Richard F. Beaubien, PE, PTOE

1685 Ross Drive
Troy, Michigan 48084
rfbea@umich.edu
248-515-3628

Education

B.S., Civil Engineering
University of Michigan 1967

M.S., Transportation and Traffic Engineering
University of Michigan 1968

Professional Registration/ Certification

Professional Engineer, Michigan
No. 19919

Professional Traffic Operations Engineer, International
No. 393

Professional Engineer, Illinois
No. 30429

Traffic Engineer, California
No. TR363

Professional Engineer, Missouri
No. E 30024

Professional Engineer, Florida
No. 67867

Real Estate Broker, Michigan
No. 3617631

Road Safety Professional, International
No. 61

Affiliations

American Society of Civil Engineers

Engineering Society of Detroit

Past International President-Institute of Transportation Engineers

Intelligent Transportation Society of Michigan

National Society of Professional Engineers

Professional Experience

More than 40 years of experience in municipal traffic engineering, transportation planning, highway design, traffic system operations, right-of-way acquisition, and Intelligent Transportation Systems. The experience includes 23 years as Transportation Director for Hubbell, Roth & Clark, Inc., 14 years as the Transportation Director for the City of Troy, Michigan; 2 years as Chief Engineer for Reid, Cool & Michalski Traffic and Transportation Engineers; and 5 years as a Highway Engineer for the Federal Highway Administration. He chairs the Metro Detroit Incident Management Coordinating Committee. He is a Past-President of the Intelligent Transportation Society of Michigan .

Mr. Beaubien has been recognized as a traffic engineering expert in litigation involving traffic crashes. He is a registered professional engineer in Michigan, Illinois, Missouri, Florida and California. He has been certified as a Professional Traffic Operations Engineer and a Road Safety Professional by the Transportation Professional Certification Board, Washington, D.C. He is a past International President of the Institute of Transportation Engineers and a recipient of the Institute's Burton W. Marsh Award.

2012 to Present **Managing Director of Beaubien Engineering**, focusing on road safety audits, traffic impact analysis, and intelligent transportation systems.

1989 to 2011 **Transportation Director for Hubbell, Roth & Clark, Inc. Consulting Engineers**, focusing on municipal traffic engineering, transportation planning, highway design, traffic system operations, right-of-way acquisition, and Intelligent Transportation Systems.

1975 to 1989 **Transportation Director for City of Troy, Michigan** with responsibilities for planning, design, and operations of the surface transportation systems with the boundaries of the 35 square mile city in the Detroit Metropolitan area.

1973 to 1975 **Chief Engineer for Reid, Cool & Michalski, Inc. Traffic Engineering Consultants** in Southfield, Michigan

1968 to 1973 **Highway Engineer with the Federal Highway Administration** with assignments in Texas, California, Nevada, Illinois, and Washington, DC. Focused on highway planning and research.

Michigan Society of Professional Engineers

Transportation Research Board

Governor's Traffic Safety Advisory Commission, Traffic Safety Engineering Action Team

Awards

Outstanding Support Award
Intelligent Transportation Society of Michigan
2017

President's Award, Intelligent Transportation Society of Michigan, 2003

Burton W. Marsh Award, Institute of Transportation Engineers, 1998

Coordinating Council Award, Institute of Transportation Engineers, 1996

Arthur C. Gibson Award, Institute of Transportation Engineers, Michigan Section, 1990

Engineer of the Year, Michigan Society of Professional Engineers, Oakland Chapter, 1987

Outstanding Civil Engineer, American Society of Civil Engineers, Southeast Michigan Branch, 1986

Outstanding Engineer in Government, Michigan Society of Professional Engineers, 1985

Project Experience

Review of Temporary Traffic Control Devices
Clark Pavement Marking Company – North Carolina

Beaubien Engineering was engaged to review the circumstances concerning a crash on southbound I-95 near Mile Marker 8 in North Carolina. Specifically, Beaubien Engineering was asked to address these questions:

1. Does the vertical curve restrict the visibility of traffic control devices and southbound motor vehicles for southbound travelers?
2. Did the traffic control devices placed by Clark Pavement Marking force motorists to merge too soon into the right ?
3. Did the traffic control devices place by Clark Pavement Marking conflict with guidance for work zone signing published by the North Carolina Department of Transportation?
4. Were the supplemental traffic control devices placed by Clark Pavement Marking detrimental to work zone safety?
5. Would the moving caravan pavement marking operation have been safer during hours of darkness?
6. Can an individual working under the supervision of an engineer, through the application of procedures and criteria established by the engineer deploy traffic control devices in the field?

