

MULTI-MODAL TRANSPORTATION BOARD
MONDAY, SEPTEMBER 8, 2014
4:30 PM
CITY COMMISSION ROOM
151 MARTIN STREET, BIRMINGHAM

- A. Roll Call
- B. Introductions
- C. Review of the Agenda
- D. Approval of Minutes, Meeting of August 25, 2014
- E. Transportation Engineering Consultant Interviews

4:30 p.m.	Orchard, Hiltz, & McCliment
5:00 p.m.	Fleis & Vandenbrink
5:30 p.m.	Wade Trim

- F. Meeting Open to the Public for items not on the Agenda
- G. Miscellaneous Communications:
 - a. Communications
 - b. Other Business
- H. Adjournment

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Las personas con incapacidad que requieren algún tipo de ayuda para la participación en esta sesión pública deben ponerse en contacto con la oficina del escribano de la ciudad en el número (248) 530-1800 o al (248) 644-5115 (para personas con discapacidad auditiva) un día antes de la reunión para solicitar ayuda a la movilidad, visual, auditiva, o de otras asistencias. (Title VI of the Civil Rights Act of 1964).

**CITY OF BIRMINGHAM
MULTI-MODAL TRANSPORTATION BOARD
THURSDAY, AUGUST 25, 2014
City Commission Room
151 Martin Street, Birmingham, Michigan**

Minutes of the special meeting of the City of Birmingham Multi-Modal Transportation Board held August 25, 2014. Chairperson Johanna Slanga convened the meeting at 5:30 p.m.

A. ROLL CALL

Present: Chairperson Johanna Slanga; Board Members
Stuart Bordman
Lara Edwards
Andy Lawson
Jeff Surnow

Absent: Amanda Warner
Adriana Tatuch

Administration: Mark Clemence, Deputy Chief of Police
Lauren Chapman, Asst. City Planner
Brendan Cousino, Asst. City Engineer
Jana Ecker, Planning Director
Paul O'Meara, City Engineer
Carole Salutes, Recording Secretary

B. INTRODUCTIONS

New board member Stuart Bordman introduced himself. Ms. Ecker introduced Lauren Chapman, Asst. City Planner

C. REVIEW AGENDA (approved)

D. APPROVAL OF MINUTES, MEETING OF JULY 10, 2014

Moved and seconded to approve the Minutes of July 10, 2014 as presented.

Motion carried, 5-0.

E. REVIEW OF TRANSPORTATION ENGINEERING CONSULTANT QUALIFICATIONS

Ms. Ecker noted the City of Birmingham published the Request for Qualifications for Transportation Engineering Consultants on the Michigan Inter-governmental

Multi-Modal Transportation Board Proceedings

August 25, 2014

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Trade Network. The City received six submittals of qualifications in response from the following firms:

1. Giffels Webster
2. Fleis & Vendenbrink
3. OHM
4. Anderson, Eckstein & Westrick
5. RS Engineering, LLC
6. Wade Trim

The score sheet results showed the overall average scores for board members and for staff. Giffels Webster withdrew their application due to a potential conflict of interest. Based on the results of the MMTB evaluation of the qualifications of the prospective consultants, the MMTB may consider requesting the top firms in consideration to interview at an upcoming meeting prior to making a recommendation to the City Commission on engaging one of these firms.

The rankings were as follows:

1. OHM
2. Fleis & Vendenbrink ("Fleis")
3. Wade Trim
4. Anderson Eckstein & Westrick ("Anderson")
5. RS Engineering

Fleis, Wade Trim, and Anderson had very close scores. Generally speaking, three firms would be invited to interview.

Mr. Surnow indicated that he personally likes Anderson because of the extensive work they have done with bike paths. His order of selection was OHM, Anderson, Wade Trim.

Mr. Cousino noted the board is not looking at extensive bike paths. There are limited opportunities for the off-street bike paths identified in the Master Plan.

Mr. Clemence observed Anderson's chief engineer has zero multi-modal experience. Ms. Ecker thought the proposal from Fleis was auto-centered and the City would not get the multi-modal approach. Chairperson Slanga's ranking was OHM, Fleis, Anderson.

Ms. Edwards did not think the Fleis cover letter was at all strong. She liked Anderson because they are local, boutique, and have a lot of planning kinship with the multi-modal vision.

It was discussed that Michael Labadie from Fleis has been the City's traffic engineer and has historical perspective on what the City has done in the past.

Mr. O'Meara noted he has done a good job in some tough situations that the City has faced. Mr. Cousino and Mr. Clemence agreed.

Mr. Bordman liked OHM and Anderson. Mr. Clemence said, and everyone agreed, that the board should have a comfort level with the lead person they will be dealing with on a regular basis.

Ms. Ecker estimated each interview would take one-half hour including questions and answers and the meeting would last three hours for three candidates.

Going around the table, no one objected to eliminating RS Engineering and Anderson.

The consensus was to interview OHM, Fleis, Wade Trim.

Ms. Ecker cautioned that the board must make sure the person they hire can stand up to public scrutiny.

It was determined there would not be a quorum for the next regularly scheduled meeting and that a survey will be sent out to determine the next meeting date.

F. OAK ST. UPDATE

Mr. Cousino reported that at their July 28, 2014 regular meeting, the City Commission considered the MMTB suggestion that a boulevard cross section be presented to the public as an option for the portion of Oak St. between Chesterfield Ave. and Lakepark Dr. Due to the higher capital and ongoing maintenance costs involved, they opted not to endorse the idea of a boulevard cross section.

However, several commissioners were complimentary of the creative ideas being generated by the MMTB, and encouraged bringing other creative solutions to the Commission for future consideration. They did endorse the idea of including a crossing island at Lakepark Dr., and they wanted to see more of those ideas. They appreciated the process of coming to them before putting ideas out to the public.

Ms. Edwards described some low cost medians that would require low or no maintenance.

Mr. O'Meara noted the Engineering Dept. is working with the City's public relations staff to perform the online surveys regarding the different cross section options for the different sections of Oak St. According to some early results, there are some people between Lakepark Dr. and Chesterfield Ave. who value the parking on Oak St. Mr. Bordman observed there are easy alternatives

because only one home along Oak St. is not located on a side street as well, and that person has stated he has no objection. It was anticipated that the final results will be available at the next MMTB meeting in September.

G. MEETING OPEN TO THE PUBLIC FOR ITEMS NOT ON THE AGENDA
(no one in the audience)

H. MISCELLANEOUS BUSINESS AND COMMUNICATIONS

a. Communications

- Harry Kokkinakis RE: Not in favor of converting W. Maple Rd. from four lanes to three and adding a bike lane.

b. Other Business (not discussed)

K. ADJOURNMENT

No further business being evident, board members motioned to adjourn at 6:25 p.m. The next meeting date will be determined by survey.

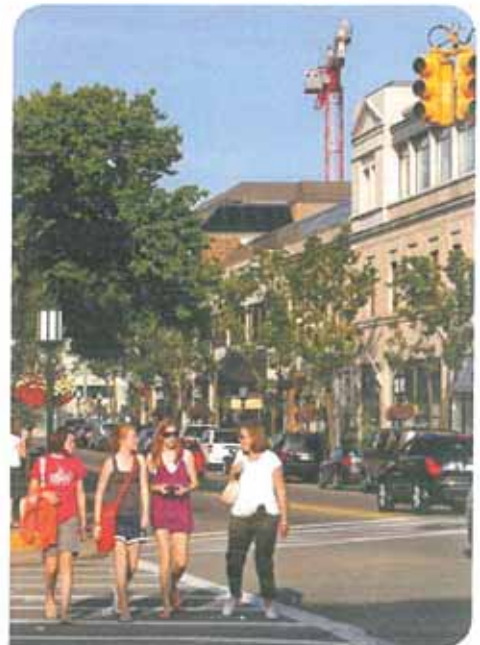
Jana Ecker, Planning Director

Paul O'Meara, City Engineer

Mark Clemence, Deputy Chief of Police

The City of Birmingham

Transportation Engineering
Consultant Services Contract



PO Box 3001
Birmingham, MI 48012
Attn: Paul O'Meara,
Jana Ecker, and Mark Clemence

July 31, 2014

OHM

Architects Engineers Planners Architects Engineers Planners Architects Engineers Planners

ARCHITECTS. ENGINEERS. PLANNERS.



July 31, 2014

Mr. Paul O'Meara, PE, City Engineer
Ms. Jana Ecker, Planning Director
Mr. Mark Clemence, Deputy Chief of Police
City of Birmingham
PO Box 3001
Birmingham, MI 48012

RE: Statement of Qualifications
Transportation Engineering Services Consultant

Dear Mr. O'Meara, Ms. Ecker and Mr. Clemence:

Congratulations to the City of Birmingham for being proactive in recognizing the benefits that can be gained by adopting a Multi-Modal Transportation Master Plan and then working towards implementing the plan. As a vibrant community within the heart of the Metropolitan Detroit area, Birmingham has much to offer and a multi-modal approach to transportation will only enhance the quality of life for your residents.

While a master plan is critical to achieving the Community's vision, the execution of the plan is equally or more important. Having the right mix of leaders, engaged staff and committed consultants is critical to achieving the goals outlined in the master plan. We feel that OHM Advisors is the committed consultant for your Transportation Engineering Services. We get that you are looking for standard traffic engineering type services, but that you also want someone you can work with to how to implement changes that benefit all users of your streets, pathways, walks, and parking areas. We look forward to introducing you to our staff and sharing our philosophy and approach with you. Highlights of what our team offers include:

Experienced traffic engineer. We understand that **safety is a key issue** with all communities and Steve Dearing, our lead engineer, has been focused on implementing improvements that emphasize safety his entire career. Steve and his team have dealt with congestion, circulation and pedestrian access in many communities in Michigan and Ohio. An example is downtown Farmington, where OHM Advisors successfully devised a streetscape and downtown section that has calmed the traffic flow, improved parking and provided a more pedestrian scale to the former four to five lane road cross section that divided the downtown area.

Community focused! Each community is unique and OHM Advisors works with their client communities to set up the policies and processes, that allow them to maximize the impact of infrastructure improvements. We don't feel that you should just resurface a street or replace a water main. A community uses that as the opportunity to evaluate what more can be done to enhance the area for all users and OHM Advisors has the team that can help you step back, relook at an area and, working within your budget, create spaces that people want to be in and explore. The ongoing downtown Newark, Ohio project is an example of how OHM Advisors has helped that community re-envision the space, traffic flow and accommodate the multi-modal travel.



We listen! Even with over 30 years of experience as a Traffic Engineer, Steve Dearing understands that you must actively listen to all sides of the issue. This must come before presenting any facts and technical data related to the issue. It is by listening to all positions and then restating the positions, you can formulate a logical, safety-focused solution that would get the various parties to move together to support. Such a consensus solution is far preferred over the City "imposing" a solution. Steve's team also understands that listening is key. Our staff have been trained in meeting facilitation techniques and bring the right set of "tools" to elicit input and move towards resolution for each unique circumstance.

A team based approach. While OHM Advisors has many individual experts, these experts understand that it still takes a team to arrive at the best solution. While you will be primarily served by a locally based group led by Steve Dearing, there is the backing of a regionally focused group that brings proven ideas from across the U.S. and Canada that may fit to bring that comprehensive solution to a transportation issue facing Birmingham.

Focused on the City of Birmingham! OHM Advisors has grown by providing service to governmental clients and is especially focused on the municipal market. We do only limited work for private sector developers. While we are proud of the work we do with the Michigan Department of Transportation and the Road Commission for Oakland County, when working for a city or village, we make it clear who we are working for. We take a professional approach and our clients have recognized that we provide advice that is in the best interests of the ultimate client: the users of the facility. This applies whether it is a road, pathway, sidewalk or a building. We will be focused on achieving the best outcome for the City of Birmingham's customers.

We greatly appreciate your consideration and hope that you will see the passion we feel about Traffic Engineering in particular, given our focus on Advancing Communities. We want to be a part of helping you shape a better future for the City of Birmingham. We assure you that we bring the best talent, desire and enthusiasm to help you create unique and focused recommendations that enhance the community and execute the ideas in the Multi-Modal Transportation Master Plan.

Sincerely,
OHM Advisors

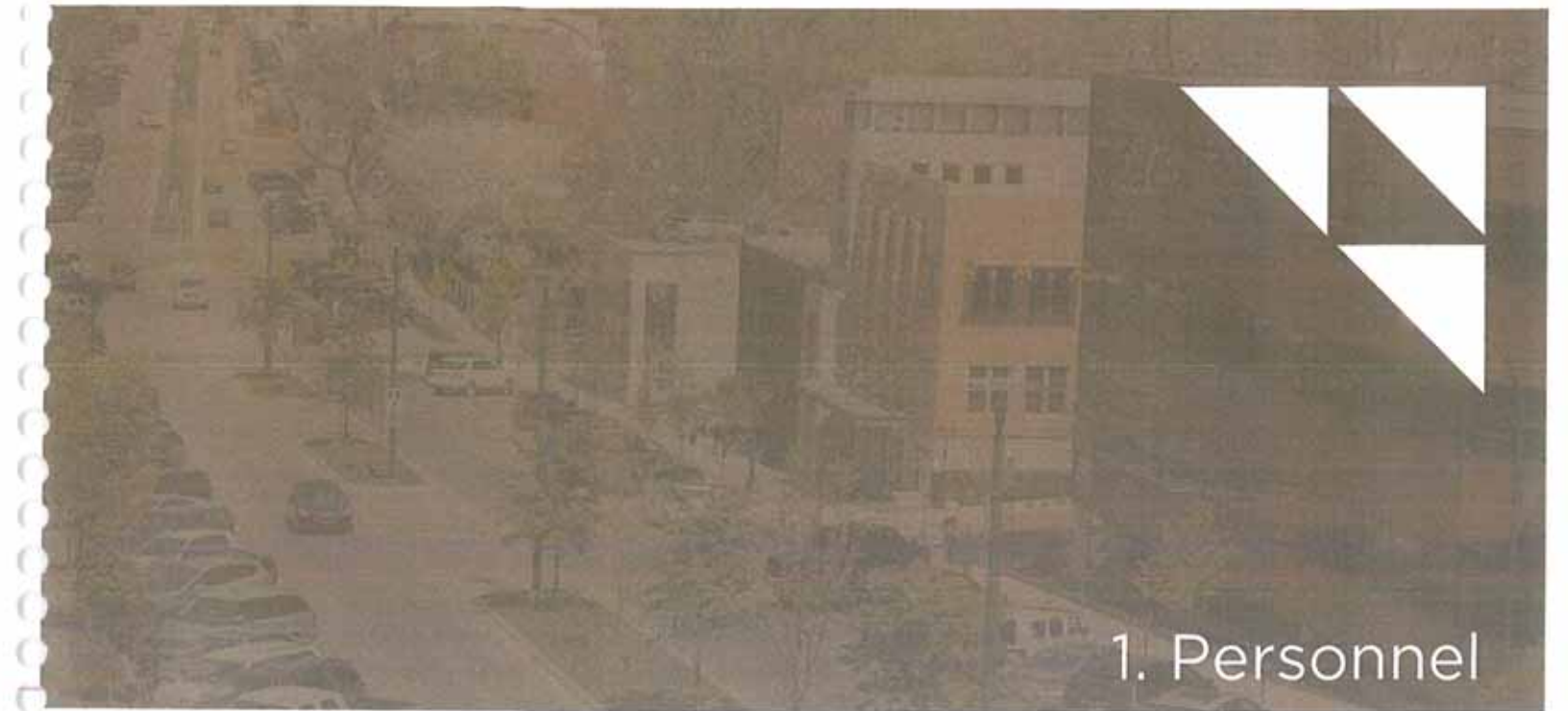
Daniel G. Fredendall, PE
Vice President

Encl: SOQ, seven copies
cc: Multi-Modal Transportation Board



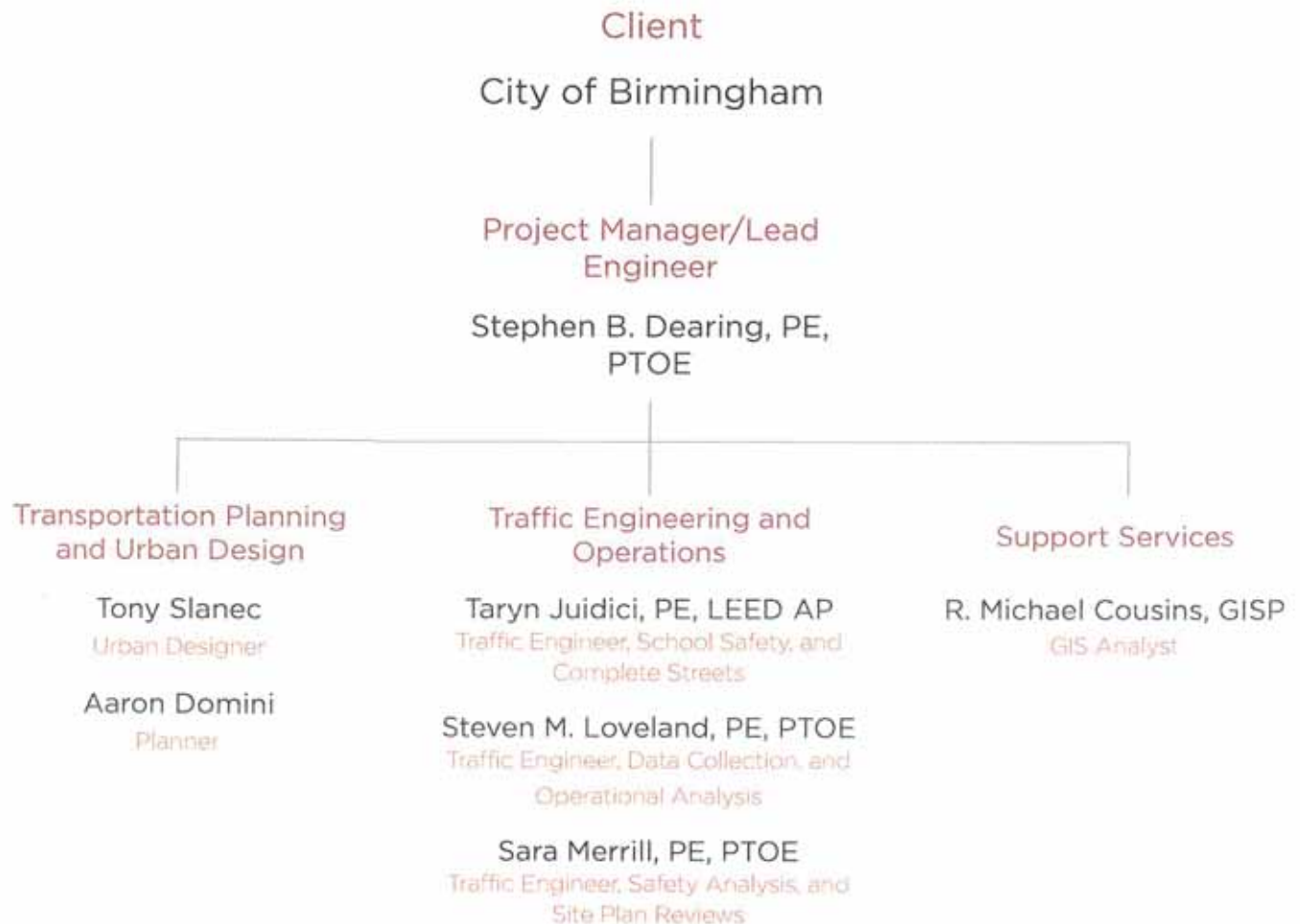
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1. Personnel

Team Organizational Chart





2. Qualifications of Team and Personnel

Key Personnel

Stephen B. Dearing, PE, PTOE | Project Manager



Education

Bachelor of Science in Civil Engineering, University of Michigan, 1976

Professional Registration

- Professional Engineer, State of Michigan, 1981, #28487
- Professional Engineer, State of Ohio, 2011, #75334
- Professional Traffic Operations Engineer, 2004

Experience

38 years, 14 with OHM Advisors

Professional Affiliations

- Institute of Transportation Engineers
- ITE Transportation Safety Council
- ITE Traffic Engineering Council
- SEMCOG Transportation Advisory Council

Papers and Presentations

- Workshops/Seminars on:
 - Traffic Engineering Fundamentals
 - Highway Tort Liability
 - Traffic Safety Programs
 - Work Zone Traffic Control Measures
 - Sight Distance

As OHM Advisors' Traffic Engineering Group manager, Steve Dearing is responsible for all aspects of transportation planning and traffic engineering services for our clients. He works with the clients to identify their needs, prepares proposals, project scheduling, budget tracking and quality control for all the studies and plans produced by the engineers and technicians of the group.

Prior to joining our team, Steve was a City Traffic Engineer for a total of 13 years, first with Naperville, IL and then at the City of Rochester Hills, MI. For both positions, he managed the activities of their Traffic Safety Division, gaining a thorough knowledge of transportation planning, traffic engineering and operations. Planning functions involved working closely with police, the local transit providers, school districts and their bus operators, state Department of Transportation, the County highway department, neighboring cities, and developers. The traffic engineering functions included reviewing traffic impact studies, performing professional surveys and making recommendations on roadway safety, geometry, capacity, operations, and traffic control.

Steve served at the National Safety Council as its professional Highway Traffic Safety Engineer. There were frequent contacts with government officials, the media, industry, public representatives, and private citizens. The position also involved providing administrative and technical support to three volunteer committees of the Highway Traffic Safety Division of the Council. They were: Roadway Environment, Pedestrian Safety, and Two-Wheeled Safety.

Relevant Experience



Grand River Streetscaping, City of Farmington, MI – 2007-2009

Lead Traffic Engineer. The project goals were to rejuvenate the downtown area for a two-block segment of this MDOT arterial roadway. In conjunction with the DDA, on-street parallel parking was to be provided along with other streetscape changes. OHM Advisors evaluated the relative feasibility of parking along one side versus parking along both sides, in conjunction with operational improvements at the intersection of Grand River Ave at Farmington Rd. The proposed parallel parking spaces were set off from the through lanes by creating curbed "bump-outs", which helped provide adequate area for landscaping changes within the road right-of-way.



Stephen B. Dearing, PE, PTOE | Project Manager

Relevant Experience Continued

Complete Streets Design Standards, City of Novi, MI – 2011-2013

Project Manager for revisions to City's design standards to incorporate complete streets concepts, in keeping with the City's adopted Master Plan.

Road Diet Evaluation, City of Royal Oak, MI – 2013

QC Reviewer for a project to review three road corridors: Campbell Road (10 Mile Road to 12 Mile Road), Main Street (Rochester Road to Normandy Road), and Crooks Road (Main Street to Normandy Road). In each case the existing condition was a 4-lane cross section and traffic volumes were declining. The study format included investigation for LOS and safety considerations.

As Requested Traffic Engineering Services – City of Mt. Pleasant, MI (2012-Ongoing), City of Troy, MI (2008-Ongoing), City of Midland, MI (2007-Ongoing), and City of Rochester Hills, MI (2000-2004)

Project Manager and Lead Traffic Engineer, for providing a full spectrum of traffic engineering and transportation planning services. On an as-requested basis, works with multiple departments within the cities, including Planning and Community Development, Engineering, Public Safety, Parks and Recreation, DDA, DPW, and Manager's Office, to provide advice, evaluations and recommendations to address numerous and varied issues confronting impacted stakeholders. Examples include reviewing traffic impact studies and site plans for proposed developments, assisting in the preparation of funding applications, undertaking crash and operational analyses, reporting on whether intersection controls (YIELD, STOP or signalization) or other controls (parking, speed limits, etc.) are merited, parking studies, reviewing internal plans, identifying bus stop locations, exploring bike route and share path uses, permit assistance, and reviewing their sign shop operations to make recommendations on modernizing equipment and procedures for sign fabrication, and Inventory and management systems for signs, signals, pavement markings and guardrails.

School Site Safety Evaluations, Farmington Public Schools, MI – 2001-Ongoing

Project Manager and Lead Traffic Engineer, working closely with the school district, to evaluate the pedestrian and vehicle safety concerns at elementary, middle and high schools. Developed a series of immediate, mid-term and long-term improvements to address the deficiencies identified, both on the school sites and the adjacent streets.

Neighborhood Traffic Safety Program, City of Rochester Hills, MI – 1997-2000

Developed a comprehensive traffic calming program for use in area neighborhoods, after reviewing best practices from comparable programs from communities around the world. The program includes facets of driver and pedestrian education, law enforcement, and traffic engineering. It emphasizes the role of resident participation and cooperation with city staff in addressing neighborhood concerns.



Nixon-Huron Parkway Intersection, City of Ann Arbor – 2006-2008

QA/QC Manager, and responsible for concept design for pedestrian and vehicular interaction for the completed project as well as during 7 phases of construction staging.

The project included a comprehensive and inclusive public outreach process for the roundabout component of the project. Focus groups and public meetings were both used, as this was the City's first roundabout. One public meeting was conducted with Chinese and Russian translators to meet stakeholder needs. Steve was the lead presenter for the project team at all public meetings, and he was responsible for all content and detailed responses to over 100 questions,



Stephen B. Dearing, PE, PTOE | Project Manager

Relevant Experience Continued

Old Towne Development and Traffic Plan, City of Rochester Hills, MI – 1989-1991

As City Traffic Engineer and lead transportation planner, worked closely with the City's Planning Department to study and evaluate this depressed commercial district. Develop land use and traffic planning concepts to revitalize the area. Traffic features included: adding on-street parking to Auburn Rd, closing off selected side streets to convert to angle parking lots and to minimize traffic intrusion into the surrounding residential neighborhood, and enhancing pedestrian crossings through the use of traffic calming features in the district.

Project Manager to evaluate Grand River Ave from Halstead to Orchard Lake Rd for a road diet. Portions of this unmarked state highway are either 4-lanes or 5-lanes wide. The community is seeking to expand on-street parking near the downtown and install bike lanes for the balance of the corridor.



Bellows Road Corridor and Roundabout Study, Mt. Pleasant, MI – 2011-2012

Traffic Engineering Expert on this project that included the overall functionality review of the existing mini-roundabout installed at a "T" intersection, and development of recommendations as to modifications at the intersection removal of the mini-roundabout. As part of the review, we looked at the overall traffic flow of the entire ½ mile corridor, including 8 intersections. We looked at the interaction of the land uses since this corridor is a natural separation between CMU's campus and City residential. We developed a conceptual corridor plan that incorporated traffic impacts from a potential new East Campus Connector Road, and the

overall desire to calm traffic in this corridor and improve the pedestrian and aesthetic connectivity between the two sides of the roadway. Recommended concepts included a series of single lane modern roundabouts, raised intersections, and streetscape improvements.

Master Thoroughfare Plan Update, City of Auburn Hills, MI – 2008-2009

Project Manager and Lead Traffic Engineer for developing an update to the City's Master Thoroughfare Plan. Plan components included existing and planned functional classification, planned right-off-way, and a new component for truck routes.

Master Thoroughfare and Pathway Plans, Rochester Hills, MI – 2006-2008

Lead Traffic Engineer for developing Master Thoroughfare and Pathway Plans for the City. Analyzed select corridors for existing and future traffic congestion, identifying spot and network improvements to meet LOS goals of community. Developed a prioritization methodology for pathway segments for use with the City's Capital Improvement Plan.

