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# Vimy Henderson, Ph.D., P.Eng.

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## Education

- **Ph.D. in Civil Engineering, *Evaluation of the Performance of Pervious Concrete Pavement in the Canadian Climate***  
University of Waterloo, Waterloo, ON, (2012)
- **B.A.Sc. in Civil Engineering**  
University of Waterloo, Waterloo, ON, (2008)

## Professional Experience

- **PTech Engineering Solutions Inc., *Principal Engineer***  
Guelph, ON, (2021 to present)
- **PSI Technologies Inc., *Director of Eastern Operations***  
Guelph, ON, (2018 to 2021)
- **Golder Associates Ltd., *Pavement Engineering Analyst, Pavement Engineer, Project Manager***  
Mississauga, ON, (2009 to 2018)
- **University of Waterloo, *Adjunct Professor Department of Civil and Environmental Engineering***  
Waterloo, ON, (2018 to present)
- **University of Waterloo, *Graduate Infrastructure Management Sessional Professor***  
Waterloo, ON, (2017 to 2018)
- **McMaster University, *Pavement and Materials Lecturer***  
Hamilton, ON, (2016 to present)
- **Centre for Pavement and Transportation Technology, *Research and Laboratory Assistant***  
Waterloo, ON, (2004 to 2011)
- **HCM Contractors, *Field Lead***  
Calgary, AB, (2007)
- **Dufferin Concrete, *Southwestern Ontario Quality Control Lead***  
Kitchener, ON, (2006)
- **Ministry of Transportation of Ontario, *Engineering Assistant***  
London, ON, (2005)

## Awards

### Industry Awards

- 2014, 30 in 30 Chair for Women in Science and Engineering
- 2013, Rock to Road Top 20 Under 40

### Best Paper Awards

- 2010, **Best Student Paper Presentation**, Annual Inter-University Symposium on Infrastructure Management, Newark, DE
- 2009, **Best Student Paper**, Transportation Association of Canada Annual Meeting
- 2009, **Best Student Presentation**, Institute of Transportation Engineers, Waterloo ON, 2009

- 2008, **Best Student Poster Presentation**, International Conference on Concrete Pavements, San Francisco, CA
- 2008, **Best Student Paper Presentation**, Annual Inter-University Symposium on Infrastructure Management, Austin, TX

### **Scholarships**

- 2010, SNC Lavalin Graduate Scholarship
- 2010, Ontario Graduate Student Science and Technology Scholarship
- 2009, Waterloo Alumni Transportation Association of Canada Foundation Scholarship
- 2008, Stantec Graduate Student Scholarship
- 2008, Ontario Graduate Student Science and Technology Scholarship
- 2008 AMEC Transportation Association of Canada Foundation Scholarship
- 2008, University of Waterloo Graduate Student Scholarship

### **Professional Development**

- Difficult Conversations Certificates and Materials, WinSETT, 2021

### **Project Experience**

#### **Asset Management**

1. **2022**, Chatham-Kent Municipality, "Bridge Deck Pavement Condition Assessment", **Project Manager, Pavement Engineer**, ON
2. 2021, Engineering Consultants International Limited., "Asset Management Course for Al Dhafrah Region Municipality", **Co-Instructor**, UAE
3. 2021, Ontario Good Roads Association, "Municipal Asset Management Course", **Co-Instructor**, ON
4. 2021, Golder Associates Ltd., "Ground Penetrating Radar Testing", **Pavement Engineer**, AB
5. 2021, Region of York, "Intersection Performance Investigation", **Project Manager**, ON
6. 2021, GIE Group, "City of Markham Network FWD Testing", **Project Manager**, ON
7. 2021, City of Ottawa, "Pathway Asset Management", **Project Manager**, ON
8. 2020, Golder Associates Ltd., "Load Transfer Efficiency Testing, Heavy Weight Deflectometer", **Project Manager**, ON
9. 2020, WSP Inc., "Rut Fill Volume for Microsurfacing", **Senior Engineer**, SK
10. 2020 – 2021, Confidential, "Composite Pavement Performance Evaluation with NDT", **Project Manager and Project Engineer**, VA, USA
11. 2020, City of Hamilton, "NDT Pavement Condition Assessment", **Project Manager**, ON
12. 2019, WSP Inc., "NDT Pavement Condition Assessment", **Pavement Engineer**, SK
13. 2017, Municipality of North Perth, "Visual Condition Inspection of Pavement Network", **Pavement Engineer**, ON
14. 2016 – 2017, Union Gas, "Pavement Performance Monitoring of Hwy 407 ETR", **Pavement Engineer**, ON
15. 2016, Golder Associates Ltd., "Pavement Condition Evaluation Icefields Parkway", **Pavement Engineer**, AB
16. 2016, Yukon Department of Highway and Public Works, "Klondike Hwy FWD Testing and Analysis", **Project Manager**, YT
17. 2015, City of Timmins, "Hwy 101 FWD Testing", **Project Manager and Pavement Engineer**, ON
18. 2015, WSP, "Alberta Pacific Forest Industries Haul Road Performance Evaluation", **Pavement Engineer**, AB
19. 2014- 2016, Region of Niagara, "Construction and Materials Standard Specification Review", **Project Manager and Project Engineer**, ON
20. 2014, Go Transit, "Pavement Performance Review", **Pavement Engineer**, ON
21. 2014, City of Burlington, "Transverse Cracking Investigation and Recommendations", **Project Manager and Project Engineer**, ON