We visited the site to observe traffic operations. Standards and guidelines referenced in our review included the *Manual on Uniform Traffic Control Devices.*

Pedestrian Safety Study
Chicago Heights School District - Chicago Heights, Illinois

Beaubien Engineering was engaged to evaluate the Traffic controls used in the work zone on 16th Place in Chicago Heights, Illinois, during the repair of a break of a water line serving Washington-McKinley School on October 23, 2013. Specifically, Beaubien Engineering evaluated the safety and effectiveness of the work zone traffic controls and their compliance with the requirements of the *Manual of Uniform Traffic Control Devices.*

Interchange Traffic Safety Review
I-70/State Route K-18 – Geary County, Kansas

Beaubien Engineering reviewed the crash history and existing traffic control devices at the interchange of I-70 and State Route K-18 in Geary County, Kansas. The assignment was to answer four questions:

1. Is the traffic signing consistent with the requirements of the *Manual on Uniform Traffic Control Devices?*
2. Is the traffic signing consistent with the *Kansas Signing Manual*?

3. Is the traffic signing sufficient to warn motorists of unusual signing at the K-18/I-70 eastbound off ramp intersection?
4. Did the traffic signing adequately consider human factors and driver expectations?

We visited the site to observe traffic operations. We reviewed the traffic crash records for the interchange to determine if there is a pattern of traffic crashes at the interchange that could be addressed with improved traffic control devices. Standards and guidelines referenced in our review included the *Manual on Uniform Traffic Control Devices, the Kansas Signing Manual, the Highway Safety Manual, and the Federal Highway Administration Publication No. FHWA-SA-07-015 Crash Reduction Factors.*

Security Credit Union Traffic Impact Study
Security Credit Union – Flint, Michigan

Prepared a traffic impact study for the development of the Security Credit Union Headquarters Campus development in Grand Blanc Township, Genesee County, Michigan. Data collection on existing traffic conditions included hourly traffic volumes, turning movements, tabulation of traffic gaps, and percentage of commercial vehicles. Trip generation, traffic assignment, and capacity analysis studies were included. Provided support for public agency review of traffic impacts and evaluation of roadway improvements needed to accommodate the traffic from the development.

Pine Creek Ridge Traffic Survey – Livingston County, Michigan
Pine Creek Ridge Homeowners Association

To control traffic volumes and reduce speeding on its streets, the Pine Creek Ridge Homeowners Association requested approval from Genoa Township to convert streets in the subdivision from public ownership to private ownership. To gain an understanding of how these streets are currently being used, Beaubien Engineering was retained to gather information on traffic volumes, speeds, and direction of travel

Traffic Safety Analysis of Gasoline Retail Traffic Operations
Costco Wholesale

Provided traffic engineering expert witness services to defend Costco in litigation involving an injury sustained by a customer at their Shelby Township, Michigan retail operation. Analyzed the gasoline retail operation to determine if the design of traffic operations provided a reasonably safe environment for gasoline retail customers.

Statewide Road Safety Audits for Michigan Department of Transportation Highway Safety Improvement Program
Michigan Department of Transportation
Project Manager for statewide road safety audits for the Michigan Department of Transportation. Facilitated interdisciplinary teams reviewing proposed safety improvement projects in different parts of the

state. The audits included briefing meetings, field reviews, benefit/cost analysis, and preparation of a findings report for each location.

Glendale Avenue Urban Collector Classification
City of Livonia, Michigan

Provided traffic engineering services needed to support adding Glendale Avenue to the Federal-aid System as a Major Urban Collector.

Traffic Impact Analysis for Kroger Store Expansion in St. Clair Shores, Michigan
City of St. Clair Shores

Provided traffic engineering expert witness services to the City of St. Clair Shores in defense of zoning litigation. The proposed expansion of the Kroger site to include fueling stations on an adjacent site generated additional traffic that the city found unacceptable. The requested zoning change was not granted by the city, and the city was sued.

Pedestrian Safety Study on Davison Avenue, Detroit, Michigan
Focus Hope

Reviewed the pedestrian crash experience along the section of Davison Avenue in the City of Detroit adjacent to the Focus Hope Village to identify countermeasures to reduce pedestrian fatalities and injuries. Worked with the Michigan Department of Transportation to program appropriate countermeasure to address pedestrian crash issues.