RCOC Signal Optimization, Oakland County, MI – 2011-Ongoing

Project Manager for project to collect data, evaluate the safety and operation, and optimize the signal timing plans for 150 intersections through southern Oakland Co.

Signal Optimization Management, Grand Region, MDOT – 2011-2014

Project Manager for providing project management services to MDOT for signal optimization efforts performed by two other consultants. The focus is on QA/QC evaluations and analysis of the optimization consultants' work product for 48 sites.

Metro Region Signal Optimization, MDOT – 2008-2011

Project Manager to evaluate the operation and optimize the signal timing plans for 30 intersections along M-3 in downtown Detroit and at isolated freeway off ramps in Wayne County. The project included the evaluation of crash data and safety mitigation and countermeasure identification.



Stephen B. Dearing, PE, PTOE | Project Manager

Relevant Experience Continued

Troy/Birmingham Intermodal Transit Center, City of Troy, MI – 2009-2010

Prepared a peer review of the proposed intermodal transit facility, with a focus on pedestrian, bus and passenger vehicle safety and circulation.

DDA Parking Evaluation, City of Romulus, MI – 2006

Project Manager for evaluating various parcels of land as potential off-street parking facilities for the downtown area. Developed preliminary parking lot layouts, and estimated the development costs for clearing the parcel, drainage, paving, lighting, pavement marking, constructing driveway(s), and boundary protection.

Burlington Northern RR / IL Rte. 53 Commuter Rail Inter-modal Transfer Station, City of Naperville, IL – 1988-1989

Working with railroad, transit and community planning officials, assisted in the study process to locate a suitable property for the proposed inter-modal facility. Worked on site layout to provide reasonable access for transit, park & ride, kiss & ride, pedestrian and bicycle users. Planned and coordinated signal and intersection improvements on the adjacent roadways.

Downtown Parking Program, City of Naperville, IL – 1987-1989

Managed parking operations for one three-story parking structure and numerous surface lots around the commuter rail stations and in the central business district. This included maintaining approximately 300 parking meters in the Central Business District. Worked with the Central Business District Association to evaluate and modify on-street parking, to balance the vitality of the downtown area by expanding parking opportunities while improving pedestrian and vehicle safety.

Peer Review of Traffic Impact Studies – 1987-Ongoing

On the behalf of various municipalities, reviewer of numerous traffic impact studies of proposed residential, office, commercial and industrial developments.

Village of Grand Traverse Traffic Study, Grand Traverse County, MI – 2009-2012

Traffic QC Reviewer on behalf of Acme Twp., Grand Traverse County Road Commission, and MDOT for the traffic analysis of the impacts of a proposed 182 acre multi-use development site fronting M-72 and Lautner Road. The development proposal has undergone several revisions in the mix of land uses and development density. The analysis included the evaluation of alternative roadway improvement configurations, including use of roundabouts in place of traffic signals.

“Evaluating Traffic Impact Studies” Advisory Committee – 1993-1994

Assisted in the preparation of this document, a recommended practice guide sponsored by the Tri-County Regional Planning Commission (Lansing, MI) and by Southeast Michigan Council Of Governments (SEMCOG).

Oakland County Michigan Federal Aid Committee, Technical Review Group – 1990-Ongoing

Participated in the technical review of all project applications submitted in Oakland County each year for federal-aid funding. Lead the team that revised and updated the rating and evaluation forms used for project applications and selection.

Access Management Ordinance – Village of Lake Orion, MI – 2002

Developed an Access Management Ordinance specific to the stated interests of the Township Board and Planning Commission. This included provisions for requiring Traffic Impact Studies, limitations on the number and location of driveways and provisions for cross access and joint-use access.

Traffic Operations (Sign) Shop, City of Rochester Hills, MI – 1989-2000, and City of Naperville, IL – 1987-1989

While City Traffic Engineer, was directly responsible for the traffic operations sign shops, including their budget and scheduling. Instituted innovative changes to improve sign fabrication, installation and maintenance. materials and application techniques, and modernized traffic survey data collection. Trained city staff in the fundamentals of work zone safety and control.

Key Personnel

Taryn Juidici, PE, LEED AP | Project Engineer



Education

Bachelor of Science in Civil Engineering, Michigan Technological University, 2004

Professional Registration

Professional Engineer, MI, 2009, #56020

Experience

10 years, 9 with OHM Advisors

Certification

LEED AP, US Green Building Council, 2009

Professional Affiliations

American Council of Engineering Companies (ACEC) Emerging Leaders Forum Steering Committee, 2012-present

Presentations

Workshops/Seminars on:

- Preparing Your Community for Electric Vehicles

Presentations on:

- Signing and Marking for Electric Vehicles
- Complete Streets Implementation
- Sustainable Design

Professional Development

- Project Management Bootcamp, PSMJ Resources, Inc., 2013

Taryn Juidici is experienced in providing traffic engineering services for local municipalities, county agencies and the Michigan Department of Transportation (MDOT). She is versed in the preparation of maintenance of traffic plans and related special provisions. Taryn's experience also includes pavement marking and signing. She is experienced in the creation of traffic simulation models. In addition, she is responsible for the preparation and review of various traffic-engineering studies including signal warrant studies, parking studies, safety studies and traffic impact studies. Taryn is responsible for the preparation of plans and studies in accordance with MDOT standards such as the MMUTCD and the standard highway signs manual as well as standards from other state and local agencies.

Taryn is also experienced in providing engineering design services for local municipalities, county and state agencies, school districts, universities, and other public and private clients. Her responsibilities include design of site infrastructure to support architectural projects. She specializes in configurations that accommodate all users while meeting applicable standards and budgetary constraints. Taryn's experience includes a diverse background in providing designs that enhance pedestrian and vehicular circulation and safety. She is experienced in the design of water, sanitary and storm sewer systems. As a LEED Accredited Professional, Taryn provides cost effective environmentally conscious design solutions.

Relevant Experience



Complete Streets Standards and Specifications, City of Novi, MI – Ongoing

Project Engineer responsible for the incorporation of complete streets into the City of Novi's existing roadway and pathway standards. The project involves evaluation of complete streets principles and practices and working with the City to incorporate specific elements into their standards. These standards and specifications will provide a basis for complete street implementation on projects within the City. Integrating complete streets concepts throughout the existing community standards will allow for the development of a consistent multi-modal approach to transportation planning and design.

Downtown Streetscape and Road Rehab, City of Fenton, MI – Ongoing

Project Engineer for roadway and streetscape improvements in Downtown Fenton. The project involves complete reconstruction of streets within the Downtown core, streetscape enhancements, utility upgrades, traffic calming, pedestrian facility



Taryn Juidici, PE, LEED AP | Project Engineer

Relevant Experience Continued

improvements, and roadway rehabilitation. Responsible for traffic components of the project including traffic signs and pavement markings.

Traffic Impact Study Policy, City of Auburn Hills, MI – Ongoing

Project Engineer responsible for the development of a policy addressing the potential traffic impacts of new developments in the city. This policy will provide a basis for requiring studies and will identify critical components of future studies. This policy is intended to provide the City with the information necessary to plan for future transportation network needs.

Parking Requirement Update, City of Auburn Hills, MI – Ongoing

Project Engineer responsible for the review and update of the parking requirements in the City Zoning Ordinance. In recent years developers have been requesting deviations from the parking requirements at an increasing rate. This project will review the current requirements and revise the ordinance in order to more closely meet the needs of the city.

Plug-in Ready Michigan, Clean Energy Coalition – 2012

Project Engineer for the development of an electric vehicle infrastructure readiness plan for Michigan. The plan provides information and tools to planners, local officials, consumers, and private enterprises to prepare for an increase in plug-in electric vehicle. Evaluated siting considerations, accessibility accommodations and signing and marking concerns. Responsibilities also include community outreach.

Peters Road Traffic Calming, Village of Milford, MI – 2014

Traffic Engineer responsible for preparing traffic calming recommendations in conjunction with this roadway design project. The paving of Peters Road in the village is expected to raise speeds on a desirable downtown bypass route. In order to maintain lower speeds and address resident concerns, recommendations include narrow roadway cross-sections and the construction of urban mini roundabouts.

Grand River Road Diet, City of Farmington, MI – 2014

Traffic Engineer responsible for preparing a road diet and

corridor operations study for the Grand River corridor through the city of Farmington. With the potential to expand the limits of the core downtown streetscape the adjacent sections of Grand River were evaluated to determine if a road diet would be feasible for this corridor. Utilized traffic modeling software to evaluate multiple alternatives. The study included a review of available safety data for the study area.



Complete Streets Policy, City of Auburn Hills, MI – Ongoing

Project Engineer responsible for the incorporation of complete streets into the City of Auburn Hills existing development standards. This policy will provide a basis for complete street implementation on projects within the City. In addition to complete streets principles, the policy will incorporate elements of planning for the aging population.

Multiple School Safety Studies, Rochester Public Schools, MI – 2014

Traffic Engineer responsible for reviewing safety concerns related to the driveway and parking areas at Hamlin Elementary School, Adams High School and Van Hoosen Middle School. Study included onsite observation at the adjoining locations. Recommendations included substantial modifications to the bus loading areas, including the potential consolidation to one location. Parking lot and loading area circulation recommendations were also made along with developing long term options to increase loading zone capacity.

Superior Region Signal Optimization, MDOT – 2009

Traffic Engineer responsible for the collection of field data on existing traffic patterns and geometric configuration. Project includes the optimization of 75 signals located on corridors throughout the superior region.

Key Personnel

Steven M. Loveland, PE, PTOE | Traffic Project Engineer



Education

- Master of Science in Civil Engineering, Michigan Technological University, 2001
- Bachelor of Science in Civil Engineering, Michigan Technological University, 1997

Professional Registration

Professional Engineer:

- MI, 2002, #49187
- OH, 2010, #75127

Professional Traffic Operations Engineer, Institute of Traffic Engineers, 2006

Experience

16 years, 13 with OHM Advisors

Professional Affiliations

- Institute of Transportation Engineers, Michigan Section, Vice President, 2013-present
- Custer Complex Parent Teach Organization, Treasurer, 2013-present

Professional Development

- Traffic Signal Optimization – ASCE 2007
- Roundabout Design, MTJ Engineering, 2007
- Roundabout Design Workshop, NE Roundabouts 2007

As a Project Engineer in OHM Advisors' Traffic Group, Mr. Loveland has experience working on traffic operations studies, traffic impact studies, traffic impact study and site plan reviews for numerous municipalities, crash analyses, traffic data collection and signal warrant analyses. He is skilled in the use of Synchro/SimTraffic, RODEL, Paramics, HCS+, AutoCAD and MicroStation Software. In addition to traffic studies, Mr. Loveland has extensive design experience working on freeway and non-freeway signing and pavement marking plans, as well as maintaining traffic plans for stage construction.

As a design engineer in our Roads Group, Mr. Loveland gained extensive design experience working on road and highway projects for various counties throughout Southeastern Michigan. He has worked on all aspects of design, including horizontal and vertical alignment, grading and drainage plans, permanent signing and striping plans, and maintaining traffic plans for stage construction.

Prior to joining us, Mr. Loveland assisted in the development of contract plans and specifications for traffic signal design projects. These projects included traffic signal modifications, signal interconnects, Autoscope vehicle detection, temporary traffic signal design and new traffic signal designs.

Relevant Experience

Review of Traffic Impact Studies – 2001-Ongoing

On the behalf of various municipalities, typically review 5 to 10 traffic impact studies per year of proposed residential, office, commercial and industrial developments.



Massillon Road Corridor Plan, City of Green, OH – 2012

Lead Traffic Engineer for the analysis of the Massillon Road corridor and local network. Steve developed Synchro models for the existing conditions analysis and multiple alternatives throughout the study. Work also included analyzing multiple roundabouts and interchange configurations; including SPUI and DDI layouts. The goal was to find a combination of intersection and roadway improvements that would alleviate the traffic burden on Massillon Road.



Steven M. Loveland, PE, PTOE | Traffic Project Engineer

Relevant Experience Continued

Road Diet Study: Campbell Rd, Crooks Rd and Main St, City of Royal Oak, MI – 2012-2014

Lead Traffic Engineer for this Road Diet Study of 3 corridors (Campbell Rd, Crooks Rd and Main St) in Royal Oak, MI. The purpose of the study was to determine if each of the corridors could be reduced in laneage and accommodate on street bike lanes. The project work included data collection, Synchro/SimTraffic analysis, and report writing.

AATA Park and Ride, City of Ann Arbor, MI – 2008

Lead Traffic Engineer responsible for the preparation of a traffic impact study for a proposed Park and Ride Facility (300 spaces) in the City of Ann Arbor at the US-23/ Plymouth Road freeway interchange.

Review of Site Plans – 2001-Ongoing

On the behalf of various municipalities, typically review 20 to 30 site plans per year of proposed residential, office, commercial and industrial developments for traffic related issues.

City of Charlotte Industrial Park Expansion, City of Charlotte, MI – 2007

Traffic engineer responsible for the developing a traffic impact study for the proposed 784,000 square foot expansion of the industrial park located in the Charlotte along Shepherd Street.

Marshall Industrial Research Park, City of Marshall, MI – 2004-2005

Traffic engineer responsible for developing a traffic impact study for the proposed 134 acre industrial research park located in Marshall along Kalamazoo Avenue.

City-Wide Bike Route Signs and Markings, City of Royal Oak, MI - 2014

Lead Traffic Engineer responsible for development of bid documents for the installation of the desired signs and pavement markings related to the City's Non-Motorized Transportation Bicycle Network Map and Bike Route Signage Master Plan. The delivery method treated this project as a form of installation inventory, and relied on log plans that detailed the locations to install specific signs and markings, and the accompanying details for the traffic control devices.

Speed Study (Beck Road from 8 Mile to 11 Mile), City of Novi, Oakland County, MI – 2007

Lead Traffic Engineer responsible for the speed study along Beck Road from 8 Mile to 11 Mile in Novi, MI. The study included data collection, crash analysis and report writing.

Traffic Signal Warrant Study (Beck Road and Cider Mill Boulevard), City of Novi, Oakland County, MI – 2007

Lead Traffic Engineer responsible for the warrant study of the Beck Road at Cider Mill Boulevard intersection in Novi, MI. The study included data collection, a warrant analysis and report writing.



Bicentennial Bikeway Engineering - Task 2, City of Columbus, OH – 2012

Project Engineer for the design of a mast arm installation along Henderson Road to hold lane use signage over Henderson Road. This pole replaced two strain poles with a span wire sign bridge; one of the poles was in the way of the proposed trail and needed to be eliminated. The calculations and specs utilized for the pole design were per City of Columbus standards.

I-94 BL (Stadium Drive) Non-Motorized Path, Kalamazoo County, Michigan Department of Transportation – 2003-2004

Traffic Engineer responsible for the signing, striping and maintenance of traffic pertaining to the construction of a non-motorized path in Kalamazoo along Stadium Drive. Approximately 1 mile of the path is an on-street bike lane with full signing and pavement markings.

Pearl Street Conversion From 1-way to 2-way, City of Ypsilanti – 2003

Traffic Engineer responsible for technical memo preparation detailing the transformation of Pearl Street from a 1-way



Steven M. Loveland, PE, PTOE | Traffic Project Engineer

Relevant Experience Continued

street to a 2-way street. Work included coordinating traffic counts, safety analysis and a capacity analysis using Synchro Software.

Road Safety Audits for 4 Locations, MDOT, MI – 2014 Ongoing

Facilitator and Team Leader for RSA team evaluating four rehabilitation projects. The duties as the Facilitator and Team Leader include compiling data relevant to the project, conducting the project kickoff meeting, giving a presentation on the RSA process and scope of the specific job, leading the field review team and facilitating a debriefing meeting, preparing and giving the findings presentation, and preparing the final report.

Alignment Study for Hitchingham Road/Textile Road/Stony Creek Road Intersections, Ypsilanti Township, Washtenaw County Road Commission – 2001

Traffic engineer for roadway alignment study, which evaluated the existing and future travel demands in the Hitchingham Road/Textile Road/Stony Creek Road triangle. The study identified practical alternatives, and recommended that modern roundabouts be constructed at all three intersections. The decision to proceed with the study recommendations is on hold pending the resolution of funding issues. The project work included traffic counts, traffic and accident analyses, a feasibility study comparing roundabout and conventional intersections, and report writing.

Textile Road Traffic Study, Ypsilanti Township, MI - 2012

Lead Traffic Engineer responsible for a study to analyze Textile Road from Stony Creek Road to Hitchingham Road and the Stony Creek Road at Hitchingham Road intersection. Alternatives considered and evaluated included: signalized alternative and roundabout alternative. The signalized alternative was analyzed using Synchro/SimTraffic. The roundabout alternative was analyzed using RODEL to determine geometric characteristics and roundabout capacity.

Master Thoroughfare and Pathway Plans, Rochester Hills, MI – 2008

Traffic Engineer assisted in development of Master Thoroughfare and Pathway Plans for the City. Analyzed select corridors for existing and future traffic congestion, identifying

spot and network improvements to meet LOS goals of community.

Okemos DDA Traffic Study, Meridian Township, MI – 2008

Lead Traffic Engineer responsible for the traffic analysis of existing and forecast conditions near the intersection of Okemos and Hamilton Roads in Okemos, MI. The analysis included the evaluation of alternative roadway network configurations.

Ann Arbor Trail Traffic Study, Westland, MI – 2006

Lead Traffic Engineer responsible for the preparation of a report detailing the level-of-service under existing roadway conditions and two roadway design options. This report included a crash analysis, roundabout analysis using RODEL software, and recommendations as to which roadway design to use.

Geddes Road Corridor Study, Superior Township, MI – 2004-2005

Lead Traffic Engineer for project to evaluate existing and forecast conditions along this 6-mile corridor. Using Synchro/SimTraffic, the study included evaluating alternate improvements and general timelines for their need.

M-24 Access Management Plan, Michigan Department of Transportation, Oakland County, MI – 2006-2007

Traffic Engineer for project to develop an access management plan and model ordinance for the 14.5-mile long corridor. Process included a detailed crash analysis, reviewing existing geometry and operations, developing a Synchro /SimTraffic model of the corridor, and identifying low-cost spot improvements in Auburn Hills, Lake Orion, Oxford, Orion Township, and Oxford Township.

US-24 Access Management Plan, Michigan Department of Transportation, Monroe County, MI – 2004-2005

Traffic Engineer for project to develop an access management plan and model ordinance for the 10.6-mile long corridor. Process included a detailed crash analysis, reviewing existing geometry and operations, developing a Synchro /SimTraffic model of the corridor, and identifying low-cost spot improvements in Ash, Frenchtown and Monroe Townships



Steven M. Loveland, PE, PTOE | Traffic Project Engineer

Relevant Experience Continued

and the City of Monroe

University Region Traffic Signal Optimization Management, Jackson and Hillsdale Counties, MI – 2013

Lead Traffic Engineer responsible to provide MDOT with assistance in providing project management services for signal optimization efforts performed by other consultants. The focus is on QA/QC evaluations and analysis of the optimization consultants' work product for 69 signal locations.

Wayne County Signal Optimization, Wayne County, MDOT – 2012

Lead Traffic Engineer and Deputy Project Manager for project to collect data, evaluate the operation and optimize the signal timing plans for 95 intersections along US-24 (Telegraph Road), US-12 (Michigan Avenue) and Old M-14 (Ann Arbor Road) in Wayne County.

Superior Region Signal Optimization, Multiple Counties, MDOT – 2011

Project Manager and Lead Traffic Engineer to collect data, evaluate the operations, and optimize the signal timing plans for 75 intersections throughout the Upper Peninsula.

Washtenaw County Signal Optimization, MDOT – 2011

Project Manager and Lead Traffic Engineer for project to evaluate the operation and optimize the signal timing plans for 32 intersections in and around the City of Ypsilanti under the jurisdiction of the Brighton TSC in the University Region.

M-3 Corridor and I-94 Isolated Locations Signal Optimization, Wayne County, MDOT – 2011

Lead Traffic Engineer for project to collect data, evaluate the operation, perform signal warrant analyses and optimize the signal timing plans for the M-3 Corridor and I-94 isolated locations in Wayne County, MI.

Grand Region Signal Optimization, Kent County, MDOT – 2008

Project Manager and Lead Traffic Engineer to collect data, evaluate the operation and optimize the signal timing plans for 85 intersections along M-37 & M-44 (East Beltline), M-44 Connector (Plainfield Rd), and M-11 (28th Street).

Goddard Road Reconstruction, City of Romulus, MI – 2014 Ongoing

Lead Traffic Engineer for this project that involved reconstruction of Goddard Road. Responsible for traffic counts, maintenance of traffic, signing and marking plans.

Evergreen Road Reconstruction, City of Southfield, MI

Lead Traffic Engineer for this project that involved reconstruction of one mile of minor arterial road ranging from three to five lanes. Full drainage improvements were required as well as reconstruction of two traffic signals within the project limits. Responsible for maintenance of traffic, signing and marking plans.

14 Mile Road, City of Farmington Hills, MI – 2007

Lead Traffic Engineer responsible for sign and marking plans related to the design and construction of 14 Mile Road from Farmington Road to Orchard Lake Road. Existing signs and pavement markings within the project limits are being upgraded.

Newburgh Road Reconstruction, City of Westland – 2003

Traffic engineer responsible for the development of sign and marking plans related to geometric changes at this location.

Main Street Reconstruction, Washtenaw County Road Commission, Northfield Township, MI – 2003

Traffic Engineer responsible for the development of sign and marking plans related to geometric changes at this location.

Key Personnel

Sara Merrill, PE, PTOE | Traffic Engineer



Sara Merrill is experienced in providing traffic engineering services for roadway construction projects, including traffic signing, striping, maintenance of traffic, crash analysis, trip generation, and traffic simulation. She has completed peer reviews for dozens of site plans, rezoning requests, and traffic impact studies on behalf of multiple municipalities. Sara is well versed with both current MDOT and local agency standards, including AASHTO and ADA guidelines. She also has a wide variety of field experience, which includes traffic counts, signing inspections, and roadway construction.

Education

Bachelor of Science in Civil Engineering, Michigan Technological University, 2005

Professional Registration

- Professional Engineer, State of Michigan, 2011, License No. 6201057839
- Professional Traffic Operations Engineer, 2011

Experience

6 years with OHM Advisors

Professional Affiliations

Institute of Transportation Engineers Member, 2006 present

Professional Development

- Traffic Signal EPIC Controller Workshop, Carrier & Gable, 2009
- Traffic Signal EPAC Controller Workshop, Carrier & Gable, 2008
- Michigan State University, Introduction to Sight Distance, 2007
- Michigan State University, Practical Applications for Sight Distance, 2007
- American Society of Civil Engineers, Roadside Delineation Webinar, 2006
- Sterling Systems, MicroStation Level 1 Training, 2006

Relevant Experience

Peer Review of Site Plans and Traffic Impact Studies – 2006 - Ongoing

On the behalf of various municipalities, reviewer of numerous site plans and traffic impact studies of proposed residential, office, commercial and industrial developments.

Shiawassee Road CA/CE, City of Farmington, MI – 2007

Traffic Engineer responsible for preparing the temporary pavement marking and signing plans, permanent pavement marking and signing plans, and detour route plans for Shiawassee Road within the City of Farmington.



Coolidge Road, 8 Mile to 10 Mile Improvements, City of Oak Park, MI – 2007

Traffic Engineer responsible for preparing permanent pavement marking & signing plans. This project featured a concrete overlay on a five lane roadway between 8 Mile Road and 10 Mile Road (gapping out the 9 Mile intersection within the City of Oak Park). It also included the addition of several landscaped median islands as part of a streetscape enhancement, and the replacement of at least four traffic signals within the project limits.

Superior Region Signal Optimization, Michigan Department of Transportation, MI – 2009-2011

Traffic Engineer for project to collect data, evaluate the safety and operation, and optimize the signal timing plans for 75 intersections in the Superior Region. Tasks included field collection of geometric and operational data, evaluating safety and intersection/corridor operations, preparing optimized signal timing plans, and determining measures of effectiveness (MOEs) for the project.



Sara Merrill, PE, PTOE | Traffic Engineer

Relevant Experience Continued

Traffic Signal Optimization for US 12, US 24 & Old M 14, Michigan Department of Transportation, MI – 2007-2010

Traffic Engineer responsible for coordinating and performing all field work, including conducting turning movement counts and gathering field geometric data for all signalized intersections along the M 14, US 12, & US 24 corridors within the Wayne County limits.

Grand Region Traffic Signal Optimization, Michigan Department of Transportation – 2009

Traffic Engineer for project to evaluate the safety for 85 intersections along four corridors of M-44, M-44 Connector, M-11, and M-37 in MDOT's Grand Region.

2008 SCATS/ADA Upgrades, Oakland County, MI – 2008-2009

Design engineer for the replacement/upgrading of traffic signals at six intersections in various communities along Lahser and Southfield Roads in Oakland County, Michigan. Sidewalk ramps were evaluated for ADA compliance and retrofit design plans to bring the sidewalk and ramps into compliance with current ADA/ MDOT standards were prepared.

2006 SCATS/ADA Upgrades, Various Communities in Oakland County, MI – 2007-2008

Design engineer for the replacement/upgrading of traffic signals at 15 intersections in various communities along Lahser and Orchard Lake Roads in Oakland County, Michigan. Sidewalk ramps were investigated for ADA compliance and design plans for the ramp and sidewalk retrofits were prepared. The intersections encompassed a variety of ROW constraints, existing site constraints and difficult skews.

M-97 and M-29 Signal Optimization, Macomb County, MI – 2005-2007

Traffic Engineer responsible for performing crash analysis of the M-97 & M-29 corridors within the Macomb County limits. High-frequency crash locations were identified and analyzed in order to identify solutions.

Taft Road Reconstruction Design, City of Northville, MI – 2006-2008

Traffic Engineer responsible for preparing the permanent pavement marking and signing plans. Duties also included performing peak hour turning movement counts, and completing a inventory of existing signs. The project consisted of reconstructing approximately 1.5 miles of Taft Road to include a single lane roundabout and bicycle lanes.

I 75 Freeway Signing, Michigan Department of Transportation, MI – 2006-2007

Traffic Engineer responsible for entering the alignment information into the Michigan Traffic Sign Inventory System (MTSIS), and for performing QA/QC. The project encompassed approximately 15 miles of urban freeway signing.



Jackson Road Reconstruction – Phase III, Honey Creek to Dino Drive, Washtenaw County Road Commission, MI – 2007

Traffic Engineer responsible for preparing permanent pavement marking & signing plans. This project included the complete reconstruction of two miles of Jackson Road from a two lane road to a four lane boulevard with bicycle lanes and pedestrian facilities.

11 Mile Road Reconstruction, Greenfield to Woodward, Cities of Oak Park, Berkley and Huntington Woods, MI – 2006-2007

Engineer responsible for preparing the permanent pavement marking & signing plans. This project included the complete reconstruction of over two miles of 11 Mile Road within the Cities of Oak Park, Berkley and Huntington Woods, as well as city-maintained off-street parking lots along this corridor.

