective would be to produce, if feasible, a mix that would meet the requirements or would be close to SP 12.5 FC2 mix.~~⁴⁵

45. Dr. Uzarowski’s notebooks include two entries, both noting “Gary Moore” dated November 22, 2017 and November 23, 2017.⁴⁶

46. On November 23, 2017, Dr. Uzarowski and Ms. Rizvi exchanged messages regarding the draft proposal:

[Dr. Uzarowski] Gary has asked about the timeframe and I would have to include this in my email to him. Do you know the timeframe for the work?

[Ms. Rizvi] I am still trying to confirm that we can do the coring in the first or second week of December. However, I think that is the timeline you can tell Gary and then we will make sure we have someone who will do it.

[Dr. Uzarowski] Can we do it sooner? We will have a week of nice weather coming.

⁴³ [HAM0052823_0001](#) attaching [HAM0052824_0001](#)

⁴⁴ [HAM0052824_0001](#)

⁴⁵ Comparison of [GOL0005925](#) (as original version) to [HAM0052824_0001](#) (as modified version)

⁴⁶ [GOL0007414](#) at image 55

[Ms. Rizvi] No there is no way we have the personnel availability for that, and neither do we have time to coordinate all the things needed. Earlier than the timeline I provided you would mean next week, and there is no way we can get organized in that time frame.

[Dr. Uzarowski] I am concerned with the BPN testing. We have to use water for it and will not be able to use it if the temperature drops significantly below 0.⁴⁷

47. Dr. Uzarowski sent the final proposal to Mr. Moore later the same day, writing that the work could be performed in the first or second week of December, and that Golder would monitor the weather to ensure the field work could be conducted without frost.⁴⁸ The final proposal appears to be an executed version of the draft that Ms. Rizvi sent to Dr. Henderson on November 22, 2017.⁴⁹

48. On November 24, 2017, Mr. Moore emailed Dr. Uzarowski approving the proposal. Ms. Rizvi, Diana Cameron (Administrative Assistant to the Director of Engineering, Engineering Services, Public Works, Hamilton), Mr. Ferguson, Mr. White, Ms. Matthews-Malone, Mr. Becke, Mr. Andoga and Mr. Paul were copied on this email. Mr. Moore wrote:

Ludomir

Your proposal is satisfactory with the exception of the use of Cold mix to fill the hole. Given the high speed and traffic volume nature of the road please ensure the holes are tacked and filled with hot mix pavement.

I would arrange a pre-work meeting with Traffic and Engineering Services staff so we can notify the public and make sure everyone know what is going on. Also perhaps you can arrange for recycled Hot mix from our Operations staff.

Mike and/or Rick can you arrange the meeting with all parties. Emergency Services and Police should also be notified of the investigative work to be done on the Red Hill.

When we get the timing and details we'll put out a PSA through Jas or Clorinda.⁵⁰

⁴⁷ [GOL0006298](#)

⁴⁸ [HAM0001072_0001](#) attaching [HAM0001073_0001](#)

⁴⁹ [HAM0001073_0001](#)

⁵⁰ [HAM0026538_0001](#); and [HAM0052829_0001](#)

49. Mr. White forwarded the email to Bob Butrym (Construction Coordination, Traffic Operations, Traffic Operations & Engineering, Transportation, Public Works, Hamilton) advising him to “be ready to assist with any required signing and notifications.” Mr. Ferguson, Mr. Mater and Kim Wyskiel (Superintendent, Traffic Services, Traffic Operations & Engineering, Transportation, Public Works, Hamilton) were copied on this email.⁵¹

50. Mr. Moore forwarded Dr. Uzarowski’s email attaching the proposal from November 23, 2017, to Mr. Becke and Mr. Andoga, writing “[h]ere’s what Ludomir will be doing.”⁵²

51. In late November 2017, Ms. Rizvi corresponded with various Golder employees to find a staff member to perform the asphalt coring for the 2017 Golder Pavement Evaluation. The London, Ontario Golder office had staffing capacity to perform the coring, and Mike Arthur (Senior Geotechnical Technologist, Golder) was the technician selected. Ms. Rizvi indicated in an email on November 29, 2017, that Amelia Jewison (Geotechnical Analyst, Golder) would be taking over the project.⁵³

C. December 2017

1. Changes to Public Works Organizational Structure

52. On November 28, 2017, Jasmine Graham (Communications Officer, Strategic Partnerships & Communications, City Manager’s Office, Hamilton), emailed Jen Recine (Manager, Communications, Strategic Partnerships & Communications, City Manager’s

⁵¹ [HAM0026538_0001](#)

⁵² [HAM0052830_0001](#)

⁵³ [GOL0006204](#); [GOL0006207](#); and [GOL0006204](#)

Office, Hamilton) under the subject line “CONFIDENTIAL: PW Report”. She attached a staff report, signed by Chris Murray (City Manager, City Manager’s Office, Hamilton) titled “Organizational Structure Changes for Public Works Department (CM17021)” (“Report CM17021”) and wrote:

Jen – confidential PW restructuring report attached. Meeting with Dan this morning was helpful in explaining how all of this will play out, I’m putting together a plan/materials and will let you know more later...fairly big shake up but no people leaving (other than John Mater retiring later in 2018)⁵⁴

53. The Executive Summary of Report CM17021 includes the following:

In a continued effort to examine the organization design of Public Works Department in order to increase efficiencies and support effective collaboration, and in recognition of continued budget pressures, some organizational structure changes are necessary. These changes are also reflective of the implications associated with the appointment of the new General Manager, Healthy and Safe Communities, and will be implemented no later than January 1, 2018.

In consultation with appropriate staff, the General Manager of the Public Works Department has identified organization design improvement opportunities within the Transportation Division, with the goal of better aligning the work to achieve strategic priorities and of having the right staff, in the right roles, working at the right level. As such, the Sections within the Transportation Division will be redistributed and the Division will then dissolve.

The Traffic Operations & Engineering, as well as the Policy & Programs Sections of the Transportation Division, will be transferred to the Roads and Traffic Division (formerly known as the Operations Division) of the Public Works Department. Additionally, as approved by Council through recommendation (b) of Report #CM14009/PW14068, the Transportation Planning function, including all associated staff within the Transportation Planning Services Section, will be realigned to the Planning and Economic Development Department. As part of this realignment, the Public Works Department organizational structure will be reduced by one Director position and the accompanying Administrative Assistant position.

John Mater, Director, Transportation Division/Associate General Manager, will continue providing organizational design improvement and strategic advisory work until his retirement on December 31st, 2018. He will also continue to act as the department’s primary liaison to the City-wide Business Improvement Task Force, and will be accountable for directing Public Works Department resources in order to create the outcomes jointly agreed to by Task Force participants.

Additionally, opportunities for increased efficiencies and business process improvements have been identified within the Engineering Services Division. The recommended changes

⁵⁴ [HAM0062346_0001](#) attaching [HAM0062347_0001](#)

result from a need to undertake a more comprehensive capital program development process as well as respond to the upcoming changes in provincial regulation.

As a result, Gord McGuire, Manager, Geomatics & Corridor Management will be temporarily accountable for the Asset Management, and Geomatics & Corridor Management Sections of the Engineering Services Division, and for the improvement of the capital program development process for Public Works Department. This transfer of function will allow Gary Moore, Director, Engineering Services, opportunity to provide additional technical support and resources to the Hamilton Light Rail Transit project.

With the appointment of Paul Johnson to the role General Manager, Healthy and Safe Communities, the availability of the Director, Engineering Services to provide greater focus on technical support for the LRT project will be crucial in ensuring successful continuity of the project, particularly as it enters into the construction phase. Mr. Moore will continue to be accountable for the Design, Construction and Waterfront Development Sections of Engineering Services within the Public Works Department.⁵⁵

54. On December 11, 2017, Mr. McKinnon sent an email to Public Works staff under the subject line “Changes in Public Works Structure”, attaching an organization structure chart. He noted the following in his covering email:

As you know, it is important to me that you feel informed and connected to what is happening in Public Works. I’m sending you this email today to announce some changes to the organizational structure of our department that will become effective on January 1, 2018.

The changes are being made in a continuing effort to examine the organizational design of the Public Works department in order to increase efficiencies, support effective collaboration, and in recognition of continued budget pressures.

I’m attaching a new organizational chart to my announcement, but here are the highlights:

- A new division called “Roads & Traffic” will be established as of January 1, 2018. Led by Director Betty Matthews-Malone, this division will consist of the following sections:
 - o Capital Rehabilitation & Technical Operations (Manager, Brian Hughes)
 - o Roads & Maintenance (Manager, Bob Paul)
 - o Traffic Operations & Engineering (Manager, Martin White)
 - o Policy & Programs (Manager, Jennifer DiDomenico)
- John Mater, Director of Transportation will be retiring in late 2018, and will be assuming the role of Associate General Manager of Public Works until his retirement. John will be continuing and expanding on his role as Associate General Manager to assist with the seamless transition of these structural

⁵⁵ [HAM0062347_0001](#) at images 1-2

changes, and undertake an evaluation of refinements to our internal processes related to the capital program development and other department-wide activities.

- Some staff from Transportation Planning Services section will be moving under Traffic Operations & Engineering (Manager, Martin White) in the new Roads & Traffic division. These staff include: Al Kirkpatrick, Lorissa Skrypniak, Steve Molloy, Janelle Trant and Simo Narancic.
- Daryl Bender, Project Manager of Alternative Transportation formerly in the Traffic Operations & Engineering section and the remaining staff in the Transportation Planning Services section will be joining a new group in our Planning & Economic Development department.
- The leadership role in Engineering Services will be shared between Gary Moore and Gord McGuire. Gary will be taking a more active role in providing technical support and resources to the Light Rail Transit project, and will continue to oversee the Design (Manager, Susan Jacob) Construction (Manager, Marco Oddi), and Waterfront Development (Manager, Gavin Norman) sections. Gord McGuire will oversee the Asset Management section (Manager, Sam Sidawi) and his own group, Geomatics & Corridor Management.

There are no changes being made to Environmental Services, Hamilton Water, Transit or Energy, Fleet & Facilities. To be clear, there are no staff leaving the organization.

The changes I am announcing today are part of our continuous improvement efforts to better align work within Public Works. We must ensure we have the right staff, in the right roles, working at the right level.

In the coming days, your directors and managers will be bringing staff together to discuss the restructuring and ensure you feel supported and informed throughout this transition. If you have any questions, please speak with your supervisor, manager or director.

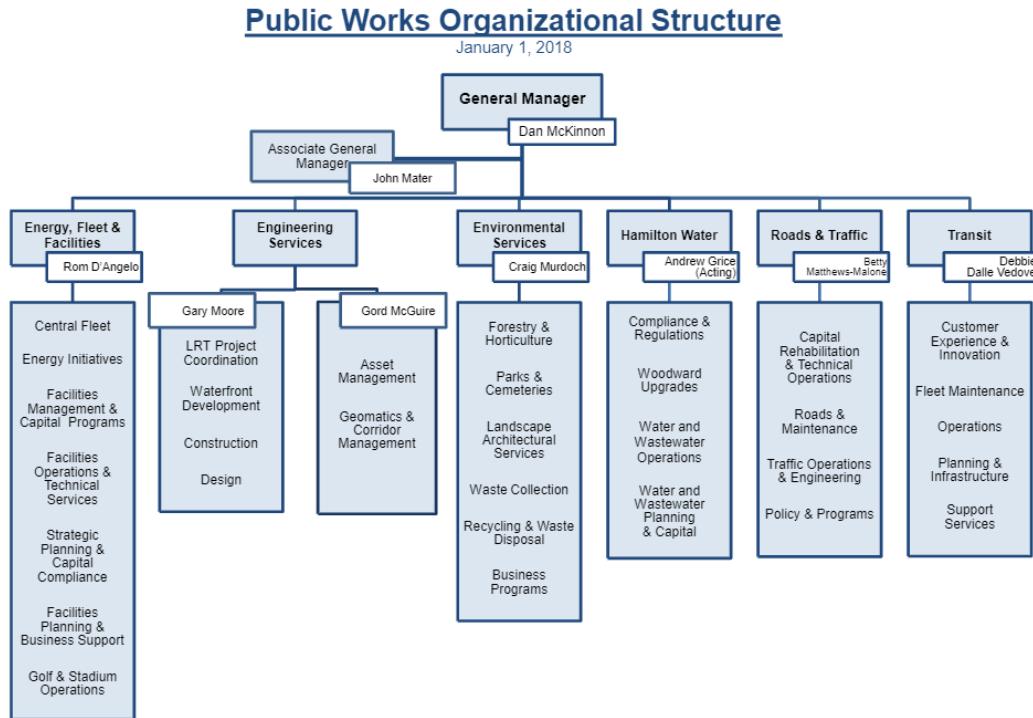
At this time, our day-to-day operations are not going to change at all. There will be no physical changes in staff locations prior to the holidays and it will take some time for these plans to be finalized in the New Year.

I look forward to continuing our journey toward a world-class Public Works department, ensuring the public has trust and confidence in our services, and serving the needs of the residents of this great city.

Thanks for your support and attention during this transition.⁵⁶

⁵⁶ [HAM0058733_0001](#)

55. The organizational chart attached to the email is reproduced below:⁵⁷



56. On January 25, 2018, Laura Keddie (Administrative Assistant to the Director of Hamilton Water, Hamilton Water, Public Works, Hamilton), on behalf of Ms. Wunderlich, sent Mr. Moore a copy of his 2017 Performance Accountability and Development Form (“2017 PAD”).⁵⁸ Mr. McKinnon wrote the following under “6. Overall Comments”:

Gary has had another successful year delivering the capital program for the City of Hamilton. Gary's representation on the LRT file has been invaluable to PW and his ability to assume responsibility for the Waterfront development since February is very much appreciate. Gary will moving to LRT in a more full time was and is likely retiring sometime in 2018, I wish him all the best in his future endeavors. Gary's career is marked by the delivery of significant, city shaping capital projects as well as a capital program that was successfully delivered year about year. Gary and I continue to have fundamental differences around leadership style but having said that I feel Gary and I agree on the fundamentals of many issues and I always appreciate our spirited conversations. I wish Gary all the best going forward!!! Dan McKinnon December 8, 2017⁵⁹

⁵⁷ [HAM0058734_0001](#)

⁵⁸ [HAM0058738_0001](#)

⁵⁹ [HAM0058739_0001](#) at image 4

57. The 2017 PAD was reviewed by Mr. Murray on January 24, 2018. The following was noted:

I fully appreciate the use of the term “spirited”. When done the right way its great otherwise problematic.⁶⁰

2. 2017 Golder Pavement Evaluation

(a) *Arrangements finalized for testing*

58. On December 1, 2017, Ms. Rizvi replied to Mr. Moore’s November 24, 2017 email approving the 2017 Golder Pavement Evaluation. She informed Mr. Becke and Mr. Andoga that Golder intended to conduct the work overnight on December 6-7, 2017. She asked whether or not any permits would be required for the lane closures, and what dates were available for the meeting with Traffic and Emergency Services referenced by Mr. Moore.⁶¹

59. Mr. Becke put her in touch with Rich Shebib (Project Manager, Corridor Management, Geomatics & Corridor Management Services, Engineering Services, Public Works, Hamilton), to coordinate permits and EMS requirements. Ms. Matthews-Malone forwarded the email to Mr. McCleary, requesting that he advise his after-hours staff of the work to be performed, writing “[I]ooks like they are getting their investigative works done before their big capital projects next year....”⁶²

60. Mr. Shebib sent a Lane Closure Permit application to Ms. Rizvi, noting that while there was no charge for the permit because it was being performed for the City, it was important to issue a permit for “permit tracking and road work coordination purposes.” Ms.

⁶⁰ [HAM0058739_0001](#) at image 5

⁶¹ [HAM0001082_0001](#)

⁶² [HAM0001082_0001](#)

Rizvi provided Mr. Shebib with the permit application on December 6, 2017, ahead of the work being completed.⁶³

61. The same day, Mr. Moore asked Ms. Cameron to prepare a purchase order requisition, attaching the Golder proposal for the 2017 Golder Pavement Evaluation. In his email, Mr. Moore described the scope of the work to be conducted as "to take cores and determine asphalt pavement mix properties in advance of 2018 rehab."⁶⁴

62. Mr. Becke's notebooks contain an entry dated December 8, 2017, which states "RHVP – Meeting with Gary about what is going on".⁶⁵

(b) Testing performed on December 6-7, 2017

63. Handwritten notes maintained by Golder, dated December 6-7, 2017, reference testing conducted that night. The notes provided results from the BPT and sand patch testing at each core location. The notes also included a comment indicating that 3 collisions occurred during testing, and that the police did not talk to them. Golder staff removed 30 cores.⁶⁶

(c) Arrangements made for analysis of test results

64. On December 11, 2017, Dr. Uzarowski emailed Stephen Lee (Head, Pavements & Foundations Section, Materials Engineering & Research Office, Highway Standards Branch, Provincial Highways Management Division , MTO) regarding PSV testing, writing:

⁶³ [HAM0001083_0001](#); and [HAM0011145_0001](#)

⁶⁴ [HAM0052844_0001](#)

⁶⁵ [HAM0061788_0001](#) at image 17

⁶⁶ [GOL0001457](#); [GOL0001458](#); [GOL0001459](#); [GOL0001460](#); [GOL0001461](#); [GOL0001462](#); [GOL0001463](#); and [GOL0001464](#)

Do you know who at MTO can do Polished Stone Value (PSV) test and, if could you please send me the contact information? I have to do it for one of the large municipalities here. Typically we would send the samples to Ireland or the UK but due to urgency I wonder if this can be done by MTO.⁶⁷

65. Mr. Lee replied, providing contact information for Joel Magnan (Head, Soils & Aggregates Section, Materials Engineering & Research Office, Highway Standards Branch, Provincial Highways Management Division, MTO).⁶⁸

66. Mr. Magnan, copied to Mr. Lee's email, replied the same day, advised Dr. Uzarowski that the MTO could not perform the testing:

MTO performs PSV testing for the purposes of maintaining MTO's Designated Sources of Materials (DSM) list for Surface Friction Courses. Our laboratory is currently backlogged with internal test requests related to our mandate to support MTO's highway infrastructure program. Sample preparation is very time consuming and our facility and resources are not set up to accommodate 3rd party testing. For requests not directly related to MTO's DSM, please contact third party laboratories that offer this service. These may include, but are not limited to the following laboratories:

AMEC Hamilton (3450 Harvester Road, Unit 100
Burlington, Ontario, Canada L7N 3W5, ph: 905 335 2353)

http://www.acsgroupofcompanies.co.uk/acs_testing/service/Aggregate_Testing

<http://www.testconsult.co.uk/services/materials-testing/specialist-materials-testing/>

<http://www.mastrad.com/psvdoc.htm>

<http://www.celtest.com/index.php/global/info/aggregates>⁶⁹

67. Dr. Uzarowski replied the same day:

Thank you Joel for the clarification.