ITS Design Build for North and Superior Regions
Michigan Department of Transportation
Engineer of Record for project to design and build 10 dynamic message signs in northern lower Michigan and in the Michigan Upper Peninsula. The project also included design and build services for 12 environmental sensor stations in the northern lower peninsula. The dynamic message signs and the environment sensor stations will communicate with the Mackinac Bridge, the MDOT Escanaba Region Office, and the Grayling Transportation Service Center. The environmental sensor stations include a CCTV camera and collect data on temperature, wind velocity, and traffic volume. The data from these sites will improve winter maintenance by providing enhanced information to the maintenance garages, the Michigan State Police, and the National Weather Service.

Metro Detroit Traffic Incident Management Program
Michigan Department of Transportation
Organized the Metro Detroit Traffic Incident Management Program to develop recommendations regarding detection, response, removal, information to motorists, and legislation. The resulting Blueprint for Action laid out a program of activities to improve traffic incident management in Metro Detroit. Some of the accomplishments for the region resulting from the Blueprint were:

- Combining of the Michigan State Police dispatch operations with the Michigan Intelligent Transportation Systems Center
- Expanding the number and coverage of closed circuit television cameras on Metro Detroit Freeways
- Establishing the Freeway Courtesy Patrol
- Reducing the abandoned vehicle time limit from 48 hours to 12 hours.

Mr. Beaubien currently chairs the Metro Detroit Traffic Incident Management Coordinating Committee.

University of Michigan Central Campus Transit Center
University of Michigan Architecture, Engineering and Construction Department
Engineering services to design and develop complete construction documents to reconstruct North University Avenue between Fletcher Street and Church Street and to provide shelters for major transit transfer point. Stakeholders include the City of Ann Arbor, Ann Arbor Transportation Authority (AATA) and the University of Michigan's Parking and Transportation Services.

MDOT ITS Grand Region Design Build - M-6 and I-96 Communications
J. Ranck Electric, Inc.
HRC was selected as the subcontractor responsible for the Engineering Design, Quality Assurance and Quality Control. The project includes the design and installation of 23.02 miles of fiber-optic cable, ITS conduit, innerduct, handholes and cabinets on M-6 from I-196 to I-96 and on I-96 from M-11 to M-6 in Kent and Ottawa Counties for MDOT Grand Region.

Traffic Impact Study for Rezoning of Northwest Corner of 10 Mile Road and Beck Road, Novi
Ten & Beck, LLC
A traffic impact study was performed for the rezoning of 10 Mile Road and Beck Road in the City of Novi, Michigan. The study included estimation of background traffic, trip generation, trip distribution and assignment, capacity analysis, recommendations to mitigate impacts of additional traffic and a report summarizing results.

School Crossing Review
Shelby Township Police Department
The school crossings in the Charter Township of Shelby, Michigan were reviewed to determine the appropriate number of school crossing guards needed for safe school crossings. The existing school crossing locations were evaluated using objective traffic engineering criteria including traffic volume on the street being crossed and number of students crossing.

Tienken Road Environmental Assessment
Road Commission for Oakland County
Preparing Environmental Assessment to reconstruct 1.5 miles of Tienken Road in the City of Rochester Hills to meet future volumes and safety concerns. Work includes development of alternatives based on transportation analyses, noise and air quality analysis, evaluation of impacts and public participation.

Advanced Traffic Management System
Road Commission of Macomb County

Project Manager for the Road Commission of Macomb County to design and install an Advanced Traffic Management System (ATMS) for portions of Mound Road, Metropolitan Parkway and Harper Avenue. This project adds four new systems to the closed-loop signal system being implemented throughout Macomb County. This project integrates the latest technology for traffic signal systems, which communicates directly with the Road Commission's Traffic Operations Center in Mt. Clemens. The project provides a wireless communication system between traffic signal systems, ITS components and the Traffic Operations Center. The benefits of this new system include an improved traffic flow with the capability to change traffic signal timings based on traffic volumes and in the case of emergency situations as well as reductions in operations expenses on signals.

Regional Concept of Transportation Operations (RCTO) Initiative
Southeast Michigan Council of Governments
Provided project management support for the development of regional process and priorities for transportation operations, including ITS elements. The process built upon the existing Traffic Incident Management program. The result of the process was a listing of agreed upon activities to improve regional transportation operations. The project received the 2008 Transportation Planning Excellence Award from the Federal Highway Administration.