Key Personnel

Tony Slanec | Principal, Director of Planning & Urban Design



Education

- Bachelor of Science in Landscape Architecture, The Ohio State University, 1999
- Minor, City & Regional Planning, The Ohio State University, 1999
- Graduate of the Mike Lin Graphic Workshop, Manhattan, Kansas

Experience

14 years, 9 with OHM Advisors

Professional Affiliations

- The Ohio State University - Knowlton School of Architecture, Adjunct Professor, 2009-present
- American Planning Association
- Michigan Planning Association
- Ohio Planning Association
- Urban Land Institute (ULI), Columbus Chapter
- Heritage Ohio
- National Trust for Historic Preservation
- Ohio, Kentucky, Indiana Regional Council of Governments, 2012 Conference Committee
- Main Street Organization
- American Society of Landscape Architects (ASLA)
- Merion Village Association
- Greater Common Good

With more than 14 years of professional experience, Tony's goal is to enhance communities through high-quality urban design and planning. Tony is an expert in creating creative and unique design solutions for all of his public and private clients. Tony's passion to seek out creative solutions is fueled by his unique ability to work with diverse user groups to establish a design direction and deliver community consensus and excitement for what is possible. As an urban designer, he believes that 'design' is a participatory process which brings citizens, business owners, developers, policy makers, and government officials together to create exciting community destinations that help build community "brand" identity, bolster investment / economic development, and promote walkable sustainable environments for ALL user groups. Most importantly, he builds on the character and positive qualities inherent to each unique place that he touches. Tony's creative talents and professional drive push past standard solutions to achieve a higher level of design that addresses project function and construction budget. His commitment to the community visioning process and sustainable development is the cornerstone of his personal and professional goals which translates to an intense interest in building community cohesion through the built environment. Tony's diverse portfolio gives him a 'creative edge' and a body of knowledge and experience to help change ordinary to extraordinary.

Relevant Experience



Newark Downtown Streetscape, City of Newark Ohio

Principal in Charge; Tony lead the planning and design process to create a downtown streetscape and transportation improvement plan for the City of Newark. The purpose of the project was to create a vision and plan for the future of Downtown Newark, with a focus on streetscaping, wayfinding, and enhancing the existing transportation network. Through this effort the goal was to improve the image and brand of the Downtown, and in turn the overall economic competitiveness of the area. The resulting solution included complete roadway network reconfiguration and streetscape enhancement (wider sidewalks, crosswalk articulation, plantings, gateways, Engineering of 4 (yes 4) roundabouts at the corners of the town square.



Tony Slanec | Principal, Director of Planning & Urban Design

Relevant Experience Continued

Massillon Road Streetscape Study, City of Green

Principal in Charge; Tony led the City of Green through the creation of a corridor plan for Massillon Road, a primary corridor within the community and region. The Massillon Road Streetscape Study resulted from this plan and includes pedestrian connections and transportation enhancements including roundabouts. A multi-use path is proposed on the west side of the road with a sidewalk along the east side. Public meetings were held to gather input on lighting design, streetscape design, landscape design, median design, and roundabouts.

COTA BRT Cleveland Ave. Central Ohio Transit Authority

Principal in Charge; OHM's involvement includes station design, streetscape design, design for two park and ride facilities for the 15.6 mile long Bus Rapid Transit operating along Cleveland Avenue from downtown Columbus to Westerville, Ohio.



Improving transportation services along this corridor is an integral part of Central Ohio's long-term vision for growth. It is important that the community, and especially the neighborhoods potentially impacted, feel ownership in the

story and outcome of the Cleveland Avenue BRT project. The degree of diversity that exists along this corridor requires targeted messaging, neighborhood ownership and sensitivity to businesses, existing and potential riders along the corridor. Our team is providing public outreach, architecture, site engineering, structural engineering, planning, and landscape architecture.

Main Street Streetscape Study, Mansfield, Ohio

Principal in Charge; This project consisted of developing a beautification plan for a major thoroughfare linking a peripheral highway to downtown Mansfield. The project included recommendations for pedestrian safety and comfort, building frontage development, landscaping and screening,

street furnishings, highway bridge enhancements, and pocket parks.

3rd Street PE Study, City of Columbus (German Village)

Principal in Charge; Tony is leading a comprehensive study of the Third Street Corridor in historic German Village. The design and engineering study considers everything from enhancements to streetscape and lighting, wayfinding, traffic calming, stormwater management and utility relocation. "The Village" is known for its walkable brick streets, mid-19th century homes, involved citizens and unique businesses.

Spring – Long Multi-Modal Street Conversion, City of Columbus, Ohio

Principal in Charge; This project consists of providing engineering services on Spring and Long Streets with the intent of providing a safe east-west bicycle route for cyclists in Downtown Columbus. The project presented several unique challenges including maintaining the existing capacity and parking in the project area. The proposed solution includes changes to Spring and Long (one-way streets with an existing 3-lane section) to include dedicated a bike lane and on-street parking.

Bicentennial Bikeways Task Order, City of Columbus

Principal in Charge; This task order is being used to advance the implementation of the Bicentennial Bikeway Plan. Tasks have included on street bikeway striping plans for bike lanes, sharrows, and bike boulevards. This project was a quick to construct project and included a large retaining wall, removal of private owner items from the ROW, drainage modifications, guardrail relocation, new curb ramps, relocation of street lighting and survey services. Later tasks included beacon crossings, road diet analysis and public involvement including the neighborhood commissions.

Springfield One-way Conversion, Springfield Ohio

Principal in Charge of converting four downtown arterials from one-way to two-way traffic flow. This project utilized a comprehensive approach to studying the conversion including looking at the economic impacts of the conversion, and a complete streets approach to the alternatives development including enhanced pedestrian and bikeway facilities. Specific design elements considered as part of this project were bike



Tony Slanec | Principal, Director of Planning & Urban Design

Relevant Experience Continued

lanes, shared lanes, bike boulevards and designated bike routes utilizing alleys and other types of non-traditional biking facilities. The planning and public input process for this study followed the ODOT PDP planning process.

Vining Road Interchange, Romulus, MI

Project Manager and Lead Urban Designer, I-94 at Vining Road is the “gateway” to and from Detroit Metropolitan Airport. With the current interchange presenting a bleak entrance into the City of Romulus, the improvements will become a catalyst for positive attention, and a renewed identity and community brand for the City. The enhancements to the interchange will spur future business growth and economic development in the surrounding 1,000 acres of undeveloped, yet prime available land. This interchange will become distinctive along I-94, and create a sense of place for the City. Unique site elements such as, windmills, decorative walls, substantial landscaping, and bridge and gateway features will be some of the improvements incorporated in the interchange.

Auburn Hills Downtown Redevelopment, Auburn Hills, MI

Project Manager and Lead Urban Designer, One of the primary opportunities in Downtown Auburn Hills that was a driver for conducting this study was the City’s purchase of a large manufacturing site north of Auburn Road and east of Squirrel Road. Surrounding this site were two other underutilized properties that when looked at collectively, created a large area to support future economic development, and continue to build on the downtown as an attractive destination within the community. The vision that was developed through this planning process for the future Downtown was simple, attract and promote future development by marketing new development opportunities. A vision plan was created around six primary development goals and is the catalyst for a redevelopment effort of a former blighted property.

Arlington Avenue Streetscape Improvements Ph IIA & IIB, Upper Arlington, OH

Urban Designer/Project Manager; provided client and consultant management, site design, landscape architecture,

documentation oversight, and construction administration services for this phased project in conjunction with engineers EP Ferris & Associates, Inc. The project included study of three designated areas and provision of streetscape plans for each study area. Pedestrian zones were identified, and aesthetic treatments will be recommended for trees, plantings, pavement applications, and site furnishings



Central City Parkway Corridor Master Plan, Westland, MI

Lead Urban Designer; provided public space and urban design services to fulfill a recently completed community master plan that accommodates a highly diverse program of activities in Westland. The master plan identified a future City Hall site and a strategy to convert a former big-box format Circuit City into a state of the art City Hall and Community Center, carved out a site that includes a Farmers Market Plaza, performance stage and ‘great lawn’ community meeting/event facility, restrooms/concessions, outdoor seating/café space, arbor/trellis ‘swing’ benches, children’s ‘hidden’ garden, and a wetland interpretive area. This transformational project results from months of planning and community engagement and will transform the grassy area into the ‘cultural hub’ of the Westland Community. The Central City Farmer’s Market is considered a nodal element on a much grander plan of tying together a large commercial district to the north to the Civic District thereby creating a linear park called ‘The Mile’. ‘The Mile’ is an aggressive plan underway to shrink Central City Parkway and shift the road to open up green space, multi-use paths, and bike lanes for a multi-modal linear park application. The Westland Library, Westland Central City Farmer’s Market, City Hall, Tattan Park, community gardens, dog parks, and open space will line this multi-modal transit line.

Key Personnel

Aaron Domini | Senior Planner



Education

- Master of City and Regional Planning, The Ohio State University, 2004
- Bachelor of Science, Fort Lewis College, 2002, Cum Laude

Experience

12 years, 5 with OHM Advisors

Professional Affiliations

- American Planning Association, Central Ohio Chapter, Board of Directors
- The Ohio State University - Knowlton School of Architecture Adjunct Faculty, 2009-Present
- Ohio, Kentucky, Indiana Regional Council of Governments, 2012 Conference Committee, 2011-2012
- National Trust for Historic Preservation Member, 2009 - Present
- American Planning Association Member, 2004 - Present
- Michigan Planning Association Member
- Ohio Planning Association Member, 2010 - Present
- The Urban Land Institute, Design Juror

Aaron's background is in community planning, economic development, and public policy. He has played a key role in creating plans for urban, rural, suburban, and regional areas throughout the country. Aaron's expertise aside from creating community plans includes creating design guidelines, zoning code regulations and amendments, and master plans for new residential, commercial and mixed-use developments. Aaron is passionate about creating plans for communities that will build community, promote new economic opportunities, and have citizens at the center of the planning process. His background in community planning and visioning contributes to his knowledge and ability to lead and facilitate the public participation process. Aaron also has years of experience serving as a public sector planning administrator which contributes to his ability to create plans and codes that are easily understood and implemented by local stakeholders, staff, and elected and appointed officials.

Relevant Experience

Grand River Corridor Plan, Farmington Hills, Michigan

Project Manager for the Grand River Corridor, a mixture of auto-oriented development that was lacking a strong vision for the future. This plan provided a framework for the corridor to develop and redevelop in a cohesive and coordinated manner. Additionally, it made recommendations for streetscape improvement and future land use, and provide development scenarios based on those changes.



Downtown Revitalization Plan, Auburn Hills, Michigan

Senior Planner for the vision plan that was created around six primary development goals and is the catalyst for a redevelopment effort of a former blighted property. One of the primary opportunities in Downtown Auburn Hills that was a driver for conducting this study was the City's purchase of a large manufacturing site north of Auburn Road and east of Squirrel Road. Surrounding this site were two other underutilized properties that when looked at collectively, created a large area to support future economic development, and continue

to build on the downtown as an attractive destination within the community. The vision that was developed through this planning process for the future Downtown was simple, attract and promote future development by marketing new development opportunities.

Downtown Conversion Study, Clark County-Springfield Transportation Coordinating Committee, Springfield, OH

Senior Planner; Aaron served as the senior planner for converting four downtown arterials from one-way to two-way traffic flow. This project utilized



Aaron Domini | Senior Planner

Relevant Experience Continued

a comprehensive approach to studying the conversion including looking at the economic impacts of the conversion, and a complete streets approach to the alternatives development including enhanced pedestrian and bikeway facilities. Specific design elements considered as part of this project were bike lanes, shared lanes, bike boulevards and designated bike routes utilizing alleys and other types of non-traditional facilities.

Stark County Long Range Land Use and Transportation Plan

Senior Planner for the study of north central Stark County, Ohio. The study analyzed existing and projected land use to determine the resulting transportation needs of the study area for the next 20-25 years. Interviews with the development community assisted in identifying “Hot Spots” for potential development. Travel demand modeling was utilized to determine future traffic impacts to the existing system and alternatives were identified to mitigate the resulting impacts. A stakeholder committee was utilized for feedback during the process and assisted in prioritizing projects and opportunities to be included in the plan. The identified projects will become part of the MPOs long range transportation plan.



Wilson Bridge Road, Worthington, OH

Project Manager; Aaron was the project manager to develop a land use plan for the Wilson Bridge Road Corridor. The Wilson Bridge Road Corridor was an aging corridor with underperforming office and retail development and residential intermixed. The plan for this corridor included a full market analysis to determine if the market potential would support new mixed-use development strategies throughout the corridor. The planning process included extensive public involvement, and a two-day design charrette to develop multiple development concepts for the corridor. The final plan was a comprehensive area plan with strategic economic development strategies to guide growth and investment in the corridor. Following the completion of the corridor plan Aaron led a planning team to develop design guidelines and an overlay for the corridor. The guidelines and

overlay codified the development principles outlined in the corridor plan.

New Albany Land Use and Transportation Study, New Albany, Ohio

Senior Planner working with the New Albany Company to develop transportation alternatives for the Village of New Albany to promote economic growth through the strategic re-thinking of the original village street alignments/network. Work included studies and preliminary engineering layouts for roadways including roundabouts, new road connectors, and the disconnecting of existing roadways. Each location was highly context sensitive with special attention to walkability. Other studies have included site circulation studies for entities such as the school campus and village core areas. A wider thoroughfare plan is also being developed as part of this effort.

Canton Economic Development and Strategic Marketing Handbook, Canton Township, MI

Senior Planner for this plan created to attract and guide future private investment in two primary commercial corridors in the community including Ford Road, home of IKEA. The final product is a sleek economic development tool that is intended to attract and guide private sector investment. The document, informed by a complete market assessment study, identifies market opportunities, outlines the potential development areas within the community, and includes capacity studies for each potential development area that were designed to accommodate the target users identified in the market study. In essence, the document serves as the “front-end” for future development deals for the targeted sites and communicates that Canton is open for business to the private sector.

Farmington Vision Plan, Farmington, Michigan

Project Manager for this plan that asked citizens what they wanted their city to be like in the future. The process involved several public meetings, small group sessions, and an online survey. A city with a historic downtown, but an eye to the future, Farmington sought a plan that will position itself as a place that will attract and retain residents. The plan yielded 47 recommendations covering topics such as economic development, transportation, and community events. Since the completion of the plan, the City and stakeholders have begun implementation of several of the recommendations.

Key Personnel

R. Michael Cousins, GISP | GISP Manager



Education

Bachelor of Science in Geography with a Specialization in Spatial Information Processing, Michigan State University, 2007

Experience

7.5 years, <1 with OHM Advisors

Certifications

- Geographic Information Systems Professional (GISP), GIS Certification Institute, #29470, 2012
- Former GIS/LIS Technologist, ASPRS, 2009

Professional Affiliations

- Improving Michigan's Access to Geographic Information Networks (IMAGIN)
- Michigan Communities Association of Mapping Professionals (MiCAMP) – Member, 2014-Present
- Urban and Regional Information Systems Association (URISA) – Member, 2012-Present
- Tennessee Geographic Information Council (TNGIC) – Member, 2014-Present
- Ohio-Michigan GIS User Group (OHMI) – Member, 2014-Present
- Southwest Ohio GIS Users Group (SWOGIS) – Member, 2014-Present

Michael Cousins is a results-oriented Geographic Information Systems (GIS) Analyst with strong work ethic and the ability to address complex problems and design technical solutions. Michael specializes in the areas of GIS, environmental planning and assessment, hydrology, and floodplain management. With over 7 years of experience in GIS and planning, his development concentrations range from data model design to spatial analysis for water resources. The popularity and near necessity of GIS technology within municipal government and public organizations has driven his desire to understand the spatial and attribute components to public assets, such as utilities and natural features.

Due to the increased demand for data spatial accuracy and integrity, Michael's focus has also been on the integration and usage of GPS and mobile platforms. Incorporating GPS and GIS together creates an enterprise solution for data collection, analysis and presentation.

Along with data platform design and development, Michael has added his expertise to numerous professional organizations and is heavily involved in the GIS community. Michael is experienced in using a variety of software and related tools, including ERDAS IMAGINE, ESRI ArcGIS, 3D Analyst Extension, Spatial Analyst Extension, ArcHydro, ArcPad, Adobe Photoshop and Microsoft Office

Relevant Experience

As Needed GIS Support, Data Management, Updates, and Modeling

- Charter Township of Orion
- City of Auburn Hills
- City of Farmington
- City of Westland
- Livingston Community Water Authority
- Village of Baraga
- Village of Pinckney
- Village of Dexter
- Superior Township
- Scio Township
- Ypsilanti Township

Romulus Pavement Maintenance Program, City of Romulus, MI – Ongoing
GIS Manager for this project. The City of Romulus has 106 miles of streets in their jurisdiction. The project includes collecting PASER condition ratings yearly and continuous tracking of contracted pavement maintenance procedures. Michael takes the data from Roadsoft and creates various figures showing the yearly ratings to be used for further analysis.



R. Michael Cousins, GISP | GISP Manager

Relevant Experience Continued

MDOT – Detroit Non-Freeway Sign Inventory – 2014-Ongoing

OHM Advisors was tasked with collecting a full sign inventory of 4 major roads in Detroit totaling approximately 22 miles and over 2,200 signs. Michael was the GIS Manager. Michael developed a new data collection technique using tablets and a portable GPS that would allow our technicians in the field to take a full inventory, including pictures, in a fast and efficient manner that exceeded expectations from the client.

Ypsilanti Township Residential Rental Analysis - 2014

OHM Advisors was tasked with performing residential rental analysis on properties throughout the township. Using tax assessors data, crime data, and existing GIS parcel data, Michael created various hotspot report figures to be used for future development. Michael was the GIS Manager and served as the primary person responsible for creating these figures.

City of Milan Sign/Sidewalk Repair Inventory – 2014

OHM Advisors was tasked with collecting a full sign and sidewalk repair inventory in Milan. Milan is approximately 3.4 square miles. We collected almost 900 signs and nearly 2,400 sidewalk repair points. Michael was the GIS Manager. Michael used his new data collection technique, which uses tablets and a portable GPS that would allow our technicians in the field to take a full inventory, including pictures, Field inventory only took 9 days to complete.

Village of Chesaning Sign/Sidewalk Repair Inventory – 2014

OHM Advisors was tasked with collecting a full sign and sidewalk repair inventory in Chesaning. Chesaning is approximately 3.1 square miles. We collected almost 600 signs and just over 1,600 sidewalk repair points. Michael was the GIS Manager. Michael used his new data collection technique, which uses tablets and a portable GPS that would allow our technicians in the field to take a full inventory, including pictures, Field inventory only took 5 days to complete.

U.S. Army – SE Core Subcontractor, Orlando, FL – 1.5 years*

Michael was Project Lead and QC Lead for 20+ GIS staff on various projects. Primary duties included manipulating feature classes to match provided imagery through attribution and alignment to create a real world simulated environment in Terra Vista or various 3D simulators; overall QA/QC of post production data including but not limited to: attribution, alignment, conflict resolution and fixing of data if failure when tested in the 3D simulator; troubleshoot methods, resolve SDE conflicts and overall decision making on usage of data and attribution; create new databases, source standardize data, and overall QA/QC before database is released on the production floor; innovate new methods and strategies that will speed up production but still adhere and meet the SE Core program guidelines, this includes new models, python scripts, write ups for production use, and changes to existing documents.

Bartow Watershed Management Program, Bartow, FL*

Michael was the Primary GIS Specialist for this project. The Bartow watershed spans approximately 8.5 miles and centers around the City of Bartow. Ardaman and Associates' scope of work for this project focuses on hydraulic evaluation of the watershed and includes development of an inventory of the City's stormwater system. Michael's duties included the following tasks: collection and evaluation of existing data, desktop reconnaissance, identification and delineation of hydraulic features, extensive field reconnaissance using a Trimble GPS handheld, quality control, and preparation of deliverables (reports and GIS databases).

North Port/Big Slough Watershed Management Program*

Michael was the GIS Specialist responsible for this joint City of North Port and Southwest Florida Watershed Management District project studying a 195-square mile watershed. His tasks included the generation of floodplains, data management, Best Management Practices analysis, and the production of a variety of map products.

*Work completed outside of OHM Advisors

MULTIMODAL TRANSPORTATION PLANNING & TRAFFIC ENGINEERING



SUSTAINABLE COMMUNITIES, CONTEXT-SENSITIVE MULTIMODAL DESIGN, MULTIMODAL PLANNING, INNOVATIVE TRAFFIC ENGINEERING SOLUTIONS.

Municipalities across the country are working to create safe and practical access to streets for a variety of user groups including vehicles, pedestrians, bicycles, freight, and transit. This movement has been addressed in a variety of ways in both the planning and engineering sectors over the past decade. OHM Advisors has been a leader in this movement to develop livable communities by applying context sensitive design concepts to develop balanced multimodal networks for many years. Our approach carefully considers existing and planned connections, the project's context, the user's point of view, and the relationship to the existing and future system, to develop solutions that work for your community.

PLANS & STUDIES

- Thoroughfare Plans
- Transit Orientated Design Master Plans
- Trail and Bikeway Plans
- Area-wide and Corridor Studies
- Access Management Studies
- Road Safety Audits
- Road Diets

COMMUNITY-BASED STREET DESIGN

- Complete Streets
- Streetscapes and Gateways
- Way-finding, Branding and Signage Plans

TRAFFIC ENGINEERING

- Capacity Analysis
- Roundabout Analysis & Design
- School & Pedestrian Travel Studies
- Safety Studies
- Parking Studies
- Data Collection Services

SPECIAL ADVISORY SERVICES

- Funding Procurement Assistance
- Geospatial Decision-Making / GIS Services



WHAT WE DO BEST

Over 200 professionals dedicate their time and talents to OHM Advisors. Our team includes architects, civil, electrical, environmental and mechanical engineers, planners, urban designers, surveyors, grant writers, LEED accredited professionals and information technology professionals.

We use collaboration, attention and long-term involvement to serve as the trusted advisor to clients.

~ John Hiltz - President

Architecture

Municipal Engineering

Planning & Urban Design

Environmental & Water Resources

Water & Wastewater Treatment

Transportation

Parks & Recreation

Construction Engineering

Geographic Information Systems

Surveying

Information Technology



ABOUT OHM ADVISORS

Orchard, Hiltz & McCliment, Inc. (OHM Advisors) is a firm of architects, engineers and planners committed to Advancing Communities. Leaders rely on our proven public and private sector expertise, insightful counsel and forward thinking to create lasting, viable places and communities.

We opened our doors in Detroit, Michigan in 1962 and have been growing ever since. Headquartered in Livonia, we have offices across Michigan, and in Tennessee and Ohio.

Cities, Villages, Towns

Counties & Townships

K-12, Colleges & Universities

State and Federal Agencies

US Army Corps of Engineers

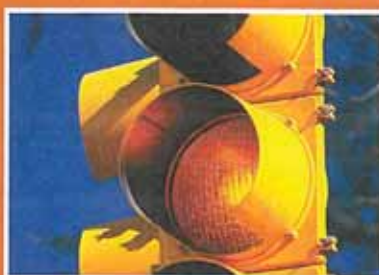
Fortune 500 Companies

Utility Authorities

Parks Authorities

Road Agencies

Corporations



As-Requested Traffic Engineering Services | Midland, MI



Client Reference Information

City of Midland, MI
 Brian McManus
 City Engineer
 989-837-3353
 333 W. Ellsworth St
 Midland, MI 48640

Completion Date

Ongoing since 2007

Services Provided

- Transportation Planning,
- Traffic Engineering,
- Traffic Operations
- Geometric Studies



We are providing a full spectrum of traffic engineering and transportation planning services to this community. While available at any time to deal with specific, pressing issues, we generally travel to the community on a regularly scheduled bi-monthly basis to provide advice, evaluations and recommendations to address numerous and varied issues confronting impacted stakeholders. The regular trips are coordinated to facilitate any required meetings with the City Council, Planning Commission or other agencies, as appropriate. The singular point of contact for this work is Mr. Dearing, supported by the OHM Traffic Group staff for more involved evaluations and studies.

Some examples of our transportation planning services to Midland include:

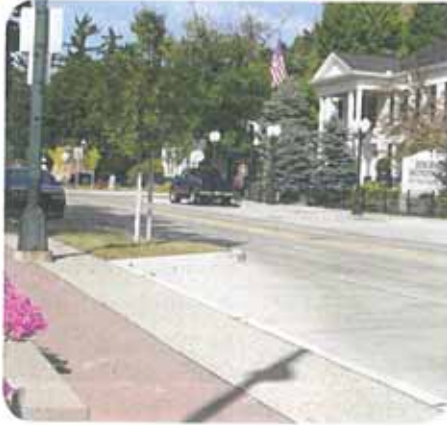
- Advising on access management policies
- Performing site plan reviews
- Evaluating the traffic impact studies provided by developers
- Assisting with preparation of funding applications.

For traffic engineering services, we have provided:

- Crash analysis and identifying mitigation countermeasures for individual intersections and road segments,
- Operational evaluations of individual intersections and road segments, including warrant studies for the installation of YIELD, STOP, all-way STOP or signal controls, parking restrictions and speed limits,
- Signal optimization and operational studies,
- School and general pedestrian safety evaluations,
- Bicycle route signing and pavement marking guidance, whether for dedicated bike lanes or shared use paths.

We have also undertaken to assist in the training of City DPW personnel in work zone traffic control planning and field set up.

Grand River Streetscape | Farmington, MI



Client Reference Information

City of Farmington, MI
Vince Pastue, City Manager
248.474.5500
23600 Liberty Street
Farmington, MI 48335

Completion Cost and Date

\$1,400,000 - 06/2010

Services Provided

- Traffic Capacity and Operational Analysis Study
- Topographic and Construction Surveying
- Geotechnical Engineering Services
- Roadway, Storm Sewer and Culvert Design
- Construction Engineering including Testing
- Traffic Signal Modernization Design
- Pedestrian Signal Design
- Engineering Studies, Preliminary Drawings and Data required for funding and grant applications
- Non-Motorized Pathways



This project was a complex streetscape project in a downtown area that experiences heavy traffic, as it is an MDOT trunk line road. The project involved detailed coordination with the MDOT, RCOC, as well as the City's DDA.

The project involved a comprehensive traffic study to justify to MDOT the removal of a lane of traffic on both the north and south side of the road. This facilitated the construction of parallel parking stalls (bump outs) and the widening of the sidewalk area along Grand River Avenue in certain locations. Due to these changes in the grading additional storm sewer was designed and constructed to help facilitate drainage.

New sidewalk was placed from the proposed back of curb to the building fronts, partially

comprised of brick pavers. Signal modernization with mast arms were designed and installed at two main intersections.

The existing building facades posed difficult design and construction constraints due to their proximity to the roadway, as well as the variation of the brick ledge elevations from building to building.

Old infrastructure from the turn of the century such as basements and stairwells that extended beneath the proposed sidewalks and brick pavers posed difficult design and construction constraints.

Two-way traffic was maintained in this downtown area throughout construction as well as access to all businesses, which was a key concern for the DDA.

Cleveland Avenue Bus Rapid Transit | Columbus, OH



Client Reference Information
 Central Ohio Transit Authority
 Michael J. McCann
 Director of Planning
 William J. Lhota Building
 33 North High Street
 Columbus, OH 43215
 614-275-5812

Completion Date and Cost
 Ongoing
 Estimated \$46 Million

Services Provided

- Public Outreach
- Architecture
- Site Engineering
- Structural Engineering
- Planning
- Landscape Design



OHM Advisors, in partnership with HDR, Inc., is providing preliminary design, engineering, and environmental clearance for a proposed Cleveland Avenue Bus Rapid Transit (BRT)/Enhanced Bus Service Project.