We have done the testing in the UK and in Ireland in the past.⁷⁰

⁶⁷ [GOL0002880](#)

⁶⁸ [GOL0002902](#)

⁶⁹ [GOL0002902](#)

⁷⁰ [GOL0002901](#)

68. Mr. Magnan replied to Dr. Uzarowski, writing: "O.K. but we confirmed this year that there is a lab in Hamilton that does the test, so that is another option (AMEC)".⁷¹

69. Dr. Uzarowski forwarded his messages with the MTO to Ms. Rizvi, writing:

MTO is too busy to do the PSV testing for us for the Hamilton project. Please see the email below. We will have to send it to Ireland or the UK.⁷²

70. Mr. Moore received the purchase order requisition for the 2017 Golder Pavement Evaluation on December 15, 2017. The requisition identified the scope of work as "to take cores and determine asphalt pavement mix properties in advance of 2018 rehab."⁷³ On December 19, 2017, staff in the City's Procurement Section sent the purchase order to Dr. Uzarowski.⁷⁴

71. On December 15, 2017, Ms. Rizvi and Ms. Jewison exchanged messages regarding the core samples for the 2017 Golder Pavement Evaluation. The cores were to be sent to Jeremy Rose (Asphalt Laboratory Supervisor/Manager, Whitby Office, Golder) to extract the aggregate from the cores prior to the material being sent to Test Consult in Ireland.⁷⁵

72. On December 19, 2017, Ms. Rivzi sent Ms. Jewison a "report skeleton" for the 2017 Golder Pavement Evaluation. The table of contents for the draft, titled "Evaluation of Pavement Surface Skid Resistance, Red Hill Valley Parkway, City of Hamilton", is included below:

⁷¹ [GOL0002901](#)

⁷² [GOL0002900](#)

⁷³ [HAM0052855_0001](#) attaching [HAM0052856_0001](#)

⁷⁴ [HAM0026605_0001](#)

⁷⁵ [GOL0005599](#)

1.0 INTRODUCTION

2.0 FIELD INVESTIGATION

2.1 Sand Patching

2.2 British Pendulum Testing

2.3 Asphalt Coring and Aggregate Extraction

3.0 FIELD AND LABORATORY RESULTS.

3.1 Sand Patching

3.2 British Pendulum Testing

3.3 Asphalt Coring and Aggregate Extraction

4.0 RECOMMENDED METHODS FOR IMPROVING SKID RESISTANCE

5.0 CLOSURE⁷⁶

73. On December 19, 2017, Ms. Rizvi also sent an email to Mr. Rose regarding the extraction of the aggregate to be sent to Ireland. She wrote in the email:⁷⁷

Is there any way it can be started the week of January 2. I hate to be a pain but the aggregates then have to be shipped to Ireland and the testing there will take another couple of weeks. The client is facing an urgent safety issue with their road and would like an answer before further issues arise. Please let me know if that will be possible. Also, how long do you think the extraction will take?

3. Continued drafting of PW18008 and other safety initiatives

74. On December 1, 2017, Ms. Romanoski emailed a draft Report PW18008 and appendices to Diana Aquila (Administrative Secretary to the Associate General Manager & Director of Transportation, Transportation, Public Works, Hamilton) and Ms. Hands-Lourie (with Mr. Mater, Mr. Ferguson and Mr. White copied).⁷⁸

⁷⁶ [GOL0005601](#) attaching [GOL0005602](#)

⁷⁷ [GOL0003560](#)

⁷⁸ [HAM0026542_0001](#) attaching [HAM0026543_0001](#), [HAM0026544_0001](#), [HAM0026545_0001](#) and [HAM0026546_0001](#)

75. On December 4, 2017, Mr. White sent an email to Councillor Chad Collins (Ward 5, Hamilton), attaching the draft and appendices of Report PW18008.⁷⁹ He advised that it was subject to changes by the Director or General Manager.

76. The same day, Ms. Cameron emailed Gord McGuire (Manager, Geomatics & Corridor Management, Engineering Services, Public Works, Hamilton) and Mike Field (Senior Project Manager, Street Lighting & Electrical, Geomatics & Corridor Management, Engineering Services, Public Works, Hamilton) (copying Mr. Moore) regarding lighting on the RHVP. She wrote:⁸⁰

Councillor Conley is requesting an Information Report on lighting the Red Hill as he says he still gets complaints. I spoke to Mike and since Martin is doing a report for January 15th that is responding to 5 previous motions that includes barriers he feels a coordinated effort is required. I suggest, Gord that you, Mike and I sit down and put something to Martin copying in Gary and John Mater.

Mike was approved by Committee for the money to hire the consultant but he thinks the EA may have to be updated.

Mike – any additional information?

77. Mr. McGuire replied to Ms. Cameron's email the same day:

Thanks Diana:

We're looking at this right now as Martin has a report going forward in the next cycle or so I believe that addresses a number of RHVP / Linc outstanding issues.

Lighting needs to be understood in the context of the original EA and restrictions placed in that file. Mike is looking into this currently.⁸¹

⁷⁹ [HAM0026552_0001](#) attaching [HAM0026553_0001](#), [HAM0026554_0001](#) and [HAM0026555_0001](#)

⁸⁰ [HAM0052846_0001](#)

⁸¹ [HAM0052847_0001](#)

78. On December 6, 2017, Mr. White emailed Mr. Mater, asking him to review the revised Linc/RHVP report he had sent Ms. Aquila. Mr. White also asked Mr. Mater to review "the PXO annual installation infor report."⁸²

79. Later that day, Ms. Aquila emailed Mr. White and Mr. Ferguson writing "PXO approved by John. Sent over to Dan for his review/approval."⁸³

80. On the same day, Ms. Aquila sent Mr. White a markup of the revised Linc/RHVP report, with handwritten notes from Mr. Mater asking whether the traffic volume statistics were a snapshot, or normalized data.⁸⁴ Mr. White responded the same day, copying Mr. Ferguson:

John, in short they are snap shot. They are the data used in the CIMA report (is that true Dave?)

Rich Shebib barley had any volume info on these facilities therefore they are all we have and are a snapshot volume. They are not normalized as we no longer have data to adjust for time of day year etc as they stopped collecting volumes to determine the factors.⁸⁵

81. Mr. Mater requested that the report be updated to include at least the date of collection of the data, or to include updated numbers for comparison, stating: "[t]his kind of specifics will open us up to criticism unless we have some other data to support it."⁸⁶

82. Mr. Ferguson replied, stating that the LINC data was recent (within the last year), and that he thought the RHVP data was collected in 2014 or 2015.⁸⁷

⁸² [HAM0046074_0001](#)

⁸³ [HAM0046074_0001](#)

⁸⁴ [HAM0046072_0001](#) attaching [HAM0046073_0001](#)

⁸⁵ [HAM0026571_0001](#)

⁸⁶ [HAM0026571_0001](#)

⁸⁷ [HAM0026571_0001](#)

83. Mr. White responded to Mr. Ferguson only: "Can we hide a line in the paragraph above saying when the data was collected. Im afraid it is old data??? See my bbm too."⁸⁸

84. Mr. White then responded to the whole group (Mr. Ferguson, Mr. Mater and Ms. Aquila):

Ok thanks Dave. Can you give Di a sentance to add to the report paragraph just above the volume chart, referencing the source and date for the volume data for the report. Please confirm dates collected. Thanks.⁸⁹

85. On December 7, 2017, Mr. Cooper sent an email to Mr. Barnet, Mr. Decler, Mr. Izadpanah and Mr. Malone, replying to an email he received on October 27, 2017, regarding the Speed Limit Reduction Study, and CIMA's request for additional speed data. Mr. Cooper advised that the City would be unable to provide any speed data, and that the proposal should reflect the need to collect data.⁹⁰

86. Ms. Cameron emailed Mr. Field and other Public Works staff, attaching the follow-up report from the PWC meeting held on December 4, 2017. She wrote:

See attached as approved.

Mike the lighting on the Red Hill has been added as an OBL item. I will therefore need a date. We can talk more on Tuesday when I'm back in the office.⁹¹

87. Lighting was addressed at Added Item 11.2 of the report:

(ii) Lighting on the Red Hill Valley Parkway (Added Item 11.2)

Staff were directed to report back to the Public Works Committee on the cost of installing brighter lights on the southern portion of the Red Hill Valley Parkway (RHVP) and that the

⁸⁸ [HAM0046076_0001](#)

⁸⁹ [HAM0046077_0001](#)

⁹⁰ [CIM0016041](#)

⁹¹ [HAM0011148_0001](#) attaching [HAM0011149_0001](#)

report also address, what, if any, impact the brighter lighting may have on the Environmental Assessment currently in place for the RHVP.⁹²

88. Mr. Field replied to Ms. Cameron with the following picture:⁹³



89. Ms. Cameron responded, writing “[d]on’t make me go all Gary on you”. Her email included the image below:⁹⁴



90. On December 13, 2017, Mr. McKinnon emailed Mr. Ferguson, Mr. White, Mr. Mater and Ms. Wunderlich, under the subject line “LINC and RHVP Safety Update”. He wrote:

Gents I am going to ask Laura to find 90 minutes for us in the new year for you to walk me through this report⁹⁵

⁹² [HAM0011149_0001](#) at image 15

⁹³ [HAM0052853_0001](#)

⁹⁴ [HAM0052853_0001](#)

⁹⁵ [HAM0026595_0001](#)

91. The meeting was scheduled for January 8, 2018. Mr. Mater, Mr. Ferguson, Mr. White and Ms. Matthews-Malone were included as attendees.⁹⁶

92. On December 14, 2017, Sarath Vala (Project Manager, Design, Engineering Services, Public Works, Hamilton) emailed Paul Nunes (Corridor Management Officer, Corridor Management, Central Region, Provincial Highways Management Division, MTO) regarding the anticipated scheduling of RHVP resurfacing, writing:

The City of Hamilton intends to resurface the northbound lanes for the Red Hill Valley Parkway from north of the Mud street interchange to the QEW limits in the spring/summer of 2018. I have attached an image showing the approximate limits of the proposed work.

I'm wondering and would appreciate it if you could provide information on if there are any special considerations/requirements for MTO that are to be taken into account during the design and construction of this project, and if this work needs to be coordinated with any proposed works on QEW or the service roads. Could you please also confirm if this work would require an MTO encroachment permit? Please note that the resurfacing for the southbound lanes within these limits is intended to be completed the following year in 2019.

Please feel free to contact me if you have any questions or need additional information. Thank You!⁹⁷

93. On December 14, 2017, Mr. Izadpanah provided Mr. Cooper and Mr. Declerl with CIMA's proposal for the Speed Limit Reduction Study. The proposal also included the development of an intelligent transportation system ("ITS") strategic plan for the RHVP and LINC. The work plan for the project contemplated a stakeholder workshop (including emergency services, transit, maintenance, traffic management, traffic safety, planning, the MTO and others identified) to gain support for the project from the groups and determine their needs.⁹⁸

⁹⁶ [HAM0005546_0001](#)

⁹⁷ [HAM0026601_0001](#)

⁹⁸ [HAM0046130_0001](#) attaching [HAM0046131_0001](#)

94. The proposal included the speed study portion of the project as the second phase and involved a review of the best practices relevant to determining an appropriate speed limit, the collection of speed data (for which Pyramid Traffic Inc. was retained by CIMA) and a review of the existing RHVP and LINC speed limits. A third optional task, the evaluation of the accuracy of Bluetooth data, was also included. The cost estimate for the proposal was \$91,240.00.⁹⁹

95. On December 20, 2017, Ms. Cameron emailed Ms. Wunderlich regarding the date for the lighting report on the Outstanding Business List, writing:

Will be added to the December 10, 2018 date hoping it will go sooner. A lot of Mike's response will depend on the outcome on PW18008 going January 15th.¹⁰⁰

96. On December 20, 2017, Mr. White sent Councillor Lloyd Ferguson (Ward 12, Hamilton) a copy of Report PW18008. The email reflected that they had spoken previously regarding the report when Councillor Ferguson visited the Traffic Operations centre on December 15, 2017. The report was signed by Jennifer DiDomenico (Manager, Policy & Programs, Corporate Assets & Strategic Planning, Public Works, Hamilton), who was to be the Acting Director of Transportation at the January 15, 2018, PWC meeting.¹⁰¹

97. The report outlined that since January 2013, there had been 10 Council motions regarding the RHVP and LINC, and that the purpose of the report was to consolidate and address the outstanding 5 reports. This included a broad range of safety and traffic related initiatives, including the implementation of short- and medium-term countermeasures

⁹⁹ [HAM0046131_0001](#)

¹⁰⁰ [HAM0052858_0001](#)

¹⁰¹ [HAM0046146_0001](#) attaching [HAM0046147_0001](#)

identified in the 2015 CIMA Report and 2015 CIMA LINC Report, an annual detailed collision analysis of the RHVP and LINC, continued HPS speed and aggressive driving enforcement of the LINC and RHVP, proposed widening of the RHVP, an annual traffic count program and the future installation of median barriers. Public Works staff was also to report back to the PWC in 2020 to provide an update regarding the overall conditions of the LINC and RHVP, focusing on safety, the need for widening, truck activity and MTO activity relating to widening of the QEW or Highway 403.¹⁰² The report recommended that three items on the PWC outstanding business list be removed:

1. Expansion of Redhill Valley Parkway (RHVP) and Lincoln Alexander Parkway (LINC) (PW16084) (City Wide) (Item 8.1)
 - (d) That the matter respecting the Expansion of the Redhill Valley Parkway (RHVP) and Lincoln Alexander Parkway remain on the Outstanding Business List of the Public Works Committee and also be referred to the consideration of the development of the Transportation Master Plan.
2. Status Report about Issues Relating to the LINC and Red Hill Valley Parkway
 - (a) That staff be directed to bring back an Information Report to the Public Works Committee respecting the status of installing medians/other barriers on the LINC and Red Hill Valley Parkway (RHVP) that the report contain information about the cost of such measures.
3. Traffic Incidents on the LINC and Red Hill Valley Parkway

That staff from Traffic Operations be directed to consult with the Hamilton Police Service to bring forward a plan to report annually on fatal incidents on the LING and RHVP and that the report identify causes of the incidents.¹⁰³

98. The report included information regarding the collection date and source of the traffic volume data, as discussed by Mr. Mater, Mr. White and Mr. Ferguson, in a paragraph on page 3 of the report. The table with the data is on page 7 of the report.¹⁰⁴

¹⁰² [HAM0046147_0001](#)

¹⁰³ [HAM0046147_0001](#) at image 2

¹⁰⁴ [HAM0046147_0001](#) at images 3 and 7

99. The report also discussed the findings from the 2015 CIMA Report and 2015 CIMA LINC Report:¹⁰⁵

The reports identified that there is an over representation of incidents that occur on the LINC under dry road conditions and on the RHVP under wet road conditions.

...

Both Safety reports identified that collisions are occurring as a result of speeding, aggressive driving, following to close, distracted driving and driving too fast for weather conditions. Recent enforcement completed by Hamilton Police Services identified that over ninety percent of all violations issues were directly related to speeding. In addition, the Police Chief and Ontario Provincial Police have identified that speeding, aggressive driving and distracted driving are the leading causes of fatal collisions in Ontario.

100. The report indicated that Public Works staff identified that the installation of the collision countermeasures from the 2015 CIMA Report and 2015 CIMA LINC Report "could address some of the driver behaviour issues that are causing collisions to occur." VMS signs (to raise awareness of speed limits and operating conditions) and queue end warning systems (to notify drivers of slow traffic ahead) were included as examples.¹⁰⁶

101. The report also discussed the scheduled repaving of the LINC and RHVP between 2018 and 2021, with the scope to include cats' eyes, pavement markings, and shoulder rumble strips.¹⁰⁷

102. The installation of barriers was also discussed:¹⁰⁸

Crossover collisions represent five percent of the total number of collisions that occur on the LINC and three percent of the total number of collisions that occur on the RHVP. The installation of barriers would greatly reduce the likelihood of crossover incidents occurring; however there are other potential impacts that may arise and cause a continued safety issue. In addition, the installation of barriers does not directly address the primary root

¹⁰⁵ [HAM0046147_0001](#) at image 4

¹⁰⁶ [HAM0046147_0001](#) at image 4

¹⁰⁷ [HAM0046147_0001](#) at image 4

¹⁰⁸ [HAM0046147_0001](#) at image 5

cause of the collisions, speeding, aggressive and distracted driving. These driver behaviour issues must be addressed or collisions will continue to occur.

As the LINC is currently built with a curbed centre median and the RHVP with a grass swale median, both facilities would need to be properly designed by an Engineer to ensure for a safe and appropriate installation. Should the need for widening be supported through the process, staff recommends that appropriate median barriers be designed and installed in co-ordination with future reconstruction and widening of both the LINC and RHVP.

103. Appendix A to the report provided a completion status for the collision countermeasures from the 2015 CIMA Reports. Pavement friction testing was marked as complete.¹⁰⁹

104. On December 26, 2017, a member of the public sent an email to the Mayor and Council, attaching an article regarding speed limits. He wrote in his email that he socializes with police officers in various surrounding areas, and when he mentions he is from Hamilton “universally the first comment is, the badly designed death trap RedHill valley.” He identified the curves, visual distractions, traffic and the interchanges being close together as issues.¹¹⁰

D. January 2018

1. Continued discussion of RHVP resurfacing and anticipated timeline

105. Mr. Moore emailed Ms. Matthews-Malone on January 2, 2018, regarding the status of RHVP resurfacing. The email appears to have been in response to an email sent by Ms. Matthews-Malone. He wrote:

Right now we are progressing towards a February tender but I am waiting to hear from Ludomir with regard to our testing results. Then we have to make a decision on whether we are going to post-pone the tender this year in favour of Hot-in-place instead of shave-and-pave. Whatever Traffic has established with Asset Management on scope on what

¹⁰⁹ [HAM0046147_0001](#) at image 12

¹¹⁰ [HAM0026627_0001](#)

accounts are paying for what is what is being incorporated. If you have a list things you can send it to Sam/Rick for confirmation.¹¹¹

106. Ms. Matthews-Malone forwarded the email, and subsequently discussed the scope of resurfacing with Mr. Ferguson and Mr. White:

[Ms. Matthews-Malone]: For your info as well. With the report going next Monday just wanted to make sure we were up to speed on their status. Also want to make sure that they include your requirements. They are going out earlier than I expected (unless they use the new technology). Do you guys get a chance to see the tender documents prior to release?

[Mr. White]: We don't usually see the actual tender documents unless we ask but we did add scope, including inlaid pavement marking reflectors and right side edge line rumble strips.... The RLC reserve is paying for the inlaid reflectors Did I miss anything else Dave?

[Mr. Ferguson]: The following is the Scope that we have submitted into CPMS

Traffic Scope:

Note: the following scope was requested by Traffic staff for coordination with the resurfacing of RHVP and LINC. The scope for both the RHVP and LINC, and for both directions, has been included below, for your information, and is to be considered/applied to the respective section of roadway being designed.