VII Data Use Analysis and Processing (DUAP)
Michigan Department of Transportation
As a sub consultant to Mixon/Hill, Inc., provided support and expertise for traffic data gathering and MDOT's policies, standards and practices. Project evaluating uses and benefits of VII related data in transportation agency management and operations.

Great Lakes Intelligent Transportation Systems I-75/Opdyke Arterial/ Freeway Integration Project
Iteris, Inc.
Project Manager for the design of the pilot project to test the diversion of traffic on northbound I-75 onto Opdyke Road between Square Lake Road and Lapeer Road in case of traffic incidents, emergencies, and highway construction. The project includes the design and implementation of 8 CCTV cameras for monitoring traffic conditions and detecting incidents through the use of a solar powered microwave traffic detection unit. Design includes a solar flashing beacon system activated by MITS Center personnel which diverts traffic to the alternate route when traffic conditions warrant the diversion strategy.

Oakland County Signal Systems Optimization Project, Phase 2
Road Commission for Oakland County
Project Manager for the Road Commission for Oakland County project to analyze and retime 324 traffic signals in 13 communities in southeast Oakland County. The project was funded by MDOT with a federal grant from the Congestion Mitigation Air Quality program. The program improved the efficiency and safety of the roadway network and improved air quality by optimizing the signal timings and providing of progression on the major corridors.

Macomb County Traffic Operations Center
Road Commission of Macomb County

Project Manager for the development of an ITS Master Plan and the Design/Build of a Traffic Operations Center for the Road Commission of Macomb County in Mt. Clemens, Michigan. The new traffic operations center was designed to monitor and communicate with 170 signalized intersections on the most congested arterials in southern Macomb County. In addition to building a new facility to centralize all of the traffic signal operations, the project developed an Intelligent Transportation Systems Master Plan to guide the Road Commission's future investments in technologies and equipment to improve traffic flow and reduce congestion throughout the county.

ITS/ATMS/ATIS Deployment-Metro Detroit
Project Manager for the civil design portion of the design/build of 145 miles of ITS equipment on metro Detroit freeways. Part of the Iteris (formerly Rockwell) team responsible for the implementation of one of the world's largest freeway instrumentation projects in Metropolitan Detroit. Nearly 145 miles of freeway were equipped with both Advanced Transportation Management System (ATMS) and Advanced Traveler Information System (ATIS) elements. A major feature of the project was the integration of MDOT's intelligent transportation systems center (MITS Center) in downtown Detroit with the Road Commission for Oakland County's arterial traffic operations center in Waterford Township.

Oakland County Real Time, Adaptive, Advanced Traffic Management
Project Manager for the first phase of the FAST-TRAC project in Oakland County, Michigan. The project installed an advanced Traffic Management System which incorporates the Sydney Coordinated Adaptive Traffic System (SCATS) for real time adaptive traffic control and Autoscope Machine Vision Vehicle Detection System. This is the first application of the SCATS Traffic Control System in the western hemisphere. This is also the first widespread application of the Autoscope Machine Vision Vehicle Detection System to an arterial street system. HRC's role in this project included plans for the new Traffic Operations Center.

MDOT Metro Region Traffic Incident Management Plans
HNTB, Inc.
Subcontractor on a project intended to develop traffic incident management plans for four major construction projects in the Metro Detroit Region. Developed stakeholder lists, prepared meeting materials describing construction project impact, and organized stakeholder meetings. Provided exhibits for use during planned special events surrounding the 2006 Super Bowl XL in downtown Detroit.

MDOT Traffic Incident Management (TIM)
Michigan Department of Transportation-MITS Center
Project Manager for provision of administrative support services to TIM Committee as well as technical support for website, mapping and development and alternate routes in 2005. Provided administrative support services to the Traffic Incident Management Committee, technical support for the website, mapping, and aerial photographs. Retained a Metro Detroit Traffic Operations calendar that can be viewed on a website and accessed through the website of ITS Michigan.

Traffic Impact Analysis for Heritage Park North
Grand Sakwa of Grand Blanc, LLC

Project Manager for traffic impact analysis of 600,000 SF mixed commercial development in Grand Blanc Township to accompany rezoning request and subsequent site plan review. Study included data collection, trip generation and comparisons, trip assignment, capacity analysis of existing and future traffic conditions, signal optimization and recommendations. Conducted signal warrant analysis and access management review. Retained to develop alternatives for access issues, design the new traffic signal on Saginaw Road and modify traffic signal on Dort Highway.