The new service will transport riders between Downtown Columbus and Polaris Parkway/Africa Road, stopping at 62 designated stations in both directions along the way.

OHM is assisting COTA with public outreach efforts to inform and engage participation on key elements including developing a unique BRT identity that will be carried forward into the future service of the BRT corridor as well as potential future corridors. The project will create the following benefits for the community:

- Improved transit service
- Improved mobility and

reliability in a congested corridor

- Travel times savings of approximately 21 percent
- More travel options for growing transit-dependent populations
- Improved pedestrian access and safety
- Creates opportunities for economic development within the corridor
- A projected 15-20 percent increase in ridership in the first five years

BRT Station Amenities will include:

- ADA ramps
- Distinctive pavement & crosswalks
- Indoor waiting area
- Shelter with bench and lighting
- Bicycle parking
- Public art
- Landscaping
- COTA system map/paper
- Ticket vending machines

Massillion Road Corridor Plan | Green, OH



Client Reference Information

The City of Green
Wayne Wietha, Director of Planning & Development
1755 Town Park Boulevard
Green, Ohio 44232
330.896.6614

Completion Date and Cost

2011
\$300,000

Services Provided

- Planning
- Urban Design
- Landscape Architecture
- Transportation Planning

Our team assisted the City of Green, Ohio to create a corridor plan for Massillion Road, a primary corridor within the community and region. The plan created a variety of economic development and placemaking strategies aimed at attracting investment to the corridor, grounded in transformational ideas of what the corridor could be in the future.

The plan was initiated by the city in response to tremendous growth within the Massillion Road Corridor. Three new health care businesses and a large Fortune 500 company were considering moving to the corridor. The corridor plan served as a tool to attract these economic opportunities by illustrating a clear picture of how the city would guide future development in the corridor, and invest in public projects that

will define the character of the community, and contribute to improving the overall quality of life.

Our team was selected to create the corridor plan based on a proven track record of both public and private sector planning, including a long history of planning and designing corporate headquarters, and understanding what it takes to attract and retain high-quality investment in a community through both the public and private sector lens.

The plan resulted in all three health care facilities and the Fortune 500 company selecting Green as their community to expand in and call home.

Streetscape and Transportation Plan | Newark, OH



Client Reference Information

The City of Green
Wayne Wiethe, Director of Planning & Development
1755 Town Park Boulevard
Green, Ohio 44232
330.896.6614

Completion Date and Cost

2014 - Design
\$50,000 - Design

Services Provided

- Planning
- Urban Design
- Landscape Architecture
- Traffic Engineering

OHM Advisors led a planning and design process to create a downtown streetscape and transportation improvement plan for the City of Newark. This effort was conducted in concert with a multi-million dollar sewer separation project to improve the aging city infrastructure in the downtown.

The purpose of the project was to create a vision and plan for the future of Downtown Newark, with a focus on streetscaping, wayfinding, and enhancing the existing transportation network. Through this effort the goal was to improve the image and brand of the Downtown, and in turn the overall economic competitiveness of the area.

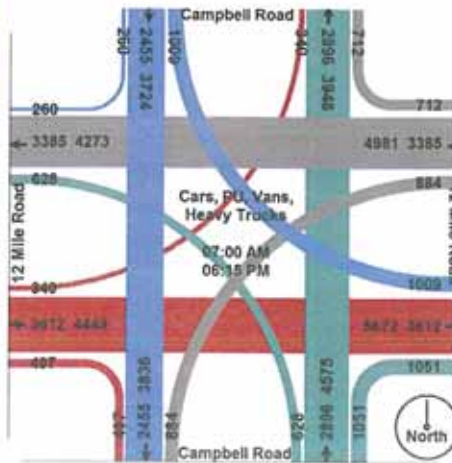
The planning process included extensive public outreach in order to

build consensus related to the vision and plan, and more specifically the future of the historic square anchored by the Licking County Courthouse. The planning process extended over a six month period and included eight stakeholder meetings and three public meetings, with more than 500 local residents contributing their ideas to the future of Downtown Newark. Multiple meetings were also held with local leaders, developers, and philanthropists to gain perspective on, and support of, the project.

Through the public outreach process a vision was created for the streetscape which included among other elements enhanced lighting, pedestrian amenities, landscaping and extended sidewalks to accommodate on-street dining and entertainment. It was also determined one of the major barriers to growth and development in the downtown was the existing auto centric traffic pattern around the square. Specific issues identified by the community included access, safety, and an inadequate pedestrian network.

In response to this key finding, OHM Advisors performed a traffic study which considered multiple alternatives (including traffic signals and roundabouts) that would address the issues identified by the client and public. The outcome of this study was a preferred alternative which included four roundabouts at the four corners of the square.

Road Diet Study | Royal Oak, MI



Client Reference Information
 City of Royal Oak
 Matt Callahan
 City Engineer
 248.246.3260
 P.O. Box 64
 Royal Oak, MI 48068-0064

Completion Cost and Date
 \$53,900 - 2013

Services Provided

- Traffic Capacity Analysis
- Geometric Studies

As part of a city-wide effort to improve non-motorized mobility through the city, Royal Oak was considering the reduction some of their roads from 4-lane roads to 3-lane roads, to accommodate the placement of on-road bicycle lanes. This type of reduction is commonly referred to as a "road diet."

The study limits included the following corridors:

- Campbell Road from 10 Mile Road to 12 Mile Road
- Main Street from Rochester Road to Normandy Road
- Crooks Road from Main Street to Normandy Road

The study analyzed in detail the potential impacts of implementing road diets along these corridors, identifying where road diets can

be implemented and where they would not be ideal. Existing crash pattern were evaluated, as well as modeling the roadway corridors with Synchro / SimTraffic for both existing and forecast traffic volumes, under the current configuration and with lane reductions. It also included a pro / con statement for each corridor.

The study concluded that portions of the corridors would be good candidates for lane reductions. But there were specific locations in each of the three corridors, typically major signalized intersections, where a lack of capacity would lead to unacceptable levels of congestions.

Village of Grand Traverse Transportation Planning Review | Acme Township, MI

Client Reference Information

Acme Township
Sharon Vreeland
Twp. Manager
231-938-1350
6042 Acme Rd
Williamsburg, MI 49690

Completion Cost and Date

\$46,400 - 2012

Services Provided

- Site Plan Reviews
- Traffic Capacity Analysis
- Geometric Studies

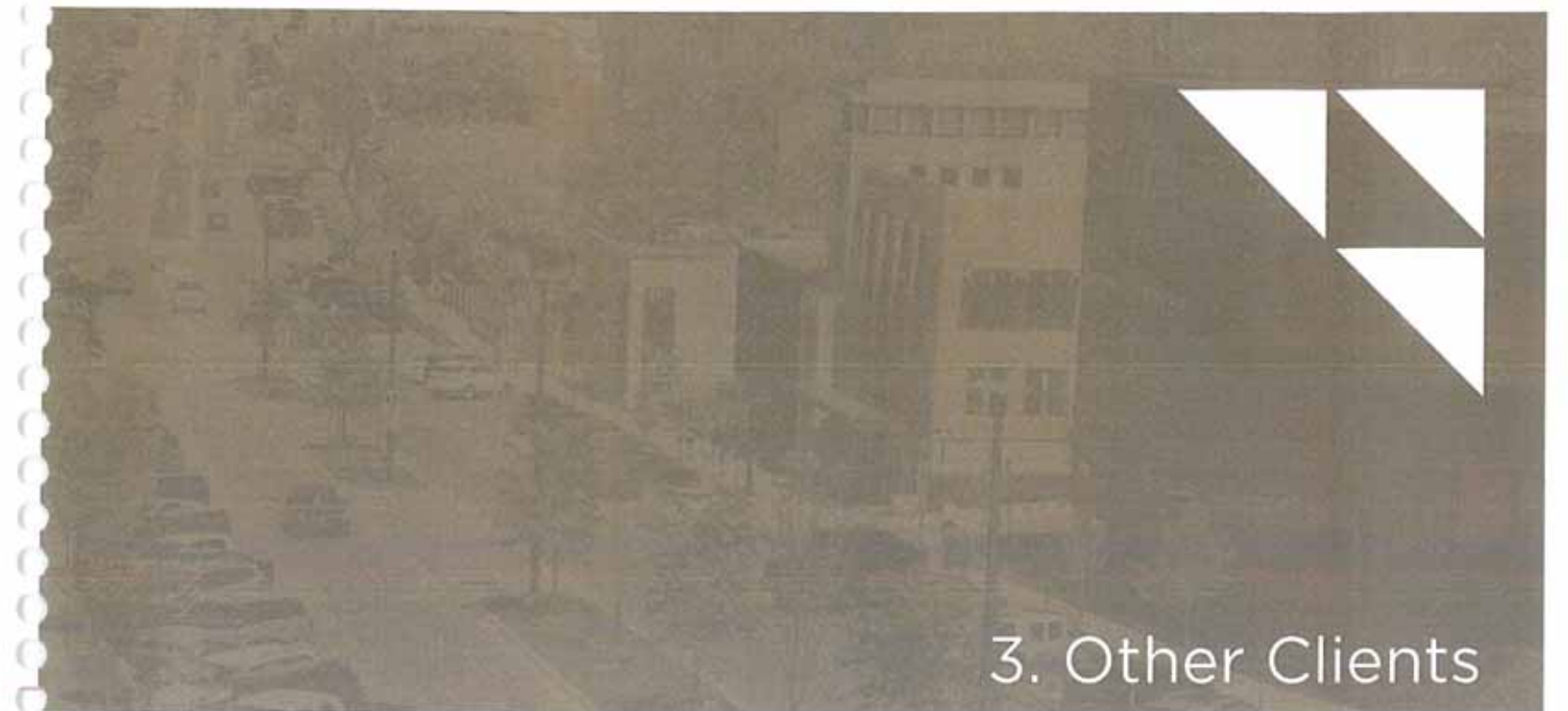
The Township of Acme was faced with the largest, most complex land use proposal in its modern history – a 182 acre multi-use development fronting M-72 at its junction with Lautner Road. At its heart was the concept of creating a new 'village'-scale downtown, with retail, hotel, and housing. On the outskirts of this new downtown was to be a single big-box retail store for Meijers, intended as the catalyst for the rest of the development.

The site had already undergone several revisions in the mix of land uses and development density, been the subject of lawsuits and precipitated recall elections. After years of controversy, in 2009 OHM was brought in to assist the Township in reviewing the development site plan and traffic impacts.

We worked collaboratively with the Township staff, the Grand Traverse County Road Commission and MDOT to identify the appropriate scope of the traffic analysis, coordinating the interests of each agency into a single, coherent set of standards for the developer's consultant team to incorporate into their plans and studies. With this fresh start from the reviewing agencies, the developer brought in a new MDOT-prequalified traffic consultant to compile a fresh traffic impact study and assist with yet further revisions to the site plans.

We evaluated the plans for roadway geometry. We suggested revisions to the street network within the development to promote complete streets, forming a coherent mix of sidewalks, pedestrian crossings, and bike lanes. We performed quality control checks on the developer's modeling with Synchro / SimTraffic for the adjacent roadway corridors, for both existing and forecast traffic volumes. With a clearer understanding of the significant impacts, we helped lead extensive discussions with the various stakeholders. They honed in on a range of alternative roadway and intersection improvements, both on site and for the adjacent highways, to mitigate the impacts. At our suggestion, several locations were evaluated by the development team for roundabouts in place of traffic signals.

After three years of effort, as the development proposal approached completion, we attended various public information meetings and hearings before the Planning Commission and Township Board. We reported at these meetings on the due diligence undertaken by the public agencies to safeguard the public interests. The development proposal was ultimately approved and began construction in 2014 for its first phase.



3. Other Clients

OHM Advisors is a broad-service Architecture, Engineering, and Planning firm with seven offices in three states. However, our southeast Michigan roots are based on providing engineering services to governmental clients with a particular focus on the municipal market. Even as we have added services, expanded into other markets, and grown our public and private sector expertise, we remain committed to providing insightful counsel and forward thinking to create viable communities. We feel that our ultimate client is the users of the facilities we design, whether it is of a road, pathway, sidewalk or a building. We believe our professional duty is to advance the best interests of the public. We will be focused on achieving the best outcome for the City of Birmingham's customers.

The RFQ has requested information on the average percentage of income earned by OHM Advisors for the past three fiscal years. The particular focus was income earned from MDOT, RCOC, and from private firms involved in development projects within Oakland County. Net revenue figures (total less pass through amounts to sub-consultants) are provided for years 2011 through 2013:

Client	Net Revenue	% Total
MDOT	\$4,950,536	8.8%
RCOC	\$1,587,623	2.8%
Private	\$26,590	0%
3 Year Total	\$56,334,257	100%

We are not aware of any relationships with developers active in Birmingham. However, we are prepared to stipulate that we will relinquish any such relationships, and not engage in any new associations while serving the City of Birmingham.



4. Consultant Approach

OHM Advisors has the in house, diverse team to provide assistance to Birmingham for both the Traffic Engineering and the Multi-Modal Design/Review outlined in the Request for Proposals. Steve Dearing will be the key contact, but we expect he will use the talents of Taryn Juidici when reviewing proposed street improvements and the multi-modal aspects of traffic flow for all users. Steve will also know when to recommend to the community the use of OHM's urban design team and their varied skills to assist with the evaluation of how changes in policies can impact the City or what the impacts of a large scale development might look like to the City.



Strong Leadership – Mr. Stephen Dearing, PE, PTOE will be the lead professional to serve the City of Birmingham. He will personally assist with resolving inquiries, problems and complaints, and will be the primary point of contact with City staff. He will attend all pertinent Board and Commission meetings. He understands the transportation issues confronting cities, having been the on-staff City Traffic Engineer for Naperville, IL and Rochester Hills, MI. Steve is continuing his service to the traveling public, serving the needs of Midland, Troy and other Michigan communities on an as-requested basis as their consultant.

Support in Depth – While Mr. Dearing is a very capable individual, there are work assignments and tasks that require the talented efforts of a team. OHM Advisors has one of the largest traffic engineering teams amongst consultants in Michigan. We have the resources of several experienced traffic engineers to perform tasks in an expeditious, cost effective manner. Resumes are provided for our full traffic engineering team. Please note that this group of professionals represents about 70 years of cumulative experience in traffic engineering and operations. Each has a fundamental grounding in traffic issues experienced by municipalities, as well as diversity in projects that run the gamut from signal optimization, safety studies, traffic calming, to complete streets.



Multi-Modal Approach – The City of Birmingham is a vibrant community. Some traffic issues will not be trivial, and will involve finding creative ways of fitting transportation solutions into the urban fabric your community. While Mr. Dearing has a strong background in non-motor vehicle transportation he will have strong support from professionals that are recognized leaders in helping advance communities with urban design and multi-modal transportation planning. Messrs. Tony Slanec and Aaron Domini, respectively, will be available to Birmingham to strengthen the OHM project team when needed by the demands of a challenging project or study.



Community Outreach and Communication – With a diverse community like Birmingham, problem solving starts with active listening to the residents and business owners. When required by the scale and scope of the problem(s) being addressed, OHM Advisors can mobilize a team to assist the City with this process of outreach. When time to report back to the community, it is sometimes critical that clear, compelling map products or other exhibits are available for public presentation. So we have Mr. Michael Cousins available to support the City as it gathers community reaction on proposed solutions and present them back in graphical form.



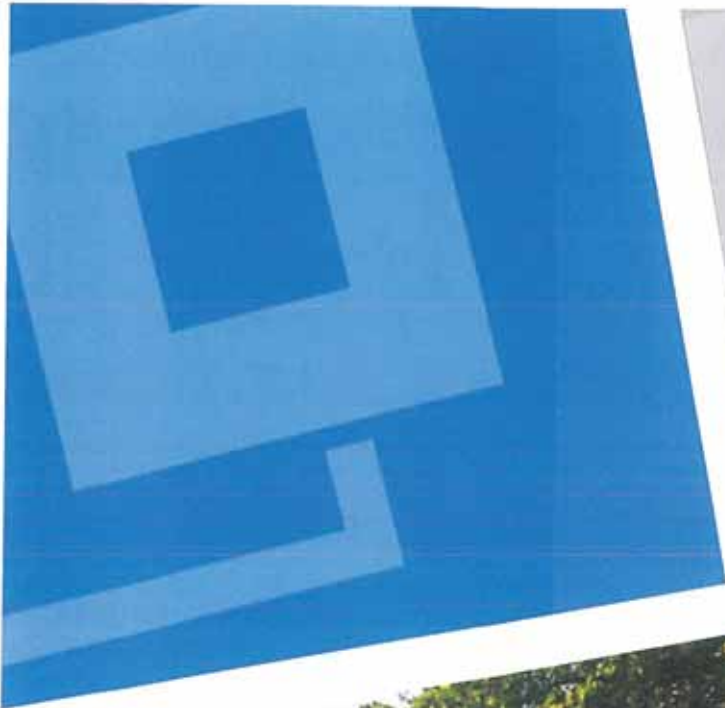
5. Consultant Fees

2014 Rate Schedule

Classification	Rate
PRINCIPAL	\$180
SR. ASSOCIATE	\$170
ASSOCIATE	\$155
SR. TRAFFIC ENGINEER	\$175
TRAFFIC ENGINEER	\$150
PROFESSIONAL ENGINEER	\$125
GRADUATE ENGINEER	\$105
TECHNICIAN IV	\$110
TECHNICIAN III	\$100
TECHNICIAN II	\$85
TECHNICIAN I	\$65
ENGINEERING AIDE	\$60
PROFESSIONAL SURVEYOR II	\$125
GRADUATE SURVEYOR	\$100
SURVEYOR III	\$95
SURVEYOR II	\$85
SURVEYOR I	\$65
SURVEYOR AIDE	\$48
LANDSCAPE ARCHITECT	\$110
PLANNER II	\$110
PLANNER I	\$70
PLANNER AIDE	\$50
GRAPHIC DESIGNER	\$100
ADMINISTRATIVE SUPPORT	\$55
CLERICAL AIDE	40

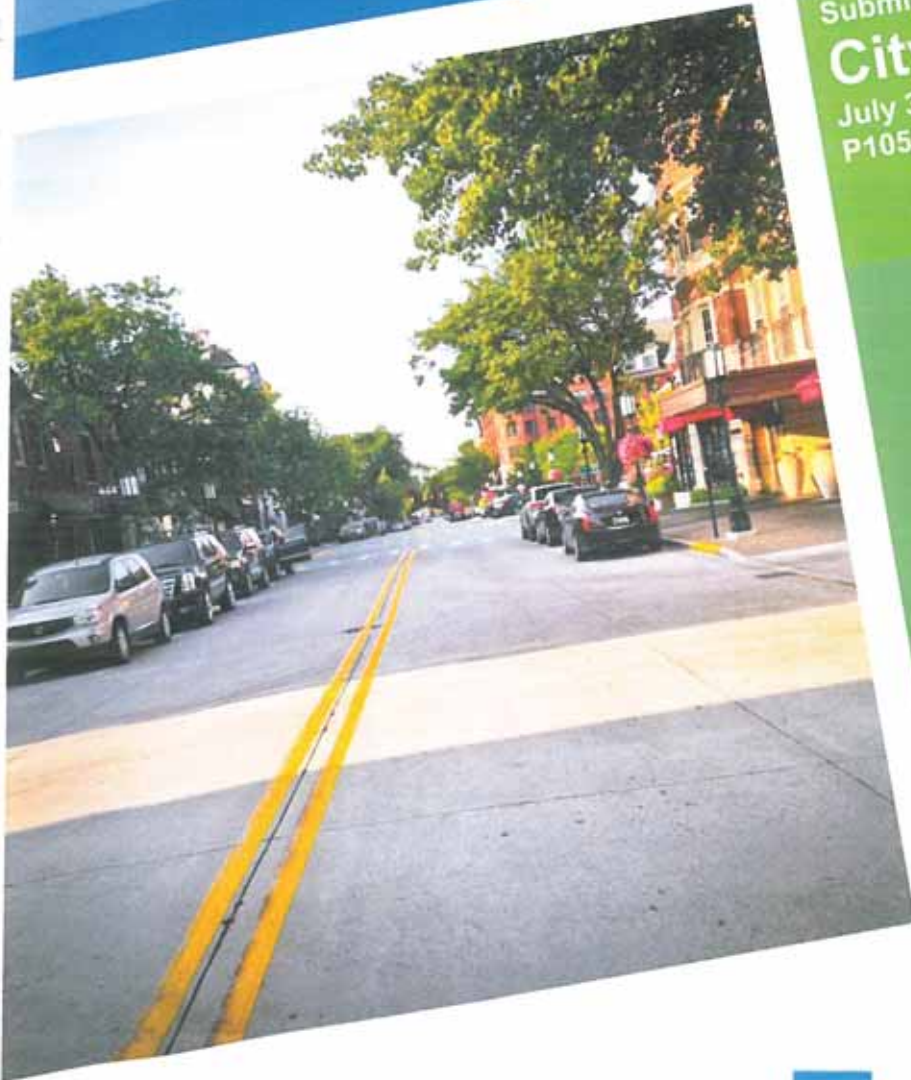
Notes:

1. Rates are inclusive of mileage and other miscellaneous charges.
2. Reimbursables are charged for presentation materials (boards, models, rental equipment, etc.) at cost plus 10%.
3. Rates are reviewed on a calendar year basis and subject to reasonable adjustment after notification to the City.



Qualifications for
Transportation
Engineering Consultant

Submitted to
City of Birmingham
July 31, 2014
P10585



FLEIS & VANDENBRINK
DESIGN. BUILD. OPERATE.



July 31, 2014

City of Birmingham
PO Box 3001
Birmingham, MI 48012

**RE: Response to Request for Qualifications
Transportation Engineering Consultant Services Contract**

To the City of Birmingham:

Thank you for the opportunity to present this response to your recent Request for Qualifications (RFQ) for the City of Birmingham's Transportation Engineering Consultant Services Contract. Fleis & VandenBrink (F&V) staff has been assisting the City for many years and would be pleased to continue this valued relationship.

The following highlights why the F&V team is the right team, at the right time, to successfully deliver services for your transportation needs:

- **Experience:** F&V's core business includes transportation capital improvements planning, design and construction or preventative maintenance and rehabilitation, as well as street reconstruction projects and traffic studies for municipal clients.
- **Familiarity and Past Success:** The Project Manager for this assignment has contributed to previous Birmingham projects. His name and face should be familiar to many staff at the City.
- **Qualifications:** The key personnel and project team assembled by F&V for this project are well qualified to deliver street improvement and maintenance projects on behalf of the City.
- **Grant Experience:** Identifying grant opportunities helps to make conceptual projects become a reality. F&V will assist the City with securing grants.
- **City Knowledge:** Because our staff has been assisting the City for many years, we believe that we have comprehensive knowledge that will benefit any potential transportation project and aid in completing the work efficiently.
- **Working with Local Agencies:** Having provided similar projects for other municipalities, we know the primary contacts and expectations of State funding agencies, regulators and public agencies for permitting and project coordination.
- **Responsiveness:** We value client communications and responsiveness as part of our success. Nearly 90% of our work from year-to-year comes from repeat clients. We know how important quality, value and responsive service is to our clients and to our firm in order to earn this repeat work.

27725 Stansbury Boulevard, Suite 150
Farmington Hills, MI 48334
P: 248.536.0080
F: 248.536.0079
www.fveng.com

F&V staff has had a great working relationship with the City of Birmingham and their staff on previous projects. We look forward to continuing this relationship with the City and getting started on upcoming transportation projects.

If you have any questions or need any additional information, please contact us.

Sincerely,

FLEIS & VANDENBRINK

A handwritten signature in black ink, appearing to read "Michael J. Labadie". The signature is fluid and cursive, with the first name "Michael" and last name "Labadie" clearly distinguishable.

Michael J. Labadie, PE
Group Manager



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CORPORATE PROFILE

Municipalities throughout Michigan have an established history with Fleis & VandenBrink (F&V). Since 1993, more than 250 cities, villages, counties and townships have contracted with F&V for roads, bridges, treatment plants and beautification projects. Besides design and construction services, we have assisted communities in securing more than \$350 million in grants and loans from governmental agencies over the last 15 years.

With municipal services being the cornerstone of our firm, close working relationships and constant communication are essential at all levels with our client communities. In order to provide the type of service expected by mayors, council members, city managers and department heads, our 150+ professionals maintain seven Michigan offices and two in Indiana.

Our staff members look forward to providing transportation services to the City of Birmingham.

AWARDS

In 2014, the American Council of Engineering Companies – MI recognized two of our projects with Eminent Conceptor (First Place) Engineering & Surveying Excellence awards.

In 2012, the Zweig White Letter published F&V as a national Hot Firm, recognizing us for our annual growth among our architectural and engineering company peers.

In 2010, the firm was recognized as the American Council of Engineering Companies—MI "Firm of the Year."

For four years in a row, F&V was recognized as one of the "101 Best & Brightest Companies to Work For."



OFFICE LOCATIONS

CORPORATE OFFICES:

Grand Rapids

2960 Lucerne Drive, SE
Grand Rapids, MI 49546
P: 616.977.1000
F: 616.977.1005

www.fveng.com

MICHIGAN OFFICES:

Farmington Hills Office

27725 Stansbury Boulevard, Suite 150
Farmington Hills, MI 48334
P: 248.536.0080
F: 248.536.0079

Grand Blanc Office

9475 Holly Road, Suite 201
Grand Blanc, MI 48439
P: 810.743.9120
F: 810.743.1797

Kalamazoo Office

4798 Campus Drive
Kalamazoo, MI 49008
P: 269.385.0011
F: 269.382.6972

Midland Office

304 West Wackerly
Suite 600
Midland, MI 48640
P: 989.837.3280
F: 989.837.3290

Muskegon Office

316 Morris Avenue
Suite 230
Muskegon, MI 49440
P: 231.726.1000
F: 231.726.2200

Traverse City Office

603 Bay Street
First Floor
Traverse City, MI 49684
P: 231.932.8600
F: 231.932.8700

INDIANA OFFICES:

Fort Wayne Office

5331 South Bend Drive
Fort Wayne, IN 46804
P: 260.435.1414
F: 260.435.1384

Indianapolis Office

140 Washington Pointe Drive, Suite C
Indianapolis, IN 46229
P: 317.843.0022
F: 317.843.0405

REFERENCES



"A thorough review of our traffic circulation and parking analysis as part of our site plan review and approval process helps coordinate all of our services, including Police, Fire and Planning Departments. This helps us make sound and practical solutions to traffic and parking concerns."