1. Installation of Reflective Recessed Pavement Markings - full length of roadway including on/off ramps (funded 100% by Red Light Camera fund)
2. Pavement Markings to be completed in hard plastic (capital funding) (refer to pavement marking info/documents on S:\ path) Each edge line and lane line

Note: budgeted \$500K for each direction of RHVP and \$500K for each section of LINC, total \$2M for pavement markings

3. Shoulder Rumble Strips (capital funding)

Note: budgeted \$250K for each direction of RHVP and \$375K for each section of LINC

- 4a. Modify the Dartnall eastbound on-ramp to Upper RHVP off ramp so that it is a continuous auxiliary lane. Minor widening may be required.

5. Modification to Alignment between Mud Street and Dartnall - modification to Spiral Curve

8. Only one off-ramp is to be converted to a single lane exit, that being the off-ramp from RHVP NB to Mud St. This was identified in the CIMA report and is already identified in Traffic's work program. This will be a simple restriping. For all other ramp locations with double lane exits, Traffic will include a through arrow/right turn arrow durable pavement markings on the mainline travel lane to assist in raising awareness to the motorist.

¹¹¹ [HAM0001086_0001](#)

Note: Bike lanes are planned through the King Street interchange in 2018 so any resurfacing of these ramp termini, should be coordinated. King Street bike lanes are identified in the approved Cycling Master Plan. The 2018 bike lanes work will include concrete works at the ramp terminus.

[Ms. Matthews-Malone]: Thanks guys. Any impacts if they go hot in place versus shave and pave? Thinking a couple of the items might be a bit pricier but I'm not that knowledgeable on the technology he is investigating....¹¹²

107. On January 16, 2018, Susan Jacob (Manager, Design, Engineering Services, Public Works, Hamilton) emailed Sam Sidawi (Manager, Asset Management, Engineering Services, Public Works, Hamilton), Mr. McGuire and Mr. Moore (copying Mr. Becke) regarding 2018 capital projects. She wrote:

Below are some of the highlights to Changes to Capital Project Delivery Program for 2018.

10986- RHVP Rehabilitation was committed for a Jan 24th tender. However the project is still in programming with Scope still being modified. The delay in the project should be communicated to the HAND association and all internal and external parties including Traffic, Road Operations etc. Design has reallocated its resources to Project 1159: Birch Ave: Wilson to Barton reconstruction which was added to Project delivery in Dec 2017 in response to PTIF finding.¹¹³

108. Mr. Sidawi emailed Ms. Jacob the same day, noting that they still needed to confirm whether the RHVP was to be rehabilitated using HIR, and if so, construction would be deferred to 2019.¹¹⁴

109. On January 31, 2018, Mr. Becke emailed Mr. Andoga, Mr. Moore, Mr. Perusin and Ms. Jacob regarding HIR. He advised that they had received a copy of the MTO's HIR tender documents for a project in Northwestern Ontario.¹¹⁵

¹¹² [HAM0001086_0001](#)

¹¹³ [HAM0026671_0001](#)

¹¹⁴ [HAM0026671_0001](#)

¹¹⁵ [HAM0026701_0001](#)

2. Follow-up from 2017 Golder Pavement Evaluation

110. Dr. Uzarowski's notebooks included an entry dated January 2, 2018, which appeared to refer to the 2017 Golder Pavement Evaluation. The note included the following:

Hamilton – PSV (next week) – HIR/, spec, pav. cond.

Summary

laboratory testing scheduled this week – report next week¹¹⁶

111. On January 8, 2018, Mr. Moore emailed Dr. Uzarowski regarding the 2017 Golder Pavement Evaluation, asking “[h]ow are the tests progressing (PSV. Etc) for the Red Hill?”¹¹⁷

112. Dr. Uzarowski responded the same day, writing:

We have the friction (from British Pendulum Tester) and texture (Sand Patch test) results at the locations where we took cores on the RHVP. We are completing the extraction, washing and preparing the aggregate samples for PSV testing. They will be sent by the end of this week. We anticipate the PSV results by the end of this month.¹¹⁸

113. Mr. Moore replied and asked Dr. Uzarowski for the preliminary results from the BPT and sand patch.¹¹⁹ To date, the Inquiry has not received any documents evidencing a reply to this email.

3. 2018 Collision Memorandum

114. On January 9, 2018, Mr. Ferguson emailed Mr. Izadpanah, Mr. Malone and Mr. Hadayeghi, replying to an email sent by Mr. Izadpanah in November 2017. He wrote:

¹¹⁶ [GOL0007414](#) at image 62

¹¹⁷ [GOL0002903](#)

¹¹⁸ [GOL0002904](#)

¹¹⁹ [GOL0002904](#)

Wondering if you would be able to assist me with this. On Monday we are headed back to Committee for an update on the RHVP/LINC, during the Management discussions yesterday, the GM asked how these numbers compare to other locations, are we on par with others. They have asked if it would be possible to have a comparison to other similar type roadways. A couple of locations came up, 406 through St. Kitts, Hwy 7/8 in Kitch, DVP. Wondering if you would have any information related to those locations that I could go through and use as a comparison.

In addition, John Mater asked for the collision rate of the 2 facilities. I did find in the report the collision rate related to that of the median barrier. Two parts to this question,

1. There was discussion that we identified any median related collision in the collision rate, however the feeling was that for many of the instances, the median did what it was intended to do and a vehicle did not completely cross the median. Would you be able to tell me what the Collision Rate would be if we just looked at those vehicles that crossed.
2. Do you guys by chance have the collision rate for both facilities based on the mainline collisions/direction?

One other question for you, I have always used 1.0 as the Red Flag for a collision rate. Is that still a fair assessment for a roadway like this or should I be considering something different? I am continuously hearing the roads referred to as freeways, so is a collision rate higher on a freeway? Is there a Provincial Highway collision rate that we could compare to?

If there is some work involved in putting any of this together, please do send me an invoice for the work, I can get John to sign it off if needed.¹²⁰

115. Mr. Izadpanah indicated they could prepare a brief memorandum, though noted they may need to get permission from other CIMA clients to use their data. He proposed \$5000 as a limit for the work to be performed.¹²¹

116. On January 10, 2018, Mr. Ferguson advised Mr. Izadpanah that the memorandum would be needed by the morning of January 15, 2018, and that if needed, the specific roadways did not need to be named in the memorandum. Mr. Ferguson later informed Mr. Izadpanah that he had the “ok to proceed”.¹²²

¹²⁰ [HAM0001088_0001](#); and [CIM0014718](#)

¹²¹ [HAM0001088_0001](#); and [CIM0014717](#)

¹²² [CIM0014716](#); [CIM0010203](#); and [CIM0010304](#)

117. On January 11, 2018, Mr. Ferguson emailed Mr. Decleir and Mr. Cooper, asking for an update on the status of the Speed Limit Reduction Study and the QEWS Study, as Ms. Matthews-Malone wanted to share this information with the PWC. Mr. Cooper replied that the necessary paperwork was completed and sent to Traffic Operations, and that they were waiting for the purchase order number to start the project. He noted that CIMA's proposal, sent December 14, 2017, listed the end of May as the date for their final report, if CIMA was able to begin by January 22, 2018.¹²³

118. On January 12, 2018, Mr. Ferguson emailed Mr. Izadpanah regarding the status of the memorandum. Mr. Izadpanah advised that he would receive the report that day. He subsequently sent the report that evening.¹²⁴

119. The same evening, Mr. White forwarded the memorandum to Mr. Mater, Ms. Matthews-Malone, Mr. Moore and Mr. McKinnon, writing:

Please find attached an analysis conducted by the Consultant to address the questions we discussed at our meeting this week. David and I will review the data and will be prepared to use it as required to assist PW during discussion of the Linc/RHVP report. In general the collision rates on our facilities are lower than on the corresponding MTO roadways we discussed. In fact in comparison we have a very much lower collision rates. Should you have any questions or concerns let us know.¹²⁵

120. The memorandum, dated January 12, 2018, compared the average collision numbers between 2009 and 2013 for the RHVP and LINC with three provincial highways: Highway 406 (between Highway 58 and QEW in St. Catharines), Highway 7/8 (between Conestoga Parkway/Victoria Street N and Trussler Road in Kitchener) and Highway 8 (between Sportsworld Drive and Highway 7 in Kitchener) ("2018 CIMA Collision Memo").

¹²³ [HAM0046229_0001](#); and [HAM0046130_0001](#) attaching [HAM0046131_0001](#)

¹²⁴ [HAM0046235_0001](#)

¹²⁵ [HAM0001094_0001](#)

It noted lower collision rates on the RHVP and LINC compared to the three provincial roadways.¹²⁶

121. Also on January 12, 2018, Nicole O'Reilly (Report, Hamilton Spectator) emailed Ms. Graham, Mr. White and Mr. Ferguson requesting an interview regarding the upcoming RHVP and LINC report for the PWC meeting.¹²⁷

122. Mr. White emailed Mr. Ferguson, copying Ms. Matthews-Malone, in response. He wrote “[s]taff are not going to make any comment to media until after the matter is debated at PW.”¹²⁸

123. Ms. Graham advised Ms. O'Reilly that they could answer questions regarding clarity, but that they “always like to give Council a genuine opportunity to review reports” before commenting publicly.¹²⁹

4. Additional Commentary Regarding 2018 CIMA Collision Memorandum

124. On January 14, 2018, Mr. Izadpanah emailed Mr. Ferguson, providing additional comments regarding the 2018 CIMA Collision Memo.

I was thinking about your questions today and thought it will be useful for you to know the proportion of fatal and injury collisions (severe collisions) in total number of collisions for LINC/RHVP and the comparison highways. So, I just did the analysis and results can be interesting for your tomorrow's meeting:

HWY	% Severe Collisions
LINC	58%
RHVP	44%
HWY 406	19%
HWY7	23%
HWY 8	22%

¹²⁶ [HAM0001095_0001](#)

¹²⁷ [HAM0046231_0001](#)

¹²⁸ [HAM0046231_0001](#)

¹²⁹ [HAM0046232_0001](#)

This table shows that more than half of collisions on the LINC and almost half of the collisions on the RHVP are either fatal or injury collisions. These percentages are significantly more than the highway sections in the comparison group. This is despite the fact that the LINC and RHVP have smaller collision rates as per the memo we sent you on Friday.¹³⁰

125. Mr. Ferguson forwarded the email to Mr. White the same day, writing “interesting stuff.” Mr. White responded, “Yea why is the Linc and RHVP less forgiving?”¹³¹

126. Mr. White forwarded Mr. Ferguson’s email to Ms. Matthews-Malone the same day, writing:

This set of stats is not as favorable. Despite having a lower collision rate the Linc RHVP has a much higher injury and fatality rate. See email from Pedram below. For now I haven’t shared this with anyone else. I’m not sure what the cause is for this at this time? Speeding and distracted driving with a lower design speed is likely part of it. See you Monday morning!¹³²

127. He subsequently forwarded this email to Mr. Ferguson, writing that he “only sent this to Betty. Note my comments”.¹³³

128. On January 15, 2018, at 8:15am, Ms. Matthews-Malone responded to Mr. White’s email, writing that they should notify Mr. McKinnon prior to the PWC meeting later that day.¹³⁴

¹³⁰ [HAM0046235_0001](#)

¹³¹ [HAM0046235_0001](#)

¹³² [HAM0046236_0001](#)

¹³³ [HAM0046236_0001](#)

¹³⁴ [HAM0001099_0001](#)

129. At 9:05am, Mr. White forwarded Mr. Ferguson's January 14, 2018 email to Mr. McKinnon, Ms. Matthews-Malone, Mr. Mater and Mr. Moore (copying Mr. Ferguson).¹³⁵

He wrote:

Cima added some additional data on injury and fatality rates. See below. In this regard we have a higher rate of injury/fatal collisions than the comparative data. This is likely caused by speeding and distracted driving. We have to remember that the Parkway design speed is lower than provincial highways.

5. January 15, 2018 PWC Meeting

130. On January 15, 2018, the PWC met with Councillors Ferguson, Tom Jackson (Ward 6, Hamilton), Sam Merulla (Ward 4, Hamilton), Collins, Terry Whitehead (Ward 8, Hamilton), Doug Conley (Ward 9, Hamilton), Arlene VanderBeek (Ward 13, Hamilton) and Maria Pearson (Ward 10, Hamilton) present.¹³⁶

131. The City produced a set of handwritten notes titled "Jan 15, 2018 PWC Notes".¹³⁷ The author of the note was not indicated. The notes included:

¹³⁵ [HAM0026667_0001](#)

¹³⁶ [RHV0000717](#)

¹³⁷ [HAM0026666_0001](#)

Jan 15, 2018
 PwC
Notes

Recommended list of Short term & Med Term measures
 be completed - Paving @ eye rumble strips Qend.

Recommended annual update of Collision & volume
 data

Recommend barrier be installed only when
 widened. Cost it before

Recommend continue to monitor widening regions
 MTO plans affect. - Budget -

Width into median - construct barriers

132. On January 15, 2018, McKinnon sent a calendar invite to Ms. Matthews-Malone, Mr. White, Mr. Ferguson, Mr. Mater, Mr. Moore, Mr. McGuire and Grant McGuire (Fleet Technician, Central Fleet; Energy, Fleet & Facilities Management, Public Works, Hamilton). The meeting was scheduled for January 31, 2018, and the subject was "Follow up to Red Hill Report - PW Committee Jan 15, 2018".¹³⁸

133. The same day, January 15, 2018, Ms. Graham emailed Mr. McKinnon and Mr. Moore regarding a RHVP-related media inquiry:

CHML is looking to have someone on to talk about the consultant report on the RHVP asphalt. I'm not sure if something has come up around this in recent days? Can you advise if we are able to speak to this report or if we need to decline?

Dan – anything you can add in resulting from your exchange with them from this morning?

¹³⁸ [HAM0009345_0001](#)

The interview request is for 12:35 with Scott Thompson.¹³⁹

6. Continued discussions regarding Speed Limit Reduction Study

134. On January 22, 2018, Mr. Ferguson emailed Diane Piedimonte (Assistant to Councillor Sam Merulla, Ward 4, Hamilton) to arrange a meeting with Councillor Merulla regarding "his motion related to the reducing the speed limit on the Parkways." This meeting was arranged for February 7, 2018.¹⁴⁰

135. The same day, Mr. Cooper emailed Mr. Izadpanah and Mr. Decleir, regarding the Speed Limit Reduction Study, writing:

Just wanted to let you know that we are still waiting for a PO#. Hopefully we'll have it shortly so you can begin the assignment.¹⁴¹

7. Discussions regarding scheduled document destruction

136. On January 9, 2018, Debbie Gargano (Records & Information Management Clerk, Office of the City Clerk, Corporate Services, Hamilton) emailed Mr. McKinnon regarding records scheduled for destruction.¹⁴²

137. On January 11, 2018, Mr. McKinnon, through Ms. Wunderlich, emailed various Public Works directors and assistants, asking whether any of the documents were related to their respective divisions, requesting a response by January 26, 2018. This was in turn forwarded by Rebeka Eisbrenner (Administrative Assistant to the Director of Roads & Traffic, Roads & Traffic, Public Works, Hamilton) to Mr. Paul, Brian Hughes (Manager,

¹³⁹ [HAM0005561_0001](#)

¹⁴⁰ [HAM0005568_0001](#)

¹⁴¹ [CIM0016021](#)

¹⁴² [HAM0011161_0001](#)

Capital Rehabilitation & Technical Operations, Roads & Traffic, Public Works, Hamilton), Mr. White and Ms. DiDomenico.¹⁴³

138. On January 25, 2018, Ms. DiDomenico sent Ms. Eisbrenner's January 11, 2018, email regarding document destruction to Mr. Oddi and Mr. Moore.¹⁴⁴ She wrote:

I wanted to check in with you for any comments you have on these files – I've gone through and highlighted the ones specific to RH.

There are various types of files from Design Construction Tenders, on both the Linc and RHVP, analysis reports and condition assessments.

Please take a few minutes to review and let me know if you have need to continue to store any of these records or if you would support their destruction at this time.

139. Mr. Moore and Ms. Di Domenico exchanged messages on January 26, 2018:

[Mr. Moore]: I don't need any of these. But I'll let you know the keep asking for lighting on the Red Hill and I keep telling them they would have to re-open the EA. Am I correct in that assumption? Would it be an addendum? How would they even do that?¹⁴⁵

[Ms. Di Domenico]: That is a great question but I don't do EAs for unfortunately I don't have an answer for you. Probably best to direct that question to Al and Lorissa.

That being said, do you want the EA document and material that's in the boxes (as there are a few)?

[Mr. Moore]: I don't want any of it! But they might need some of it if they are going to re-open the EA!¹⁴⁶

8. Pavement inspection and road maintenance

140. On January 17, 2018, Mr. Sidawi emailed Leanne Whiteley-Lagace (Pavement Management Team Lead, Stantec Consulting Ltd.), asking:¹⁴⁷

Do you have any good graphs or tables that correlate Pavement Condition index to maintenance cost or effort?

¹⁴³ [HAM0011161_0001](#)

¹⁴⁴ [HAM0011161_0001](#) attaching [HAM0011162_0001](#)

¹⁴⁵ [HAM0011163_0001](#)

¹⁴⁶ [HAM0011163_0001](#)

¹⁴⁷ [HAM0046249_0001](#)

141. Ms. Whiteley-Lagace responded, providing cost tables for major rehabilitation on asphalt roads. The table provided a cost per square foot based on the pavement condition index.¹⁴⁸

142. On January 19, 2018, Mr. Sidawi sent Mr. McCormick (copying Mr. McGuire) a PowerPoint titled “Road Rehab and Maintenance Needs V1”. The PowerPoint listed the RHVP/LINC as having a condition index of 77 in 2015. The PowerPoint indicated that values between 60-100 are considered good.¹⁴⁹

E. February 2018

1. Discussions regarding safety initiatives and collisions on the RHVP

(a) Correspondence with HPS

143. On February 1, 2018, Walter Johnston (Police Constable, Support Service Division (Traffic), HPS) emailed Linda Juchniewicz (Collision Analyst, Traffic Operations, Traffic Operations & Engineering, Roads & Traffic, Public Works, Hamilton) regarding collision data. He wrote:

Sorry to bother you but I have two requests...one is standard and the other is special.

May I please have my Jan 2018 MVC Stats for Tuesday or Wed of next week...please, and thanks.

The second request comes from the Chief...via my Supt.

May I have for the year 2017 the MVC Stats for the Linc & Red Hill.

I need total number of MVC P.D.'s.....&..the total number of P.I.'s (Box 75codes 1,2 &3...totals)

I can get the number of fatal's which is = 3 (For these numbers, can you get them at your earliest convenience..Thanks Linda.)¹⁵⁰

¹⁴⁸ [HAM0046249_0001](#)

¹⁴⁹ [HAM0005565_0001](#) attaching [HAM0005566_0001](#) at images 2, 5

¹⁵⁰ [HAM0057299_0001](#)

144. Ms. Juchniewicz responded the same day, writing:

Hi Walter,

Reportable collision stats for the Linc/Rhvp, as requested.