Traffic Impact Study for Mixed Use Development in Northville Township
Real Estate interests Group, Inc.
Preparation of traffic impact study for the mixed use development in Northville Township including all field data collection.

Traffic Impact Study for MotorCity Casino
Detroit Entertainment, LLC
Project Manager for the traffic impact study for site plan approval of the original Casino, with a gaming floor area of 68,000 sq. ft. The study responded to all of the transportation requirements set forth in the Development Agreement between the City of Detroit and the casino developers. This included access for pedestrians and transit vehicles. Approximately six months after the MotorCity Casino was opened, conducted a traffic operation study to identify any operational and/or safety problems and to develop countermeasures to reduce the risk of crashes and conflicts.

Shoppes of Fenton
Detroit Development
Corrected, revised and optimized traffic model of existing and future traffic for a planned unit development including five adjacent signals.

Traffic Impact Analysis for White Lake Hill Mixed Use Development
Laurtec, Ltd.
Project Manager for traffic impact analysis of mixed commercial development in White Lake Township to accompany rezoning request and site plan review. Study included data collection, trip generation and comparisons, trip assignment, capacity analysis of existing and future traffic conditions, signal optimization and recommendations.

Downtown Traffic and Parking
Village of Romeo
Provided consulting services to improve safety of pedestrians downtown, improve utilization of parking lots and review safety of on-street parking.

Sashabaw Road Corridor Study
Charter Township of Independence
Prepared a model of future transportation needs for Sashabaw Road corridor at interchange with I-75. Development list of recommended geometric improvements.

Community Policy on Mid-Block Pedestrian Crossings
City of Wyoming

Researched and recommended practices and developed policy for approving and format for evaluating requests for mid-block crossings.

Big Beaver Road Reconstruction, Livernois to Rochester
City of Troy
Design of 6-lane boulevard with master storm, water main and sanitary sewer relocation. Design included maintaining 4 lanes of traffic while under construction. Included safety path.

Abbott Road Environmental Assessment
City of East Lansing
Responsible for developing and evaluating design concepts to widen Abbott Road from 2 to 5 lanes to meet future capacity needs. Evaluation of alternatives included traffic operations and safety studies. Concepts included safety and access management concerns.

Road Safety Audit for the Proposed Brandon Elementary School
Charter Township of Brandon
Project Manager for the road safety audit of a driveway onto Oakwood Road from the proposed Brandon Elementary School. A road safety audit is an examination of a roadway, in which an independent qualified auditor identifies and reports on safety issues. The road safety audit included: 24 hour traffic volumes and speeds; sight distance evaluation; a detailed crash analysis; projected traffic volumes and patterns for the proposed elementary school and recommended road improvements for safe access to and from the site.

Traffic Circulation Analysis – Ann Arbor High School
City of Ann Arbor
Project Manager for a Circulation and Safety Study to improve overall safety in and around school campus for drivers, bus users and pedestrians. Analyzed existing traffic conditions, identified deficiencies and suggested countermeasures. Conducted license plate survey to track traffic on the school premise. Performed capacity analysis using HCS and detailed crash analysis at two intersections and two driveways.

Rochester Road, Torpey to Barclay
City of Troy
Design of new 6-lane boulevard with enclosed master storm drainage, 16" water main and sanitary sewer relocation, traffic signals and maintenance of traffic plans.

Intersection Safety Audits
City of Wixom
Project Manager for Safety Studies at three intersections in Wixom. Performed peak hour turning movement counts, collected 24-hour traffic volume and speed data, reviewed crash history, reviewed geometrics, and suggested countermeasures with cost estimates for two adjacent intersections on Beck Road in Wixom.

Williams Lake Road Environmental Assessment
Road Commission for Oakland County
Project Development Study to evaluate alternative alignments and geometry for Williams Lake Road in Waterford Township. Conducted traffic and

safety analyses to determine the preferred alternative for a realigned Williams Lake Road. Conducted traffic crash analysis and license plate survey to determine the safety and traffic flow impacts of the proposed realignment. Assessed environmental impacts.

I-696/Franklin Road Interchange Roadway Network Evaluation
City of Southfield
Design included two new ramps and one reconstructed ramp, a new 5 lane bridge, and a new lane for eastbound I-696. Network evaluation included signal retiming, with the construction of slip ramps at Franklin Road to improve access to the area without detrimental effects on the operation of I-696. Determined the local road system improvements that would be needed to make both slip ramps operate effectively, if the slip ramps were constructed as planned

Oakland County SCATS Clearance Interval Study
Road Commission for Oakland County
Project Manager for the Road Commission for Oakland County project to develop clearance interval timing for Sydney Coordinated Adaptive Traffic Systems (SCATS) signals in Oakland County. A total of 274 intersections were surveyed for approach speed, grade, pedestrian and vehicle clearance distances. Data collected for each SCATS signal was used to calculate the required vehicle change and clearance intervals according to RCOC and ITE standards. Results were calculated and reported in an easy to use spreadsheet format.