*Patricia Voelker
Director of Planning, Building & Ordinance
Bloomfield Township*

BIG RAPIDS

Mark Gifford, DPW Director
P: 231.592.4018

BLOOMFIELD HILLS PUBLIC SCHOOLS

Rob Glass, Superintendent
P: 248.341.5400

BLOOMFIELD TOWNSHIP

Leo Savoy, Supervisor
P: 248.433.7700

CANTON TOWNSHIP

Bill Serchak, Township Engineer
P: 734.394.5100

CLINTON TOWNSHIP

Carlo Santia, Planner
P: 586.286.9325

COMMERCE TOWNSHIP

Kathleen Jackson, Planner
P: 248.960.7050

HOWARD CITY

Mike Scott, President
P: 231.937.4311

MANTON

Bryan Vincent, Superintendent
P: 231.884.3572

NORTHPORT

Greg King, Village Administrator
P: 231.386.5182

THREE RIVERS

Christie Trammell, Director Three Rivers DDA
P: 269.278.8193

WEST BLOOMFIELD TOWNSHIP

Michele Economou Ureste, Supervisor
P: 248.451.4800

TRAFFIC ENGINEERING

THE F&V TEAM

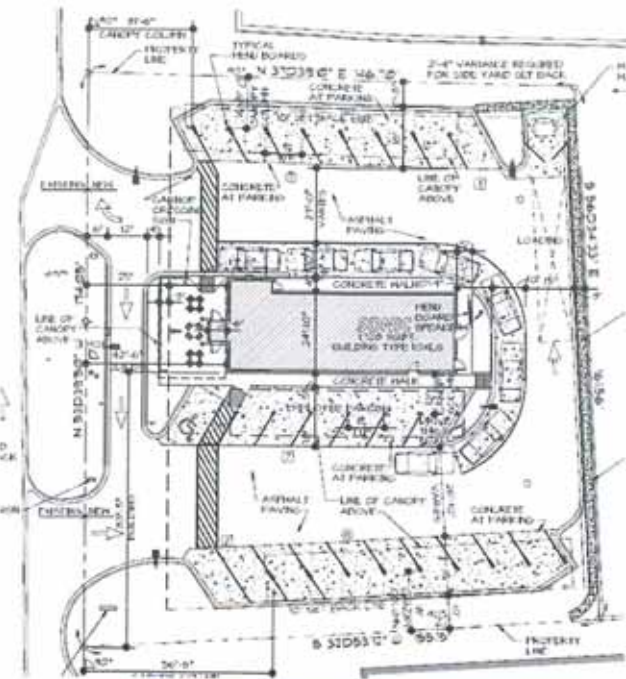
Traffic Engineering is the phase of Transportation Engineering which addresses the planning, design, and operation of highways, road networks, control systems, abutting lands, and their relationship with other modes of transportation. Our communities rely on such engineering to provide for the safe, economical, and reliable movement of people and goods – which is the backbone of our nation's commerce.

F&V's professional staff is experienced in providing traffic engineering services to both public and private sector clients. Our technical analyses are intended to minimize capital investment and maximize system operations. We pay strong attention to detail in the quality of our engineering, and act as advocates to serve our clients' needs. With the diversity of services offered by F&V, we are able to seamlessly integrate the recommendations of our traffic engineers into our civil design process.

Solving complex traffic problems requires specialized education, years of experience, and an understanding of the best tools available. F&V's traffic engineers have advanced degrees, as well as over 35 years of transportation engineering experience. We utilize the latest traffic modeling and simulation technology to assist our clients in meeting their objectives.

AREAS OF EXPERTISE

- Traffic Impact Studies
- Parking Occupancy & Shared Parking
- Loading & Queuing Analysis
- Highway & Intersection Capacity
- Complex Intersection Geometrics & Design
- Traffic Signal Optimization
- Network Modeling & Simulation
- Traffic Signal Warrants & Design
- Corridor & Downtown Street Planning
- Access Management
- School Traffic Operations
- Special Event Traffic Management
- Traffic Calming



PROJECT HIGHLIGHTS

Traffic Signal Modernization &
Synchronization
Mast Arm Mounted
Camera Activated
LED Signals
Pedestrian Countdown Signals

EXPERTISE PROVIDED

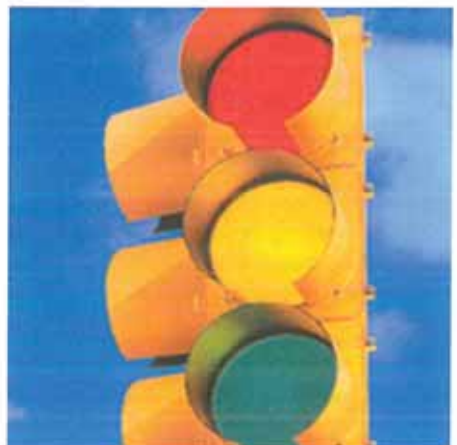
Traffic Signal Improvements &
Upgrades

PROJECT INFORMATION

Project Cost: \$240,000

CONTACT

Tom Anthony,
Public Works
P: 269.668.2300



TRAFFIC SIGNAL UPGRADE

MATTAWAN, MI

F&V provided traffic signal improvements and upgrades at the intersection of Main Street and McGillen Avenue. The existing span-wire mounted traffic signals and controller were replaced with mast arm mounted, camera activated, LED signals with pedestrian countdown signals.

Construction of this project utilized Federal CMAQ and local funding and required programming through the Michigan Department of Transportation's Local Agency Division. The CMAQ program strives to reduce transportation-related emissions by providing state and local governments options to fund different emission reduction strategies like traffic flow improvements. This strategy reduces emissions by promoting efficient traffic movement, thereby reducing unproductive travel delays and emissions resulting from engine idling. Traffic signal modernization and synchronization is one way to reduce travel delays.

PROJECT HIGHLIGHTS

- Latest LED Features
- Dark-Sky Compliant
- Low-Wattage Lights

EXPERTISE PROVIDED

- Design Services
- Construction Oversight
- Grant Administration

PROJECT INFORMATION

- Date Completed: 2012
- Construction Cost: \$320,000

CONTACT

Mike Salisbury,
DDA
P: 269.792.2232



DOWNTOWN LED LIGHTING IMPROVEMENTS WAYLAND, MI

In July of 2011, the MEDC announced that 14 Michigan cities, villages and counties would receive a total of \$1,066,429 in advanced lighting technology projects. The Advanced Lighting Technology Demonstration Grants were awarded from the Michigan Energy Office through the American Recovery and Reinvestment Act for projects that created and retained jobs, saved energy and reduced greenhouse gas emissions.

Wayland was one of the 14 communities to receive the grant and was awarded the maximum grant amount of \$100,000. The grant was used to complete a 2008 project and extend the new LED lights through the traditional downtown core of Wayland.

F&V provided design, bidding and construction oversight services while working closely with the DDA, City Council and staff to develop lighting that would accentuate the historic buildings downtown.

The \$326,000 project included the removal of the existing 33 HP fixtures and 17 shoebox fixtures in a four block area. These were replaced with 44 new low-wattage (eight 100-watt and 36 80-watt) LED fixtures that are dark sky compliant with full cut-off design. The lights were placed approximately 80 feet on center to provide the most efficient and uniform lighting for the downtown commercial core.

PROJECT HIGHLIGHTS
Roundabout
Infrastructure Improvements
Beautification

EXPERTISE PROVIDED
Design Engineering
Construction Engineering
Utility Improvements

CONTACT
Gregg Zack, PE
P: 616.777.3451



EDISON LANDING ROUNDABOUT

MUSKEGON, MI

F&V provided engineering services for design and construction of a roundabout and roadway redevelopment of a 34-acre site on the Muskegon Lake shoreline. Durability and long-term maintenance of the road were critical concerns of the City during design.

The former industrial site features new roadways, sewer and water utilities linking the development with Shoreline Drive. The decorative roundabout and infrastructure improvements significantly enhance the area and allows for planned commercial, residential and marine developments.

PROJECT HIGHLIGHTS

Downtown Master Plan
Safer Streets
Connectivity
Streetscape Amenities

EXPERTISE PROVIDED

Design Services

PROJECT INFORMATION

Date Completed: 2008

CONTACT

Julie Beaton,
Public Works
P: 616.847.3493



WASHINGTON AVENUE STREETSCAPE

GRAND HAVEN, MI

F&V prepared the Washington Avenue Streetscape Master Plan which explored the possibilities for the City of Grand Haven's downtown core and addressed the infrastructure and streetscape improvements needed for a five-block area along Washington Avenue.

The Master Plan served to blend public and private utility needs with the enhancement efforts for the downtown core, incorporating recently completed public and private projects.

The Master Plan explored safer streets (including curb bump-outs and narrower crossings for pedestrians), uniform streetscape amenities (including lighting, signalization, benches, way-finding signage), pedestrian spaces and connectivity to local businesses and parks. Improved utilities were also included and featured sanitary, storm, water main and a snow melt system.

The plan identified projected costs, mapped out potential construction schedules and identified potential funding sources.

Project Highlights

Aesthetic Improvements
Drainage Improvements
Decorative Concrete
Decorative Street Lighting
ADA Accessibility

Expertise Provided

Landscape Architecture

Project Information

MEDC Grant: \$750,000
Local Match: \$175,000

Contact

Joe Bippus, City Manager
City of Three Rivers
P: 269.273.1075 x103



MURAL MALL & LED STREET LIGHTING

City of Three Rivers

Access through the existing Mural Mall was a challenge with nearly 18 feet of elevation change. F&V redesigned the entryway from the ground up, incorporating an ADA-compliant walkway from Main Street leading toward Memory Isle Park, another City park located on both sides of the Rocky River. The changes provided connectivity between public recreation areas and the City's Downtown.

F&V assisted the City with the design and construction administration of an active gathering space that was created next to the downtown core. The accessible park included:

- Seating areas
- A rain garden
- Chess tables
- Pergola gateways
- Perennial gardens
- Brick seating walls
- Decorative concrete paving
- LED street lighting
- Rubberized play surfacing

A strong and vibrant downtown area offers improved retail, entertainment, housing, recreation and social opportunities to people of all ages and physical abilities.

With this in mind, the City moved forward to improve accessibility to this precious natural resource in the heart of downtown Three Rivers. Grant funding was obtained through the Michigan Strategic Fund – Community Development Block Grant Program.

PROJECT HIGHLIGHTS

Two-Mile Pathway
Two County Agencies
Connects Three Municipalities

EXPERTISE PROVIDED

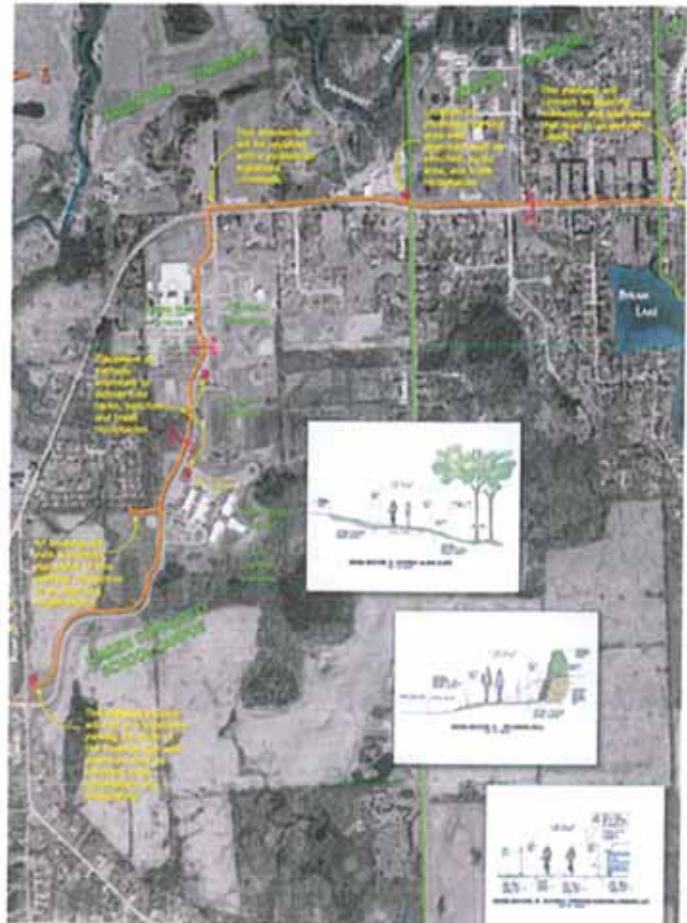
Design Services
Stakeholder Facilitation
MDNRE Permit
Easement Acquisition
Wetlands & Drain Crossings

PROJECT INFORMATION

Design Completed: 2009

CONTACT

Robert Cole,
Supervisor
P: 810.735.5050



SILVER LAKE ROAD UNIVERSAL MULTI-USE PATHWAY

CITY OF LINDEN, FENTON & ARGENTINE TOWNSHIPS

This two-mile pathway project is located within two townships and involves the cooperation of three municipalities, two county agencies and one public school system. The project starts at the west limits of the City of Linden where it follows Silver Lake Road within the Genesee County road right of way in Fenton and Argentine Townships. This route is also located along the frontage of the Genesee County Drain Commissioner's wastewater treatment facility, along the frontage of the Genesee County Road Commission's southern field services yard and alongside the major access way through Linden Community School's campus.

Our team developed the preliminary engineering plans, an MDNRE grant application, and easement documents for this pathway and played a major role in the facilitation effort for project buy-in and easement acquisition.

Along with the challenges of multi-jurisdictional coordination, this project also involves a wetland and drain crossing requiring a permit from the MDNRE, special design consideration through the school's parking facilities and athletic fields, and unique grade challenges. The pathway connects the communities of Linden, Fenton Township and Argentine Township to the school campus, and is the first phase of an eight-mile system through the township connecting to the adjoining Shiawassee County trail.

PROJECT HIGHLIGHTS

Flood Water Storage
Wildlife Habitat Enhancement
Utilization of 576 Acres

EXPERTISE PROVIDED

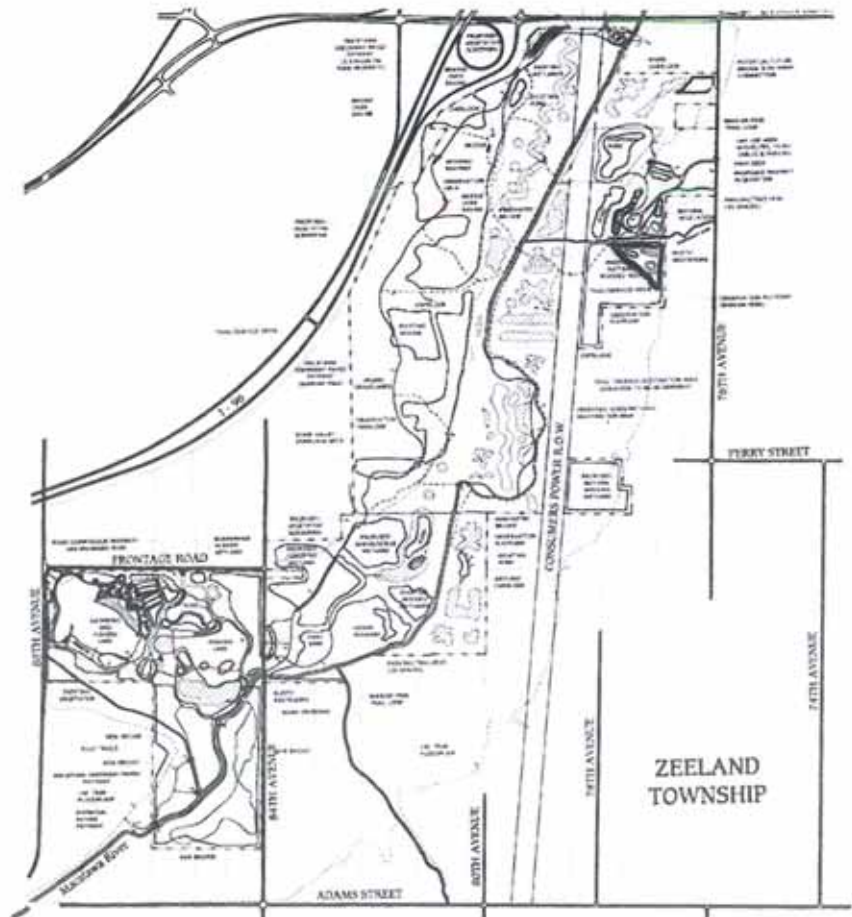
Design Services
Water Quality Improvements
Grant Writing & Administration

PROJECT INFORMATION

Date Completed: 2013
Construction Cost: \$1.35 Million
Grants & Loans

CONTACT

Curt Terhaar,
Coordinator of Park
Planning & Development
P: 616.738.4656



UPPER MACATAWA GREENWAY NON-MOTORIZED PATH OTTAWA COUNTY, MI

The Upper Macatawa Natural Area (UMNA), located in Zeeland Township, includes 576 acres with the potential for up to 700 acres in the future. In addition to recreation, the UMNA is being developed around the principles that recognize the value of the site for water quality improvement, flood water storage and wildlife habitat enhancement.

The Upper Macatawa Greenway Trail will connect the Fred Meijer Kenowa Trail with the Lakeshore Trail along the Lake Michigan Shoreline as well as serve as a primary staging point with such amenities as parking and restroom facilities. Completion of this section of 2 miles from Byron Road to Adams Street will eventually create a continual connection from the Grand Rapids region to Holland and the lakeshore area.

F&V provided grant writing assistance under the Michigan Department of Transportation Enhancement Program in which the County Parks Department received over \$675,000 in funding. F&V prepared final design plans with construction completed in the summer/fall of 2013.

PROJECT HIGHLIGHTS

Grading Challenges
Geotextile Fabric
Completion Under Budget

EXPERTISE PROVIDED

Road Reconstruction
Utility Replacement
Design Engineering
Construction Engineering
Permitting Assistance

PROJECT INFORMATION

Date Completed: 2010

CONTACT

Patrick Reagan,
Interim Manager
P: 517.647.2931



GRAPE & DETROIT STREET RECONSTRUCTION

CITY OF PORTLAND

The project included full road reconstruction including watermain, sanitary sewer, storm sewer and new concrete curb and gutter. F&V dealt with extremely poor soils and sawdust fill on old road. The project had to be designed with special backfill and geotextile fabric to bridge poor soil conditions.

F&V also provided full survey, design and construction engineering services including private utility conflict resolution, watermain construction permitting, sanitary sewer construction permitting, MDEQ joint permit, soil erosion and sediment control permitting and NPDES permitting.

The project construction finished well enough under budget that the City was able to add a \$200,000 mill and fill project on Divine Highway to the contract.

PROJECT HIGHLIGHTS

Road Reconstruction
Storm Sewer
Watermain
Sanitary Sewer

EXPERTISE PROVIDED

Design Engineering
Construction Engineering
Environmental Consultation
Grant Administration

PROJECT INFORMATION

Date Completed: 2010
Construction Cost: \$1.6 million
Grants & Loans

CONTACT

Gary Tuhacek,
Director of Public Works
P: 269.561.2444



MAPLE STREET RECONSTRUCTION

FENNVILLE, MI

F&V provided the City with survey, inspection, design and construction engineering services for Maple Street between Landsburg Road and the alley south of M-89. The project included complete road reconstruction including storm sewer between Third Street and Landsburg Road; watermain between Third Street and Landsburg Road; and sanitary sewer the entire length of the project. A portion of the funding was provided by the Michigan Economic Development Corporation (MEDC).

The project included crossing M-89 with a new 12-inch sanitary sewer which was bored beneath the roadway. The project encountered contaminated soils as two diesel tanks were found in the first week of construction. F&V's environmental team was able to provide soil sampling, testing, and coordinating of the tanks' removal, thus keeping the project delay to under one week.

PROJECT HIGHLIGHTS

- Concrete rubblizing
- Road construction
- Drainage improvements
- Guardrail
- Intersection improvements
- Traffic signal modifications

EXPERTISE PROVIDED

- Design Services
- Conceptual Service

CONTACT

William LeFevre,
City Manager
P: 269.857.1438



BLUE STAR HIGHWAY

DOUGLAS, MI

F&V provided design services as well as conceptual through construction of 1.1 miles of Blue Star Highway. Construction included concrete rubblizing, road construction, drainage improvements, guardrail, intersection improvements and traffic signal modifications. The design included part-width construction staging to accommodate an industry and several businesses along the heavily traveled stretch of highway that runs through the center of town. The \$1.1 million ISTEA project was partially funded by MDOT Category D transportation funds.

PROJECT HIGHLIGHTS

Milling and Resurfacing
ADA Compliant Sidewalks
Concrete Curb and Gutter
Storm Catch Basin

EXPERTISE PROVIDED

Survey
Design Engineering
Construction Engineering
Permitting

PROJECT INFORMATION

Date Completed: 2012
Construction Cost: \$738,000

CONTACT

Patrick Waterman,
City Manager
P: 616.669.0200



32ND AVENUE IMPROVEMENTS

HUDSONVILLE, MI

The project included road reconstruction, milling and resurfacing as well as improvements that included water main, a new concrete sidewalk with ADA compliant ramps, and new concrete curb and gutter. F&V field engineered stormwater drainage improvements including roadway crown adjustment and the addition of a storm catch basin.

F&V also provided full survey, design and construction engineering services including water main construction permitting, MDOT right-of-way permitting and soil erosion and sedimentation control permitting.

The project was constructed on schedule and within budget such that the City was able to add nearly \$11,000 of desired commercial and residential drive approach, sidewalk, and curb and gutter removal and replacement to the contract.

PROJECT HIGHLIGHTS

- Pavement reconstruction
- Bridge reconstruction
- Retaining wall construction
- Storm sewer placement
- Watermain placement
- Site lighting
- ITS installation

EXPERTISE PROVIDED

- Inspection Services
- Testing services
- Survey Support

PROJECT INFORMATION

Date Completed: 2010
Construction Cost: \$32,014,000

CONTACT

Thomas Tellier, PE
P: 616.464.7716



"THE FIX" I-196 RECONSTRUCTION

KENT COUNTY, MI

Project included concrete pavement reconstruction, bridge reconstruction, retaining wall construction, storm sewer placement, watermain placement, site lighting and ITS installation.

F&V provided inspection and testing services for MDOT including concrete paving, aggregate density, storm sewer placement, watermain placement and restoration. F&V also provided verification survey support to validate critical layout components.

PROJECT HIGHLIGHTS

Road Reconstruction

EXPERTISE PROVIDED

Concrete Resurfacing

Signal Upgrades

Utility Coordination

Traffic Control

PROJECT INFORMATION

Date Completed: 2008

Construction Cost: \$300,000



SHERMAN BOULEVARD RECONSTRUCTION MUSKEGON, MI

F&V completed the reconstruction of 0.54 miles of this 5-lane cross section of Sherman Boulevard, which consisted of concrete pavement resurfacing, HMA cold milling, cross-walk signal upgrades, utility coordination, pavement markings, traffic control, sidewalk construction and restoration. This project was construction under part width construction to maintain the high traffic volume. This project was funded with an 80% federal grant.

PROJECT HIGHLIGHTS

Asphalt Road Construction
Concrete Curb and Gutter
Watermain
Sanitary Sewer
Storm Sewer

EXPERTISE PROVIDED

Design Engineering
Construction Engineering
MDEQ & SESC Permits

PROJECT INFORMATION

Date Completed: 2008
Construction Cost: \$1.2 Million

CONTACT

Jason Eppler,
City Manager
P: 616.527.4170



PEARL & UNION STREETS RECONSTRUCTION IONIA, MI

F&V provided design and construction engineering for this road and utility reconstruction project. The design involved 2,700 feet of asphalt road construction with concrete curb and gutter, 2,500 feet of 8-inch watermain replacement, 2,400 feet of sanitary sewer replacement, storm sewer and all associated work.

F&V coordinated private utility relocation on the project and also acquired MDEQ watermain construction and SESC permits.

PROJECT HIGHLIGHTS

Road Construction
Storm Sewer
Sanitary Sewer
Watermain
Street Lighting

EXPERTISE PROVIDED

Design Engineering
Construction Engineering



HENRY STREET IMPROVEMENTS

ALLENDALE CHARTER TOWNSHIP, MI

F&V performed design and construction management of 700 feet of new street construction including storm sewer, sanitary sewer, watermain, street lighting and landscaping improvements.

The project included decorative concrete, sidewalks, curb and gutter, bituminous paving and an irrigation system. Design was in accordance with Township, Ottawa County Road Commission and Ottawa County Drain Commission standards.

PROJECT HIGHLIGHTS

Crush and Shape
Widening Shoulder
Drainage Improvements
Guardrail Installation

EXPERTISE PROVIDED

Design Engineering
Construction Engineering

PROJECT INFORMATION

Date Completed: 2010
MDOT Local Agency

CONTACT

Patrick Waterman,
City Manager
P: 616.269.0200



36TH AVENUE IMPROVEMENTS

HUDSONVILLE, MI

F&V provided design and construction engineering services on this 0.8 mile crushing and shaping project.

The project included crushing and shaping the existing asphalt surface, widening along each side for proposed shoulder and drainage improvements, and guardrail installation.

The project was funded as an MDOT Local Agency Project and was designed and constructed according to MDOT standards.

PROJECT HIGHLIGHTS

Community Connectivity
Multi-Use Pathway

EXPERTISE PROVIDED

Project Design
Grant Assistance
Retaining Wall

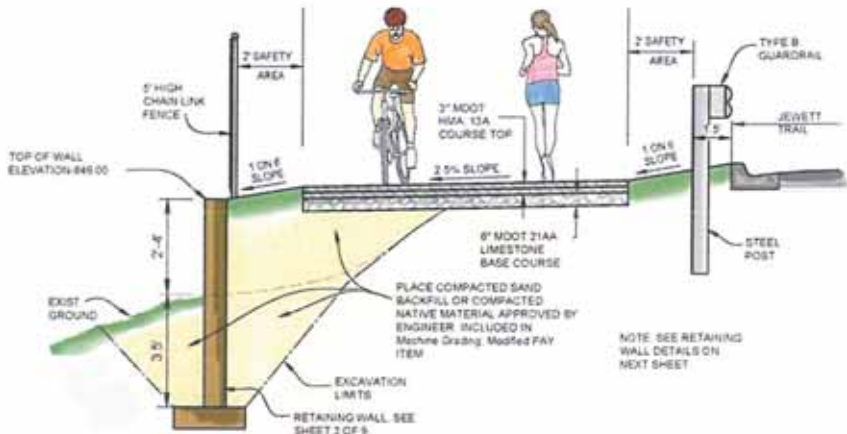
PROJECT INFORMATION

Date Completed: 2009

CONTACT

Susan Soderstrom,
Mayor
P: 810.694.1118

Matt Wurtz
DPW Director
P: 810.694.1113



JEWETT TRAIL PATHWAY

CITY OF GRAND BLANC, MI

Jewett Trail is a road that connects Holly Road to Davis Street and Bush Street. It traverses around two Grand Blanc Community School buildings. This is the only road that is adjacent to the school buildings that does not have a sidewalk.

Our team prepared a grant application for Congestion Mitigation and Air Quality (CMAQ) funds on behalf of the City of Grand Blanc and was awarded the project by a rating process through the Genesee County Metropolitan Planning Commission.

The project consists of an asphalt multi-use pathway that connects into existing sidewalk at Holly Road and Davis Street. The pathway alignment was reviewed and coordinated with the Grand Blanc Community Schools and includes a retaining wall, new guardrail, fence relocations, and tree replacements.

This project will provide a safe and direct mode of travel for non-motorized movement around the school buildings by eliminating the present conflicts with vehicular traffic. Students and athletes will be able to safely walk, jog and run alongside Jewett Trail.

PROJECT HIGHLIGHTS

Road & Utility Planning
Evaluating Current Conditions
Planned Improvements
Surveying Current Infrastructure



CAPITAL IMPROVEMENT PLANS & STREET CONDITION SURVEYS

MICHIGAN

F&V has assisted numerous communities in evaluating, planning and surveying their roads and infrastructure. Some of these communities include:

Adrian Township
Allendale Charter Township
Calhoun County Road Commission
City of Belding
City of Hudsonville
City of Portland
City of Pottersville
City of Plainwell
City of Saugatuck
City of the Village of Douglas
Village of Berrien Springs
Village of Caledonia
Village of Dimondale
Village of Roscommon



MDOT PREQUALIFICATIONS

Fleis & VandenBrink is pre-qualified with the State of Michigan Department of Transportation (MDOT) in the following classifications.