2017 – Linc:

Fatal = 2

Non-fatal injury = 34

P. D. only = 30

Total collisions on the Linc for 2017 = 66

2017 – Rhvp:

Fatal = 1

Non-fatal injury = 39

P. D. only = 57

Total collisions on the Rhvp for 2017 = 97.¹⁵¹

(b) *Continued discussions regarding 2018 Collision Memorandum*

145. On February 1, 2018, Mr. Ferguson replied to Mr. Izadpanah's email from January 14, 2018, regarding the increased proportion of severe collisions (defined by CIMA as collisions involving fatalities or injuries) on the LINC and RHVP:

At our Management meeting yesterday, our General Manager asked the question of why are motorists more likely to be injured travelling on our roadways when involved in a collision compared to the others and why is it close to 50% of collisions.

My comment based on what I recall from the reports, was that there is evidence of speeding on both facilities, LINC dry conditions, RHVP wet conditions. Police have reported that 95% of the violations they issue on these facilities is related to speeding. I also suggested that the Hwy 7 & 8 facilities might have longer hours of heavy volume and therefore motorists aren't able to speed as often. Hwy 406 I suspect is lower simply because the vehicle speeds are simply lower because you simply can't really speed through the section in St. Kitts just simply because of roadway geometrics.

Any thoughts?¹⁵²

¹⁵¹ [HAM0005580_0001](#)

¹⁵² [HAM0001105_0001](#)

146. Mr. Izadpanah responded:

That is a very good question. As you said, speed is definitely a major cause. But, the question might be whether the proportion of motorists speeding on the LINC/RHVP is larger than those motorists on the comparison highways. Another question is whether the comparison highways have a more forgiving environment.

Do you mind if I have a look at a few things and get back to you tomorrow?¹⁵³

147. On February 4, 2018, Mr. Izadpanah emailed Mr. Ferguson, writing:

We dissected severe collisions (Fatal and Injury) on the LINC/RHVP and the comparison highways into weekend and weekday collisions. Then looked into the hours of day during weekdays when collisions took place. Please see attached.

A few observations:

- RHVP experiences 25% of severe collisions on weekends. This is very similar to the comparison highways. I attribute these collisions to high speed.
- The LINC experiences 16% of severe collisions on weekends. It is very different from the other highways.
- Severe collisions during early morning (00:00 – 2:59 & 3:00 – 5:59) and late night (21:00 – 23:59) for both the LINC and RHVP are very similar to the other highways.
- On the LINC, 34% of collisions occur during AM peaks and exactly 27% of collisions occur during PM peaks.
- For the RHVP, 27% of collisions occur during AM peaks and exactly 27% of collisions occur during PM peaks.

As you suggested, these observations show that speed is the problem. Also, they show that the PM and AM peaks are the biggest issues.

It is counter intuitive to have speeding related collisions during AM and PM peaks. But, as we wrote in our reports, there is a big speed differentials between the two lanes on the LINC. I highly suspect that this is a major contributing factor to the severity of collisions. This large speed differential is unusual and not necessarily observed on the other highways.

We are starting a speed review study requested by Steve Cooper. This study will give us much better insight into the speed issue on these highways.

I hope this is helpful.¹⁵⁴

148. On February 5, 2018, Mr. Ferguson replied to Mr. Izadpanah's email from February 1, 2018, writing:

¹⁵³ [HAM0001105_0001](#)

¹⁵⁴ [HAM0001102_0001](#) attaching [HAM0001103_0001](#)

Thank you for the updated information Pedram, it is truly appreciated and Martin also says thank you for the work you have assisted us on with this.

Are you comfortable with these numbers and the percentages in which injuries occur? Our GM and the director of Eng (Gary Moore) questioned that 1 in 2 collisions on the facilities resulted in a serious injury or fatality. Not sure if you have met Gary, but he emphatically questioned that. Our GM is pretty supportive, but when Gary went off in this meeting, he raised the question. Almost 50% does seem high, but as I said, I related it to the speeds.¹⁵⁵

149. Mr. Izadpanah responded the same day, stating:

Thanks a lot for your email.

We will double check the numbers and get back to you on this shortly. To clarify, the statistics are for fatal and injury collisions and not fatal and **serious** injury collisions.¹⁵⁶

150. The following day, Mr. Izadpanah emailed Mr. Ferguson to confirm the statistics, writing:

We double checked the numbers and it is confirmed that:

- The LINC has 58% Fatal and Injury collisions (166 out of 286 collisions, 2009 – 2013)
- The RHVP has 44% Fatal and Injury collisions (134 out of 306 collisions, 2009 – 2013)

As mentioned yesterday, no distinction between minor and major injuries, only fatal/non-fatal injuries were reported.¹⁵⁷

151. Mr. Ferguson forwarded this response to Mr. White the same day. He also copied part of Mr. Izadpanah's February 4, 2018 email, and added:

Further to our discussion, I have reviewed and discussed with Pedram from CIMA. Pedram has further responded they have confirmed the numbers related to injuries. Pedram has further identified that these stats are related to injuries to fatalities. There is no differential in the severity of the injuries, it is simply that some level of injury has been identified or a fatality.

- The LINC experiences 16% of severe collisions on weekends. It is very different from the other highways.
- On the LINC, 34% of collisions during weekdays occur during PM peaks. This is higher than the other highways.

¹⁵⁵ [HAM0001105_0001](#)

¹⁵⁶ [HAM0001105_0001](#)

¹⁵⁷ [HAM0001106_0001](#)

- For the RHVP, 27% of collisions occur during AM peaks and exactly 27% of collisions occur during PM peaks.

As you suggested, these observations show that speed is the problem. Also, they show that the PM and AM peaks are the biggest issues.

It is counter intuitive to have speeding related collisions during AM and PM peaks. But, as we wrote in our reports, there is a big speed differentials between the two lanes on the LINC. I highly suspect that this is a major contributing factor to the severity of collisions. This large speed differential is unusual and not necessarily observed on the other highways.

As you can see, Pedram is of the position that vehicle speeds are a direct reflection to the resulting injury, I would even add the addition of distracted and aggressive driving. I am also going to bring this up at the HSRSC meeting this week to discuss with the police and get their feedback on the issue.¹⁵⁸

152. Mr. White forwarded this on February 7, 2018 to Ms. Matthews-Malone, writing:

Hi Betty I am sharing this detailed data with you as there are some interesting things arising from the data. (speed differential between the lanes etc) I have asked Dave to consolidate the data to answer Dan's questions as I think this is too detailed and a bit confusing the way it is presented now. Once Dave complies the data for Dan I will share it with you before we transmit it. I have also asked for the collision data in the PW report to be fully updated to 2017.

Let me know if you think we need further analysis at this point.¹⁵⁹

153. Ms. Matthews-Malone replied the same day:

Interesting stuff. First thing that came to mind was that timeslots could potentially assist Police on when to target enforcement. Will be interest to hear what comes of Dave's meeting with Police. Other interest was wet condition summary. Wondering when Gary going to have his core samples back?

Thanks for overview. Looking forward to seeing draft responses for Dan.¹⁶⁰

154. On February 6, 2018, Ms. Juchniewicz exchanged emails with Mr. Ferguson regarding the collision statistics in a chart which appears to have originated from the PW18008 Report, presented to the PWC on January 15, 2018:

¹⁵⁸ [HAM0001125_0001](#)

¹⁵⁹ [HAM0001125_0001](#)

¹⁶⁰ [HAM0001125_0001](#)

[Ms. Juchniewicz]: Martin has asked for this chart to be updated, I was told CIMA did the stats but I'm not getting the same numbers for total collisions in any of the years. Can you let me know how they came up with these numbers.

The reports identified that there is an over representation of incidents that occur on the LINC under dry road conditions and on the RHVP under wet road conditions. As a result of a number of cross-over fatal collisions, there has been public debate on the need to install median barriers along both the LINC and RHVP.

Collision History of LINC-RHVP 2008-2014

Year	Total Collisions LINC	Fatal Collisions on LINC	Number of Crossover Collisions on LINC	Total Collisions RHVP	Fatal Collisions on RHVP	Number of Crossover Collisions on RHVP
2008	42	0	3	43	1	0
2009	54	1	6	37	0	1
2010	40	0	4	51	0	1
2011	60	0	1	71	0	3
2012	65	1	3	67	1	1
2013	67	0	2	80	0	1
2014	61	1	3	71	0	4
Total	389	3(2)	22	420	2(1)	11

Note: (x) represents the number of fatal collisions from a crossover collision

Both Safety reports identified that collisions are occurring as a result of speeding, aggressive driving, following to close, distracted driving and driving too fast for weather conditions. Recent enforcement completed by Hamilton Police Services identified that over ninety percent of all violations issued were directly related to speeding. In addition,

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[Mr. Ferguson]: I have copied Steve also, but these are the numbers we would have provided to CIMA when they initiated the 2 safety assignments. I suspect it is a summary from IM.¹⁶²

[Ms. Juchniewicz]: I need the summary of data that was sent to CIMA showing total collisions broken down between the LINC and RHVP. ¹⁶³

155. Mr. Ferguson forwarded this email to Mr. Izadpanah, writing:

Do you have the original email when we provided you with this data? I suspect we sent it via email?¹⁶⁴

156. Mr. Izadpanah replied the following day, attaching various emails. He wrote:

¹⁶¹ [HAM0001110_0001](#)

¹⁶² [HAM0001110_0001](#)

¹⁶³ [HAM0001110_0001](#)

¹⁶⁴ [HAM0001110_0001](#)

Please find attached the original emails by which we received the collision data from Steve Cooper back in 2015. Also, we included our spreadsheet which combines the collisions for the LINC and RHVP.

Please let me know if you have any questions or need our assistance.¹⁶⁵

157. On February 9, 2018, Mr. Ferguson sent Mr. White a draft of an email summarizing the information received from CIMA regarding the collision statistics:

Have a look, I've tried to just focus on the specific questions that were raised and provided a recommendation going forward.

At our recent Management meeting to discuss the RHVP/LINC collision information, two specific questions were asked. The purpose of this email is to clarify the position of Traffic Engineering.

1. Are the injury/fatality statistics correct, they seem high.

Through discussion with CIMA, the statistics were confirmed to be correct. The LINC has 58% Injury collisions, the RHVP has 44% Injury collisions.

I further clarified with CIMA that there is no distinction between minor and major injuries. I further clarified with Hamilton Police Services at the Hamilton Strategic Road Safety Committee meeting that if an occupant declares even a minor injury (ex. Sprained wrist) it is recorded as an injury.

In reviewing the stats, though the incident of injury are higher, the number of fatalities is low compared to the overall number of collisions.

2. Why are the collisions occurring and the root causes.

CIMA undertook a quick evaluation on the collision stats and identified that in the majority of incidents, speed is the contributing factor. Also, they show that the PM and AM peaks are the biggest issues.

It is counter intuitive to have speeding related collisions during AM and PM peaks, but as written in the Safety reports for the two facilities, there is a big speed differential between the two lanes on the LINC. CIMA highly suspects that this is a major contributing factor to the severity of collisions. This large speed differential is unusual and not necessarily observed on the other highways.

Further support for this theory, is that HPS provided us with an update on enforcement statistics on the RHVP and LINC. Since December 14/15 to February 7/18, there has been a total of 8,880 violations issued. Of this total 8,101 (91%) were issued for speeding and furthermore 4,282 (48%) of the total, were issued to

¹⁶⁵ [HAM0001110_0001](#) attaching [HAM0001111_0001](#), [HAM0001112_0001](#), [HAM0001113_0001](#), [HAM0001114_0001](#), [HAM0001115_0001](#), [HAM0001116_0001](#), [HAM0001117_0001](#), [HAM0001118_0001](#), [HAM0001119_0001](#), [HAM0001120_0001](#), [HAM0001121_0001](#), [HAM0001122_0001](#), [HAM0001123_0001](#) and [HAM0001124_0001](#)

vehicles exceeding 120km/h. HPS has also stated that on most days, officers can't keep up with the number of the violations that are occurring.

Recommendation:

The original safety report and subsequent committee report to PWC, identified a number of improvements to address the issues occurring on the roadways. Staff have been implementing these counter-measures and will continue to add additional features through the roadway resurfacing that is proposed.

Hamilton Police Services has requested for provisions to be completed on both the RHVP and LINC to assist in their enforcement efforts. Based on this information, staff recommend the following request be added to the Scope of the resurfacing project.

1. At any point where there are established crossover locations such as guard-rail end and overpasses, the locations be paved or built up with gravel.
 - a. North end, north of Barton Street
 - b. Between Barton and Queenston
 - c. Between Queenston and King
 - d. Between King and Greenhill
 - e. Between Greenhill and Mud St
 - f. Between Pritchard and Dartnall
2. Three different access points along the side of the RHVP to stormwater ponds, request to have the access roads built up with gravel and/or paved
3. On the LINC, requires for curbs to be cut down and gravel placed at a number of bridge abutment locations.
4. Add a number of crossing points in the median throughout LINC
 - a. Between Dartnall and U. Ottawa
 - b. Between U Ottawa and U Gage
 - c. Between U Gage and U Sherman
 - d. Between U Sherman and U Wellington
 - e. Between Garth and Golf Links
 - f. Between Golf Links and 403
5. Grass and tall weed cutting required at locations in area of bridges at Pritchard and Dartnall as well as at the point where the LINC meets RHVP. Tall foliage inhibits enforcement using LIDAR equipment.¹⁶⁶

158. Mr. White replied on February 12, 2018, directing Mr. Ferguson to add information regarding the number of drivers caught stunt driving and to send the email to those present at the meeting.¹⁶⁷

¹⁶⁶ [HAM0046393_0001](#)

¹⁶⁷ [HAM0046393_0001](#)

159. On February 14, 2018, Ms. Juchniewicz emailed Mr. Ferguson regarding collision data, writing:

I know your off this week but Martin suggested I still send this to you to clarify the numbers that went to CIMA, before he releases the stats. The first chart is the updated one, but there seems to be a discrepancy with the “number of crossover collisions on the LINC and RHVP” columns. You asked that collisions involved in hitting the median, curb and total cross over collision’s are all to be included, my numbers (2015-2017) are a lot higher than previous years. Can you please confirm the numbers that went to CIMA do include all types of crossovers.

Updated Collision History of LINC-RHVP

2008 - 2017

(PW18008)

Year	Non-fatal				Non-fatal				Number of Collisions	
	Total Collisions	Property Damage Collisions	Injury Collisions	Fatal Collisions	Number of Crossover Collisions	Total Collisions	Property Damage Collisions	Injury Collisions	Fatal Collisions	
LINC Collisions on LINC on LINC	LINC Collisions on LINC	LINC Collisions on LINC	RHVP Collisions on RHVP	RHVP Collisions on RHVP	RHVP Collisions on RHVP	RHVP Collisions on RHVP	RHVP Collisions on RHVP	RHVP Collisions on RHVP		
2008	42	17	25	0	3	43	21	21	1	0
2009	54	23	30	1	6	37	23	14	0	1
2010	40	14	26	0	4	51	33	18	0	1
2011	60	29	31	0	1	71	37	34	0	3
2012	65	23	41	1	3	67	32	34	1	1
2013	67	30	37	0	2	80	47	33	0	1
2014	61	24	36	1	3	71	44	27	0	4
2015	70	22	48	0	14	142	80	60	2	53
2016	57	20	37	0	10	103	58	45	0	37
2017	55	25	29	1	6	107	61	44	2	36
Total	571	227	340	4 (3)	52	772	436	330	6 (4)	137

Note: (x) represents the number of fatal collisions from a crossover collision.

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160. Mr. Ferguson and Mr. White later requested that Ms. Juchniewicz revise the data so the column regarding cross-over collisions only reflected “total cross-overs into the opposing lanes”.¹⁶⁸

¹⁶⁸ [HAM0057327_0001](#)

¹⁶⁹ [HAM0057327_0001](#)

(c) Status of other CIMA projects

161. On February 22, 2018, Mr. Cooper emailed Mr. Izadpanah and Mr. Decleir regarding the Speed Limit Reduction Study. He advised that the project was on hold until they had a chance to discuss with a member of Council.¹⁷⁰

162. On February 27, 2018, Mr. Field emailed Mr. Malone, writing that the City was looking to engage CIMA to conduct a lighting study on the RHVP ("RHVP Lighting Study").¹⁷¹

(d) Claim following collision on RHVP off-ramp

163. On June 21, 2017, the City received a letter from a Senior Claims Advisor at Allstate. The letter, received by John McLennan (Manager, Risk Management, Legal & Risk Management Services, Corporate Services, Hamilton) on June 26, 2017, related to a collision involving a pedestrian on an off-ramp of the RHVP. The letter advised that it was their belief that the "design of the off-ramp and poor road conditions contributed to the collision". The email also attached a list of reportable collisions for the particular ramp for the period between October 5, 2007 to October 5, 2017.¹⁷² The letter was attached to a document dated February 28, 2018, over which the City of Hamilton has asserted privilege.¹⁷³

¹⁷⁰ [HAM0046449_0001](#)

¹⁷¹ [CIM0017463](#); and [CIM0017461](#)

¹⁷² [HAM0052919_0001](#)

¹⁷³ [HAM0052917_0001](#) attaching [HAM0052918_0001](#), [HAM0052919_0001](#) and [HAM0052920_0001](#)

(e) Vision Zero

164. On February 14, 2018, Mr. McLennan emailed Mr. Murray, Councillor Aidan Johnson (Ward 1, Hamilton) and an individual named Scott, in response to an inquiry from Scott sent on February 7, 2018. The inquiry related to traffic safety and accident investigations.

Thank you for reaching out to Councillor Johnson with respect to traffic safety in the City. As the Risk Manager for the City it is a topic of constant concern and interest for me.

The City's Traffic Division presently has two active programs dedicated to traffic safety and accident prevention. The first is a regular report with respect to collision statistics in the City. In a nutshell the report identifies high incident areas and is a primary source of information for planning traffic infrastructure enhancements and larger capital projects. Last I spoke with the Manager of the Traffic Division he had advised that they have upgraded their data management software and that the next report is due in September 2018.

Attached is a previous report which I happen to have handy on my computer.

The second is the Vision Zero program, wherein the City has joined in with a global movement dedicated to transforming the way we use, interact, and travel on our roads. Vision Zero has a simple and clear goal: ZERO fatalities or serious injuries on roadways. Vision Zero aims for safer streets through improved education, enforcement, engineering, evaluation and engagement. Here is the link to the City's Vision Zero web page:

<https://www.hamilton.ca/streets-transportation/driving-traffic/vision-zero>

I encourage you to take the time to complete the on-line survey within. Public input is a very important component to formulating the action items of Vision Zero.

You will find links to the Vision Zero programs of other large municipalities as well.

Also you will see some statistics related to the issue of the social costs of collisions in Hamilton, which you referenced in your e-mail, and a link to Transport Canada report dedicated to the subject

I should also point out that Hamilton Police Service conducts a very thorough forensic investigation of any vehicle collision in the City involving serious injury or fatality. The information contained within these reports can be useful for planning traffic infrastructure enhancements and capital projects.

If you check the following link closer to September and go to the Public Works Committee meeting schedule you should find an exact date for when Traffic's next Collision Report will be presented to the Committee.