22. 2014, City of Redmond, "Evaluation of Structural Capacity of Road Sections with FWD Testing", **Pavement Engineer**, WA, USA
23. 2014, Celestica, "Pavement Condition Inspection", **Pavement Engineer**, ON
24. 2014, Region of Waterloo, "Snyder's Road Performance Investigation and Cracking Repair Recommendation", **Pavement Engineer**, ON
25. 2014, City of Toronto, "Construction and Materials Specifications Review", **Project Manager and Project Engineer**, ON
26. 2014, Associated Engineering, "Regina ByPass FWD Testing", **Project Engineer**, SK
27. 2013 - 2015, IBI Group, "Pavement Condition Assessment with Non-Destructive Testing for Haul Route", **Pavement Engineering Analyst, Project Manager and Project Engineer**, ON
28. 2013, Region of Niagara, "Evaluation of the use of Recycled Asphalt Shingles in Hot Mix Asphalt", **Project Manager, and Pavement Engineering Analyst**, ON
29. 2012 – 2017, Region of York, "Pavement Preservation Program", **Project Manager, Pavement Engineering Analyst, and Project Engineer**, ON
30. 2012 – 2014, City of Hamilton, "5 Year Review of the Performance of the Red Hill Valley Parkway", **Project Manager, Pavement Engineering Analyst, and Project Engineer**, ON
31. 2012, Region of Waterloo, "Construction and Materials Specification Review", **Project Manager, and Pavement Engineering Analyst**, ON
32. 2012 – 2014, City of Hamilton, Red Hill Valley Parkway Instrumentation Data Collection", **Project Manager, Pavement Engineering Analyst, and Project Engineer**, ON
33. 2012, Host Kilmer, "Pavement Condition Assessment at ONRoute Facilities", **Project Manager, and Pavement Engineering Analyst**, ON
34. 2011, Region of Waterloo, "Pavement Performance Investigation", **Project Manager and Pavement Engineering Analyst**, ON
35. 2011 – 2013, AECOM, "Pavement Condition Monitoring", **Pavement Engineering Analyst and Pavement Engineer**, ON
36. 2011, Dufferin County, "Visual Condition Inspection of Pavement Network", **Pavement Engineering Analyst**, ON
37. 2010 - 2012, City of Hamilton, "Pavement and Materials Technology Review Phase 2", **Pavement Engineering Analyst**, ON

### **Construction**

1. 2021, Huron Construction, "Construction Consultation Baseline Bridge Paving", **Project Manager and Pavement Engineer**, ON
2. 2021, Saskatchewan Ministry of Highways and Infrastructure, "Cumberland House Apron Test Sections", **Senior Project Manager**, SK
3. 2017, Region of Waterloo, "Crack Sealing Pavement Maintenance Program", **Project Manager and Project Engineer**, ON
4. 2016 – 2017, TransCanada, "Pavement Condition Monitoring", **Pavement Engineer**, ON
5. 2016, Fieldgate Developments Inc., "Late Season Paving Consultation", **Pavement Engineer**, ON
6. 2015, MMM Group Ltd., "Construction Consultation for Steeles Ave", **Pavement Engineer**, ON
7. 2015 – 2017, Parsons Burgoyne Bridge, "Construction Submittals Review", **Pavement Engineer**, ON
8. 2015 – 2016, Region of Niagara, "QA Field and Lab Testing and Construction Consultation", **Project Manager and Project Engineer**, ON
9. 2015, Big H Group, "Pavement Construction Recommendations", **Pavement Engineer**, ON
10. 2015, Alberici Constructors Ltd., "Asphalt QA Testing Results Consultation", **Pavement Engineer**, ON
11. 2014 – 2015, Hwy 407 ETR, "Subgrade Acceptance with FWD Testing", **Pavement Engineer**, ON

12. 2014, Orlando Corporation, "Canadian Mosport Park Racetrack Construction Materials Recommendation and Review", **Project Manager and Project Engineer**, ON
13. 2014, Associated Engineering, "Construction Submittal Review", **Project Engineer**, BC
14. 2014, Go Transit, "Construction Submittal Reviews", **Project Engineer**, ON
15. 2013, STC Construction Group Inc., "Parking Lot Pavement QA Testing Results Review", **Pavement Engineering Analyst**, ON
16. 2012 – 2018, Region of Waterloo, "Construction Submittals Review", **Pavement Engineering Analyst, Pavement Engineer**, ON
17. 2011, Kaleidoscope Birchwood Resident, "Construction Submittals Review", **Pavement Engineering Analyst**, AB
18. 2009 – 2017, TTC Toronto York Spadina Subway Extension, "Construction Consultation, Submittal Reviews", **Pavement Engineering Analyst, Pavement Engineer**, ON
19. 2009 - 2016, VivaNEXT, "Construction Consultation", **Pavement Engineering Analyst, Pavement Engineer**, ON
20. 2009 – 2015, Delcan/Parsons, "Construction Consultation, Submittal Reviews", **Pavement Engineering Analyst, Pavement Engineer**, ON
21. 2009, Schickedanz Bros. Limited, "Park Vista Subdivision Construction Submittal Reviews", **Pavement Engineering Analyst**, ON