- Aggregate Testing
- Bituminous Pavement Inspection
- Bridge Construction Engineering
- Bridge Safety Inspection
- Complex Signal Operations
- Construction Staking
- Density Inspection and Testing Services
- Engineering Assistance
- Hydraulics
- Hydraulic Surveys
- Landscape Architecture
- Maintaining Traffic Plans and Provisions
- Municipal Utilities
- Pavement Marking Plans
- Portland Cement Concrete Inspection & Testing
- Right-of-Way Survey
- Road Construction Engineering
- Road Design Surveys
- Roads & Streets
- Roadway Rehabilitation and Rural Freeways
- Short and Medium Span Bridge Design
- Simple Traffic Signal Operations
- Site Investigation
- Structure Surveys
- Technical Assistance
- Traffic and Safety Inspection Services
- Traffic Capacity Analysis & Geometric Studies



MDOT PREQUALIFICATIONS

F&V has performed numerous design and construction projects for MDOT, in addition to providing staff assistance directly to MDOT. The following is a representative list of typical projects we have completed:

MDOT CONSTRUCTION EXPERIENCE

- M-11 (28th Street) – Division to US131 – Grand Rapids
- US-131 – Grand Rapids – Multiple Projects
- I-196 – Saugatuck
- M-44 – Cannon Township
- US -31 – Grand Haven
- I-96 ROW – Bridge over the Grand River, Ionia County
- Shoreline Drive – Muskegon
- M-6 – Kent and Ottawa Counties
- I-196 BR – Zeeland
- US-131 BR – Big Rapids
- M-6 – Kalamazoo Avenue Interchange, Kent County
- Marquette Avenue – Over US-31, Muskegon County
- M-120 – Over the Muskegon River, Muskegon County
- M-6 – Bridge over Eastern Avenue, Kent County
- I-96 BR and US-31 – Muskegon County
- M-82 and M-120 – Newaygo and Montcalm Counties
- US-31 and M-104 – Ottawa and Allegan Counties
- I-196 BR – Kent and Ottawa Counties
- I-196 Grand River to Lane – Joint Repair
- M-45 at I-196 – Joint Repair
- M-37/M-44: Lake Eastbrook to I-96 – Joint Repair
- M-11: Church to US-131 – Paving and Sidewalks
- I-196 – Bus route paving
- US-131 and
- M-45 (old) Fulton Street – Paving
- I-96, M-11, M-21 – Joint Repair
- M-37 – Paving
- M-45 – Paving
- M-104 – Paving
- Irish Road – Genesee County Road Commission
- Richfield Road – Genesee County Road Commission
- Mesick Avenue Streetscape – Mesick
- Indian River Pathway – Tuscarora Township
- East State Street – Grant
- Ferry Street – Berrien Springs
- Main Street – Caledonia
- 120th Avenue – Ottawa County, Michigan
- Orchard and Kenwood Streets – Belding City Limits, Belding
- Congress Street – Belding
- High Street – Belding
- Main Street – Saranac
- Bridge Street – Portland
- Bridge Road Reconstruction– Allegan
- 8th Street – Martin Township, Allegan County
- East State Street – Grant
- Woodside Avenue – Essexville
- Michigan Avenue – Bay City
- Lafayette Avenue – Bay City
- Pine Street – Essexville
- Borton Avenue – Essexville
- Grand Blanc Road – Grand Blanc
- Clio Road – Genesee County Road Commission
- Silver Lake Road – Genesee County Road Commission
- 32nd Avenue Reconstruction- Hudsonville
- 32nd Avenue widening – Hudsonville
- State Street Reconstruction – Shelby
- Main Street Reconstruction – Berrien Springs
- Blue Star Bridge Improvements – Saugatuck
- Charlotte Highway – Portland
- Edgerton Street Improvements – Howard City
- Main Street Improvements (Two Phases) – Pottsville
- 5 Mile Road over the Little Muskegon River – Mecosta County Road Commission
- 20 Mile Road over the N. Branch of the Chippewa River – Mecosta County Road Commission
- 190th Avenue over the Little Muskegon River – Mecosta County Road Commission
- Green Avenue over the White River – Newaygo County Road Commission
- Old M-20 over the White River – Newaygo County Road Commission
- 6 Mile Road over the White River – Newaygo County Road Commission
- Main Street over Amtrak Railroad – Mattawan
- Washington Street over Fish Creek – Hubbardston
- Cayuga Street over the Intermediate River – Bellaire
- Findlay Trail Pedestrian Bridge – Hudson
- Sixth Street Improvements – Constantine
- Hamilton Street – Berrien Springs
- Bryant Road – Ludington
- Grand Haven Road – Norton Shores
- 36th Avenue – Hudsonville

SERVICES PROVIDED DIRECTLY TO MDOT OFFICES

- Office Technician – Construction Administration
- "Call for projects" – Scoping and Estimating
- Drafting

MDOT DESIGN EXPERIENCE

- Grand Rapids – I-96: 28th Street to Alpine – Paving
- Grand Rapids – M-6: I-96 to East Paris – Paving
- Kent County – M-37: 76th Street to Patterson Avenue – Paving
- Allendale – M-45: 68th to Ferndale – Paving
- Ottawa County – M-45: 68th to US-131 – Paving
- Grand Rapids – I-96: Off-ramp to M-21
- I-96 Bridge over Mid Michigan Rail
- I-96: 36th Street Interchange
- Manton – M-42 Streetscape – Randolph St. to BR-131

MDOT LOCAL AGENCY DESIGN EXPERIENCE

- Clio Road – Genesee County Road Commission
- Silver Lake Road – Genesee County Road Commission
- Linden Road – Genesee County Road Commission



PROJECT TEAM

F&V staff members provide transportation engineering services to municipalities throughout Michigan and Indiana. Our professional team can assist the City of Birmingham with Complete Street evaluations and Capital Improvement Plans. We have extensive experience in multi-modal situations that allow for vehicular traffic, bike lanes and buses. We have assisted our clients with traffic calming features to make their streets safer and helped incorporate walking and biking trails in their communities.

Our firm is MDOT-prequalified in 22 different categories and has the expertise to assist the City with numerous types of transportation projects.

Our specialized team for the City is as follows:

Michael Labadie, PE will serve as **Project Manager**. With over 35 years of experience in transportation engineering, Mike has been responsible for countless traffic projects, including Traffic Impact Studies, intersection operations,

corridor studies, development impact, environmental impact and traffic safety.

Some of Mike's larger projects include providing transportation engineering services for the Comerica Park and Ford Field master plans, conceptual plans for the City Casinos, and over 20 years of ongoing traffic management for the Michigan International Speedway.

Paul Galdes, PE is the Vice President of Operations at F&V and has designed an extensive amount of transportation projects for his clients. With nearly 30 years of experience and an exceptional set of road design skills, Paul is highly-qualified to provide **QA/QC** review tasks for the City of Birmingham.

Geric Rose, PE will assist as a **Project Engineer** for the City. Geric works out of F&V's nearby Grand Blanc office and has extensive experience in both design and construction engineering. Geric's unique skillsets include being

certified as both a Professional Surveyor and a Professional Engineer.

Steven Russo, EIT will be a **Transportation Engineer** for this project. He has five years of experience in the field and assists with the completion of traffic impact studies, traffic signal optimization, signal warrant analysis, traffic data collection and analyzing site conditions.

Rick Stout, LEED AP BD&C will assist with projects that require a **Landscape Architect**. He has been an integral team member on projects that encompassed the design of streetscapes, parks, trails and site improvements. His creativity brings added value to any project and he is an expert at planning connectivity and multi-modal uses for communities.

Lisa Easterwood, CST is an extremely skilled **Planner** for F&V. She has completed numerous master planning studies and is highly-experienced with sustainable and low-impact construction methods. Lisa completes feasibility studies of various potential trail and pathway routes and has helped design streetscape features for clients.

F&V team members listed here have the availability to complete assignments from the City of Birmingham and look forward to working with your staff.

Resumes are provided in this section.

Experience Summary

Michael has over 35 years of experience in the field of Transportation Engineering. He has directed many traffic and transportation engineering projects, including intersection operations studies, corridor studies, citywide traffic studies, signal system studies, roadway design projects, development impact studies, environmental impact statements, and traffic safety projects.

Michael has served as Transportation Engineering Manager responsible for all traffic engineering and transportation planning work, including planning, design, and implementation of traffic operation improvements for communities and private developments. He has provided professional transportation engineering services for projects such as the Comerica Park and Ford Field master plans, redesign of the Detroit Renaissance Center, conceptual plans for the City Casinos, and traffic management for the Michigan International Speedway.

Additionally, he served as Rural District Transportation Engineer for the Road Commission for Oakland County and Adjunct Faculty in the Construction Engineering Department at Lawrence Technological University. Michael has completed a variety of transportation and parking engineering projects in and for numerous Michigan communities, including the City of Detroit, City of Birmingham, and Bloomfield Township.

Major Areas of Expertise

- Transportation Engineering & Planning
- Traffic Impact Studies
- Shared Parking Studies
- Corridor & Downtown Street Planning
- Transportation & Community Connections
- Public Approval Processes
- Complex Intersection Capacity and Operations
- Large Event Traffic Management

Project Experience

1993-Present, Birmingham

Responsible for providing the City with as-needed traffic and transportation engineering consulting services. Responsibilities include collaboration with City Engineering, Planning, and Police staff, direction and review of traffic analyses, communication and presentation of study results and recommendations, and coordination with the Road Commission for Oakland County and MDOT. Project examples include city-wide traffic operations evaluation, corridor traffic signal optimizations, traffic control studies, lane reduction studies, parking evaluations, evaluating pedestrian accommodations, traffic signal warrant analysis, and development impact studies. Several traffic analyses were completed for an area of the City including Old Woodward Avenue, Woodward Avenue, and Maple Road which included traffic signal optimization, roadway reconstruction, and evaluation of proposed development impacts. Mr. Labadie participates in public meetings and provided recommendations to the City based on the results of these analyses, in order to maintain acceptable traffic operations for City residents, businesses, and visitors.

2000-Present, Bloomfield Township

Provides traffic operations analyses, site plan and impact study reviews, presentations to the Planning Commission and the Township Board of Trustees, Township Ordinance reviews, neighborhood meetings, and representation at meetings with other agencies including the Road Commission for Oakland County and MDOT. Recently participated in traffic and parking analyses for several mixed use office/retail/restaurant development including the corner of Woodward Avenue (M-1) & Big Beaver Road, Telegraph Road (US-24) & Square Lake Road, and



MICHAEL LABADIE, PE
PROJECT MANAGER

Education

MS Civil Engineering
Wayne State University,
1978

BS Civil Engineering
Wayne State University,
1975

Registrations

Registered Engineer
▪ Michigan (No. 26598)

Professional Affiliations

- Institute of Transportation Engineers

Certifications / Trainings

- National Highway Institute
FHWA Road Safety Audits

Telegraph Road (US-24) & Maple Road.

Present, Michigan International Speedway, Brooklyn

Has provided traffic control and management consulting for MIS for several years, and his recommendations have resulted in significant improvements to traffic operations related to race weekends at the Speedway. With nearly 200,000 patrons and miles of impacted roadways, traffic volumes previously would queue for 10's of miles, spilling back into local communities and onto I-94 prior to his involvement. Mr. Labadie developed plans in coordination with MDOT and local agencies to improve the road infrastructure and efficiently manage traffic flows in and out of these large events, which are still carried out to date.

2010-Present, Bloomfield Hills HS Consolidation, Bloomfield Hills

Bloomfield Hills Schools is currently proposing the combination of Andover and Lahser High Schools in Bloomfield Township and Bloomfield Hills, MI. Two sites were considered for the future school combination and a traffic impact study was completed to evaluate the traffic related impacts of both options. The study road network includes seven (7) signalized intersections along US-24, Long Lake Road, and Lahser Road. Mr. Labadie was responsible for the management and QA/QC for the project including review of the Synchro/SimTraffic models, development of project mitigation measures, and final report documentation. Mr. Labadie is also responsible for coordination with the project stakeholders including the School District, Bloomfield Township, the Road Commission for Oakland County, and MDOT.

2011-2012, Redford HS Redevelopment, Detroit

Completed the Traffic Impact Study for the redevelopment of the former Redford High School with retail land use, which is proposed to include Meijer. The study evaluated the potential impacts of the project on the adjacent road network and determined appropriate site access and traffic control. Mr. Labadie led the development team meetings with MDOT and developed the mitigation measures which ultimately lead to project approval.

2007-2012, Parking Engineering Studies, Troy

Directed a number of parking studies in the City of Troy based on the Urban Land Institute (ULI) methodology for the sharing of parking spaces based on seasonal, daily, and hourly variations in land use parking demands. These projects have involved parking demand forecasts and evaluation of parking supply for various commercial developments. All of these studies were approved by the City and resulted in more efficient land use and reduction in pavement for sites where previous standards had resulted in the over-design of parking supply. Project examples include the PNC Center, Troy Sports Center, Troy Marketplace, and Troy Place.

2011, Firekeepers Casino Hotel and Events Center, Battle Creek

Provided traffic engineering and project management for the site plan design and Traffic Impact Study for a new hotel and event center at the existing Firekeepers Casino. The project site is located adjacent to the I-94 interchange with M-311 and has access via the I-94 Business Loop, also known as M-96. Traffic impacts on the adjacent road network and intersections were evaluated and recommendations were developed to mitigate project impacts. Mr. Labadie led the development of study recommendations for presentation to Firekeepers and MDOT.

2008-2010, Bloomfield Park Mixed Use Development, Bloomfield Township

Acted on behalf of the Township in review of the Traffic Impact Study for the proposed mixed use development on Telegraph Road (US-24) north of Square Lake Road (I-75BL). Mr. Labadie met frequently with staff from the Township, City of Pontiac, and the MDOT to provide recommendations for development impact mitigation strategies. Directed the project traffic analysis and coordinated efforts with other consulting firms to provide the involved jurisdictions with an acceptable traffic impact analysis and resulting mitigation. Reviewed the development Parking Study and provided recommendations related to site parking supply versus demand as well as site layout and internal circulation.

2007-2009, Northpointe Town Center, Blackman Township

The objective of this project is to evaluate the impacts of the proposed commercial development on the adjacent road network including the I-94 interchange with Airport Road and the US-127 interchange with Springport Road. Mr. Labadie was responsible for the management of project tasks and QA/QC of the proposed development impact study, which included roundabout evaluation. Developed and recommended traffic control and geometric modifications in order to minimize the impact of the proposed development on the roadway network as compared to the existing traffic conditions. The study was conducted in coordination with MDOT and Blackman Township, MI.

2008, Corridor Modernization Study for Caniff Street, Hamtramck

The objective of this project was to modernize the Caniff Street corridor between I-75 and Buffalo Street. The traffic engineering aspect of the study was led by Mr. Labadie, which focused on the improvement of traffic signal operations and corridor progression in order to reduce vehicle delays and emissions. Pedestrian crossings were also of particular consideration due to the proximity of several schools along the corridor. Mr. Labadie directed the network modeling and analysis and the development of optimized corridor progression plans.

2006-2008, Pavilions of Troy Mixed Use Development, Troy

This project involved the redevelopment of the former K-Mart headquarters site at Big Beaver Road and Coolidge Highway with a proposed large-scale mixed use town center. Mr. Labadie's responsibility was to oversee a project team in data collection and analysis efforts for over 25 intersections and develop roadway improvement strategies to minimize the impact of development traffic on the surrounding road network. Reviewed study documentation and acted as a liaison between the developer and the Road Commission for Oakland County and the City of Troy. Delivered the findings and recommendations to the Road Commission, the City of Troy Planning Commission and the City Commission for approval.

2004, Van Dyke Avenue (M-53) Corridor Study, Warren & Centerline

This study was completed to provide the foundation for managing improvements to the M-53 corridor between 8 Mile Road and I-696. The project stakeholders included the City of Warren, City of Centerline, and MDOT. Elements addressed in the study included evaluation of traffic operations, establishment of site design guidelines, recommendations for vehicular and pedestrian facility improvements, conceptual policy design for streetscape improvements, strategy development for improvement project budgets, and ordinance recommendations. Responsible for the oversight of data collection, evaluation of corridor signal timing improvements, crash data analysis, evaluation of pedestrian accommodations, and planning for future land uses along the corridor.

Experience Summary

Paul has been involved in the planning, funding, design and construction of public and private roads, landfills, sanitary sewer, storm sewer, bridges, dams, recreation facilities and water distribution systems for nearly 30 years. He has extensive experience working with MDOT-funded road projects and has been extremely successful in obtaining grants and low-interest loans for F&V clients.

As Vice President of Operations, Paul is responsible for overseeing the production of our work firm-wide. His vast knowledge and project experience make him highly-qualified to provide QA/QC tasks for our engineering staff, particularly on transportation projects.

Paul is the primary contact with our firm for Engineer-of-Record assignments in Portland, Saugatuck, Big Rapids, Howard City and Caledonia.

Major Areas of Expertise

- Project Manager for MDOT-funded road projects
- Project Manager for design and construction engineering of municipal projects including road, bridge, watermain, sanitary sewer and storm sewer systems.
- Federal and State Grant application assistance, preparation and administration for municipal infrastructure projects.
- Water and wastewater feasibility studies and user charge systems.
- Traffic counts and analysis.
- Nuclear density and concrete testing.
- MDOT / ACEC certified Standing Neutral for construction conflict resolution.
- Manages municipal group work schedules and activities.
- Coordinator of all construction inspection and testing services for the company.
- Analysis of existing water, sanitary and storm water systems.

Certifications/Training

- 1994 / MDOT Office Technician Course
- 1990 / Troxler Certified

Project Experience

Roads & Streets

South Maple Street, Saugatuck

Project Manager for the reconstruction of South Maple Street. A major portion of the road was washed out in the spring of 2013 with rains jeopardizing access to several homes, a gas main, sanitary sewer and water main. F&V worked with the City to acquire FEMA emergency funds and get the road and utilities reconstructed before winter.

Kent Street Improvements, Portland

Project Manager for improving the road and utilities on this main corridor in downtown Portland. Project was completed under an accelerated schedule and phased to minimize disruption of the downtown businesses.

Edgerton & Ensley Street Streetscape, Howard City

Project Manager for design engineering services for the reconstruction of 0.4 miles of Edgerton Street and Ensley Street. The project included aesthetic, as well as, infrastructure and drainage improvements covering a two block stretch along Edgerton Street between Ensley Street and Lincoln Street and Ensley Street between Shaw Road and Edgerton Street. Aesthetic improvements funded through MDOT included: trees, benches, flower planters, trash receptacles, decorative paving, traffic calming bump-outs, ADA accessibility and decorative streetlights.



PAUL GALDES, PE
VICE PRESIDENT

Education

BS Civil Engineering
Michigan State University,
1985

Registrations

Professional Engineer

- Michigan (No. 36057)
- Wisconsin (No. 28773)

Professional Affiliations

- American Society of Professional Engineers
- National Society of Professional Engineers
- Committee Chair
American Council of

Maple Street Improvements, Fennville

Project Manager for the design and construction engineering for a \$1.3-million road reconstruction and utility improvements project. The project included 2,900 feet of road reconstruction, bore and jack of M-89, 1,900 feet of 8-inch and 12-inch watermain, 2,900 feet of 10-inch sanitary sewer and 1,700 feet of 12-inch and 24-inch storm sewer. F&V was successful in acquiring and administering a \$156,800 Michigan Economic Development Corporation (MEDC) grant for this project.

Grape & Detroit Street Reconstruction, Portland

Project Manager for 3,500 feet of full road reconstruction including watermain, sanitary sewer, storm sewer and new concrete curb and gutter. Dealt with extremely poor soils and sawdust fill on old road. Project had to be designed with special backfill and geotextile fabric to bridge poor soil conditions. Project was completed ahead of schedule and \$30,000 under the bid price.

Blue Star Highway Road Reconstruction & Traffic Signal Modifications, Douglas

Project Manager for the design and construction, of 1.1 miles of Blue Star Highway. Construction included concrete rubblizing, road reconstruction, drainage improvements, guardrail, intersection improvements and traffic signal modifications. The design included part-width construction staging to accommodate an industry and several businesses along the heavily traveled stretch of highway that runs through the center of town. The \$1.1-million ISTEAD project was partially funded by MDOT Category D transportation funds.

Street & Utility Improvements, Saugatuck

Project Manager for the planning, design and construction of a \$3.5-million project to upgrade several City streets and utilities. The project included over 2.0 miles of street reconstruction with curb and gutter, watermain, storm sewer, sanitary sewer and electrical conduits for lighting. The project was staged, and the work was accelerated, to minimize impact of construction on this City that relies heavily on tourism. F&V assisted the City in the public information and financing process of the project.

Maple Street Improvements, Portland

Design Assistance for the design and construction of Maple Street from Brush Street to Grand River Avenue. The project included 1,400 feet of road reconstruction with utility improvements, streetscape improvements and related work.

Grand River Avenue Improvements, Portland

Design Assistance for the design and construction of Grand River Avenue from Kent Street to Charlotte Highway. The project included 4,000 feet of road reconstruction with utility and sidewalk improvements, retaining walls and related work.

Lake Street Improvements & Traffic Study, Saugatuck

Project Manager for the design and construction of Lake Street improvements for the City. The project included planning, traffic study and the design and construction of approximately 3,500 feet of road. The project also included improvements to parking, geometrics, safety, traffic flow, drainage and road quality. The project was funded with MEDC funds.

Traffic Study, Portland

Project Manager for a traffic study looking at the short and long term effects of community business' driveway entrances, traffic signal timing, development of alternate routes for commuter traffic and other traffic related issues in the community.

Elizabeth Street, Saugatuck

Project Manager for the design and construction of 800 feet of Elizabeth Street including watermain replacement and storm sewer repairs. In order to complete this project economically, F&V was able to salvage the existing curbs and avoid costly undercutting of organic material through the design of an underdrain and geotextile drainage and separator system.

Main Street (Kinsey to Ash), Caledonia

Project Manager for the design of Main Street from Kinsey Street to Ash Street. The project included the reconstruction of 2,000 feet of 3-lane concrete curb and gutter. The project also included 2,000 feet of 12-inch sanitary sewer, 2,000 feet of 12-inch watermain, 1,500 feet of 12-inch to 24-inch storm sewer, sidewalks, pavement marking and signage as well as the reconstruction of a Village parking lot. F&V assisted the Village in acquiring MDOT STP and Enhancement funds for the project.

First Street, Mary Street & Rose Street Reconstruction, Fennville

Project Manager for the design and construction of 2,100 feet of First Street, Mary Street and Rose Street for the City in order to improve safety to the new school. The project included 1,400 tons HMA paving, 1,300 feet of sanitary sewer, 1,200 feet of storm sewer and 4,600 feet of storm sewer. The project was funded with \$500,000 from the MEDC and MDOT SIB funds and included drainage and safety improvements at the M-89 intersections.

Street Reconstruction, Fennville

Project Manager for the design and construction of the road reconstruction project for the City. The project included drainage improvements, sidewalk replacement, 1,450 feet of 12-inch to 24-inch storm sewer, road reconstruction and HMA overlay.

Charlotte Highway, Portland

Project Manager for the reconstruction of 4,000 feet of Cutler Road on Charlotte Highway in the City. The project included storm sewer, sanitary sewer, watermain, concrete curb and gutter, HMA paving, sidewalk and pedestrian trail construction, I-96 bridge modifications, pavement markings and signage.

Ensley Road Resurfacing and Local Street HMA Underlays, Howard City

Project Manager for the mill and overlay of 2 miles of Ensley Road (Federal Highway) and overlay of approximately 3 miles of local streets. The project included watermain and sanitary sewer extensions, drainage improvements, curb and gutter and sidewalk replacement. The project was funded with Village, MDOT and County solid waste funds.

Donna and Bethel Drive, Portland

Project Manager for the reconstruction of 2,300 feet of roadway including watermain, storm sewer and sanitary sewer. The project also included concrete curb and gutter, sidewalks, trees and pavement markings.

Main Street Reconstruction, Caledonia

Project Engineer for a full road reconstruction to an all season, 3 lane roadway. The project included 2,000 feet of curb and gutter, 1,700 feet of 12-inch watermain, 1,400 feet of storm sewer, 1,350 feet of sanitary sewer replacement, HMA reconstruction, HMA milling and overlay, pavement markings and restoration. The project also included removal of peat, geotextile separator and sub-grade undercutting. This was a TEA 21 Project.

Lake Street, Saugatuck

Project Manager for the design and construction of Lake Street improvements for the City. The project included planning, traffic study and the design and construction of approximately 3,500 feet of road. The project also included improvements to parking, geometrics, safety, traffic flow, drainage and road quality. The project was funded with MEDC funds.

Canal Street, Portland

Project Manager for the design and construction of 2,100 feet of road and storm sewer as well as 2,500 feet of 12-inch and 8-inch watermain. The project also included two new parking lots. The entire project was located in the floodway and required permitting and considerable negotiations with the MDEQ on an acceptable design.

Central Michigan University East Campus Drive / Bloomfield Road, Mount Pleasant

Project Manager for the study and conceptual design of intersection improvements. The intersection receives 19,600 vehicles from "3511 Projects Statue".

Pleasant Street, North Street and Washington Street Reconstruction, Portland

Project Manager responsible for the improvements to North Street and Washington Street which included subbase undercutting, storm drainage, 2,150 feet of watermain and 2,070 feet of sanitary sewer, sidewalks, 2,550 feet of curb and gutter and 1,500-tons of bituminous. The project also included the preparation of cost estimates, contract documents and permit applications.

Hoffman Street, Saranac

Project Manager for the design and construction of 1,200 feet of road reconstruction and 600 feet of bituminous overlay on Hoffman Street. The project included 500 feet of concrete curb and gutter, 3,900 square feet of sidewalk, 1,100 tons of bituminous, 500 feet of storm sewer and 600 feet of watermain.

Creyts/East Road Roundabout, Dimondale

Project Engineer for the design and construction of a mini-roundabout at the intersection of Creyts Road and East Road in Dimondale. The design included traffic review, geometric layout, pavement markings and signing. F&V consulted with two British designers to complete what is thought to be the first true mini-roundabout installed in North America.

Maple Street, Saugatuck

Project Manager for the design of 500 feet of street reconstruction, drainage improvements and watermain installation.

Bridge Street (Grant Street to Kent Street), Portland

Project Manager for the street improvements from Grant Street to Charlotte Highway which included watermain, storm drainage and structures, sanitary sewer repairs, road reconstruction, new concrete curb and gutter and new sidewalk. The project also included 2,270 tons of bituminous asphalt overlay and related work.

Experience Summary

Geric is involved with the study, planning, design, and construction of municipal, county, and private engineering and surveying projects. As a licensed Professional Engineer and Professional Surveyor in the State of Michigan, he provides leadership in both our engineering and surveying departments. Having experience in both design and construction, he is typically involved in a project from the initial planning/programming phase through construction completion and project closeout. He has completed numerous transportation projects and has also been involved in the design and construction of several trails and pathways.