Squirrel Road Corridor Traffic Study
City of Auburn Hills
Project Manager for development of a Master Plan for road improvements in eastern Auburn Hills and western Rochester Hills, Michigan. Retained by the Cities of Auburn Hills and Rochester Hills to study the future needs of the Squirrel Road Corridor in the City of Auburn Hills. The study area included the eastern part of Auburn Hills, and a portion of the western part of the City of Rochester Hills. The study area suggested intersection and segment improvements where needed.

Downtown Traffic Study
City of Northville
Project Manager for additional studies in the downtown area to examine the safe movement of motorized and pedestrian traffic. Created Synchro model to evaluate alternatives and optimize signal timings.

City Wide Traffic Study
City of Northville
Project Manager for the City of Northville Downtown Traffic Study. The City of Northville retained HRC in 1998 to undertake a comprehensive citywide traffic study to determine what improvements, if any, will be necessary to safely accommodate the future traffic volumes. An important emphasis was on retaining the city's small town heritage and attractive downtown shopping area.

State Farm Intersection Safety Studies
Road Commission for Oakland County

Project Manager for the State Farm Insurance project to conduct a traffic operations and safety study at three high crash intersections.

The safety work consisted of identifying existing safety issues through a thorough analysis of traffic crash data and traffic conflict characteristics for each of the study intersections. The study of traffic conflicts augments the traffic crash analysis by providing real-time information about potential collision causation.

The traffic operations work included a review of the physical and geometric attributes of the intersection, adjacent land uses and turn movement counts during the AM and PM Peak hours. HRC then conducted capacity analysis by intersection by approach by time of day.

Tienken Road Corridor Study
City of Rochester Hills
Project Manager for a study of Tienken Road in Rochester Hills, Michigan to evaluate what road, signal, and pedestrian improvements are needed to accommodate development activities in the northeast portion of the City.

Analyzed a comprehensive array of data about the corridor including topographical data, environmental assessment and right-of-way. The major roads in the area were simulated using CORSIM/NETSIM software in order to simulate existing traffic conditions and to test which future alternative had a high probability of success.

Ryan Road Reconstruction, 18 ½ Mile to Dobry
City of Sterling Heights
Road Design for one mile of 3-lane, concrete road, master storm system, 20" transmission water main, and maintenance of traffic plans.

Access Management Study for Main Street
City of Adrian
Project Manager for a study to analyze the safety and operational characteristics of access to a redevelopment site near downtown Adrian.

26 Mile Road Corridor Study
Road Commission of Macomb County
Project Manager for an environmental assessment of 26 Mile Road in Macomb County, Michigan. The Road Commission of Macomb County selected a team headed by Hubbell, Roth & Clark, Inc. (HRC) to prepare an Environmental Assessment for the 26 Mile Road corridor in Macomb County. This project required the analysis of the impacts of upgrading 26 Mile Road (2-lane rural type road) in Macomb County, Michigan. The limits of the project were the Oakland County line (Dequindre Road extended) on the west to the St. Clair County line on the east.

M-15 Access Management Plan
Michigan Department of Transportation
Project Manager for the MDOT project to develop an Access Management Plan for M-15, from I-75 to I-69. The M-15 corridor is 20 miles long,

traverses through seven communities and is maintained by two county road commissions. Recommendations for existing problems focused on Access Management techniques such as sharing and consolidating driveways, separating driveways from intersections, and correcting offset problems.

Evergreen Corridor Study
City of Detroit
Project Manager for the AAA Michigan Study of the Evergreen Corridor in the City of Detroit. AAA Michigan retained HRC to conduct a safety study for the Evergreen Road corridor (between 8 Mile Road and Warren Avenue). The purpose of this study was to conduct a review of the traffic conditions and collision characteristics of the Evergreen Road corridor, to identify any operational deficiencies that may be affecting traffic safety, and to develop countermeasures to reduce the collision risk along the corridor. The study also included re-timing of the signals along the corridor.