### ***Design Projects***

1. 2021, Sterling Truck and Trailer, "Shipping Container Yard, Industrial Pavement", **Pavement Engineer and Project Manager**, SK
2. 2020, Transtec Group, "Gordie Howe International Bridge Pavement Design Review", **Senior Reviewer**, ON
3. 2017 – 2018, HDR, "Pavement Design Recommendations Erin Mills Parkway", **Pavement Engineer**, ON
4. 2017, HDR, "Pavement Rehabilitation Recommendations for Mississauga Rd and Bush St.", **Pavement Engineer**, ON
5. 2017, Huron County, "Road 87 Pavement Rehabilitation Design", **Project Manager and Pavement Engineer**, ON
6. 2016 – 2017 J.L. Richards & Associates Ltd, "Landfill Truck Scale Pavement Structure Design", **Pavement Engineer**, ON
7. 2016 – 2017, Region of Waterloo, "Pavement Rehabilitation Recommendations Nafziger Rd", **Pavement Engineer**, ON
8. 2016 – 2017, Manulife, "Pavement Design Recommendations", **Project Manager and Pavement Engineer**, AB
9. 2016 - 2018, WSP "Non Passenger Vehicle Screening Gate at GTAA Design", **Project Manager and Pavement Engineer**, ON
10. 2015 – 2018, AECOM, "Connecting Link Pavement Rehabilitation Design", **Project Manager and Pavement Engineer**, ON
11. 2015 - 2018, HDR, "16th Ave Pavement Rehabilitation Recommendations", **Pavement Engineer**, ON
12. 2015 – 2016, Region of Waterloo, "Pavement Rehabilitation Recommendations for Intersection of Weber St and Northfield Dr.", **Pavement Engineer**, QC
13. 2015 – 2016, Region of Waterloo, "Airside Pavement Rehabilitation Recommendations", **Project Manager and Pavement Engineer**, ON
14. 2015 – 2016, City of Calgary, "Pavement Rehabilitation Recommendations for 9<sup>th</sup> Ave SE", **Project Manager and Pavement Engineer**, AB
15. 2015 – 2016, Walter Fedy, "Pavement Rehabilitation Recommendations for Brampton Police Stations", **Pavement Engineer**, ON

16. 2015, Nassau Airport Development Company, "Pavement Rehabilitation Recommendations", **Pavement Engineer**, Bahamas
17. 2015, MMM Group Ltd., "Killarney Airport Pavement Rehabilitation Recommendations", **Pavement Engineer**, ON
18. 2015, Associated Engineering, "Pavement Rehabilitation Design Recommendations for Pelham Rd", **Pavement Engineer**, ON
19. 2015, Port of Montreal, "Pavement Rehabilitation Recommendations", **Pavement Engineer**, QC
20. 2015, AECOM "Rena Road Pavement Design Recommendations", **Pavement Engineer**, ON
21. 2015, City of Ottawa, "Pavement Design Recommendations of Lincoln Fields Bus Bays", **Project Manager and Pavement Engineer**, ON
22. 2015, WSP, "Pavement Design Recommendations and Review for Turcot Interchange Concrete Pavement", **Pavement Engineer**, QC
23. 2015, Dillon Consulting Ltd, "Pavement Design Recommendations for Landfill Haul Road", **Pavement Engineer**, ON
24. 2015, SmartCentres, "Pavement Design Recommendations for VCM Station", **Pavement Engineer**, ON
25. 2014, NOVA Chemicals, "Truck Route Pavement Design Recommendations", **Pavement Engineer**, AB
26. 2014, CN, "Railyard Roller Compacted Concrete Design Recommendation", **Pavement Engineer**, SK
27. 2014, County of Essex, "Permeable Pavement Sidewalk Design Recommendations", **Pavement Engineer**, ON
28. 2014 – 2015, City of Calgary, "Pavement Rehabilitation Recommendations Shaganappi Trail", **Project Manager and Pavement Engineer**, AB
29. 2014 – 2015, Billy Bishop Toronto Island Airport, "Field Investigation for Runway Rehabilitation and Expansion Design", **Pavement Engineer**, ON
30. 2014 – 2015, Grey County and Harold Sutherland Construction, "Evaluation of Haul Road and Design Recommendations for Increased Capacity", **Project Manager and Pavement Engineer**, ON
31. 2014, URS, "Pavement Design Recommendations", **Pavement Engineer**, ON
32. 2014, City of Calgary, "Pavement Rehabilitation Recommendations 36 St NE", **Project Manager and Pavement Engineer**, AB
33. 2014, Region of Waterloo, "Pavement Rehabilitation Recommendations for Fountain St", **Pavement Engineering**, ON
34. 2014, Region of Waterloo, "Pavement Rehabilitation Recommendations for Trussler Rd", **Pavement Engineering**, ON
35. 2013 – 2017, Region of York, "Roundabout Pavement Design", **Project Manager, Pavement Engineering Analyst and Pavement Engineer**, ON
36. 2013, Aughinish, "Asphalt Liner for Clarifier Pond Recommendations", **Pavement Engineering Analyst**, Ireland
37. 2013, City of London, "Stormwater Management Alternatives", **Pavement Engineering Analyst**, ON
38. 2013, Fieldgate Commercial, "Pavement Design Recommendations for Interlocking Concrete Pavers", **Pavement Engineering Analyst**, ON
39. 2013, Associated Engineer, "Pavement Rehabilitation Design for Lakeshore Road", **Pavement Engineering Analyst**, ON
40. 2013, Suncor, "Concrete Pavement Design Recommendations", **Pavement Engineering Analyst**, AB
41. 2013, Walmart, "Heavy Duty Concrete Pavement Design Recommendations", **Pavement Engineering Analyst**, AB
42. 2013, Cityzen Development Group, "Permeable Pavement Design Recommendations", **Pavement Engineering Analyst**, ON
43. 2012, SmartCentres, "Pavement Design Recommendations for Valleywood", **Pavement Engineering Analyst**, ON
44. 2012, Region of Waterloo, "Pavement Rehabilitation Recommendations for Fischer Hallman Rd", **Pavement Engineering Analyst**, ON
45. 2012, Region of Waterloo, "Pavement Rehabilitation Recommendations for Hespeler Rd", **Pavement Engineering Analyst**, ON