<https://www.hamilton.ca/council-committee>

Thank you again for your interest in this regard.¹⁷⁴

2. 2017 Golder Pavement Evaluation results, HIR and resurfacing

(a) *Results from 2017 Golder Pavement Evaluation*

165. On January 22, 2018, David Hein (Principal Engineer and Vice-President of Transportation, Applied Research Associates Inc.) emailed Dr. Uzarowski under the subject line “Red Hill Valley Friction Problem....” He wrote:

Next time you need friction testing on RHVP, let me know. We have an ASTM Brakeforce trailer in the Toronto area every year to do testing.

Hot In-Place Recycling technology “new”, not even remotely as Warren/Taisei was doing HIP in Ontario in the 80s, almost 40 years ago.¹⁷⁵

166. Dr. Uzarowski replied the same day:

Thanks for letting me know. If I need it I will let you know.

I agree that HIP is not new. Who says it is new? I was involved in it while working for JEGEL. In the 90’s Ontario gave up on it and Crupi sent the last HIP train to the US. The technology has significantly improved since then.¹⁷⁶

167. Dr. Hein replied to Dr. Uzarowski that afternoon, enclosing a link to an article in The Hamilton Spectator, dated January 15, 2018, titled “Scratching the surface for answers on Red Hill Paving”:

Here is the link to the article. Not very well written.

<https://www.thespec.com/news-story/8072227-scratching-the-surface-for-answers-on-red-hill-paving/>¹⁷⁷

168. Dr. Uzarowski responded “Thanks, Dave. I haven’t seen it.”¹⁷⁸

¹⁷⁴ [HAM0005584_0001](#)

¹⁷⁵ [GOL0006770](#)

¹⁷⁶ [GOL0006770](#)

¹⁷⁷ [GOL0006770](#)

¹⁷⁸ [GOL0006770](#)

169. The article included the following:

The City of Hamilton has hired a consultant to test the asphalt on the Red Hill Valley Parkway — results expected to show once and for all whether there is a problem with the material.

The parkway has been the subject of complaints regarding slippery pavement since it opened in 2007. Friction testing done in December 2015 was inconclusive, and a consultant recommended further testing; instead the city opted to repave ahead of schedule starting later this year.

"We don't know why they feel that it's slippery," said Gary Moore, director of engineering. "That's all part of (why the city is doing) the testing."

The testing includes samples that were collected before Christmas being sent to Ireland for specialized analysis. The city needs a comprehensive look at the asphalt mix to know if it can be recycled during repaving using a new technique being explored by the city, he said.

Slippery roadways have been among the concerns expressed by the grieving families who have lost loved ones in crashes along the parkway.

But the major rallying point has been a call for median barriers along the Red Hill and the connecting Lincoln Alexander Parkway, to prevent crossover crashes where cars travel through the median onto the other side.

After an emotional appeal from families in October, the city agreed to study the issue further. However, a report going to the public works committee Monday says barriers are not being considered right now. Instead, staff is recommending holding off until the parkways are expanded. However, there is no clear timeline for when that may happen and any parkway expansion is contingent on the connecting Highway 403 and QEW expanding first.

Ontario Minister of Transportation Steven Del Duca told the city that environmental assessments are ongoing and there is no set timeline for expanding the highways here.

For the families who have been fighting for barriers, the report is not surprising, but "very disappointing," said Corey and Léony Hastings.

Their daughter and stepdaughter Jordyn Hastings died in a crossover crash on the parkway May 5, 2015, alongside her best friend, Olivia Smosarski. Both girls were 19.

The crash occurred between the King Street East ramp and Greenhill Avenue — one of two particularly crash-prone stretches on the parkway.

The Hastings point out the city still has done nothing to address these "hot spots." And the other measures to reduce speed "still won't prevent crossover fatalities," they said.

Crossover crashes represent a small percentage of overall crashes on the Linc (5 per cent) and Red Hill (3 per cent), the report notes. But statistics also show crossover crashes are 50 per cent of the dozen fatalities on the two parkways.

Other "collision counter measures," include better signage, plans to study lowering the speed limit and (depending on provincial legislation) a push to look at possible photo radar.

"The installation of barriers would greatly reduce the likelihood of crossover incidents occurring; however there are other potential impacts that may arise," the report says.

Experts say barriers can increase the number of crashes, but tend to decrease the severity — namely they can prevent deadly crossovers.

"In addition, the installation of barriers does not directly address the primary root cause of the collisions, speeding, aggressive and distracted driving," the report says.¹⁷⁹

170. On February 9, 2018, Dr. Uzarowski contacted James Ward (Operations Manager, James Fisher Testing Services) regarding the status of the PSV testing:

Golder Associates sent you a material for PSV testing some time ago. I believe Amelia Jewison has contact you about this. It is extremely urgent for us and for our client to know what to do with the existing pavement in the pavement rehabilitation process. It is critical to know the PSV value for the material since this will control the design.

Could you please let me know where you are with the testing and when we can get the PSV testing results? I am meeting with the client of Monday and I know will be grilled about the PSV values. At this point of time I would need at least just a simple email and the report to follow.

I would appreciate your prompt response.¹⁸⁰

171. Mr. Ward replied the same day, writing:

Unfortunately we are very busy at the moment you sample is not yet complete, I will have an update Monday morning my time with a finish date.¹⁸¹

172. The same day, Ms. Cameron emailed Dr. Uzarowski regarding the expected receipt of the testing results:

Our AP department received an invoice from you that does not have the PO number on it. I happen to know it's to PO 87460. In future can you make sure it's noted for charges to that job.

Please and thank you.

P.S. – Gary would like to know where the test results are. Please advise.¹⁸²

¹⁷⁹ [RHV0000558](#) at image 5

¹⁸⁰ [GOL0002882](#)

¹⁸¹ [GOL0002882](#)

¹⁸² [HAM0001127_0001](#)

173. Dr. Uzarowski replied the same day, informing her that he expected to receive the testing results from the laboratory on February 12, 2018.¹⁸³

174. On February 12, 2018, Ms. Rizvi exchanged emails with Mr. Ward. They wrote:

[Ms. Rizvi]: I understand that you communicated with Ludomir Uzarowski last week and had indicated that you would have the test results for the PSV testing back to us today. Will this still be possible? I apologize for the rush but our client is really pushing us for some answers and the PSV results are critical in regards to the recommendations we give them. Could you please provide me with an updated as soon as you can.

[Mr. Ward]: Sorry for the delay. I have been promised the result for Thursday. Unfortunately the lab doing the test let me and yourselves down on their promise of today.¹⁸⁴

175. Ms. Rizvi forwarded the email to Dr. Uzarowski, copying Ms. Jewison, writing:

It appears now that the results will not be available till Thursday, see below. I will leave this in your hands now about how you want to deal with it.¹⁸⁵

176. On February 13, 2018, Ms. Cameron emailed Dr. Uzarowski regarding the status of the 2017 Golder Pavement Evaluation results, writing "I know he's going to ask in follow up to your e-mail. When can he expect the results?"¹⁸⁶

177. Dr. Uzarowski replied the same day, stating (highlighting in original):

I know Gary will ask and I am very stressed about this. Below is the response that I got from the lab on Monday. Sorry, I will get the results on Thursday. Please believe me I contact them daily and put the pressure.

Regards,

Ludomir

Hi,

Sorry for the delay. I have been promised the result for Thursday. Unfortunately the lab doing the test let me and yourselves down on their promise of today.

¹⁸³ [HAM0026734_0001](#)

¹⁸⁴ [GOL0002907](#)

¹⁸⁵ [GOL0002907](#)

¹⁸⁶ [HAM0001127_0001](#)

Regards

James¹⁸⁷

178. Ms. Cameron forwarded Dr. Uzarowski's response to Mr. Moore approximately 15 minutes later.¹⁸⁸

179. Dr. Uzarowski emailed Mr. Ward the same day, writing:

I just would like to confirm that I will get the PSV results on Thursday. My client is extremely anxious.¹⁸⁹

180. Mr. Ward replied, promising that the results would be received on February 15, 2018.¹⁹⁰

181. On February 15, 2018, Mr. Ward emailed Dr. Uzarowski, identifying the PSV as 45, and that the report would follow shortly.¹⁹¹ Mr. Ward emailed the report to Dr. Uzarowski approximately twenty minutes later.¹⁹²

182. Dr. Uzarowski's notebook contains an entry dated February 20, 2018, listing "Hamilton – PSV".¹⁹³

183. Dr. Uzarowski corresponded with Ms. Rizvi and Ms. Jewison the same day regarding the asphalt cores extracted on December 6-7, 2017. He advised Ms. Rizvi not to discard the remaining materials until after he spoke to Mr. Moore.¹⁹⁴

¹⁸⁷ [HAM0001127_0001](#)

¹⁸⁸ [HAM0001127_0001](#)

¹⁸⁹ [GOL0002883](#)

¹⁹⁰ [GOL0002883](#)

¹⁹¹ [GOL0002887](#)

¹⁹² [GOL0002905](#) attaching [GOL0002906](#)

¹⁹³ [GOL0001596_00005](#)

¹⁹⁴ [GOL0005585](#)

184. Ms. Rizvi wrote to Ryan Hobson (Lead Laboratory Technician – Asphalt, Whitby Office, Golder), instructing him to send a small portion of the aggregate to Dr. Uzarowski for examination. She also wrote that the remaining aggregates should be kept “until the reporting has been completed and we have met with the client to present the findings.”¹⁹⁵

185. Dr. Uzarowski also emailed Mr. Hobson regarding the aggregate noting that he required the aggregate ahead of a meeting with the City on Friday.¹⁹⁶

186. On February 21, 2018, Mr. Moore sent a calendar invite to Dr. Uzarowski and Claudio Leon (Project Manager, Contracts and Standards, Design, Engineering Services, Public Works, Hamilton) for a meeting on February 23, 2018. The meeting was scheduled prior to a presentation Dr. Uzarowski was giving to the City the same day, and was to discuss new asphalt specifications for the City.¹⁹⁷

187. Dr. Uzarowski emailed Mr. Moore on February 22, 2018, requesting that they meet that day to discuss the “RHVP and other aspects”. He subsequently corresponded with Ms. Cameron to arrange a meeting. She advised that Dr. Uzarowski could likely touch base with Mr. Moore before the presentation.¹⁹⁸

(b) *Discussions regarding HIR and SMA*

188. On February 22, 2018, Dr. Uzarowski exchanged email messages with Daryl Finlayson (Senior Material and Pavement Engineer, Geotechnical, Materials & Pavement Engineering Section, Ministry of Transportation and Infrastructure of British Columbia)

¹⁹⁵ [GOL0002892](#)

¹⁹⁶ [GOL0003556](#)

¹⁹⁷ [HAM0001130_0001](#); and [HAM0001131_0001](#)

¹⁹⁸ [HAM0001131_0001](#)

regarding his experience with HIR, asking whether he had any experience using HIR for SMA mixes, and if so whether there were any concerns.¹⁹⁹

189. Mr. Finlayson responded the same day, writing:

Nice to hear from you. I am in a transitional phase so have cc Brad Hogg as well for additional comments.

HIPR should work for SMA mixes as long as there isn't any recycled rubber tire in the Asphalt binder (creates a smokey event). The grinding part might be a bit coarser grinding process as the SMA may require a slightly longer heating cycle to ensure the Asphalt has soften enough for the grinding. The resulting Asphalt mix might not be a true SMA mix as the gradation may change with grinding and mix added to get the required thickness for the lift.

Arc Asphalt Recycling may have done some work in Ontario recently as I was talking with them a few years ago and there was some discussion on their activities. back east. You could contact Al Rorison at info@propaver.com<mailto:info@propaver.com> to see when and what they or affiliates may have been doing in Ontario with HIPR²⁰⁰

190. Dr. Uzarowski's notebook includes an entry from February 23, 2018, which lists:

- 1) Hamilton
 - MSCR spec
 - PSV investigation²⁰¹

191. On February 28, 2018, Dr. Uzarowski emailed Mr. Wiley, asking whether or not he had conducted HIR on SMA:

I have a few questions and hope you can help me. I was involved in number of hot in-place recycling projects in the past. However, I have never done or seen any SMA HIR recycling. SMA is not an easy mix with its gap gradation, high asphalt cement content and drain down test required, content of fiber and difficult volumetrics. I was not able of find any example on the Internet of successful SMA HIR recycling.

Have you ever done any SMA HIR in BC or other provinces? If, was it successful? What conditions you had to meet and were there any issues? Would you give the warranty for the performance of the pavement where HIR recycled material would serve as the surface

¹⁹⁹ [GOL0003640](#)

²⁰⁰ [GOL0002856](#)

²⁰¹ [GOL0007414](#) at image 71

course on a very busy highway? You know what road I am talking about. How comfortable would you be with this kind of work?²⁰²

192. On February 28, 2018, Mr. Becke circulated a calendar invite with the subject line "Meeting to discuss rehab strategy for RHVP. – 2019". The meeting was ultimately scheduled for March 9, 2018, and the invite included Mr. Oddi, Dennis Perusin (Senior Project Manager, Construction, Engineering Services, Public Works, Hamilton), Mr. Andoga, Ms. Jacob, Dr. Uzarowski, Mr. Leon, Mr. Vala and Tyler Renaud (Project Manager, Construction Quality Assurance, Construction, Engineering Services, Public Works, Hamilton). The following was included in the body of the invitation:

Further to the presentation on Friday (Thanks Ludomir), we had a side discussion afterwards regarding Hot-in-place on the RHVP. It sounds like there will be some challenges with this approach that we need to discuss moving forward.

According to everyone's Calendar, this date and time seems to work for a meeting... I would prefer to not push it too far into March as I would like to hammer out what we are doing sooner than later.

Please let me know if you are available and I will send the location information out shortly.²⁰³

193. Dr. Uzarowski replied to the calendar invite, writing:

As discussed and requested after the Friday's presentation, I contacted Pat Wiley, the President of Ecopave Asphalt Recycling Inc. Pat does a lot of HIR in BC and will likely be doing some HIR for MTO in the Thunder Bay area this year.

Pat has never done HIR recycling of SMA and thinks that this is perhaps not feasible. He has referenced the MTO guidelines that do not allow HIR of SMA. I have included below the statements from the MTO June 2015 guidelines on HIR for your information.

HIR is recommended only for existing flexible pavements, excluding SMA, with a minimum asphalt pavement thickness of 70 mm. The specified HIR lift thickness is 40 mm to a maximum of 50 mm (including any beneficiating HMA). The measured lift thickness is the actual lift thickness of the HIR placed and may or may not be equal to the hot milling depth. A minimum of 25 mm of existing asphalt pavement should be maintained below the HIR.

The HIR process shall not be used to recycle SMA or composite pavements.

²⁰² [GOL0003589](#)

²⁰³ [HAM0001132_0001](#)

I look forward to our meeting next Friday and discussing what can be the optimum solution.²⁰⁴

194. Dr. Uzarowski's notes contain an entry dated March 1, 2018, which lists "Hamilton – RHVP – Mike Becke".²⁰⁵

(c) Delayed installation of reflectors

195. On February 27, 2018, Mr. White emailed Mr. McKinnon regarding RHVP resurfacing and the installation of reflectors:

We are not replacing the pavement marking reflectors (as we are going to install new ones as part of the scope of the upcoming repaving project.) Yes we will be repainting the Linc and RHVP in the spring and in the fall until resurfacing occurs at which time we will be installing durable plastic pavement markings in the new asphalt....²⁰⁶

196. That evening, Mr. McKinnon forwarded Mr. White's message to Mayor Eisenberger.²⁰⁷ Mayor Eisenberger replied approximately 10 minutes later, writing:

When is the resurfacing scheduled for? If it is years away what do we do with these reflectors in the meantime? Is this not a warranty issue? Half or more missing is not acceptable now or in the future.²⁰⁸

197. The next day, Mr. McKinnon forwarded Mayor Eisenberger's response to Mr. White and Ms. Matthews-Malone, writing "What day you? Don't want to over react to this but let's chat".²⁰⁹

198. Mr. White replied later that day, writing:

Hi Dan the existing reflectors were installed in 2014 on a short section of the RHVP from about the top curve to north of Greenhill at a cost of \$234,000. All warranty on the installation has expired. We were not going to maintain them this year as this would be

²⁰⁴ [GOL0002720](#)

²⁰⁵ [GOL0007414](#) at image 72

²⁰⁶ [HAM0035357_0001](#)

²⁰⁷ [HAM0035357_0001](#)

²⁰⁸ [HAM0035357_0001](#)

²⁰⁹ [HAM0035357_0001](#)

throw away cost due to the upcoming resurfacing and at that time the new reflectors will be inlaid into the new asphalt (a better process than gluing them onto the road).

At this time, I'm not sure yet what Gary's plans are for the resurfacing of the RHVP and Linc. We were basing our original decision to not replace them on Gary's plan to resurface the RHVP as soon as possible. As far as I know Gary hasn't committed to a process or a time frame however we are working on their original schedule which has NB RHVP in 2018 SB RHVP in 2019 and the Linc in 2020/21. Roads and Traffic have a meeting with Engineering Services tomorrow and we can try to get an answer from Gary on the plans and timing for resurfacing the parkways at that time. If there will be a delay of a year or two, we can and should maintain the reflectors. If we are to maintain the reflectors we will require a new contract to be let.

As soon as we get the timing of the resurfacing I will advise and recommend a course of action.

Hope this assists.²¹⁰

199. Mr. McKinnon replied that afternoon, asking Mr. White or Ms. Matthews-Malone to correspond directly with Mayor Eisenberger regarding the issue.²¹¹

3. Asset Management and Road Maintenance

200. On February 28, 2018, Mr. Sidawi sent an email to Mr. McGuire and Mr. Andoga, attaching a presentation and report regarding the City's asset management program, noting that the report had gone to Committee the previous year.²¹²

201. The report, titled "Roads Asset Management Plan Update (PW17003)" was prepared by Mr. Sidawi and submitted by Mr. Moore on January 16, 2016. The report and presentation related to roads along with other Public Works divisions. The RHVP/LINC received a condition index ("OCI") of 77. This value was the highest on the list, and was significantly above the average network condition of 62.²¹³

²¹⁰ [HAM0035357_0001](#)

²¹¹ [HAM0035357_0001](#)

²¹² [HAM0005591_0001](#)

²¹³ [HAM0005593_0001](#) at image 2

F. March 2018

1. Discussions regarding resurfacing, HIR and 2017 Golder Pavement Evaluation

202. Mr. Wiley responded to Dr. Uzarowski on March 1, 2018, writing:

We have not done any work with SMA and the Ontario MTO HIR guidelines advise against it. I think we should approach it very cautiously, perhaps its not feasible.²¹⁴

203. Also on March 1, 2018, Mr. White emailed Mayor Eisenberger regarding his inquiry into RHVP reflectors and resurfacing. Mr. White wrote:

Dan has asked me to follow up with you on your concerns respecting the reflectors on the Red Hill Valley Parkway.