He is very experienced with the Michigan Department of Transportation and the Michigan Department of Environmental Quality permitting processes.

Geric regularly assists communities with their day-to-day engineering needs including planning, design, and implementation of municipal projects. He is instrumental in completing engineering assignments including utility master planning, roadway and utility design, cost estimation, project bidding, construction engineering, grant writing and funding assistance, capital budgeting assistance, plan reviews, and meeting attendance. Geric has a professional reputation of providing high quality services and has demonstrated his ability to work cooperatively with councils, boards, city and township managers, public works directors, and citizens.

He also is involved with various survey operations such as records research, rights-of-way preparation, road vacation and abandonment, remonumentation, project management, land planning and platting, and quality assurance/quality control. He often assists municipalities and county agencies with easement preparation and processing for infrastructure improvement projects. Having completed and processed many condominium plans and subdivision plats, he is very experienced with the Michigan Land Division and Condominium Act.

Geric's experience and licensing as both an engineer and a surveyor provides the knowledge and support that is key for a successful project.

Project Experience

Road Experience

2013, Union Street Reconstruction, Grand Blanc

Project Design Engineer for roadway reconstruction and expansion project to eliminate redundant railroad crossings.

2012, Irish Road Rehabilitation, Genesee County Road Commission

Project Design Engineer for a one mile long, two lane MDOT Local Agency road rehabilitation project consisting of HMA base crushing and shaping. Project included geometric improvements of lane drop transition taper and sign replacement to meet current MMUTCD requirements

2012, Linden Road Reconstruction, Genesee County Road Commission

Project Design Engineer for a one mile long, five lane MDOT Local Agency concrete road rehabilitation and reconstruction project consisting of roadway geometrics and intersection turn lane improvements. Project included sign replacements to meet current MMUTCD requirements.

2012, Saginaw Street Rehabilitation, Grand Blanc

Project Design and Construction Engineer for a one mile long, five lane MDOT Local Agency road rehabilitation project of the major thoroughfare in the City of



GERIC ROSE, PE, PS
STAFF ENGINEER

Education

BS Survey-Engineering
Ferris State University, 1997

Registrations

Professional Surveyor
▪ Michigan (No. 47972)
Professional Engineer
▪ Michigan (No. 55609)

Professional Affiliations

▪ Advisory committee member for Lake Fenton High School Engineering Academy's initiative with "Project Lead the Way"

Certifications/Training

▪ Concrete Paving Inspection
▪ Designing Pedestrian Facilities for Accessibility
▪ Implementing Low Impact Development in Michigan
▪ Michigan Bridge Construction & Rehabilitation Field Inspection Workshop 2008
▪ Bridge Geotechnical Considerations & Designing for Scour

Grand Blanc. With daily traffic in excess of 30,000 vehicles, this project was constructed at night in an effort to lessen the impact on the business owners and residents.

2011, Davis Street Resurfacing, Grand Blanc

Project Design and Construction Engineer for a road rehabilitation project along a primary bus route for the Grand Blanc Community Schools.

2010, Parkin Lane, Tyrone Township, Livingston County

Project Engineer for roadway improvement project to reconstruct street. Project was funded through special assessment.

2009, Clio Road Improvements, Genesee County Road Commission

Project Engineer for a four lane MDOT Local Agency rehabilitation project in Mt. Morris Township and Flint.

2009, Perry Road Improvements, Grand Blanc

Project Engineer for a four lane MDOT Local Agency road rehabilitation project. Project included concrete base course repairs, HMA resurfacing, and sidewalk improvements.

2008, Local Street Improvements, Grand Blanc

Project Engineer for the yearly road improvement projects. Responsibilities include pavement evaluation, plan preparation, specifications, and cost opinions.

2008, Island View, Genesee County Road Commission

Project Construction Engineer for roadway improvement project. Project was funded through special assessment.

2008, Clio Road Improvements, Genesee County Road Commission

Project Construction Engineer for a four lane MDOT Local Agency road rehabilitation project in Mt. Morris Township.

2007, Clio Road Improvements, Genesee County Road Commission

Project Engineer for a four lane MDOT Local Agency road rehabilitation project in Mt. Morris Township.

Non-Motorized Transportation Experience

2011, Genesee Valley Trail, Genesee County Road Commission

Project Engineer responsible for construction engineering services for 2.7 miles of multi-use HMA pathway.

2011, Safe Routes to School, Grand Blanc

Project Manager responsible for design and construction administration services for a sidewalk improvement project along Perry Road.

2009, Flint River Trail - Kettering Extension, Genesee County Metropolitan Planning Commission

Project Surveyor responsible for preparation of temporary construction permits and permanent easements for HMA pathway project.

2008, Jewett Trail Multi-Use Pathway, Grand Blanc

Project Surveyor responsible for preparation of temporary construction permits and permanent easements for HMA pathway project.

2005, Rust Park Expansion, Grand Blanc

Project Engineer for HMA pathway design and MDEQ permitting for park expansion within a floodplain area.

Water System Experience

2013, DWRP Water System Improvement Project, Beecher Metropolitan District, Genesee County

Project Engineer for 12,000 feet of watermain replacement.

2010, Baldwin Road Water Main, Genesee County Drain Commissioner

Project Engineer for the design of water main extension project in two adjacent townships. Design included implementing horizontal directional drilling construction techniques to minimize impacts to natural resources and the design of a bidirectional metering station.

Culvert Replacement Experience

2011, Culvert Replacement Program, Genesee County Road Commission

Design Engineer for the replacement of five short span mini bridges with concrete box culverts that ranged in size from 7 foot span x 7 foot rise to 19 foot span x 9 foot rise. Work included hydraulic analysis and design of culverts, MDEQ

permitting, preparation of contractor plans and specifications.

2007, Lippincott Boulevard over Big Swamp Drain, Genesee County Road Commission

Project Engineer for culvert improvement project to remove four existing metal pipes and replace with a single concrete box culvert with wing walls, reconstruct roadway, and add guardrails.

2006, Clovis Road over Root Drain, Genesee County Road Commission

Project Engineer for culvert improvement project to remove three existing metal pipes were replaced with a single concrete box culvert with wing walls, reconstruct roadway, and add guardrails.

Storm Drainage Experience

2007, White Branch of Perry Drain, Grand Blanc

Project Engineer for completion of storm sewer design and MDEQ permit application for drainage improvements.

2006, Drainage Study, Beecher Metropolitan District, Genesee County

Project Engineer for preliminary drainage study of entire community drainage area. Project included evaluation and analysis of existing drainage system, improvement alternatives and recommendations, and preliminary cost estimate.

2005, Bush-Perry Drainage Study, Genesee County Drain Commissioner

Project Engineer for preliminary drainage study completed on the Bush and Perry Drains for consideration of drainage improvements to contributing drainage systems. Project included management and QA/QC of surveying procedures to obtain drain cross-sections and culvert data on over three miles of open drain.

2003, Layman Drain Improvements, Grand Blanc

Project Engineer for completion of water surface profiling and analysis to determine effects of adding additional storm water runoff into the Layman Drain for FEMA-LOMR application.

Recreational Experience

2009, Flint River Trail - Kettering Extension, Genesee County Metropolitan Planning Commission

Assistant Project Engineer for design of a portion of the HMA multi-use pathway system within floodplain area and completion of MDNR permit application. Responsibilities also included preparation of temporary construction permits and permanent easements for HMA pathway project.

2007, Lake Charles Water Sports, Private Client, Gratiot County

Project Engineer for the design of a private water sports lake. Responsibilities included site surveying, lake and boat ramp design, and MDNR permitting.

2005, Placid Waters Water Sports Community, Private Client, Ottawa County

Project Engineer for the design of a man-made six lake water sport community. Project included implementation of spillways and rain gardens for storm water pretreatment and filtration in lieu of traditional catch basin inlets and storm sewer.

Sanitary Experience

2004, Oak Road Sanitary Sewer, Davison Township, Genesee County

Project Engineer for the design of a sanitary sewer and pump station extension project. Responsibilities included study of surrounding land uses and connection feasibility to determine current and future service areas.

Funding Assistance

2013, DWRP Project Plan, Grand Blanc

Project Manager for preparation of project plan to secure low interest loan for the water system improvements in Fiscal Year 2015.

2013, FY 2014-2017 TIP Applications, Grand Blanc

Project Manager for preparation of FY 2014-2017 Transportation Improvement Program applications for two preservations and one reconstruct roadway improvement requests.

2012, Federal Local Safety Program, Grand Blanc

Project Manager for preparation of MDOT FY 2014 Local Safety Program Application for roadway and intersection improvements along S. Saginaw Street. The City was approved for this Federal Funding in March, 2013.

Experience Summary

Steven has five years of experience working in the civil engineering field, all of it dealing with transportation issues and solutions. He assists in the completion of traffic impact studies, performs tasks associated with traffic signal optimization, prepares signal timing permits, and conducts signal warrant analyses.

He is responsible for coordinating and collecting all in-house traffic data collection for F&V's Farmington Hills office. He prepares technical reports and memos and is extremely familiar with MDOT requirements.

A previous position in the construction industry allowed him to gain insight and experience with regard to performing site work, following blueprints, and coordinating with other contractors to meet project deadlines.

Major Areas of Expertise

- Traffic Impact Studies (TIS)
- Traffic Signal Optimization
- Signal Warrant Analysis
- Traffic Data Collection
- Analyzing Site Conditions

Project Experience

Steven is a valuable asset as a transportation engineer and has performed numerous Traffic Impact Studies. A few of his recent projects are shown below.

Road & Transportation Projects:

2-42 Community Church – Traffic Update
A-Team – Riding Oaks Traffic Study
Alidade Capital – Royal Oak N. Traffic Study
ARI-EL Enterprises – Sagamore Plaza Parking Study
Beck South LLC – Traffic Impact Analysis
Birmingham – S. Old Woodward Traffic Impact Study
Bloomfield Hills Schools – Conant Elementary TIS
Bloomfield Hills Schools – Way Elementary TIS



STEVEN RUSSO, EIT
TRANSPORTATION
ENGINEER

Education

BS Civil Engineering
Michigan State University,
2009

Certifications/Training

- 2002 / Concrete

Experience Summary

Rick has been involved in the design, preparation of plans and specifications, and construction of site development projects for close to 30 years. He has served as Landscape Designer, Lead Landscape Architect and Project Manager for the study, design and construction of streetscapes, parks, trails, site improvements and residential developments.

He has prepared successful grant applications for more than 20 projects involving federal aid. Funding sources include MDOT TEA-21, MEDC CDBG and MDNR MNRTF and LWCF funding programs.

Rick brings the unique insight from serving five terms as a city council member in his community as well as two terms on the zoning board of appeals, two past terms on the zoning board and three terms on the park and recreation advisory board.

Major Areas of Expertise

- MDOT and local agency design and construction of road storm drainage and streetscapes, including the use of decorative concretes
- LED lighting design
- MEDC Grant coordination and administration

Project Experience

Downtown Enhancement

Streetscape Master Plan, Sand Lake

Prepared a Streetscape Master Plan and explored the possibilities for the Village's downtown core and addresses the infrastructure and streetscape improvement needs for a two block area along W. Lake Street. The Master Plan serves to blend public and private utility needs with the enhancement efforts for the downtown core. The Master Plan explores safer streets (including curb bump-outs and narrower crossings for pedestrians), uniform streetscape amenities (including lighting, tree planting, benches, way-finding signage), connectivity to businesses and community parks, and improved roadway with storm sewer. The projected cost for improvements identified under the Master Plan is \$1.0 - 1.1 million.

Downtown Street Lighting Improvements LED, Wayland

Project Manager and designer for LED project included the removal of the existing 33 HP fixtures and 17 shoebox fixtures in four blocks limited to the area along Superior Street, from Church to Forrest Street, and along Main Street, from Hanlon Court to Maple Street. These were replaced with 44 new low wattage (eight 100 watt and thirty-six 80 watt) LED fixtures that are dark sky compliant with full cut-off design. The lights were placed approximately 80 feet on center to provide the most efficient and uniform lighting for the downtown commercial core.

Downtown Improvements, Three Rivers

Landscape Architect for design engineering services for the LED street lighting improvements along of 0.3 miles of Main Street in the City of Three Rivers and redevelopment of public gathering space known as the Mural Mall. Aesthetic improvements funded through MEDC will include: LED lights, decorative stamped concrete paving, rain garden, ADA accessible walk through Mural Mall, planter walls, decorative handrail, trash receptacles, metal pergolas, textured skin concrete walks, micro-top decorative concrete, tables, drip irrigation system and perennial plantings.

Main Street Streetscape, Pottersville

Landscape Architect for design engineering services for the reconstruction of 0.4 miles of Main Street. The project included aesthetic, as well as, infrastructure and drainage improvements covering a four block stretch along Main Street between Hartman Road and Nelson Street. Aesthetic improvements funded through MDOT will include: trees, benches, flower planters, trash receptacles, decorative stamped



RICK W. STOUT,
LEED AP BD+C
LANDSCAPE ARCHITECT

Education

BS Landscape Architecture
Michigan State University,
1985

Licenses

Landscape Architect

- Michigan (No. 1054)
- Indiana (No 20800171)
- North Carolina (No. 1561)

CLARB Certified Landscape Architect (Council of Landscape Architectural Registration Boards) 2008

Professional Affiliations

- Member, West Michigan Environmental Action Council
- American Society of Landscape Architects (ASLA)

Certifications/Training

- LEED Certified – New Construction

concrete paving, brick pavers, granite pavers, traffic calming bump-outs, ADA accessibility and decorative streetlights.

Alcoa Celebration Square & Splash Park, Muskegon

Landscape Architect for design engineering services for the Alcoa Celebration Square was designed and built within a challenging 3 month period at the clients request to coincide with Alcoa National Corporate Leaders visit to Muskegon in late June of 2011. Square offers a children's fountain, geometric integrally colored concrete blocks for people to sit on and decorative integral colored concrete paving as well as prominently displayed public art that was incorporated into the overall plaza design. The outer perimeter of the square is landscaped with native perennials to reduce water usage as well as the addition of deciduous trees to provide shade for the plaza and reduce the heat island effect.

Edgerton & Ensley Street Streetscape, Howard City

Landscape Architect for design engineering services for the reconstruction of 0.4 miles of Edgerton Street and Ensley Street. The project included aesthetic, as well as, infrastructure and drainage improvements covering a two block stretch along Edgerton Street between Ensley Street and Lincoln Street and Ensley Street between Shaw Road and Edgerton Street. Aesthetic improvements funded through MDOT will include: trees, benches, flower planters, trash receptacles, decorative paving, traffic calming bump-outs, ADA accessibility and decorative streetlights.

Downtown Streetscape & Parking Improvements, Bloomington

Landscape Architect and Project Manager grant writing and design engineering services for two municipally owned off-street parking areas in the core downtown area. The Village hired F&V to prepare an MEDC CDBG Noticed of Intent, and upon award, provide final and construction design services for this fast track project that from grant submittal to construction was complete in five months. Final design elements included decorative brick columns, decorative fencing to screen and soften perimeter of parking areas, landscaping, decorative lighting, new sidewalk, traffic calming bumpouts, landscaping and relocation of existing park concrete arch.

Main & Bridge Street Streetscape, Belding

Landscape architect and project manager for design and construction engineering services for the MEDC funded streetscape improvements along 0.2 miles of Main Street and Bridge Street. The project included curb bump-outs on Main Street, installing two bump-outs on the east side of Bridge Street, new storm sewer structures, new handicap ramp with brick decorative wall, outer eating area, new fire hydrant, irrigation, landscaping and installing 12 decorative street lights. Angle parking was added on the south side of main street and while parallel parking remained on the north side of Main Street.

Main Street Streetscape and Street Reconstruction, Middleville

Landscape architect for design and construction engineering services for the reconstruction of 0.4 miles of Main Street. The project includes both aesthetic, as well as, infrastructure and drainage improvements covering a two block stretch along this major street from the Thornapple River to Church Street. With non-participating local funds, the Main Street storm sewer, curb and gutter and storm sewer will be entirely reconstructed as well as portions of the antiquated water system. Aesthetic improvements funded through MDOT include: trees, tree grates with guards, benches, decorative columns, decorative signage, decorative fencing, trash receptacles, decorative paving, traffic calming bump-outs, ADA accessibility and decorative streetlights. Non-participating aesthetic items include irrigation and decorative signage.

Grand River Avenue & Maple Street Improvements, Portland

Landscape Architect for the design and construction engineering services on the streetscape portion of the Grand River Avenue and Maple Street Reconstruction. F&V prepared the Downtown Master Plan and MDOT Enhancement Grant Application as well as worked with the City and MDOT on the Grand River Avenue Turnback Agreement. F&V prepared the conceptual design drawings, cost estimates, programming and permit applications. F&V completed the topographic survey and design engineering. During the 2008 construction, the project will provide full construction engineering and grant administration. The Enhancement Project includes lighting, street trees, decorative pavers, crosswalks, colored concrete, planters, irrigation, decorative signing, street furniture and a City pavilion.

Washington Avenue Streetscape Master Plan, Grand Haven

Prepared the Washington Avenue Streetscape Master Plan and explored the possibilities for the City's downtown core and addresses the infrastructure and streetscape improvement needs for a five block area along Washington Avenue. The Master Plan serves to blend public and private utility needs with the enhancement efforts for the downtown core, incorporating recently completed public and private projects. The Master Plan explores safer streets (including curb bump-outs and narrower crossings for pedestrians), uniform streetscape amenities (including lighting, signalization, benches, way-finding signage), calm pedestrian spaces, connectivity to businesses and community parks, and improved utilities (including sanitary, storm, water main, snowmelt system). The Master Plan identifies projected project costs, maps out potential Construction Schedules, and identifies potential funding sources. The projected cost for improvements identified under the Master Plan is \$4.5 – 6.0 million.

M-20/M-66 Corridor Enhancement - Remus

Landscape Architect for the design and construction engineering services for the aesthetic enhancements along 0.6 miles of M-20 and M-66. Aesthetic improvements funded through MDOT will include: crosswalks and site furniture such as decorative lights, block retaining walls, benches, trash receptacles and planter pots.

Farmers Market, Fremont

LA Design Assistance for design and construction engineering for Central Business District - 80 car parking lot including site for Fremont Marketplace and establishing streetscape elements for all future City projects. Tasks include parking lot reconstruction, utility improvements, decorative site lighting, landscaping, irrigation, decorative site amenities and enclosed trash area.

Grand Haven Main Street DDA - Streetscape & Parking Lot Improvements, Grand Haven

Design of three parking lots and establishing streetscape elements for all future City projects. Project completed through TIF funding. Tasks include parking lot reconstruction, decorative concrete (stamping and color) in vehicular alley way, decorative site lighting, landscaping, irrigation, decorative site amenities and enclosed trash complex with green roof. Project included public utility relocation and burial, as well as MDEQ CMI grant funding assistance.

US-31/33 Streetscape, Berrien Springs

Landscape Architect for design and construction engineering services for the reconstruction of 0.25 miles of US-31/33. The project will include both aesthetic, as well as, infrastructure and drainage improvements covering a two block stretch along this major artery of highway--U.S. Highway 31(Ferry St.) between Cass and Mechanic and will extend along Main St. between Mars and Pitt Streets. Under the MEDC grant, the antiquated water system will be replaced along with some aesthetic improvements. Aesthetic improvements funded through MDOT will include: trees, benches, flower planters, trash receptacles, decorative paving, traffic calming bump-outs, ADA accessibility and decorative streetlights.

Center Street Reconstruction, Douglas

Landscape Architect for the reconstruction of 0.4 miles of Center Street, from Blue Star Highway to Water Street. The project reconstructed the existing 2 lanes with parallel and angle parking, decorative lighting, decorative stamped concrete, tree planting, perennial planting, irrigation system, ADA ramps with tactile warning devices, watermain, underground electrical services, curb and gutter and storm sewer.

M-115 Streetscape, Mesick

Landscape Architect for the reconstruction of 0.98 miles of M-115 Streetscape, from Clark Street to M-37. The project constructed traffic calming techniques such as bump-outs, irrigation system, decorative stamped concrete paving, decorative lighting, tree planting, ADA ramps with tactile warning devices, watermain, curb and gutter and storm sewer.

Western Avenue Reconstruction, Muskegon

Landscape Architect for the reconstruction of 0.35 miles of Western Street, from Third Street to Terrace Street. The project constructed the new roadway consisting of 2 lanes with parallel and angle parking, round-about, irrigation system, decorative stamped concrete paving, decorative lighting, tree planting, ADA ramps with tactile warning devices, watermain, sanitary sewer, curb and gutter and storm sewer.

Streetscape, Berrien Springs

Landscape Architect responsible for preparing Preliminary Master Plan and TEA-21 Grant application for the construction of upgraded and new streetscape amenities along 0.3 miles of Ferry Street (US-31/33) and Main Streets in the downtown.

Streetscape, Douglas

Landscape Architect responsible for preparing MEDC and TEA-21 Grant application for the construction of upgraded and new streetscape amenities along 0.5 miles of Center Street in the downtown.

Tone Road (M-80) Streetscape, Kinross Charter Township

Landscape Architect responsible for preparing design and TEA-21 Grant application for the addition of streetscape components on 1.7 miles of Tone Road (M-80). The project includes re-construction of east and west sidewalks, installation of barrier-free ramps, curb and gutter, decorative lighting system, site furniture, and native trees, shrubs, wildflower and boulder groupings.

Mable Street (M-13) and Kaiser Street Streetscapes, Pinconning

Landscape Architect responsible for preparing a Streetscape Master Plan to develop streetscape improvements in the downtown area and assist in grant application services. Project involves working closely with a steering committee consisting of City staff, DDA members and designated citizens.

Experience Summary

Lisa has nearly 25 years of experience in site planning and design. Her early career duties included various types of land surveys, mapping, and residential land development projects. Now, Lisa is responsible for managing and coordinating new site development projects of all types including the conceptual layout, design, and processing of site plans for approvals. She is accustomed to working with zoning ordinances and regulatory guidelines, as well as projects that incorporate environmentally sustainable and low impact development methods. She is involved in the coordination and permitting process of each of her projects through various local and state agencies including the Michigan Department of Environmental Quality (MDEQ).

Lisa is involved in the design of our streetscape and landscape enhancement projects as well as recreational planning and grant writing and the public facilitation needed to accomplish such projects. She is skilled in various computer design and presentation programs that allow her to creatively prepare large scale master plans down to site-specific designs for our municipal, recreational, and private development clients.

Her knowledge and experience, along with her creative ideas and ability to meet client goals and timelines, have earned her many positive accolades from numerous clients.

Major Areas of Expertise

- Parks & Recreation projects
- Streetscapes
- Site planning and design
- Sustainable and low-impact construction methods
- Obtaining permits through local and state agencies
- Grant writing and administration

Project Experience

Master Planning, Studies, and Streetscapes

Grand Boulevard Redevelopment Schemes, Grand Blanc

Completed conceptual planning and renderings of various redevelopment schemes for this retail corridor located in the downtown. This information was used for marketing several City-owned and private properties to developers to reinvent the City core as a traditional mixed-use center.

Fred Meijer CIS Trailway Study, Owosso and Owosso Township, Shiawassee County

Completed a trailway feasibility study of various routes to connect the existing Clinton Ionia Shiawassee (CIS) trail, ending in Owosso Township to the James Minor Riverwalk in downtown Owosso. The study included analysis of various route options, appropriate facility types at various locations, cost opinions and steps toward implementation.

Grand Blanc Road Streetscape, Grand Blanc

Completed conceptual planning and landscape design of this streetscape and towns center area in the downtown.

Historic Oak School Feasibility Study, Genesee County Metropolitan Planning Commission

Completed records research and evaluation of existing site features and prepared conceptual plans for the feasibility study to rehabilitate this 1850's two story brick structure into residential units for the Genesee County Land Bank authority.



LISA EASTERWOOD,
CST
PLANNER

Education

Computer-aided Design & Drafting, Phoenix College, 1989

Professional Affiliations

- American Society of Landscape Architects
- Michigan Association of Planning
- National Society of Professional Surveyors - CST
- Flint River Watershed Coalition
- Miss Dig System, Inc.
- Grand Blanc Chamber of Commerce
- Advisor to Grand Blanc Township's Historic District Commission

Certifications/Training

- SEMCOG - Low Impact Development Facilities Management
- AASHTO Bike Facility Design
- Designing Pedestrian Facilities for Accessibility
- Certified Survey Technician
- Michigan Zoning Enabling Act training - MSU Land Policy Institute
- Effective Grant Writing - Learning Designs, Inc.

Eaton County Park Feasibility Study, Eaton County

Completed research and cost analysis of proposed park amenities and development of cost opinions for the feasibility of developing a 200+ acre recreational facility to include camping, ball fields, pathways, beach, and boat launch.

YMCA – Camp Copneconic – Phase II, Oakland County

Master planning for 240± acre multi phased private camp expansion project. Project included conceptual design, site planning and processing for first phase of this project which implements low impact design techniques such as vegetative buffers, bio swales and rain gardens.

Parks & Recreation Projects

Park and Recreation Planning, Marathon Township

Project manager responsible for preparing the township's first Park and Recreation Master Plan including facilitation of public meetings, surveys, and preparing a conceptual plan for a new park along the southern links trailway. This also included preparing a MNR Trust Fund land acquisition grant application.

Fred Meijer CIS Trailway Study, Owosso and Owosso Township

Completed a trailway feasibility study of various routes to connect the existing Clinton Ionia Shiawassee (CIS) trail, ending in Owosso Township to the James Minor Riverwalk in the downtown. The study included analysis of various route options, appropriate facility types at various locations, cost opinions and steps toward implementation.

YMCA's Camp Copneconic Health and Wellness Center, Grand Blanc

Project Manager responsible for site layout, design, and site plan processing for a 12,000 square foot state of the art health and wellness center that allows children with special medical needs, such as diabetes, cancer, or crohn's disease, to experience camp in a fun and safe environment.

Park and Recreation Planning, Burton

Project manager responsible for preparing the city's Park and Recreation Master Plan including facilitation of public meetings, research, surveys, and preparing two conceptual park plans for a new regional park and for improvements to existing Kelly Lake Park. Responsibilities also included preparing a MNR Trust Fund grant application in which the city was awarded in 2013.

Perry Road Pathway, Grand Blanc Township

Project manager and designer for this non motorized multi-use pathway in which a portion runs in front of the Historic Perry McGrath home. The design had to consider extreme grades and minimizing impacts to the home and preserving several historic maple trees located within the pathway route.

Silver Lake Road Multi Use Pathway, Argentine Township

Completed planning and preliminary engineering plans for this 2.0± mile, 10' wide multi-use pathway that falls within three communities, two county owned facilities, and the Linden Community School Campus.

Eaton County Park Feasibility Study, Eaton County

Completed research and cost analysis of proposed park amenities and development of cost opinions for the feasibility of developing a 200+ acre recreational facility to include camping, ball fields, pathways, beach, and boat launch.

Argentine Township and Linden Community Schools Parks and Recreation Master Plan, Genesee County

Project planner responsible for research and preparing this master plan including implementation of public survey, facilitating public workshops and planning meetings and developing the community's recreational capital improvement plan.

YMCA – Camp Copneconic – Phase II, Oakland County

Master planning for 240± acre multi phased private camp expansion project. Project included conceptual design, site planning and processing for first phase of this project which implements low impact design techniques such as vegetative buffers, bio swales and rain gardens.