46. 2012, MMM Group Ltd., "Pavement Widening and Rehabilitation Recommendations for James Snow Parkway", **Pavement Engineering Analyst**, ON
47. 2012, Amico, "Open Graded Drainage Layer Design Using Pervious Concrete Pavement, Hydromedia for Right Honourable Herb Gray Parkway", **Pavement Engineering Analyst**, ON
48. 2012, Dexter Construction, "Airfield Pavement Performance Investigation at Providenciales International Airport", **Pavement Engineering Analyst**, ON
49. 2012, Halton Region, "Pavement Widening and Rehabilitation Recommendations for Steeles Ave", **Pavement Engineering Analyst**, ON
50. 2012, Region of Waterloo, "Pavement Rehabilitation Recommendations for Highland Ave", **Pavement Engineering Analyst**, ON
51. 2012, Region of Waterloo, "Pavement Rehabilitation Recommendations for Weber St", **Pavement Engineering Analyst**, ON
52. 2012, Ontario Ministry of Transportation, "Hwy 12 Pavement Rehabilitation", **Pavement Engineering Analyst**, ON
53. 2011, SmartCentres, "Pavement Design Recommendations for Vaughan Metropolitan Centre", **Pavement Engineering Analyst**, ON
54. 2011, Region of Waterloo, "Pavement Rehabilitation Recommendations for Sawmill Rd", **Pavement Engineering Analyst**, ON
55. 2011, Region of Waterloo, "Pavement Rehabilitation Recommendations for Erb's Rd", **Pavement Engineering Analyst**, ON
56. 2011, AECOM, "Pavement Design Recommendations for Twinning of Banff Hwy", **Pavement Engineering Analyst**, ON
57. 2011, CN, "Pavement Design Recommendations for Railyard Using Roller Compacted Concrete", **Pavement Engineering Analyst**, AB
58. 2011, BP Global, "Pavement Design Recommendations for Wind Turbine Access Road", **Pavement Engineering Analyst**, PA, USA
59. 2011, AECOM, "Pavement Design Recommendations for Ashbridges Bay Treatment Plant", **Pavement Engineering Analyst**, ON
60. 2011, SmartCentres, "Pavement Design Recommendations for Vaughan KPMG Block", **Pavement Engineering Analyst**, ON
61. 2011, SNC Lavalin, "Huronario LRT Condition Assessment for Design Recommendations", **Pavement Engineering Analyst**, ON
62. 2010, Morrison Hershfield, "Taxiways and Road Design Recommendations Over the in Field vehicle tunnel at Pearson Airport", **Pavement Engineering Analyst**, ON
63. 2010, Nuclear Waste Management Organization (NWMO), "Pavement Design Recommendations for Heavy Hauls at Bruce Power", **Pavement Engineering Analyst**, ON
64. 2010, Lac Bombardier, "Concrete Spillway Pavement Design", **Pavement Engineering Analyst**, QC
65. 2009 – 2017, TTC Toronto York Spadina Subway Extension, "Pavement Design Recommendations", **Pavement Engineering Analyst, Pavement Engineer**, ON
66. 2009 - 2016, VivaNEXT, "Pavement Design Recommendations", **Pavement Engineering Analyst, Pavement Engineer**, ON
67. 2009 – 2015, Delcan/Parsons, "Weston Tunnel Design Recommendations", **Pavement Engineering Analyst, Pavement Engineer**, ON

### ***Forensic Investigations***

1. 2022, ICBC, "Surface Treatment Performance", **Senior Pavement Engineer, Project Manager**, BC
2. 2022, Avia NG, "Pavement Performance Investigation", **Pavement Engineer, Project Manager**, MB
3. 2021, Field Law, "Pavement Performance Investigation", **Senior Pavement Engineer**, AB
4. 2017, GRI Towers, "Pavement Performance Investigation", **Pavement Engineer**, TX, USA

5. 2016 – 2017, Saint John, “Pavement Performance Investigation”, **Project Manager and Pavement Engineer**, NB
6. 2015, Nassau Airport Development Company, “Pavement Rutting Investigation”, **Pavement Engineer**, Bahamas
7. 2015, Region of Niagara, “Pavement Performance Investigation”, **Project Manager and Pavement Engineer**, ON
8. 2014 – 2015, Region of Waterloo, “Premature Cracking Investigation”, **Project Manager and Pavement Engineer**, ON
9. 2014, Dufferin Construction, “Pavement Performance Investigation”, **Project Manager and Pavement Engineer**, ON
10. 2013 - 2015, Region of Niagara, “Pavement Performance Investigation”, **Project Manager, Pavement Engineering Analyst and Pavement Engineer**, ON
11. 2012, Iroquis Oakville Community Centre, “Pavement Performance Investigation”, **Pavement Engineering Analyst**, ON
12. 2011 – 2012, MTO, “Cause of Rutting on Hwy 401”, **Pavement Engineering Analyst**, ON
13. 2011, City of Moncton, “Pavement Failure Investigation”, **Pavement Engineering Analyst**, NB