The repaving was originally scheduled for 2018 and therefore we were not going to replace the missing reflectors as they will all be replaced during the paving operations. There is however a chance that the paving tender and contract may be held over until 2019. If this is the case Traffic will replace the missing reflectors this construction season (2018). A determination of the paving schedule will be made by Public Works later this winter/spring. In either case it is our intention to have visible reflectors on the RHVP. I can also confirm for you that Traffic will repaint the pavement markings on the Linc and the RHVP twice this year, once in spring and once in the fall. Upon resurfacing it is our intention to apply durable plastic pavement markings along the RHVP and the Linc as part of the paving contract.²¹⁵

204. Dr. Uzarowski's notebooks include an undated entry, which includes the following:

RHVP – PSV and other subjects

- A) 1) Texture OK
 - 2) BPN - v. variable, average good (39.4), but ranges from 21 to 62
 - unreliable – weather issue
 - 3) SN from Tradewind Scientific Av 35 and 38 but variable
 - 4) SN from MTO 2007, Av. good for new SMA, 34.9 &, 34.8 but have low values under structures
 - 5) PSV = 45 - traprock medium, limestone - low (30-42)
 - traprock with 50 is v. good
 - 6) Dolomitic sandstone – the best ~ 55
- Conclusion – somewhat risky to reuse it in the surface course
Gary – results inconclusive

- B) Speed – monitoring station data indicated that during no rush hours only low % drivers follow the speed limit 90 km/h speed as high as 120+

²¹⁴ [GOL0002855](#)

²¹⁵ [HAM0001137_0001](#)

C) Loading – much exceeded the prediction. The loading in 6 years as high as would be anticipated between Year 9 and 15. And maximum wheel loads were drastically exceeded (discussed possibility of possible weight station and speed control).

D) Issues – top down cracking and dips/bumps

Pat Wiley says he has never done hot in-place recycling of SMA so he did not want to do it on RHVP, main road in Hamilton. Also, changing the gradation and other aspects from SMA to SP 12.5FC2 would be impossible according to Pat.

Option 1 Mill Overlay – mill 40 mm (use millings on other projects for low speed roads) and repave with 50mm new HMA SP12.5FC2. Use dolomitic sandstone if possible/feasible – 10 mm elevation raise.

Option 2 Hot-in-place recycle the SMA to a depth of 40 mm as a binder course and place a very thin surface course – 40 mm of SP 12.5 FC2. Use dolomitic sandstone if possible. Elevation raise ~ 40 mm.

The last FWD was done in 2013 including coring. Cracks were shallow, only in the surface course. Repeat FWD and check the condition, particularly where the flooding was. There were locations where subgrade was weak. Inspect pavement before the rehab.

Address – dips/bumps, cracking (top down), potential aggregate subject. Control drainage condition.

Warning! Neither Option 1 nor Option 2 will solve the accident hazard issue. The speed has to be controlled. Skid hazard increases drastically when the speed increases.



SUBJECT: RHVP PSV		
Job No.: Ref.	Made by Reviewed	Date Sheet _____ of _____

1) BPN

43
26
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41
46
50
51
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47
44
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30
29
36
43
38
62

Avg. 39.4
SD 10
Min 21
Max 62

RHVP

1) HIR of SMA + microsurfacing

microsurfacing

$$7,000 \text{ m} \times 15 \text{ m} = 105,000 \text{ m}^2$$

$$105,000 \text{ m}^2 \times \$6/\text{m}^2 = \$630,000 \text{ can be } \$5$$

bonded wearing course - \$ /m²

2) Mill & overlay 50 mm

- milling \$2.0/m² 105,000 m² x \$1.5/m² = \$200,000

-overlay 0.125 x 105,000 x 2.5 x 110 = \$3,600,000

Total ~ \$4,000,000²¹⁶

205. Following the handwritten pages, Dr. Uzarowski's notes include a one-page report from James Fisher Services (Ireland) Ltd. regarding PSV test results, and Golder's results regarding Measured Texture Depth.²¹⁷

206. Another entry in Dr. Uzarowski's notebooks, dated March 9, 2018, referenced a meeting he had with City staff. The following was noted:

1) City of Hamilton

- HIR of SMA

- concerns
- laboratory investigation required
- test section before HIR

- Apply microsurfacing Type III to address surface inconsistencies

- is the City comfortable with micro
- we have number of contractors who can do it

- what to do with test results (PSV...)

- HIR recycled SMA will no longer be SMA; check the characteristics of the mix to make sure it is strong enough to support the traffic without deformation and cracking

- microcracking ~ 7 years

HIR ~ 6-10 years

- micro can crack but will not spall because of polymer

- lift thickness – 40 mm or 50 mm ?

- Ecopave got the project in Th Bay

²¹⁶ [GOL0007414](#) at images 76-79

²¹⁷ [GOL0007414](#) at image 80

\$12 /m²

- skidabrading for now – no – public²¹⁸

207. Mr. Becke's notebooks also contain an entry dated March 9, 2018, which reference a meeting with Dr. Uzarowski and others at the City:

RHVP Meeting – Re – HIP

March 9./2018

- The process of SMA HIP will change the SMA that the gradation will/may change
- possible longer process to heat the mix longer to do the HIP
- Change/add more aggregates to the mix – add a beneficiary mix to the process
- Gary – No to microsurfacing
- Sample for HIP to go to BC? Do it as a section of the repairs to the “Dips” in RHVP
- Friction numbers/weaker surface afterwards?
-

40mm SMA surface on (existing) RHVP

- Sample – Ludomir needs to provide a size etc
- Concerns with Friction #s

-->

Foam asphalt & PGAC with MSCR²¹⁹

208. On March 9, 2018, at approximately 5:00pm, Dr. Uzarowski responded to Mr. Wiley's email regarding HIR and SMA, attaching the RHVP SMA mix.²²⁰

209. At approximately 5:30pm, Dr. Uzarowski emailed Mr. Moore regarding HIR and his discussions with Mr. Wiley:

²¹⁸ [GOL0007414](#) at image 74

²¹⁹ [HAM0061788_0001](#) at image 60

²²⁰ [GOL0003593](#) attaching [GOL0003594](#)

I have a relatively long discussion with Pat again and send him some basic information including the SMA mix design. He is much more optimistic now than a few days ago. We will work together to see how we can adjust the mix to make HIR feasible. So leave this to me and Pat. The area would be about 8,000 m x 2 directions x 2 lanes x say 4 m = 128,000 m².

One of his major questions is how long work shifts can he get. Can he get 10 hours of work/night which would mean 12 hours closure? Or even, can he do some work during day time? He can do about 3 km in one lane in 10 hours a night.²²¹

210. Mr. Moore responded, copying Mr. Oddi, writing:

We have 2 lanes at 8+- km in both directions, that's $2 \times 8 \times 2 = 32$ km. At 3 km per 10 hours of work, that's 107 hrs +/-.

I think we could do this 2 ways. On weekends say from Saturday at 5:00 am to Sunday at 9:00 pm +/- (but he may need 2 shifts to take full advantage of this closure to work around the clock) which could give him 40 hours for each week end. Or on week nights we could give 8:00pm to 6:00 am. Or we could combine them.

Allow two weekends and the week of nights in between. That would yield two 36 hour periods on the week end. (full closure of the road) plus 5 – 10 hour nights.

That's $36+36+50=122$ ²²²

211. The following day, Mr. Moore forwarded Dr. Uzarowski's email to Mr. Becke, writing "FYI, Ludomir has no changed his tune!"²²³

212. On March 13, 2018, Dr. Uzarowski forwarded Mr. Moore's response regarding HIR to Mr. Wiley. He also attached photos of RHVP core samples.²²⁴

213. Dr. Uzarowski's notebook entry from the same day, March 13, 2018, states: "3) Hamilton – talked to Mike Becke and Chris Thompson, got a call from Steve Manolis"²²⁵

²²¹ [GOL0003645](#)

²²² [HAM0001148_0001](#)

²²³ [HAM0052950_0001](#)

²²⁴ [GOL0003583](#), [GOL0003584](#), [GOL0003585](#), [GOL0003586](#), [GOL0003587](#), [GOL0003588](#)

²²⁵ [GOL0007496](#) at image 77

214. On March 14, 2018, Dr. Uzarowski sent an email to Dr. Henderson, Ms. Rizvi and Michael Maher (Principal, Pavement and Materials Engineering, Golder), regarding his meeting with the City on March 9, 2018:

FYI

I had a meeting with the City of Hamilton on Friday, March 9th, 2018 in their office. The meeting was attended by Gary Moore, Mike Becke, Marco Oddi, Dennis Perusin, Susan Jacobs, Rick Andoga and Shebib Rich. We discussed the possibility of hot in-place recycling (HIR) of the SMA surface course on the Red Hill Valley Parkway. I have passed the concerns that the people from BC expressed and the concerns Pat Wiley, the President of ECOPAVE had.

The concerns are that there is no experience with HIR of SMA mix. BC stated that HIR recycled SMA would no longer be a SMA mix and gradation would change. Pat stated it would have to be approached with caution and was even concerned it may not be feasible.

Frictional characteristics – I suggested applying microsurfacing on HIR recycled SMA, if they use HIR. This would make the surface uniform and offer good frictional characteristics. Gary rejected the idea. I then recommended using skid abrader or shot blasting, at least the worst areas indicated in Tradewind Scientific report, to improve friction of the current surface if they delay resurfacing. Marco rejected the idea for various reasons. For your information, I had recommended this treatment before when they let me know about friction concerns on the RHVP.

I had a discussion with Pat Wiley on Friday evening and then on Monday morning. Now he says he can HIR the SMA mix. I have sent him the SMA mix design and photos of the cores and the mat.²²⁶

215. Also on March 14, 2018, Mr. Wiley responded to Dr. Uzarowski regarding the proposed timeline sent by Mr. Moore:

Ludimer,

I think we can work with those work times. If we can negotiate a 7 pm start during the week it would be better. Not sure we can get two full crews there this fall so most likely single shifts on weekends. Still we can make this work if the materials can be recycled.

We just need to make sure we can work that material. We have been working with John Hagen of Golder for the Thunder Bay project. Why don't you two discuss and brainstorm on that.²²⁷

²²⁶ [GOL0005970](#); and [GOL0003699](#)

²²⁷ [GOL0002858](#)

216. On March 15, 2018, Mr. McKinnon sent a bi-monthly recurring calendar invite, beginning on April 9, 2018, titled “Red Hill/Linc Discussion”. Attendees included Ms. Matthews-Malone, Mr. Ferguson, Mr. White, Mr. McGuire, Mr. Sidawi, Patricia Leishman (Manager, Strategy, Continuous Improvement & Quality, Public Works, Hamilton), Edward Soldo (Director, Roads & Traffic, Public Works, Hamilton), Raffaella Morello (Senior Project Manager, General Manager's Office, Public Works, Hamilton) and Ms. Eisbrenner.²²⁸

217. On March 15, 2018, Dr. Uzarowski emailed Mr. Becke, requesting a call relating to the RHVP, writing:

Could you please call me on my cell 9054416044 to talk about HIR on the RHVP? There is a significant amount of work that should be done for this.²²⁹

218. Dr. Uzarowski's notebooks included an entry from the same day, noting:

Hamilton – Mike Becke

- Test results – leave them
- HIR
- CIREAM – polymer modified AC²³⁰

219. Dr. Uzarowski emailed Dr. Henderson on March 15, 2018, with a draft email addressed to Gary relating to HIR and a conversation with Mr. Wiley. Dr. Henderson exchanged emails with Dr. Uzarowski in response:

[VH]: I have made small edits. I have added Rabiah to this email. What project number is this within or do we need to get a new project number?

[LU]: It is 1772238 but I will have to ask for more budget.²³¹

²²⁸ [HAM0005603_0001](#); and [HAM0005609_0001](#)

²²⁹ [HAM0052952_0001](#)

²³⁰ [GOL0007414](#) at image 75

²³¹ [GOL0003610](#)

220. Dr. Uzarowski sent the edited email to Mr. Moore (copying Mr. Becke and Mr. Oddi) on March 15, 2018, regarding HIR of the RHVP:

I talked to Pat Wiley a few times and have exchanged emails. Pat thinks it is possible to Hot In-Place Recycle SMA and is now in agreement to carry out this project. He can work within the timelines you suggested although some fine tuning may be needed. By the way, Golder is involved in the Highway 11 in Thunder Bay project. The HIR surface there will not be overlaid with a new HMA. There will only be a certain percentage of a new HMA added during the HIR process as a beneficiating mix.

Pat would like to get my input on materials. I see our contribution as follows:

1. Golder will obtain field samples of the SMA and underlying SP 19 materials, i.e. I understand the City will get a contractor to get them and pass to Golder. Part of the samples will be used by Golder to carry out laboratory testing to determine the current PG grade of the asphalt cement and gradation of the mix.
2. Together with ECOPAVE Golder will look at what should be done to address the PG issue (type and approximate amount of rejuvenator) and what type, gradation, source and amount of a new beneficiating mix should be added to get a reasonable gradation and volumetrics.
3. The beneficiating mix would also have to improve the medium term frictional characteristics of the HIR mix so it would have to incorporate the right aggregates. At this point of time I think we would do PSV testing of the considered blend or blends.
4. Basically, Golder would determine what has to be done to make it feasible and determine what mix design and construction characteristics would be required.
5. Based on Items 1, 2, 3 and 4 Golder will develop a project specification or rather a Special Provision that would complement the existing OPSS.MUNI 332 November 2016 for HIR.
6. ECOPAVE would have to do their own mix design and consider the details. ECOPAVE would get the unused part of the samples obtained under Item 1.
7. ECOPAVE as a contractor would be fully responsible for the operation, QC testing and quality of the delivered product, and meeting the specification and Special Provision requirements.
8. Golder can do QA testing and inspection and, if requested by the City, a part of Contract Administration.

Please let me know if you are in agreement with this. I also think I should meet with the City to discuss some details. I am in Calgary on Monday, Tuesday and Wednesday but I am available after. Please send me the date when we can meet. Since the above would require a significant amount of work, I think we should start working on this ASAP.²³²

²³² [HAM0052969_0001](#)

221. Dr. Uzarowski also contacted John Hagan (Associate, Geotechnical/Pavement Engineer, Barrie Office, Golder) regarding HIR on SMA.²³³

222. On March 16, 2018, Mr. Moore responded to Dr. Uzarowski's email:

I'm good with the sampling and test as proposed and I appreciate Pat's assistance but he has to know we will have to tender this work. (He may be the only bidder but that's fine if it's not economical we just won't be able to award it.) So you can do items 1-5. The successful contractor would be responsible for providing the mix design (after award). 6 would be part of the works Contract and we'll have to see how the roster goes before we can determine testing.

I'm not in the office currently. But Pat can call me next week if he has further questions.²³⁴

223. On March 22, 2018, Mr. Moore emailed Mr. McGuire regarding various capital works projects scheduled for 2019, including the RHVP rehabilitation:

Please note both the attached minutes and Susan's chart indicate the number of projects that have not been signed off for the 2019 Capital Program. Without a fairly quick confirmation of outstanding scope and sign off to Design, these outstanding projects are in jeopardy not being delivered in 2019.²³⁵

224. On March 27, 2018, Dr. Uzarowski emailed Mr. Becke (copying Mr. Oddi), requesting a call to discuss a presentation regarding HIR. He wrote that he thought he should attend at the City to discuss with Mr. Becke and Mr. Oddi.²³⁶

2. Collision data and safety initiatives

225. Mr. Malone and Mr. Field continued to correspond in early March 2018 regarding CIMA's involvement with the RHVP Lighting Study. They scheduled a meeting for March 14, 2018, between CIMA and the City to discuss the scope of work.²³⁷

²³³ [GOL0003581](#)

²³⁴ [GOL0002863](#)

²³⁵ [HAM0046531_0001](#)

²³⁶ [HAM0001167_0001](#)

²³⁷ [CIM0017454](#) attaching [CIM0017454.0001](#); [CIM0017453](#); [CIM0017452](#); and [CIM0017363](#)

226. On March 6, 2018, Mr. Ferguson emailed Mr. McKinnon (copying Ms. Matthews-Malone, Mr. Moore, Mr. Mater and Mr. White) regarding the 2018 Collision Memorandum.

At our last meeting to discuss the RHVP and LINC, you asked two questions related to the collision information and the injuries being experienced. I have been in discussions with the Consultant on this topic as well as we have updated the collision stats to the end of 2017.

1. Why are motorists more likely to be injured travelling on our roadways when involved in a collision vs the comparison roadways?

The consultant reviewed the LINC/RHVP to dissect injury/fatal collisions and to review to the comparison highways. These results found that the RHVP experienced 25% of injury collisions on weekends and is very similar to the comparison highways. The LINC experiences 16% of collisions on weekend which would be lower than the comparison highways and the RHVP. The consultant also identified that the injury collisions for the LINC and RHVP occurring during the early morning (midnight to 6am) and in the evening between 9pm and midnight, are very similar to the comparison highways.

34% of the total collisions on the LINC occur weekday during the PM peak and 27% for both the AM and PM peaks for the RHVP. These numbers are higher than the comparison highways. The Consultant has confirmed that the observations show that speeding is the number 1 problem. This is further confirmed and supported by the recent enforcement statistics that have been provided by Hamilton Police Services.

At our latest Hamilton Strategic Road Safety Committee meeting, HPS provided the following enforcement statistics for the RHVP/LINC from December 2015 to February 2018

- 8,880 Provincial Offences Notices Issued
- 8,101 or 91.2 % were directly related to speeding
- 4,282 or 53% were violations of speeding exceeding 120km/hr
- HPS has also identified a concern with the increase in Stunt Driving (50km/hr over the posted speed limit) occurring city wide. Plan to undertake a marketing/education program this year.

2. Why are collisions occurring and injuries occurring?

For confirmation, Injuries are identified as any type of injury that has been recorded by the Police Officer ranging from minor to serious injuries. The collision data information does not break it down so whether it is a sprained wrist or broken leg, it is just classified as an injury. The Consultant confirmed that the biggest issue, especially on the LINC, is the big speed differentials between the two lanes which was identified in the original safety reports. This large speed differential is unusual and not necessarily observed on the comparison roadways.

3. Updated Statistics

**Updated Collision History of LINC-RHVP
2008 - 2017**

(PW18008)

Year	Non-fatal						Non-fatal						Number of Collisions on RHVP
	Total	Property Damage	Injury Collisions on LINC on LINC	Fatal Collisions on LINC	Number of Crossover Collisions on LINC	Total	Property Damage	Injury Collisions on RHVP on RHVP	Fatal Collisions on RHVP	Crossover Collisions on RHVP	on RHVP	on RHVP	
	LINC	Collisions on LINC	on LINC	on LINC	RHVP	Collisions on RHVP	on RHVP	on RHVP	on RHVP	on RHVP	on RHVP	on RHVP	
2008	42	17	25	0	3	43	21	21	1				0
2009	54	23	30	1	6	37	23	14	0				1
2010	40	14	26	0	4	51	33	18	0				1
2011	60	29	31	0	1	71	37	34	0				3
2012	65	23	41	1	3	67	32	34	1				1
2013	67	30	37	0	2	80	47	33	0				1
2014	61	24	36	1	3	71	44	27	0				4
2015	70	22	48	0	7	142	80	60	2				13
2016	57	20	37	0	5	103	58	45	0				5
2017	55	25	29	1	2	107	61	44	2				9
Total	571	227	340	4 (2)	36	772	436	330	6 (3)				38

Staff are in the process of completing three consultant assignments, speed study review and consideration for variable speed limits, Q-end Warning system consideration and a review for the design and installation of permanent Variable Message Boards. The consideration and implementation of these systems was identified in the original safety reports for the two roadways and are considered tools which may assist in deterring the driver behaviour that is being experienced and therefore improve safety and operations.