M-24 Corridor Study
Project Manager for study of M-24 corridor to document existing traffic conditions, forecast future traffic volumes, and develop long- and short-term corridor improvements.

Previous Professional Experience:

Traffic Engineer
City of Troy
City Department Head responsible for traffic engineering and right-of-way acquisition activities for the City of Troy. In this position, he promoted the safe and efficient movement of people and goods. He was responsible for the planning, design, and operation of transportation systems within the City. He was also responsible for the right-of-way acquisition and relocation activities of the City.

In his role as City Traffic Engineer, he conducted traffic engineering studies and made traffic engineering recommendations on behalf of the City Administration. He made recommendations for geometry of roadway improvements, reviewed subdivision and site plans, developed transportation plans and transportation improvement programs. He served as staff advisor to the citizen Traffic Committee appointed by City Council and provided traffic engineering expertise needed for court appearances on behalf of the City.

He applied the innovative urban traffic engineering concept of directional median crossovers to urban arterial street construction in the City of Troy. Wide medians with directional crossovers have proven effective in improving capacity and reducing accidents. He applied the proven concept that stop signs do not reduce speeds on residential streets to the continuing urban traffic engineering problem of speeding on residential streets. He implemented “difficult” urban traffic engineering programs. One of the programs was a series of road construction projects on Big Beaver Road through the center of the city. A second program was a low-cost signal interconnect project requiring the cooperation of five local communities, a

county road commission, the State Department of Transportation, and the Federal Highway Administration.

Assistant Planning and Research Engineer
Illinois Division, Federal Highway Administration
Assisted Planning and Research Engineer in discharging duties and responsibilities with respect to highway planning, highway research, TOPICS, and highway safety programs. Mr. Beaubien assisted in coordination of these programs with Division staff members, had direct contact with State engineers on various phases of the work program to guide them regarding Federal requirements. Reviewed proposed revisions to Federal-aid highway system for service rendered, integration with other routes, etc. He also analyzed various research reports, urban planning studies, traffic studies, and statistical reports.

Presentations/Publications

"Partnering for Transportation Operations in Metro Detroit", Institute of Transportation Engineers Great Lakes District Annual Meeting", Indianapolis, Indiana, April 16, 2019.

"Integrating Transportation Operations for Metro Detroit", 24th World Congress on Intelligent Transportation Systems, AM-TPO753, TS03, Montreal, Quebec, Canada, October 29, 2017.

"Developing Your Professional Artistry", Institute of Transportation Engineers Annual Meeting, Toronto, Ontario, Canada, August 1, 2017

"Integrating Transportation Operations for Metro Detroit", 2017 Institute of Transportation Engineers Great Lakes District Annual Meeting, April 2017.

"Connected and Automated Vehicles, Ready or Not Here They Come!", ITE Journal, pp. 17-20, (with Kevin Balke, PhD, Douglas Gettman, PhD, Chris Hedden, AICP, Steve Kuciemba, and John Lower), December 2015,

"Technology Assists for North American Border Crossings in Detroit", 22nd World Congress on Intelligent Transportation Systems, SIS 06, Bordeaux, France, October 6, 2015.

"Impacts of Automated Vehicles on the ITE Professions", Institute of Transportation Engineers 2015 International Annual Meeting and Exhibit, Hollywood, Florida, August 5, 2015.

"Managing Metro Detroit Traffic Incidents Through Partnerships",21st World Congress on Intelligent Transportation Systems Proceedings, TS 100, Detroit, Michigan, USA, September 11, 2014.

"Traffic Incident Management in Metropolitan Detroit", Asia-Pacific ITS Forum & Exhibition, Technical Session A4, Auckland, New Zealand, April 29, 2014.

"Implications of Connected and Autonomous Vehicles for Transportation Systems Operations", ITE Great Lakes District Annual Meeting, Technical Session 7-A, Indianapolis, Indiana, April 15, 2014.

"Connected Vehicles and Autonomous Vehicles: Where Do ITE Members Stand?", ITE Journal, pp. 31-34, (with Pei-Sung Lin, John A Lower, and Kenneth O. Voorheis), December 2013.

"Traffic Incident Management Produces a Transportation Operations Culture for Metropolitan Detroit", 19th World Congress on Intelligent Transportation Systems Proceedings, Paper Number AM 00034, Vienna, Austria, October 2012.

"Traffic Incident Management – A Metro Detroit Case Study", Lifesavers National Conference on Traffic Safety Priorities, Orlando, FL, June 2012.