### **Laboratory Testing**

1. 2020, Saskatchewan Ministry of Highways and Infrastructure, “Performance Graded Asphalt Cement Testing”, **Senior Reviewer**, SK

### **P3 Projects**

1. 2015, Flatiron “Winnipeg Interchange Bid Submission”, **Pavement Engineer**, MB
2. 2010 - 2015, SNC Lavalin, “CentrePort Canada Way Design Build”, **Pavement Engineering Analyst**, MB

### **Research**

1. 2022, Ontario Ministry of Transportation, “Spring Load Restrictions”, **Pavement Engineer**, ON
2. 2021, University of Toronto, “Evaluation of Microplastics in Pavements”, **Senior Pavement Engineer**, ON
3. 2020, City of Hamilton/Coco Paving, “Evaluation of the Performance of Pavement Recycling using Non Destructive Testing and 3D Finite Element Modelling”, **Project Manager and Senior Engineer**, ON
4. 2020, City of Hamilton, “Pavement Design Method Assessment, AASHTO, MEPDG, Shell, PSIPave™”, **Co-Supervisor**, ON
5. 2018 – Sidewalk Labs, “Permeable Pavement Feasibility Study”, **Pavement Engineer**, ON
6. 2014 – 2015, WSP, “FWD Testing to Evaluate Soil Stabilization Methods”, **Project Manager and Pavement Engineer**, ON
7. 2015, Lafarge, “Comparison of Soil Stabilization Alternatives and Applications”, **Pavement Engineer**, AB
8. 2014, Region of Niagara, “Aggregate Assessment for Use in Superpave Mixes”, **Project Manager and Pavement Engineer**, ON
9. 2014, CPATT, “Asphalt Cement Testing”, **Project Manager and Pavement Engineer**, ON
10. 2013 – 2014, Holcim, “Evaluation of the Permeability of Base Material”, **Project Manager, Pavement Engineering Analyst and Pavement Engineer**, ON
11. 2013, City of Calgary, “Pavement Degradation Fee”, **Project Manager and Pavement Engineering Analyst**, AB
12. 2013, City of Vancouver, “Evaluation of the Use of RAS in Asphalt Pavements”, **Project Manager and Pavement Engineering Analyst**, BC

13. 2013, Mohab El-Hakim Thesis, "A structural and Economic Evaluation of Perpetual Pavements: A Canadian Perspective", **Research Assistant**, ON
14. 2012, Marcela Alondra Chamorro Gine Thesis, "Development of a Sustainable Management System for Rural Road Networks in Developing Countries", **Engineering Assistant**, ON
15. 2011, Riyad-UL-Islam Thesis, "Performance Evaluation of Recycled Asphalt Shingles (RAS) in Hot Mix Asphalt (HMA): An Ontario Perspective", **Research Assistant**, ON
16. 2011, Lafarge, "Evaluation of Hydromedia", **Project Manager and Pavement Engineering Analyst**, ON
17. 2010, Shila Khanal Thesis, "Pavement Performance Modeling of Unique Crosswalk Designs", **Research Assistant**, ON
18. 2009, Cement Association of Canada, "Incorporating Recycled Concrete Aggregate in Pervious Concrete Pavements", **Research Assistant**, ON
19. 2009, Mohammad Alauddin Ahammed Thesis, "Safe, Quiet and Durable Pavement Structures", **Research Assistant**, ON
20. 2009, Mohab Y. El-Hakim Thesis, "Instrumentation and Overall Evaluation of Perpetual and Conventional Flexible Pavement Designs", **Research Assistant**, ON
21. 2009, James Trevor Smith Thesis, "Recycled Concrete Aggregate - A Viable Aggregate Source For Concrete Pavements", **Research Assistant**, ON
22. 2008 – 2013, Cement Association of Canada, "Design, Construction and Maintenance for the use of Pervious Concrete Pavement in Canada", **Project Manager and Pavement Engineering Analyst**, ON
23. 2008, Sudip L. Adhikari Thesis, Structural Performance Evaluation of Interlocking Concrete Pavement Crosswalk Designs, **Research Assistant**, ON
24. 2007, Environment Canada, "A Road Well-Traveled: Implications of Climate Change for Pavement Infrastructure in Southern Canada", **Research Assistant**, ON
25. 2007, Lori Kathryn Schaus Thesis, "Porous Asphalt Pavement Designs: Proactive Designs for Cold Climate Use", **Research Assistant**, ON

### Memberships

- Professional Engineer, PEO, 2013 – present
- Professional Engineer, APEGS, 2020 – present
- Professional Engineer, APEGA, 2021 – present
- Professional Engineer, Engineers Geoscientists Manitoba, 2022 – present
- Grand River PEO Chapter, 2013 – present
- WTS SW Ontario Chapter, 2019 – present
- Canadian Technical Asphalt Association, 2013 – present
- RMCAO Pervious Concrete Pavement Committee, 2011 – 2014