If you have any questions, please feel free to contact me.²³⁸

227. The same day, Mr. White sent Mr. Ferguson a link to a Spectator article regarding the RHVP and LINC, titled “It’s not the parkways, it’s the drivers”. The article, dated January 17, 2018, focused on median barriers for the RHVP and LINC. Councillor Conley is quoted in the article as having received numerous calls from residents concerned about the safety of the RHVP. The article identified that barriers were not to be installed until the RHVP and LINC are widened. Councillor Conley wondered whether barriers could be installed in areas where drivers felt particularly unsafe, even if just to create a safer

²³⁸ [HAM0001139_0001](#)

perception of the roadway. The author of the article attributes collisions to driver behaviour, stating that the 2015 traffic safety reports found the cause of accidents to be behaviours including speeding and aggressive driving.²³⁹

228. The article also included commentary from Mr. Moore and Mr. White. Mr. Moore advised that while barriers may stop crossover collisions, they would not reduce the overall number of accidents. Mr. White indicated that “unless the barriers are properly designed, placed and installed, they could also ricochet cars back into live lanes, which could contribute to even higher accident rates.” He was also quoted as saying speeding was the major factor resulting in collisions on the RHVP and LINC.²⁴⁰

229. On March 8, 2018, Reza Omrani (Associate Partner, Project Manager, CIMA) sent Mr. Cooper an updated proposal for the Speed Limit Reduction Study. Tasks included in the proposal included the review of industry best practices in establishing an appropriate speed limit, with consideration to the function and collision histories of the roadways, as well as providing the City with various ITS options taking into account the needs and concerns of various stakeholders and establishing a plan to implement these projects.²⁴¹

230. On March 12, 2018, Mr. Field emailed Mr. Malone regarding the RHVP Lighting Study, attaching a staff information report presented to the PWC on September 19, 2016. He wrote:

Ahead of this week's meeting attached is a previous report that we brought forward to PW committee of which created the necessity for a further report. Our recommendations were approved.

²³⁹ [HAM0046486_0001](#); and [RHV0000892](#)

²⁴⁰ [RHV0000892](#)

²⁴¹ [HAM0046496_0001](#) attaching [HAM0046497_0001](#)

Further to the above, as you may know, the Linc and RHVP has received sporadic attention at committee and we received further direction this past December. This read as follows:

(ii) Lighting on the Red Hill Valley Parkway (Added Item 11.2)

Staff were directed to report back to the Public Works Committee on the cost of installing brighter lights on the southern portion of the Red Hill Valley Parkway (RHVP) and that the report also address what, if any, impact the brighter lighting may have on the Environmental Assessment currently in place for the RHVP.

The above sits as a OLB item with a response date as December 10, 2018. That said, we are looking at bringing this report to PW earlier, perhaps before they become a dead duck council.

Look forward to meeting, see you on Wednesday.²⁴²

231. In early to mid-March 2018, Mr. Ferguson corresponded with officers from the HPS regarding an anti-speeding campaign, a part of the HSRSC. This involved radio and television messaging regarding speeding on City roadways. On March 26, 2018, Mr. White sent Ms. Matthews-Malone anti-speeding radio commercials. In April 2018, Mr. White and Ms. Matthews-Malone corresponded regarding another anti-speeding initiative, a speeding and aggressive driving pledge. ²⁴³

232. On March 19, 2018, Mr. White sent an email regarding an annual collision report that was to be released in the fall for 2017 data. In his email, he provided updated collision statistics ahead of the report being prepared:

Hi all, I am releasing attached some standard Motor Vehicle Collision Statistics updated to include 2017 data. Traffic will be releasing a comprehensive Collision Report Annually and the first version of this is scheduled to go to Council this fall (just before or after the election period) .

Jasmine it is ok to release this as required to the media.

If you have any questions or comments please contact Dave Ferguson.²⁴⁴

²⁴² [CIM0017450](#) attaching [CIM0017450.0001](#)

²⁴³ [HAM0005702_0001](#); [HAM0001157_0001](#); and [HAM0005721_0001](#) attaching [HAM0005722_0001](#)

²⁴⁴ [HAM0046521_0001](#) attaching [HAM0046522_0001](#)

233. On March 23, 2018, Mr. Ferguson emailed Mr. White, attaching a briefing note relating to questions raised by Mr. McKinnon regarding the increase proportion of severe collisions identified in the 2018 CIMA Collision Memo. Mr. Ferguson wrote:

I have put the attached summary together as per our discussion. Have a look, let me know if you want anything else added.²⁴⁵

234. Between March 20-23, 2018, Mr. Ferguson corresponded with Christina Mastrangelo (ATMS Technologist, ATMS and Signals, Traffic Operations & Engineering, Roads & Traffic, Public Works, Hamilton) regarding speed data. The HSRSC directed Public Works staff to send RHVP and LINC speed data reports to the HPS monthly. Once the format of the report was finalized between Public Works staff and the HPS, Mr. Ferguson directed Ms. Mastrangelo to send the HPS speed data monthly.²⁴⁶

235. On March 26, 2018, Mr. White responded to Mr. Ferguson's email and briefing note, attaching a handwritten markup.²⁴⁷

236. The briefing note was converted to a memorandum, dated March 29, 2018, from Mr. Ferguson and Mr. White to Mr. McKinnon and Mr. Matthews-Malone. The memorandum contained the same content as the email Mr. Ferguson sent to Mr. McKinnon from March 6, 2018, along with an update regarding the status of initiatives recommended in Report PW18008.²⁴⁸

²⁴⁵ [HAM0001154_0001](#) attaching [HAM0001155_0001](#)

²⁴⁶ [HAM0046539_0001](#)

²⁴⁷ [HAM0046554_0001](#) attaching [HAM0046555_0001](#)

²⁴⁸ [HAM0001170_0001](#) attaching [HAM0001171_0001](#)

237. On March 29, 2018, Mr. Cooper sent Mr. Omrani (copying Mr. Izadpanah) the purchase order for the Speed Limit Reduction Study. The total authorized for the Speed Limit Reduction Study was \$110,160.00.²⁴⁹ Mr. Cooper wrote in his email:

Please find attached the PO number for this project. Sorry for the lengthy delay, there was some internal discussions.

Looking forward to getting this started!

238. A project kick-off meeting was scheduled for April 11, 2018. ²⁵⁰

G. April 2018

1. Continued discussions regarding HIR and resurfacing

239. On April 2, 2018, Golder sent the City an invoice for work performed for the RHVP relating to roster contract C12-07-16. The project description in the invoice indicated the work was relating to the “investigation and testing for the friction/skid resistance of the existing pavement on the Red Hill Valley Parkway in the City of Hamilton”, and represented work performed up to March 23, 2018.²⁵¹

(a) Status of Repaving

240. The City produced a handwritten note, identifying Mr. McGuire as the custodian dated April 9, 2018, which included the following:

Red Hill
 RHVP Paving --> Hot in Place
 --> Check with Marco
 Core samples --> Check with Gary
 QA Staff
 Some Small Base Repair
 Look at Capital Budget & Where Does This Sit
 * Have We Tendered *
 Rich's Study --> Technology Review

²⁴⁹ [CIM0016007](#) attaching [CIM0016007.0001](#)

²⁵⁰ [HAM0035377_0001](#)

²⁵¹ [GOL0001448](#)

Defects of Ramps / Polymers

Polished Stone Review
Queen St. Workstation²⁵²

241. Mr. McGuire emailed Mr. Andoga on April 9, 2018, regarding the status of the RHVP repaving.²⁵³

242. Mr. Andoga replied on April 10, 2018, writing:

We are in discussion with design on a strategy moving forward. We may address ramps in 2018 and follow up with mainline improvements in 2019. The repairs to the "dips" is too much for operations therefore the same will need to be completed with the ramp rehabilitation.

The samples have not been taken. Gary (and design?) are investigating the feasibility of the hot in place option. The MTO is completing a section of road in northern Ontario with HIP this summer.²⁵⁴

243. Mr. Becke's notebooks contain an entry dated April 23, 2018 with references to HIR:

Gary suggested to look @ A pavement plan to back up:

- Overall Ludomir project with Gary? Where is it at
- Get PO# from Gary about HIP for Ludomir & the pricing for it.²⁵⁵

(b) *Contractual Issues Regarding HIR Suitability Study*

244. On April 10, 2018, Dr. Henderson emailed Graeme Skinner (Principal, Senior Geotechnical Engineer, Ground Engineer West Group Leader, Golder) and Nico Bezuidenhout (Principal, Senior Geochemist, Golder) (also copying Lisa Coyne (Principal, Senior Geotechnical Engineer, Golder), Dr. Uzarowski and Ms. Rizvi)

²⁵² [HAM0061712_0001](#)

²⁵³ [HAM0053035_0001](#)

²⁵⁴ [HAM0053035_0001](#)

²⁵⁵ [HAM0061788_0001](#) at image 77

regarding the pavement rehabilitation of the RHVP. She wrote in her email that it was the City, not Golder, driving the idea of using HIR for rehabilitation. She also wondered whether the project needed to go through Golder's Risk Committee.²⁵⁶

245. Ms. Coyne responded the same day, indicating that the project did merit discussion with the Risk Committee.²⁵⁷

246. Dr. Skinner replied and expressed his concerns:

This does sound a little messy, given the City is providing the samples, we're specifying the mix, and the contractor is hesitant to do the work... sounds like there could be a lot of finger pointing if things don't work out. That is not to say that we shouldn't proceed, but to ensure we have the responsibilities and expectations with the City clear. Does the City consider this a trial section or are they expecting absolute performance? What are the chances there could be a hic-up in the process and how are we mitigating any potential risks to ourselves?

Two items come to mind:

1. Are we ensuring any guarantee of performance of the recommended mix design? I don't think we are entering into a specifically contract with the City to guarantee the performance of the mix, but is this clear?
2. Does this pursuit involve unproven/emerging technology and/or otherwise atypical, substantial, or unusual risks? This is where I think the PRC may come in.

HIP Recycle has been around for a while (I worked a co-op term over 20 years ago with a Warren crew for HIP Recycle), but seems to have fallen out of favour – why? Were there performance issues?

Is HIP now considered atypical or an unusual risk? We don't see it very much I think. What has changed?

Why is Ecopave hesitant – what risk do they see? What has changed their mind? Are we taking on additional risk here?

Overall, what are the risks to Golder in taking on this work? Sounds like a great project to assist the City and establish ourselves in the HIP recycle market (is there an emerging market here?), but what is driving this and who is responsible at the end of the day?²⁵⁸

²⁵⁶ [GOL0005832](#)

²⁵⁷ [GOL0006183](#)

²⁵⁸ [GOL0006186](#)

247. On April 12, 2018, Dr. Uzarowski responded to various colleagues at Golder regarding HIR and the Golder's Risk Committee, writing:

Could we have our discussion soon? I cannot delay it for too long. The City of Hamilton should know if this is feasible. If, I would have to prepare a specification and a lot of other information. The City would like to have it ASAP.²⁵⁹

248. Mr. Becke's notebooks contain an entry dated April 25, 2018, which notes:

RHVP – Dip's, sample for testing

► GM's office Bi-Weekly Meeting Regarding²⁶⁰

(c) *Installation of reflectors*

249. On April 25, 2018, Mr. Becke emailed Mr. Andoga (copying Ms. Jacob and Mr. Vala) regarding the installation of "cat's eyes" reflectors on the RHVP:

Further to our Project Coordination meeting today, I was concerned to hear that the Traffic Dept. would be putting out a contract to replace and install new "cat's eyes" reflectors this year (2018), when we will be resurfacing the Red Hill Valley Parkway (RHVP) in both directions next year (2019).

As you are aware, the RHVP was originally intended to be resurfaced this year via conventional "Shave and Pave". However, a new technology has come to light that will provide the City with a faster, cheaper and more environmentally friendly way of resurfacing the road, while having less impact to traffic during construction. We opted to defer the works to 2019 in order to complete further review of this technology and take some samples from the road so we can complete the appropriate asphalt mix design needed.

I understand that there is perceived safety concerns on the RHVP. However, spending the money to install the cats eyes this year, when we will have to remove and replace the cats eyes next year, is not cost effective. Even if we wanted to, we would not be able to recycle the cats eyes to be reused next year, as the epoxy that holds the reflectors in place would break the reflector before removing it.²⁶¹

2. Continuation of safety initiatives and studies

250. On April 3, 2018, Ms. Mastrangelo emailed Mark Stiller (Staff Sergeant, Support Services Division, HPS) and Barry Stoltz (Sergeant, Support Services Division, HPS),

²⁵⁹ [GOL0006171](#)

²⁶⁰ [HAM0061788_0001](#) at image 80

²⁶¹ [HAM0001197_0001](#)

attaching a zip folder with LINC/RHVP speed data collected in February and March 2018.²⁶²

251. On April 4, 2018, Bryan Purins (Traffic Safety Technologist, Traffic Roadway Safety, Traffic Operations, Traffic Operations & Engineering, Roads & Traffic, Public Works, Hamilton) emailed Ms. Juchniewicz regarding collision data in preparation for the 2017 Annual Collision report. He wrote:

I could use your expertise with Intersection Magic for the 2017 Annual Safety Report we will be producing this year.

Would you be able to send me the following collision details?

Let me know if any of this information isn't obtainable thru IM.

2010-2017 (broken down for each year)

of collisions

of fatalities

injury collisions

pedestrian collisions

cyclists

2017

of collisions by driver action (speeding, aggressive driving, disobeyed traffic control etc.)

of collisions by location (signal, AWS, etc)

Collisions by Weather conditions

Collisions per month

Collisions per day of week

Collisions per hour of day

10 intersections with most collisions (network screened)²⁶³

252. On April 9, 2018, Mr. Andoga emailed Ms. Matthews-Malone regarding the City's infrastructure deficit. In the email, he identified the City's backlog of needs to be approximately \$1,150,000,000. He attached an email further describing the funding needs, which outlined that 41.3% of the overall network was in a state of rehabilitation or reconstruction, and that based on the LINC and RHVP's current performance, "a funding

²⁶² [HAM0001172_0001](#)

²⁶³ [HAM0057357_0001](#)

requirement of approximately \$43M will be needed to support an acceptable service level".²⁶⁴

253. On April 12, 2018, Mr. Ferguson emailed Ms. Cameron regarding the bi-monthly RHVP and LINC meetings scheduled by Mr. McKinnon. He wrote:

Gord, If you could send a designate, it would be appreciated

Ann, I have included you as I would like to discuss setting up a web page specific to the RHVP and LINC

Hello Folks,

The General Managers office has scheduled bi-monthly update meetings with Sr. PW staff to provide regular updates on works related to the LINC and RHVP. As a result, Martin and I must attend these meetings and provide updates related to items owned by Traffic Operations and Engineering. As a result, I would like to schedule these meetings for us to discuss various items. I have provided an Agenda for the first meeting and we can add to it as needed. I have also listed the staff member for the lead of each item.

1. Collision data – Bryan, can you please arrange to provide the monthly collision data for both roadways by month for the past 5 years. We can track the collisions by month going forward.
2. Enforcement Stats – Walter, as per what you already provide, if you can update for each meeting that would be appreciated.
3. Repaving and Lighting review – Engineering Group
4. Website – David, A9 highway example
5. Speed Data – Rob D
6. Traffic Counts – Rob D
7. Update on outstanding action items (ex. Q-end warning system, speed limit
8. Compile a list of all action items completed to date – Stephen
9. Open discussion²⁶⁵

²⁶⁴ [HAM0053030_0001](#) attaching [HAM0053031_0001](#)

²⁶⁵ [HAM0053050_0001](#)

(a) RHVP Lighting Study Proposal

254. On April 9, 2018, Mr. McGuire left Mr. Malone a voicemail regarding the status of the RHVP Lighting Study proposal, mentioning the recurring RHVP-related meetings called by Mr. McKinnon.²⁶⁶

255. On April 11, 2018, Mr. Malone emailed Mr. Field the proposal for the RHVP Lighting Study. The proposal included reviewing previous environmental assessments ("EA") for the LINC and RHVP, revisiting findings from previous collision analyses using recent data and conducting an illumination review to determine whether or not illumination should be installed within the study area.²⁶⁷

256. On April 13, 2018, Mr. Field approved CIMA's RHVP Lighting Study proposal. The \$121,560 purchase order for the project was sent to CIMA on April 25, 2018.²⁶⁸

257. On April 24, 2018, CIMA met with City staff regarding the RHVP Lighting Study. The work plan for the project was to include a review of original and subsequent EA documents to confirm what conditions regarding lighting were established during the EA and approval process. The study was also to involve a review of collisions and trend analysis.²⁶⁹

258. On April 24 and 25, 2018, Manny Grewal (Project Engineer, Traffic Engineering, CIMA) exchanged emails with Mr. Cooper regarding the Speed Limit Reduction Study:

²⁶⁶ [CIM0017402](#) attaching [CIM0017402.0001](#)

²⁶⁷ [HAM0053036_0001](#) attaching [HAM0053037_0001](#)

²⁶⁸ [CIM0017386](#); and [CIM0017058](#) attaching [CIM0017058.0001](#)

²⁶⁹ [CIM0017047](#)

[Mr. Grewal] To help align the ITS vision and objectives with that of the City's upcoming Transportation Master Plan, could you please provide the latest draft of the document?

[Mr. Coper] Hi Manny- I've been asking and have not received anything back. I will keep trying, sorry for the delay.

[Mr. Grewal] Thanks for the update Steve. We will continue to work on our deliverables nonetheless.

[Mr. Cooper] Hi Manny- please see below from our Transportation Planning group who is managing the TMP.

The TMP isn't approved yet so I cannot release it...That being said, the text below regarding with RHVP/LINC has been communicated to Councillors (the attached info report also acknowledges the Councillors thoughts on the matte as presented to them):

- Red Hill /LINC Expansion
 - Subject to more detailed analysis, the AM EMME model identifies constrained corridors along Highway 403 between the Halton Region border Highway 6 and along the QEW between the Skyway bridge and the Niagara Region border. Under the do-nothing scenario, primary pinch points occur at the following locations:
 - NB RHVP between Mud Street and King Street
 - EB LINC between Gage and Mud Street
 - EB LINC between Highway 403 and Upper James
 - WB LINC between Garth and Highway 403
 - Given the above constraints, any widening of the LINC/RHVP would increase queuing approaching these bottleneck and would negate any capacity gained between these two corridors
 - The spacing between the RHVP and Upper Centennial Parkway is approximately 3.5 km, the lack of escarpment crossings opportunities, coupled with growth in the area and lack of higher-order transit opportunities has contributed to the capacity constraints being experienced (as a comparison, Hamilton mountain has five crossings over a 4.1km distance)
 - From a sustainable transportation policy perspective; any alternatives for the Red Hill and LINC expansion should consider HOV and/or HOT lanes to provide transit routing flexibility, support car pooling, while proving a sustainable funding mechanism for continued maintenance of these expressways

Ultimately, our recommendation is when/if improvements are made to the 403/QEW bottlenecks that HOV/HOT lanes be part of any future expansion of the corridor. This was the information fed into a PW report that removed the OBL item...I just don't recall the report title.