"Traffic Incident Management-A Gateway to Regional Transportation Operations," 18th World Congress on Intelligent Transportation Systems, Paper Number 1032, Orlando, FL, October 2011.

"Design-Build of Intelligent Transportation Systems for Northern Michigan," 18th World Congress on Intelligent Transportation Systems, Paper Number 1114, Orlando, FL, October 2011.

"Managing Traffic Incidents for Safer Freeways in Metropolitan Detroit," Traffic Technology International Annual 2009, pp. 6-8.

"Sustainability and Transportation Infrastructure: A Golden Age," Michigan Municipal League Review, pp 37-39 (with James Burton and Nancy Faught) September/October 2010.

"Engaging Local Governments in Metropolitan Detroit Intelligent Transportation Systems," 15th World Congress on Intelligent Transportation Systems, Paper Number 30213, New York, New York, November 2008.

"Metropolitan Detroit, MI, USA, Shares ITS Information to Benefit Operations," ITE Journal, Volume 78, No. 9, September 2008, pp. 24-27.

"A Regional Concept of Transportation Operations for Metropolitan Detroit," 14th World Congress on Intelligent Transport Systems, Technical Paper 1068, Beijing, China, October 2007.

"The Metro Detroit Regional Transportation Operations Collaboration and Coordination Initiative," Institute of Transportation Engineers 2006 Annual Meeting Compendium of Technical Papers, August 2006.

"Traffic Incident Management in Metro Detroit: A Prelude to Regional Operations," Institute of Transportation Engineers 2004 Annual Meeting Compendium of Technical Papers, August 2004

"How a Good Traffic Engineering Program Can Help Defend Public Agencies," Institute of Transportation Engineers 2001 Annual Meeting Compendium of Technical Papers, August 2001

"Working Together for a Safer Construction Zone," Institute of Transportation Engineers 2000 Annual Meeting Compendium of Technical Papers, August 2000

"What Every City Should Know About Intelligent Transportation Systems," National League of Cities Issues and Options, Volume 7, No. 1, January/February 1999, (with Beata Lamparski), pp. 7-11.

"What Every City Should Know About Intelligent Transportation Systems," 2000 Institute of Transportation Engineers, Publication No. IR-102, 1000/EG/HP/300 (with Beata Lamparski)

"Harmonization Programs: What is the Role of Liability?", Compendium of Technical Papers, Institute of Transportation Engineers Conference on Enhancing Transportation Safety in the 21st Century, March 1999.

"The Joy of Traffic Engineering… and ITE," ITE Journal, Vol. 68, No. 10, October 1998, pp. 34-36.

"Designing and Building ITS for Metro Detroit Freeways - Lessons Learned," 1998 Compendium of Technical Papers, Institute of Transportation Engineers, August 1998.

"Does Traffic Calming Make Streets Safer?" Compendium of Technical Papers, Institute of Transportation Engineers, Conference on Harmonizing Transportation and Community Goals, March 1998.

"Early Winners for Metro Detroit's Incident Management Program," 1996 ITE International Conference Resource Papers, March 1996, pp. 21-25.

"Advanced Technology - A Tool for Urban Traffic Engineers in Incident Management," 1995 Compendium of Technical Papers, Institute of Transportation Engineers, August 1995, pp. 248-252.

"Metro Detroit's Incident Management Program - Applying ITS Technology," ITE Journal, Vol. 65, No. 4, April 1995 (with Kunwar Rajendra), pp. 19-24.

"Smart Streets - A Tool for Urban Traffic Engineers," Traffic Technology International '95, pp. 162-167.

"Incident Management as a Platform for IVHS Deployment in Metropolitan Detroit," Compendium of Technical Papers, Institute of Transportation Engineers, Canadian District, June 1994, pp. 307-321.

"Bringing 'Smart Streets' to Metropolitan Detroit," Planning & Zoning News, Vol. 12, No. 7, May 1994 (with Kunwar Rajendra) pp. 14-17.

"Deployment of Intelligent Vehicle-Highway Systems," ITE Journal, Vol. 63, No. 2, February 1993, pp. 15-18.

"Real-Time Adaptive Traffic Control and Machine Vision Detection for Advanced Traffic Management Systems." Compendium of Technical Papers, Institute of Transportation Engineers, District 7, Canada, 1993 Annual Conference (with D. F. Allyn), pp 357-379.

"Information and Control Networks for Traffic Management," 1993 Compendium of Technical Papers, Institute of Transportation Engineers (with Clay Collier), pp. 114-118.

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