### Volunteer Positions

- Treasurer, WTS SW Ontario Chapter, 2020 - present
- Fundraising Lead, 2021 Annual Conference, Canadian Society for Civil Engineering, 2020 – 2021
- Communication Committee Chair, Transportation Association of Canada Foundation, 2019 – present
- Board Member, Transportation Association of Canada Foundation, 2016 – present
- Pavement Committee Member, Transportation Association of Canada, 2010 – present
- Soils and Materials Committee Member, Transportation Association of Canada, 2010 – present
- Darwin ME Pavement Design Group Member, Transportation Association of Canada, 2016 – present
- Automated Data Collection Group Member, Transportation Association of Canada, 2018 – present

### Publications

#### *Papers in Referred Journals*



1. Sonia Rahman, Andrew Northmore, **Vimy Henderson**, and Susan Tighe, 2015. "Developing a Framework for Low-Volume Road Implementation of Pervious Concrete Pavements", *International Journal of Transportation Science and Technology*. 4(1):77-92
2. **Vimy Henderson** and Susan Tighe. 2012. "Evaluation of Pervious Concrete Pavement Performance in Cold Weather Climates." *International Journal of Pavement Engineering*, Taylor & Francis Online, Vol. 13(3), pp. 197-208.
3. **Vimy Henderson** and Susan Tighe, 2011. "Evaluation of Pervious Concrete Pavement Permeability Renewal Maintenance Methods at Field Sites in Canada", *Canadian Journal of Civil Engineering*, National Research Council, 38(12) 1404-1413.
4. Rabiah Rizvi, **Vimy Henderson**, Susan Tighe, and Jodi Norris, 2010. "Evaluating the Use of Recycled Concrete Aggregate in Pervious Concrete Pavement", *Transportation Research Record, Journal of the Transportation Research Board*, Vol. 2164, pp. 132-140, Washington, D.C.
5. **Vimy Henderson** and Susan Tighe. 2010. "Analysis of Canadian Climate Change Impacts Using MEPDG and LTPP", *American Society of Civil Engineers Journal*.
6. **Vimy Henderson**, Susan Tighe, and Jodi Norris. 2009. "Pervious Concrete Pavement: An Integrated Laboratory and Field Study", *Transportation Research Record: Journal of the Transportation Research Board*, Washington, D.C., N. 2113, pp. 13-21.

#### ***Papers in Referred Conference Proceedings***

1. Daniel Pickel, **Vimy Henderson**, Roberto Soares, Michael Becke, and Taylor Lefebvre, 2021. "A Case Study Demonstrating the Use of NDT and FEM to Quantify Pavement Response in Canada", 2021 Transportation Research Board.
2. Faraz Forghani, Susan Tighe, **Vimy Henderson**, Michael Becke, Roberto Soares, and Rielle Haichert, 2020. "Impact of Road Geometry and Thickness on Pavement Behaviour using PSIPave 3D", 2020 TAC Conference & Exhibition.
3. Ludomir Uzarowski, Rabiah Rizvi, **Vimy Henderson**, and Susan Tighe, 2018. "Developing Shear Resistant Asphalt Mixes for Roundabout Pavements", *Transportation Association of Canada Conference - Innovation and Technology: Evolving Transportation*, TAC 2018.
4. Ludomir Uzarowski, **Vimy Henderson**, Rabiah Rizvi, Karim Mohammad and Venkat Lakkavalli, 2016. "Use of FWD, GPR and IP in Combination on Complex Pavement Projects-Including Case Studies", 2016 Transportation Association of Canada's Conference and Exhibition, TAC 2016.
5. Ludomir Uzarowski, Gary MacDonald, John Rizzo, Gary Moore and **Vimy Henderson**, 2015. "Cold 2014 Winter and Early Asphalt Pavement Cracking Observed in Ontario", 2015 Annual Conference of the TAC, Charlottetown PEI.
6. Ludomir Uzarowski and **Vimy Henderson**, 2014. "Pavement and Materials Technology Review for municipalities-Including a Case Study", *Asphalt Pavements - Proceedings of the International Conference on Asphalt Pavements*, ISAP 2014, 1, 115-124.
7. Ludomir Uzarowski, Michael Halloran, Jim Ellerman and **Vimy Henderson**, 2014. "Evaluation of the Use of Green Pavement Technologies in the Region of Waterloo, Ontario", 2014 Transportation Association of Canada Conference and Exhibition: Past, Present, Future, ATC 2014.
8. **Vimy Henderson**, Susan L. Tighe, and Rico Fung, 2014. "Development of the Canadian Design, Construction and Maintenance Guide for the Use of Pervious Concrete Pavement", 2014 Transportation Association of Canada Conference and Exhibition: Past, Present, Future, ATC 2014.
9. Mohammad Karim, Rabiah Rizvi, **Vimy Henderson**, Ludomir Uzarowski and Joe Chyc-Cies, 2014. "Effect of Utility Cuts on Serviceability of Pavement Assets - A Case Study from the City of Calgary", *Transportation Association of Canada Conference and Exhibition: Past, Present, Future*, ATC 2014.
10. Sonia Rahman, **Vimy Henderson**, Susan Tighe, and Rico Fung, 2014. "Long Term Drainage Performance of Pervious Concrete Pavements in Canada", *Transportation Association of Canada Annual Meeting*, September 28 – October 1, 2014.