Not much help for you, but if you need clarification or further explanation please let me know.²⁷⁰

259. On April 25, 2018, Ms. DiDomenico forwarded an email to Mr. Oddi, that she sent earlier that day to Mr. McGuire and Mr. Field. The email attached a document titled "Technical Report Database". Ms. DiDomenico wrote:

Just wanted to let you know that Gord was looking for info on the Linc/RH Parkways as part of the work they are undertaking (with CIMA) to consider if lighting or other changes should be made along the road.

I thought that you may want to have a copy of the "library" of reports that were produced related to that corridor in the event that you ever need any of the background too.²⁷¹

260. CIMA held an internal meeting regarding the RHVP Lighting Study on April 30, 2018. Minutes from the meeting noted the following:

Just thought I'd provide you with an update based on the additional information provided by Reza and Brian at today's meeting:

- There is uncertainty regarding whether the EA strictly prohibits the inclusion of lighting in the road design in the official EA documents or technical supporting documents. It is their understanding that (likely due to financial reasons), the city wasn't planning on putting lighting into the design in the first place, and so the EA may have reflected this decision as an added benefit to the environment due to other environmental concerns brought forward, but again, there is uncertainty whether the EA or supporting documents specifically speak to lighting impacts on wildlife and whether or not the studies actually made these recommendations (or if they were stipulated as a condition of approval from a particular agency stakeholder). These are questions that need to be addressed for May 16.
- They mentioned that the number of collisions is high throughout these corridors – health and safety issue. The City would like to pursue lighting the corridors if possible – overall benefits.
- As part of the gap analysis, they would also like to provide the following information to the city for their meeting on May 22 (internal deadline, May 16):
 - Given the dates and information in the EA and supporting documents, changes in policy and legislation, does another EA need to be completed to move forward with this specific project (legal question)?
 - Would an addendum be appropriate to address outstanding concerns (legal question + technical merit)?
 - In short, we need to (1) outline where lighting is specifically referenced in the EA and technical documents, (2) review the recommendations from a technical perspective, (3) see if it is a possibility to move forward with the Project, and (4) if so, outline what steps need to be taken to move the Project forward

²⁷⁰ [CIM0015976](#)

²⁷¹ [HAM0001195_0001](#) attaching [HAM0001196_0001](#)

- I have committed to going through the spreadsheet and identifying which documents we would like to review. We discussed level of effort; a visit to the City and flipping through these documents might be in CIMA's best interest instead of the level of time and effort for scanning a multitude of documents which may not have any relevant information in them. If you would like me to go, I'm hoping to do this visit early next week (Monday morning – to be scheduled).²⁷²

3. Follow-up regarding scheduled records destruction

261. On April 11, 2018, Ms. Wunderlich had received an email from Ms. Gargano regarding the scheduled destruction of offsite records, including records relating to the RHVP. The email attached a list of documents scheduled for destruction, and Ms. Gargano asked Ms. Wunderlich to confirm whether or not certain records should be retained.²⁷³

262. Ms. Wunderlich forwarded the request to Mr. Moore to confirm the same day. The following day, at Mr. Moore's request, she forwarded this email to Ms. DiDomenico, writing:²⁷⁴

Gary said to ask you but funny enough we just received an FOI request yesterday afternoon for all records pertaining to the construction of the Red Hill Valley. I sent it to construction but not sure if it should go to you also or leave it with them. Let me know.²⁷⁵

263. On April 16, 2018, Ms. Cameron also emailed Ms. DiDomenico regarding the records. Ms. Wunderlich emailed Ms. Di Domenico the same day, writing:

Considering we don't know what is in these boxes on the Red Hill should we just go with yes to play it safe. No one has time to go down and look through each one.²⁷⁶

²⁷² [CIM0016261](#)

²⁷³ [HAM0026869_0001](#) attaching [HAM0026870_0001](#)

²⁷⁴ [HAM0026869_0001](#); and [HAM0035387_0001](#)

²⁷⁵ [HAM0026869_0001](#)

²⁷⁶ [HAM0035387_0001](#)

4. Gary Moore retirement

264. On March 14, 2018, Mr. McKinnon emailed Mr. Moore, attaching a draft of Mr. Moore's Retirement Agreement, noting:

Hi Gary, can you have a look at this draft to see what if anything needs amending? The quantum will be for you and Chris to decide...Let me know...²⁷⁷

265. The attached agreement outlined that Mr. Moore was to retire as Director of Engineering on May 31, 2018, and beginning a new term of employment with the City relating to the Light Rail Transit Project.²⁷⁸

266. The following day, Mr. Moore emailed Lora Fontana (Executive Director, Human Resources and Organizational Development, Human Resources, Hamilton), copying Mr. Murray. He attached a draft agreement, noting that he had "a number of proposed amendments to the draft contract Dan forwarded" him.²⁷⁹

267. The following comment was included in the draft attached by Mr. Moore:

I'm only retiring in order to take this position. I am not otherwise retiring and had no intent to retire until Chris Murray requested that I take this work on.²⁸⁰

268. On April 13, 2018, Mr. McKinnon sent an email announcing Mr. Moore's retirement, writing:

Please join me in congratulating Gary Moore, who has decided it's time for him to retire from the City of Hamilton after 30 years delivering some of the most significant capital projects Hamilton has seen in the past half century.

Gary's project leadership successfully delivering the Lincoln M. Alexander Parkway and the Red Hill Valley Parkway have been fundamental to the City's growth and sustainability, and have prepared Hamilton for future generations. As well, Gary has spent many hours helping the City to prepare for possible emergencies through contingency planning in

²⁷⁷ [HAM0058743_0001](#)

²⁷⁸ [HAM0058744_0001](#)

²⁷⁹ [HAM0058746_0001](#)

²⁸⁰ [HAM0058747_0001](#)

Public Works, and providing guidance at the departmental and corporate Emergency Operation Centres.

Gary is recognized for his industry-leading work in asphalt and pavement design research. Over the years, he has been an advocate for ensuring Hamilton is using the best engineering available on our roadway system.

Gary's last day as a City employee will be on Friday, May 25, 2018.

Gary will then join the LRT office to provide senior technical guidance and City representation as we proceed with building the LRT in Hamilton. I have no doubt that Gary will continue to provide great value to the LRT office on this substantial and transformational project.

Please join me in congratulating Gary and wishing him all the best in this new chapter of his career.²⁸¹

269. Ms. DiDomenico forwarded the email to Mr. Moore, sending a congratulatory message. Mr. Moore replied, writing:

Thanks

But that leaves you with the title of "Mrs Red Hill" . By the way where are all the reports that used to be on the web. All the design files, etc? You were the admin side not me!²⁸²

270. On April 25, 2018, Mr. Moore emailed Mr. Andoga and Mr. Becke, attaching two spreadsheets relating to the widening of the RHVP, writing:

Just cleaning out files. Here are my estimates for widening both the LINC and Red Hill for future information.²⁸³

271. Mr. Andoga replied the same day, writing: "[i]t's a sad day when you give that up".²⁸⁴

²⁸¹ [HAM0057362_0001](#)

²⁸² [HAM0058754_0001](#)

²⁸³ [HAM0026980_0001](#)

²⁸⁴ [HAM0026983_0001](#)

H. Appendix A: Individuals Referenced in Overview Document #8

Last Name	First Name	Organization	Position(s) ²⁸⁵
Adriano	Nancy	MTO	Traffic Area Manager , Traffic Office, Central Region, Provincial Highways Management Division
Andoga	Richard	City of Hamilton	Senior Project Manager , Infrastructure Programming, Asset Management, Engineering Services, Public Works
Aquila	Diana	City of Hamilton	Administrative Secretary to the Associate General Manager & Director of Transportation , Transportation, Public Works
Arthur	Mike	Golder	Senior Geotechnical Technologist
Barnet	Mike	CIMA	Associate Partner, Senior Project Manager, Traffic Engineering
Beal	Andrew	MTO	Manager , Traffic Office, Central Region, Provincial Highways Management Division
Becke	Michael	City of Hamilton	Senior Project Manager , Design, Engineering Services, Public Works
Bezuidenhout	Nico	Golder	Principal, Senior Geochemist
Blackburn	Tammy	City of Hamilton	Senior Project Manager , Roads & Maintenance, Operations, Public Works
Boorsma	Richard	City of Hamilton	District Supervisor - Roads , District 7, Roads & Maintenance, Operations, Public Works
Butrym	Bob	City of Hamilton	Construction Coordination , Traffic Operations, Traffic Operations & Engineering, Transportation, Public Works
Cameron	Diana	City of Hamilton	Administrative Assistant to the Director of Engineering , Engineering Services, Public Works
Collins	Chad	City of Hamilton	Councillor, Ward 5
Conley	Doug	City of Hamilton	Councillor, Ward 9
Cooper	Stephen	City of Hamilton	Project Manager , Traffic Engineering, Traffic Operations & Engineering, Transportation, Public Works (until 2018) Project Manager , Traffic Engineering, Traffic Operations & Engineering, Roads & Traffic, Public Works (2018 onwards)
Costantino	Joe	MTO	Area Contracts Engineer , Central Region, Provincial Highways Management Division
Coyne	Lisa	Golder	Principal, Senior Geotechnical Engineer

²⁸⁵ Only positions held during the time covered by Overview Document #8 are included in Appendix A. Commission Counsel has created a separate document that includes the complete list of all positions held by all individuals referenced in Overview Documents #2 - #10, which is included in Overview Document #1 at Appendix A.

Decleir	Robert	City of Hamilton	Senior Project Manager , ATMS and Signals, Traffic Operations & Engineering, Transportation, Public Works (until 2018) Senior Project Manager , ATMS and Signals, Traffic Operations & Engineering, Roads & Traffic, Public Works (2018 onwards)
DiDomenico	Jennifer	City of Hamilton	Manager , Policy & Programs, Roads & Traffic, Public Works
Dutchak	Lance	MTO	Traffic Supervisor , Traffic Office, Central Region, Provincial Highways Management Division
Eisbrenner	Rebeka	City of Hamilton	Administrative Assistant to the Director of Roads & Traffic , Roads & Traffic, Public Works
Eisenberger	Fred	City of Hamilton	Mayor of Hamilton
Ferguson	Lloyd	City of Hamilton	Councillor, Ward 12
Ferguson	David	City of Hamilton	Superintendent , Traffic Engineering, Traffic Operations & Engineering, Transportation, Public Works (until 2018) Superintendent , Traffic Engineering, Traffic Operations & Engineering, Roads & Traffic, Public Works (2018 onwards)
Field	Mike	City of Hamilton	Senior Project Manager , Street Lighting & Electrical, Geomatics & Corridor Management, Engineering Services, Public Works
Finlayson	Daryl	Ministry of Transportation and Infrastructure of British Columbia	Senior Material and Pavement Engineer, Geotechnical, Materials & Pavement Engineering Section
Fontana	Lora	City of Hamilton	Executive Director , Human Resources and Organizational Development, Human Resources
Gargano	Debbie	City of Hamilton	Records & Information Management Clerk , Office of the City Clerk, Corporate Services
Graham	Jasmine	City of Hamilton	Communications Officer , Strategic Partnerships & Communications, City Manager's Office
Grewal	Manny	CIMA	Project Engineer, Traffic Engineering
Hadayeghi	Alireza	CIMA	Partner, Director, Transportation
Hagan	John	Golder	Associate, Geotechnical/Pavement Engineer
Hands-Lourie	Charlene	City of Hamilton	Senior Project Manager , Transportation, Public Works
Hein	Dr. David	Applied Research Associates, Inc.	Principal Engineer and Vice-President of Transportation
Henderson	Dr. Vimy	Golder	Pavement and Materials Engineer
Hewitt	Tom	MTO	Head , Corridor Management, Central Region, Provincial Highways Management Division

Hobson	Ryan	Golder	Lead Laboratory Technician - Asphalt, Whitby Office
Hughes	Brian	City of Hamilton	Manager , Capital Rehabilitation & Technical Operations, Roads & Traffic, Public Works
Izadpanah	Pedram	CIMA	Senior Project Manager, Transportation
Jackson	Tom	City of Hamilton	Councillor, Ward 6
Jacob	Susan	City of Hamilton	Manager , Design, Engineering Services, Public Works
Jacobson	Kris	City of Hamilton	Transportation Lead - Light Rail Transit , LRT Project, Public Works
Jewison	Amelia	Golder	Geotechnical Analyst
Johnson	Aidan	City of Hamilton	Councillor, Ward 1
Johnston	Walter	HPS	Police Constable, Support Service Division (Traffic)
Juchniewicz	Linda	City of Hamilton	Collision Analyst , Traffic Operations, Traffic Operations & Engineering, Roads & Traffic, Public Works
Keddie	Laura	City of Hamilton	Administrative Assistant to the Director of Hamilton Water , Hamilton Water, Public Works
Khawja	Teepu	MTO	Regional Director , Central Region, Provincial Highways Management Division
Leduc	Lauri	City of Hamilton	Legislative Coordinator , Office of the City Clerk, Corporate Services
Lee	Stephen	MTO	Head , Pavements & Foundations Section, Materials Engineering & Research Office, Highway Standards Branch, Provincial Highways Management Division
Leishman	Patricia	City of Hamilton	Manager , Strategy, Continuous Improvement & Quality, Public Works
Leon	Claudio	City of Hamilton	Project Manager , Contracts and Standards, Design, Engineering Services, Public Works
Magnan	Joel	MTO	Head , Soils & Aggregates Section, Materials Engineering & Research Office, Highway Standards Branch, Provincial Highways Management Division
Maher	Michael	Golder	Principal, Pavement and Materials Engineering
Malone	Brian	CIMA	Partner, Vice-President, Transportation
Mastrangelo	Christina	City of Hamilton	ATMS Technologist , ATMS and Signals, Traffic Operations & Engineering, Roads & Traffic, Public Works
Mater	John	City of Hamilton	Director , Transportation, Public Works (until 2018) Associate General Manager & Director , Transportation, Public Works (2018 onwards)
Matthews-Malone	Betty	City of Hamilton	Director , Operations, Public Works (until 2018) Director , Roads and Traffic, Public Works (2018 onwards)

McCleary	Terry	City of Hamilton	Superintendent - Roads , District North, Roads & Maintenance, Operations, Public Works
McCormick	Joel	City of Hamilton	Senior Project Manager , General Manager's Office, Public Works
McGuire	Gord	City of Hamilton	Manager , Geomatics & Corridor Management, Engineering Services, Public Works
McGuire	Grant	City of Hamilton	Fleet Technician , Central Fleet; Energy, Fleet & Facilities Management, Public Works
McKinnon	Dan	City of Hamilton	General Manager , Public Works
McLennan	John	City of Hamilton	Manager , Risk Management, Legal & Risk Management Services, Corporate Services
Merulla	Sam	City of Hamilton	Councillor, Ward 4
Moore	Gary	City of Hamilton	Director , Engineering Services, Public Works
Morello	Raffaella	City of Hamilton	Senior Project Manager , General Manager's Office, Public Works
Murray	Chris	City of Hamilton	City Manager , City Manager's Office
Nunes	Paul	MTO	Corridor Management Officer , Corridor Management, Central Region, Provincial Highways Management Division
O'Reilly	Nicole	Hamilton Spectator	Reporter
Oddi	Marco	City of Hamilton	Manager , Construction, Engineering Services, Public Works
Omrani	Reza	CIMA	Associate Partner, Project Manager
Paul	Bob	City of Hamilton	Manager , Roads & Maintenance, Operations, Public Works
Pearson	Maria	City of Hamilton	Councillor, Ward 10
Perusin	Dennis	City of Hamilton	Senior Project Manager , Construction, Engineering Services, Public Works
Piedimonte	Diane	City of Hamilton	Assistant to Councillor Sam Merulla , Ward 4
Purins	Bryan	City of Hamilton	Traffic Safety Technologist , Traffic Roadway Safety, Traffic Operations, Traffic Operations & Engineering, Roads & Traffic, Public Works
Recine	Jen	City of Hamilton	Manager , Communications, Strategic Partnerships & Communications, City Manager's Office
Renaud	Tyler	City of Hamilton	Project Manager , Construction Quality Assurance, Construction, Engineering Services, Public Works
Rizvi	Rabiah	Golder	Pavement and Materials Engineering Analyst
Romanoski	Marlene	City of Hamilton	Administrative Secretary , Traffic Operations & Engineering, Transportation, Public Works
Rose	Jeremy	Golder	Asphalt Laboratory Supervisor/Manager, Whitby Office

Shebib	Rich	City of Hamilton	Project Manager , Corridor Management, Geomatics & Corridor Management Services, Engineering Services, Public Works
Sidawi	Sam	City of Hamilton	Manager , Asset Management, Engineering Services, Public Works
Skinner	Dr. Graeme	Golder	Principal, Senior Geotechnical Engineer, Ground Engineer West Group Leader
Soldo	Edward	City of Hamilton	Director , Roads & Traffic, Public Works
Stiller	Mark	HPS	Staff Sergeant, Support Services Division
Stoltz	Barry	HPS	Sergeant, Support Services Division
Uzarowski	Dr. Ludomir	Golder	Principal, Pavement and Materials Engineering
Vala	Sarath	City of Hamilton	Project Manager , Design, Engineering Services, Public Works
VanderBeek	Arlene	City of Hamilton	Councillor, Ward 13
Venneri	Rita	MTO	Section Head , Planning and Design (Hamilton/Niagara), Corridor Management, Central Region, Provincial Highways Management Division
Ward	James	James Fisher Testing Services	Operations Manager
White	Martin	City of Hamilton	Manager , Traffic Operations & Engineering, Transportation, Public Works (until 2018) Manager , Traffic Operations & Engineering, Roads & Traffic, Public Works (2018 onwards)
White	Jason	MTO	Manager , Engineering, Central Region, Provincial Highways Management Division
Whitehead	Terry	City of Hamilton	Councillor, Ward 8
Whiteley-Lagace	Leanne	Stantec Consulting Ltd.	Pavement Management Team Lead
Wiley	Patrick	Ecopave Asphalt Recycling Inc.	President
Wunderlich	Nancy	City of Hamilton	Administrative Coordinator to the General Manager , Public Works
Wyskiel	Kim	City of Hamilton	Superintendent , Traffic Services, Traffic Operations & Engineering, Transportation, Public Works (until 2018) Superintendent , Traffic Services, Traffic Operations & Engineering, Roads & Traffic, Public Works (2018 onwards)