11. **Vimy Henderson** and Susan Tighe, 2013. "Verification of Pervious Concrete Drainage Characteristics Using Instrumentation", In Transportation Infrastructure Design and Construction Session of the 2013 Conference of the TAC, Winnipeg, Manitoba.
12. Ludomir Uzarowski, Carlos Midence, Tim Smith and **Vimy Henderson**, 2013. "Use of Pervious Concrete as an Open Graded Drainage Layer in Pavement Structures", 2013 TAC Conference and Exhibition - Transportation: Better - Faster - Safer, TAC/ATC 2013.
13. Ludomir Uzarowski, Gary Moore and **Vimy Henderson**, 2012. "Instrumentation in Red Hill Valley Parkway Providing Data for Long Term Pavement Management", 2012 TAC Conference and Exhibition - Transportation: Innovations and Opportunities, TAC/ATC 2012.
14. Ludomir Uzarowski, **Vimy Henderson**, Jack MacDonald, 2012. "Pavement and Materials Technology Review for Municipalities – Including a Case Study", Transportation Association of Canada, Fredericton, NB.
15. **Vimy Henderson** and Susan Tighe. 2012. "Performance of Pervious Concrete Pavement in Freeze-Thaw Conditions and with Winter Maintenance", 10th International Conference on Concrete Pavements, Quebec City, Quebec, July 18-12.
16. Ludomir Uzarowski, **Vimy Henderson**, Mike Henderson and Bob Kiesswetter, 2011. "Innovative Infrared Crack Repair Method", 2011 Conference and Exhibition of the Transportation Association of Canada - Transportation Successes: Let's Build on Them, TAC/ATC 2011.
17. **Vimy Henderson**, Susan Tighe, and Rico Fung. 2011. "Development of a Guide for the Design, Construction and Maintenance of Pervious Concrete Pavement in Canada." Transportation Association of Canada, Edmonton, AB., September 11-14, 2011.
18. Ludomir Uzarowski, **Vimy Henderson**, Susan Tighe, and Mike Halloran. 2011. "Differential Shrinkage Cracking of HMA Placed Over Foamed Asphalt Base – A Case Study." Canadian Technical Asphalt Association.
19. **Vimy Henderson** and Susan Tighe, 2011. "Evaluation of Pervious Concrete Pavement Maintenance Methods of Field Sites in Canada", Annual Meeting at the Transportation Research Board Proceedings, Paper 11-3942, Washington, D.C.
20. **Vimy Henderson** and Susan Tighe, 2011. "Pervious Concrete Pavement: A Sustainable Alternative", Annual Meeting of the Transportation Research Board Proceedings, Paper 12-3611, Washington, D.C. January 22-26.
21. Ludomir Uzarowski, Hana Prilesky, Esther Berube, **Vimy Henderson** and Rabiah Rizvi, 2010. "Laboratory Testing of Vancouver HMA Mixes Containing Recycled Asphalt Shingles", TAC/ATC 2010 - 2010 Annual Conference and Exhibition of the Transportation Association of Canada: Adjusting to New Realities.
22. **Vimy Henderson** and Susan Tighe, "Pervious Concrete Pavement Performance in Field Applications and Laboratory Testing", Annual Meeting of the Transportation Association of Canada, September 26-29, Halifax, Nova Scotia, 2010.
23. Rabiah Rizvi, Susan Tighe, **Vimy Henderson**, and Jodi Norris, 2010. "Evaluating the Use of Recycled Concrete Aggregate in Pervious Concrete Pavement", Transportation Research Board 89<sup>th</sup> Annual Meeting, Issue 2164, Washington, D.C.
24. **Vimy Henderson**, Brian Mills, Jean Andrey, and Susan Tighe, 2010. "Comparison of Mechanistic Empirical Pavement Design Guide (MEPDG) Versions and their Sensitivity to Climate Change", Annual Meeting of Transportation Association of Canada, September 26-29, Halifax, Nova Scotia.
25. **Vimy Henderson** and Susan Tighe, 2010. "Developing Sustainable Design, Construction and Maintenance Techniques for Cold Climate Pervious Concrete Pavements", International Conference on Pavement Preservation, Newport Beach, CA, April 2010-04-05.
26. **Vimy Henderson** and Susan Tighe. 2010, "Pervious Concrete Pavement Performance in the Canadian Freeze-Thaw Climate", 11th International Symposium on Concrete Roads, October. Seville, Spain.
27. Rabiah Rizvi, Susan Tighe, **Vimy Henderson**, and Jodi Norris, 2009. "Laboratory Sample Preparation Techniques for Pervious Concrete", Transportation Research Board 88th Annual Meeting, January paper No. 09-1962, 16p.
28. **Vimy Henderson**, Susan Tighe, and Jodi Norris, 2009. "Behavior and Performance of Pervious Concrete Pavement in Canada", Transportation Association of Canada Conference Proceedings, Vancouver, October.

29. Rabiah Rizvi, Susan Tighe, Jodi Norris, and **Vimy Henderson**, 2009. "Incorporating Recycled Concrete Aggregate in Pervious Concrete Pavements", Transportation Association of Canada Conference Proceedings, Vancouver, October.
30. Rabiah Rizvi, **Vimy Henderson**, Susan Tighe, and Jodi Norris, 2009. "Recycled Concrete Aggregate in Pervious Concrete Pavements", Transportation Association of Canada Annual Conference, October 2009, Vancouver, B.C. (Best Paper Award).
31. Ludomir Uzarowski, Gary Moore, Michael Halloran and **Vimy Henderson**, 2009. "Construction of Durable Longitudinal Joints - the Courage to Use Innovations Pays Off", TAC/ATC 2009 - 2009 Annual Conference and Exhibition of the Transportation Association of Canada: Transportation in a Climate of Change.
32. Ludomir Uzarowski, **Vimy Henderson**, Gary Moore, Mike Halloran, and Susan Tighe, 2009. "Innovative Approach to Construction of Durable Longitudinal Joints", Canadian Technical Asphalt Association Proceedings, Moncton, November.
33. **Vimy Henderson**, Susan Tighe, and Jodi Norris, 2009. "Pervious Concrete Pavement: An Integrated Laboratory and Field Study", Annual Transportation Research Board Conference Proceedings, Washington, D.C, January, pp. 19.
34. **Vimy Henderson**, Susan Tighe, and Jodi Norris, 2008. "Pervious Concrete Pavement: An Integrated Laboratory and Field Study", 9th International Conference on Concrete Pavements, San Francisco, CA, August 2008, (Best Poster Award).

#### ***Papers in Abstract Only Referred Conference Proceedings***

1. **Vimy Henderson** and Susan Tighe, 2010. "Pervious Concrete Pavement – A Sustainable Alternative", Annual Inter-University Symposium on Infrastructure Management, Newark, DE, June 2010. (Best Paper Award).
2. **Vimy Henderson**, Susan Tighe, and Jodi Norris, 2009. "Performance of Pervious Concrete Pavement Case Studies in Canada", Annual Inter-University Symposium on Infrastructure Management, Iowa City, Iowa, June 2009.
3. **Vimy Henderson** and Susan Tighe, 2009. "Evaluation of Pervious Concrete Pavement", Inter-University Symposium, Ames Iowa.
4. **Vimy Henderson**, Susan Tighe, and Jodi Norris, 2008. "Pervious Concrete Pavement: An Integrated Laboratory and Field Study", Annual Inter-University Symposium on Infrastructure Management, Austin, TX, August 2008.
5. Susan Tighe and **Vimy Henderson**, 2008. "Understanding Pervious Concrete: BC Case Study", Public Works Association of British Columbia Annual Technical Conference, Merritt, September.

#### **Invited Presentations**

- 2022, Mentors Throughout Your Career, WTS SW Ontario, Virtual
- 2020 – present, Pavement and Materials Engineering in Industry, University of Wisconsin – Milwaukee, WI, Virtual
- 2014, Porous and Pervious Pavements Expert Panel, American Public Works Association Congress, ON
- 2012, Pervious Concrete Workshop, ACI Quebec and Eastern Ontario, QC
- 2011, Low Impact Development Stormwater Management Workshop, ON
- 2011, Launch of Norman W. McLeod Chair in Sustainable Engineering, ON
- 2010, Waterloo Unlimited, ON
- 2010, WE Innovate, ON
- 2010, Low Impact Development Stormwater Management Workshop, ON2010
- 2010, TRB University of Waterloo Alumni Hospitality Suite, DC, USA
- 2009, University of Waterloo Dean's Honours List Luncheon, ON
- 2009, Waterloo Unlimited, ON
- 2009, Cement Association of Canada, ON
- 2009, Stantec University of Waterloo Alumni Luncheon, ON

- 2008, Ready Mix Concrete Association of Ontario (RMCAO) Pervious Concrete Committee, ON

### **Co-Supervised Students**

- 2020 – present, Shreenita Chhetri, Master's Candidate, Evaluation of Recycled Materials in Flexible Pavement in City of Hamilton, University of Waterloo, ON
- 2018 – 2020, Faraz Forghani, Master's Graduate, Comparison of Conventional and Advanced Pavement Design Methods with Ontario Case Studies, University of Waterloo, ON

### **Graduate Committees**

#### ***Master's***

- 2019, Oluremi Oyediji, Using AASHTOWare Pavement ME Design Tools to Evaluate Flood Impact on Concrete Pavement Performance, University of Waterloo, 2019
- 2019, Tracy Zhou (Bingqian Zhou), Feasibility Study of Lean Oil Sand as Base and Surface Material on Gravel Roads in Alberta, University of Waterloo, 2019
- 2019, Harbaldeep Singh Dhaliwal, Incorporating GHG Mitigation into Ontario Highway Pavement Engineering Practices, University of Waterloo, 2019

#### ***Doctoral***

- 2021, Abid Tabassum, Development of Database Framework and Quality Checks for CPATT Data, University of Waterloo, present
- 2019 – present, Mehran Kafi Farashah, Development of Sustainable Asphalt Concrete Mixture Solution for Use in Approach Intersection Pavements in Ontario, University of Waterloo, present
- 2018 – present, Tamanna Kabir, Performance Evaluation of Porous Rubber Pavement (PRP) in the Canadian Climate, University of Waterloo, present
- 2019 – present, Paula Barbi, Implications of Climate Change in Airport Pavement Design and Performance in Canada, University of Waterloo, present
- 2018 – present, Abimbola Oyeyi, Evaluation of the Field Performance of Lightweight Cellular Concrete as a Subbase Alternative in Pavements, University of Waterloo, 2020
- 2019, Donghui Lu, Pavement Flooding Risk Assessment and Management in the Changing Climate, University of Waterloo 2019