Flint River Trail, Genesee County Metropolitan Planning Commission

Completed planning and preliminary engineering plans for 5.0± miles of 10' wide multi-use pathway from downtown Flint, through Flint Township, along the Flint River. This project included an elevated boardwalks, bridges, and designing around several historic properties.

Placid Waters, Allendale Charter Township

Completed conceptual planning, prepared site plan and presentation materials to gain municipal approval of this privately owned and operated water ski lake community which includes six water ski lakes, residential units, club house, pathway system, and other recreational amenities.

Rust Park Expansion Project, Grand Blanc

Project planner and designer of an expansion to the existing Rust park facility. Amenities of this passive park include a paved pathway with Thread Creek overlook and community gardens.

Residential Land Development

Stone Creek Crossing Condominium, Genesee County

Completed conceptual design, site planning and processing for 150± acre open space residential development that preserves over half the total acreage in open space and where all units abut open space areas.

Midtown of Burton, Burton

Completed conceptual design site planning and processing for this mixed use residential development that includes multiple and single family residences with supporting commercial element.

Morgan Manor Townhomes, Grand Blanc

Completed master planning and site planning for this neo-traditional townhouse development with round-about and park amenities.

Placid Waters, Allendale Charter Township

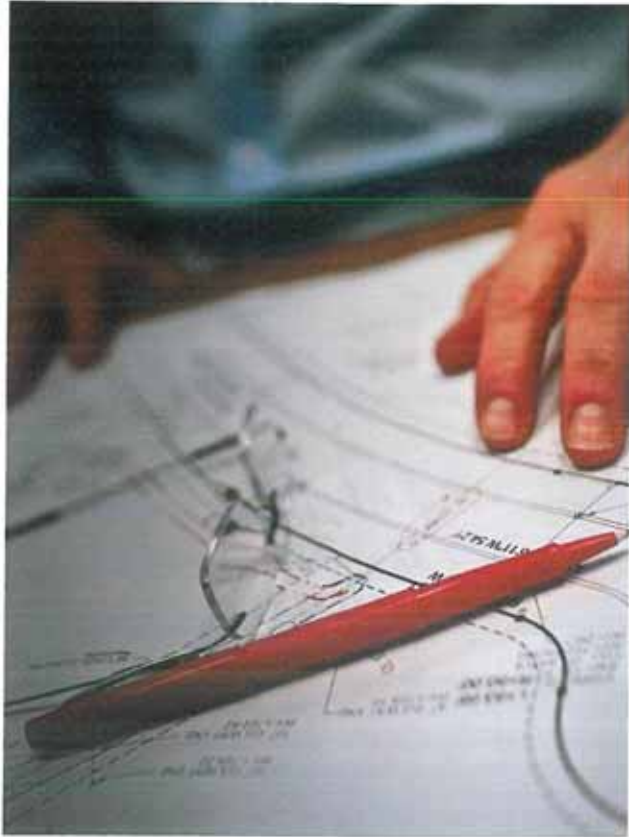
Completed conceptual planning, prepared site plan and presentation materials to gain municipal approval of this privately owned and operated water ski lake community which includes six water ski lakes, residential units, club house, pathway system, and other recreational amenities.

Jamison Crossing, Fenton Township

Completed conceptual planning and prepared and processed the site plan through municipal and governmental agency approvals for this mixed use condominium development under the planned unit development option.

Cobblestone Park Subdivision, Davidson Township

Completed conceptual planning and prepared and processed the preliminary plat through municipal and governmental agency approvals for this single family platted subdivision development.



OTHER CLIENTS

We understand the City's desire to have the City of Birmingham as a consultant's first priority. With a staff of over 150 individuals and nine offices, we are fully prepared to meet the needs of the City. Our Transportation Group Manager Mike Labadie has already been providing services to the City and is extremely familiar with the infrastructure and staff members.

Below is our income from work with MDOT for the past three years. This work is roughly 7.6% of our annual income company-wide (nine office locations).

We have *no income* from the Road Commission for Oakland County and Oakland County itself for that time period.

Calendar Year	MDOT
2013	\$780,242
2012	\$617,750
2011	\$1,237,950

PROJECT APPROACH

Our approach to provide Transportation Engineering services to the Multi-Modal Transportation Board (MMTB) includes acting as a technical advisor and professional engineer *with the best interest of the City of Birmingham in mind*. In this role, we will provide multi-modal design and traffic engineering services to the MMTB on an as-needed basis and will attend the regularly-scheduled MMTB meetings the first Thursday of each month at 6 p.m.

The principal contact for Fleis & VandenBrink (F&V) to the MMTB will be Mike Labadie, PE. He will be assisted by Geric Rose, PE; Steve Russo, EIT; Rick Stout, LEED AP BD&C; and Lisa Easterwood, CST. F&V Vice President Paul Galdes, PE will provide QA/QC services.

The MMTB will be supported by the entire company if needed for any specialty issue the Board may face. F&V has diverse and extensive experience on the type of projects that the MMTB will be involved in. Further, Mike Labadie has worked for the City as a traffic engineering consultant since 1986 (28 years!) and thus has a full understanding of the City's existing transportation infrastructure and the vision the City has for it in the future. This institutional knowledge will be invaluable to the success of the MMTB going forward. Mike will represent F&V at all of the monthly meetings and be the Project Manager for all assignments given to F&V by the Board.

PROFESSIONAL FEES & CONSTRUCTION ESTIMATE



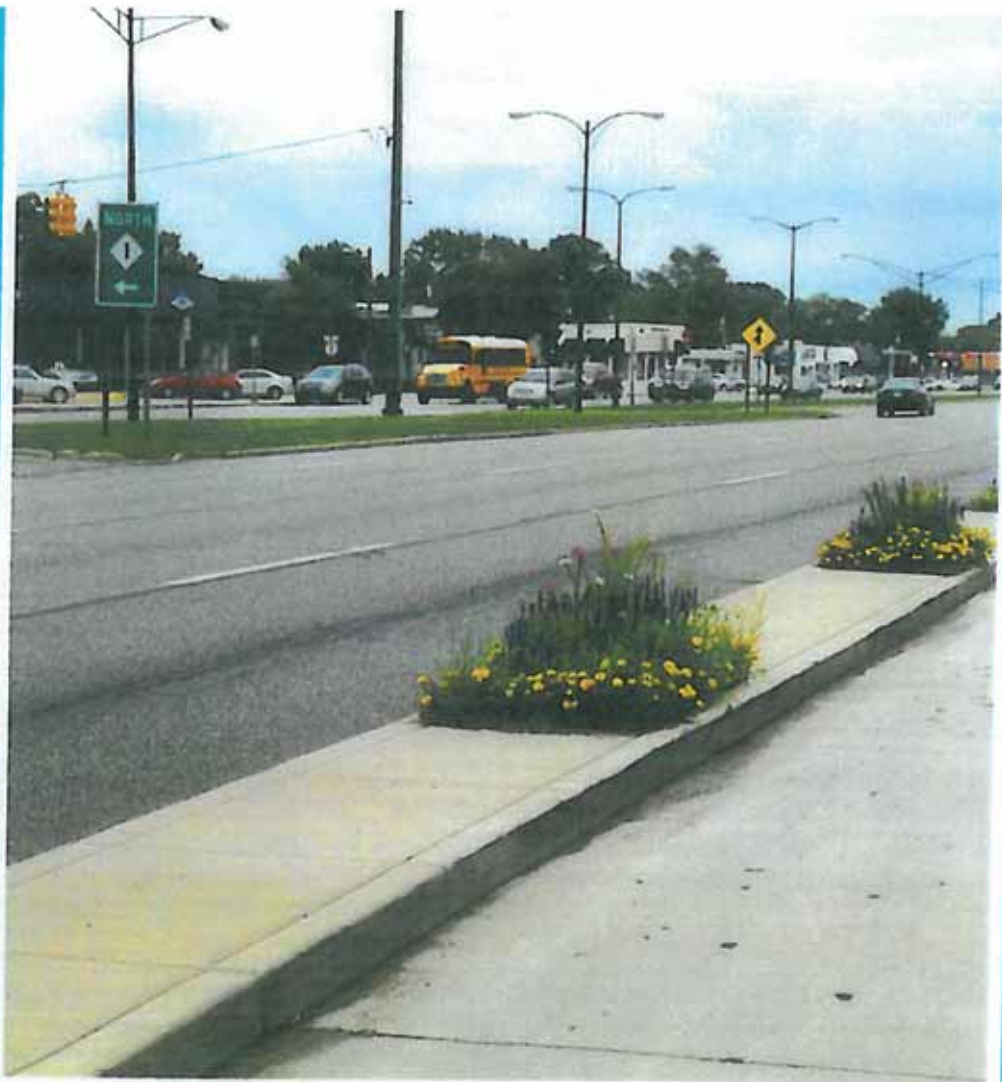
As projects are identified and selected for funding, we propose to provide appropriate project scopes and budgets using the following rates:

Classification	Rate
Sr. Project Manager, Sr. Planner, Principal-In-Charge	\$148 - \$183
Project Manager, Sr. Engineer, Sr. Architect, Sr. Geologist	\$104 - \$148
Project Engineer, Professional Surveyor, Sr. Landscape Architect, Architect	\$104 - \$130
Engineer, Engineer EIT, Geologist, Landscape Architect, Sr. Technician	\$77 - \$104
Survey Crew Chief, Sr. CAD Technician	\$91 - \$104
Technician, CAD Technician, Survey Technician	\$77 - \$92
Project Assistant, Field Assistant	\$51 - \$77

Rates are typically adjusted annually in April.

Classification	Rate
Survey & Construction Observation Equipment	
Survey Total Station	\$30 per day
Leica Global Positioning System (GPS)	\$300 per day
Robotic Survey System	\$175 per day
Troxler (Nuclear Density)	\$60 per day
Concrete Testing	\$35 per day
Vehicles	
Trucks (light duty)	\$15 per day + \$0.555 per mile
Construction Observation / Survey	\$20 per day + \$0.555 per mile
Trucks (4x4)	\$25 per day + \$0.63 per mile
Construction Observation / Survey	\$25 per day + \$0.63 per mile
Autos & Vans	\$10 per day + \$0.555 per mile

We will be happy to provide you with budgets on individual tasks as they arise to assist you with your planning processes. We will utilize a mix of younger and more experienced staff to provide you with the lowest effective billing rate to efficiently and professionally accomplish your projects.



QUALIFICATIONS TO PROVIDE PROFESSIONAL SERVICES

TRANSPORTATION ENGINEERING CONSULTANT

CITY OF BIRMINGHAM, MI

JULY 31, 2014





WADE TRIM

July 31, 2014

City of Birmingham
P.O. Box 3001
Birmingham, MI 48012

Attention: Paul O'Meara, Jana Eckler and Mark Clemence

Re: RFQ Transportation Engineering Consultant, SOQ-TE

Dear Mr. O'Meara, Ms. Eckler and Mr. Clemence:

As a premier community within southeast Michigan, the City of Birmingham has adopted a Complete Streets resolution to improve multi-modal transportation in the City. They are committed to creating improved facilities and safer interactions between vehicular traffic and pedestrians, bikes and transit traffic along the City's roadway network. As one of the first actions in implementing the Multi-Modal Transportation Master Plan, the City created a Multi-Modal Transportation Board to take over the duties of the previous Traffic & Safety Board and oversee development roadway infrastructure projects in the community with an eye towards enhancing multi-modal aspects of those projects.

The City seeks the assistance of a professional engineer with multi-modal design and implementation skills along with traffic engineering expertise to act as a consultant to the Board. To fill that role, Wade Trim provides the City a qualified team of traffic and transportation engineers led by Lori Pawlik, PE, who will act as representative to the Board and be available per the requirements of the Request for Qualifications.

We look forward to the opportunity to assist the City with this important endeavor. If you have questions or need additional information regarding our qualifications, please contact us at 734.947.9700 or 800.482.2864.

Very truly yours,

Wade Trim Associates, Inc.

Lori Pawlik, PE
Lead Traffic Engineer/Project Manager

Matthew J. Stacey, PE
Vice President

Wade Trim Associates, Inc.
25251 Northline Road
P.O. Box 10
Taylor, MI 48180

734.947.9700
800.482.2864
734.947.9726 fax
www.wadetrim.com



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WADE TRIM TEAM AND FIRM OVERVIEW

To best serve the City of Birmingham, our Team will be led by Lori Pawlik, PE, who will act as the traffic engineer on-call to the Board. Lori will be backed by Martin Parker, PE, Jill Bosserd, EIT, and Matt Stacey, PE.

Wade Trim

Wade Trim has built a foundation of excellence over the past 88 years, providing a range of urban design, community planning and design, engineering, and landscape architecture services to public and private entities. Founded and incorporated in 1926, Wade Trim's combined resources include more than 300 employees in 16 offices in six states. The City of Birmingham will be served by our Taylor office:

Wade Trim Associates, Inc.
25251 Northline Road
P.O. Box 10
Taylor, MI 48180
734.947.9700
800.482.2864
MStacey@wadetrim.com
www.wadetrim.com

Wade Trim's transportation engineers integrate local issues into overall solutions to deliver context-sensitive designs for both motorized and non-motorized users. Our engineers understand the habits of motorists and pedestrians to recognize how they

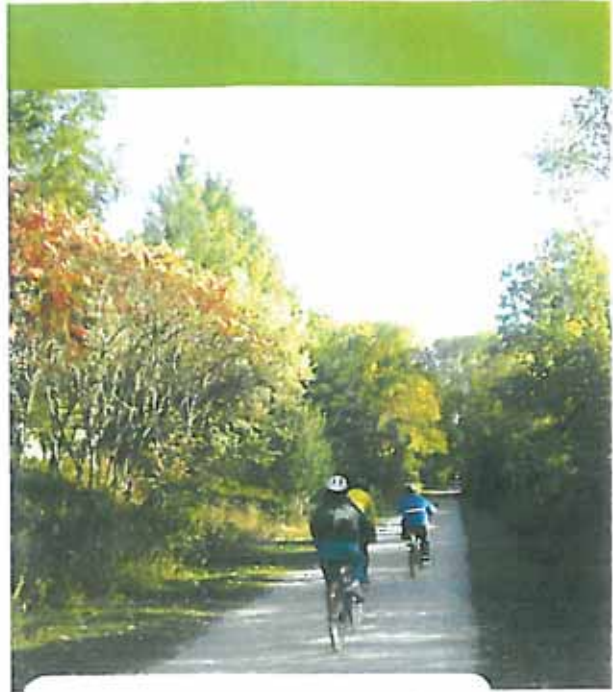
interact in transportation systems. Various studies are performed including operational analyses and traffic impact studies to generate safe, efficient, and convenient movement of people and commerce. We have been instrumental in master planning and signal improvements for many non-motorized transportation projects. Wade Trim maintains many prequalifications with MDOT, including all in the *Traffic and Safety Services*, Transportation Planning Services, and Design Services Groups.

Wade Trim has worked with the City of Birmingham as well as various Oakland County Departments including the Planning and Economic Development Services, Parks and Recreation, Road Commission, and Water Resources Commissioner's Office. Wade Trim worked closely with the Road Commission and Henry Ford Health Systems (HFHS) to analyze and mitigate traffic impacts of the West Bloomfield Hospital. We worked with the RCOC, HFHS and West Bloomfield Township to secure funding for the Maple Road corridor (Northwestern Connector project), to improve traffic operations, safety and economic development of the area.

Wade Trim has provided engineering, surveying and planning services to the following clients located in Oakland County over

the last two decades:

- City of Birmingham
- Bloomfield Township
- Commerce Township
- City of Berkley
- City of Ferndale
- City of Farmington Hills
- City of Lathrup Village
- Village of Milford
- City of Royal Oak
- Oakland County
- Oakland County Drain Commissioner
- Orion Township
- City of Rochester Hills
- White Lake Township
- Henry Ford Health System
- West Bloomfield Township
- Developers Diversified Realty
- Lowe's Home Improvement



Oakland County experience

Wade Trim prepared the Oakland County Trails Master Plan, which required coordination with MDOT, the Road Commission for Oakland County, and local agencies to evaluate potential connections and discuss issues related to trail design and construction.



2

WADE TRIM TEAM AND PERSONNEL

Wade Trim has a dedicated transportation group consisting of more than 30 professionals performing transportation and traffic engineering tasks on a regular basis. We have identified Lori Pawlik, PE, to act in the role of Lead Traffic Engineer servicing the Multi-Modal Transportation Board, including attendance at all meetings, study sessions and managing tasks and projects as directed by the Board. Lori will draw on the various resources available to her at Wade Trim. Lori's expertise in traffic engineering will be supplemented by key individuals from Wade Trim's transportation group with specific expertise to best service the Board. Martin R. Parker Jr., PE, with 48 years of experience, is a seasoned traffic engineer with expertise in traffic safety, operations and engineering; Matt Stacey, PE, is a 20-year veteran of road design, and; Jill Bosserd, EIT, is an expert in traffic signal design and timing operations. Lori will work with and be supported by these individuals as well as Wade Trim's entire transportation staff and other company resources.

Wade Trim will perform any requested services in-house. In addition to the resources and expertise available in Wade Trim's transportation group, Lori will also be able to utilize staff and resources from all areas of the company, including technicians and engineers from Wade Trim's other market

segments as-needed. For example, a major signal optimization study may require multiple teams of technicians to collect traffic data in a finite amount of time. Wade Trim has the resources to accomplish this and tasks like it.

2.1 Wade Trim Personnel

Lori Pawlik, PE, will serve as Lead Traffic Engineer on-call to the Board. She has 14 years of experience as a traffic engineer, with a Master's of Science degree in Traffic Engineering, which included a semester of transit design class taught by an MDOT transit engineer. Lori not only has prepared traffic safety, operational and non-motorized studies, but also has extensive experience as the role of traffic engineer on a large variety of roadway design projects involving multi-modal design. In her multi-modal analyses and design, she has extensive familiarity and understanding of the multi-modal standards, such as those found in the Michigan Manual on Uniform Traffic Control Devices, MDOT Traffic and Safety Notes, Section 400 – School & Pedestrian Traffic Control, FHWA's PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System, FHWA's BIKESAFE: Bicycle Countermeasure Selection System, ITE's Design and Safety of Pedestrian Facilities, and AASHTO's Guide for the Development of Bicycle Facilities.

The Complete Streets policy is integrated into her work on MDOT road design projects in which design considerations are made for non-motorized accommodations and transit. For example, Lori was Traffic Engineer for the M-85 (Fort Street) design from Sibley Road to Goddard Road in Wayne County. She prepared an analysis of existing and proposed non-motorized accommodations on the corridor, ensuring that the pedestrian and bicycle accommodations shown on the final plans are designed in accordance with current standards, appropriately addressed the needs of the users, and provided for the safe and efficient movement of vehicles and non-motorized traffic. Analysis included conducting counts of pedestrians and bicycles, review of non-motorized-related crashes, and consideration of two school zones within the corridor.

For the M-85 project, she also led the transit analysis, coordination with SMART, review of Traffic Control Orders, and preparation of the design plans for all SMART bus stop locations on the corridor. The M-85 design also ensured that the on-street parking areas shown on the final plans were in accordance with current design standards including safe sight triangles, and that a safe and reasonable level of traffic service was provided. Lori is currently Traffic Engineer for the M-29 project from County Line Road to Palms Road in St. Clair County. In her role on this project, she has worked with MDOT and stakeholders to determine a plan for non-motorized travel on the corridor, including the design of bike lanes, side-walks within the towns, and a possible bike path connecting to the Bridge to Bay Trail. Within one of the small towns on the corri-

dor, Lori's work has provided recommendations for a road diet based on capacity and safety analyses.

Lori will lead any efforts desired by the board with the assistance and expertise of the following individuals:

Martin R. Parker Jr., PE, brings 48 years of traffic engineering experience and comprehensive knowledge of vehicular/pedestrian relationships to our dedicated team. This experience enables him to provide safe and efficient transportation systems that "make sense". Martin will act as a resource to Lori and perform quality reviews on studies completed by her and the team. Martin's experience includes traffic impact studies, corridor studies, operational analyses, highway and non-motorized transportation planning, wayfinding and signage, traffic signals, signal timing, geometric improvements, as well as safe routes to schools. His projects include the City of Battle Creek Non-Motorized Plan and Implementation as well as the Davison Township walkability plan which included Complete Streets concepts into every design. Martin has also provided traffic engineering services for private developments including the Henry Ford Hospital in West Bloomfield.

Matt Stacey, PE, is a dedicated road design engineer, a stickler for details and follows through to provide accurate designs delivered on schedule. Matt's role will include coordinating with Lori on the feasibility of implementation of complete streets concepts into design. Matt serves as Project Manager and lead road engineer on urban arterial resurfacing and reconstruction

projects, pre-cast bridges, sign inventory projects, and freeway/freeway interchange design projects. Matt is the Transportation Services Group Manager for our Taylor office, and has been the technical and management lead for numerous transportation projects ranging from large urban freeway to local street resurfacing projects. His experience includes design and management of freeways, interchanges, boulevards, collector roads, as well as minor and major arterials – all of which have included complete streets concepts from addition of bike lanes, to mobility improvements for both vehicles and pedestrians, and efforts to provide for traffic calming and safety improvements. He has managed reconstruction projects, resurfacing project and CPM projects. He engages with a wide variety of clients including the Michigan Department of Transportation, Counties, Cities, Townships and Villages, DDA's and Economic Development Corporations. Matt's previous roles have given him insight and experience into implementing complete streets concepts into designs in an efficient and cost effective manner.

Jill Bosserd, EIT, is a traffic engineer with 13 years of experience. Her background with a variety of transportation projects has focused on traffic signal design and operations. Jill will be responsible for any reviews, studies or designs that require signal operations, enhancements, installations or improvements. She will work under Lori's direction as assignments are received from the Board. Jill has served as project engineer for hundreds of traffic signal modernizations throughout the state, and her experience includes performing traffic signal design work and calculations, developing pay items and special provisions for construction using e-proposal, preparing quantity and engineers estimates, developing traffic signal timing plans, and preparing timing permits using MDOT's clearance interval calculation spreadsheet and the Michigan Timing Plan Preparation Guidelines. Other project responsibilities include mitigating intersection operational deficiencies using Highway Capacity Software and Synchro, and performing signal optimization studies using Synchro and SimTraffic.



Complete Streets Experts

New legislation changes Michigan's approach to building roads. Complete Streets requires that consideration be given to all road users, not just vehicles, and that MDOT and municipalities consult with one another when planning a non-motorized project that affects a transportation facility. Communities adopting their own Complete Streets policies are best positioned to advance implementation of their own transportation goals.



Wade Trim facilitated the 20-year Battle Creek Non-motorized Plan with the City's Parks and Engineering Departments.



We have provided resumes for these key staff followed by a few project profiles highlighting some of our relevant experience.

Wade Trim has served as traffic engineer directly for or on projects for these Michigan clients:

- City of Taylor
- Charter Township of Canton
- City of Davison
- Van Buren Township
- Dearborn Heights
- City of Plymouth
- Michigan Department of Transportation
- Wayne County
- Brownstown Township
- City of Battle Creek

Lori J. Pawlik, PE

Role

Lead Traffic Engineer (On-Call)

Education

BS, Civil Engineering,
Wayne State University, 2000

MS, Civil Engineering,
Wayne State University, 2005

Registration

Professional Engineer, 2005,
Michigan #6201052560

Special Training

- Safety Analysis Using the AASHTO Highway Safety Manual, Center for Technology and Training, 2013
- Road Safety Audits, Southeast Michigan Council of Governments, 2010
- Identifying Barriers and Engineering Solutions for Safe Routes to School, Institute of Transportation Engineers, 2006
- Interchange Justification Studies, ODOT Traffic Academy, 2006
- Signing and Markings, ODOT Traffic Academy, 2006
- Access Management, MDOT, 2003

Traffic Analysis and Software Skills

- Synchro Studio 7
- CORSIM
- Highway Capacity Software
- Microstation
- Microsoft Suite 2007

Professional Affiliations

- Institute of Transportation Engineers, International and Michigan Sections
- Engineering Society of Detroit

Lori Pawlik is a Traffic Engineer with experience conducting traffic engineering, highway design, and transportation planning studies ranging from access management plans to traffic impact studies. Lori is responsible for conducting traffic operations and safety investigations using simulation modeling, conducting feasibility and parking studies, and traffic impact site studies. Previously employed by the Wayne State University Department of Civil and Environmental Engineering, she conducted traffic counts and prepared crash analyses and condition diagrams.

Representative Project Experience

- Reconstruction of M-85 from Sibley Road to Goddard Road, Wayne County, MI, MDOT - Traffic Engineer responsible for conducting capacity analyses and traffic engineering operations on this four-mile urban arterial boulevard. Lori conducted extensive operational analyses, crash analyses on the corridor, highway capacity analyses at 20 signalized intersections, and a signal optimization study for the corridor. She also conducted the access management analyses on the corridor, and the investigation of pedestrian accommodations and ADA-compliant ramps, the on-street and on-site parking studies, and preparation of permanent traffic signing and marking plans. The project also included special Intersection Safety and Operational Investigations at the two intersections of M-85 (Fort Street) and Pennsylvania Road, and M-85 (Fort Street) and Quarry Road and traffic signal warrant studies at three intersections. The studies identified highway engineering deficiencies contributing to safety risks associated with the unusual geometry at the intersections. The safety analysis effort included collecting traffic data, preparing crash analysis and collision diagrams, performing traffic conflict and human factors analyses, conducting capacity analyses using procedures outlined in the 2000 Highway Capacity Manual.
- M-97 Rehabilitation from South of Hayes Road to 14 Mile Road, Cities of Warren, Roseville, Fraser in Macomb County, MI, MDOT - Traffic Engineer for the rehabilitation of 3.55 miles of urban arterial roadway. Responsibilities included conducting safety studies and operational analysis of geometric design and traffic control elements, and evaluation of intersection improvements including non-motorized accommodations with ADA-compliant features, traffic signal design, and an access management report. Lori also prepared the permanent signing plans and conducted a Signal Optimization Study for the 13 intersection network on M-97 including preparation of Synchro models for existing conditions, optimized conditions, and mitigated conditions. The Synchro models were modified to determine the best signal timing options during stage construction, and signal timing permits are being developed. She also prepared signal timing permits for the multiple stages of construction.
- I-275 Bike Path Asset Management, Wayne and Oakland Counties, MI, MDOT/Wilbur Smith Associates - Traffic Engineer responsible for conducting a study of pedestrian crossings along the I-275 Bike Path in Western Wayne County. Lori conducted a field review at each

of the 19 major intersection crossings to review safety and operations of the crossings. Features such as sight distance, nearby traffic signals and operations, pavement markings, and signing were analyzed. Provided recommendations to improve safety and pedestrian/vehicular interaction at each point along the path where non-motorized and vehicular traffic met, such as recommendations of pedestrian signal locations, appropriate pavement markings and signs.

- M-24 Improvements from Harmon Road to Goldengate, City of Auburn Hills and Charter Township of Orion, Oakland County, MI, MDOT - Traffic Engineer responsible for operational analysis and safety studies for 5 miles of cold milling, pavement repairs, and HMA overlay. The work also includes miscellaneous replacement of driveways, sidewalk, pedestrian ramps, drainage improvements, signal upgrades/replacement, guardrail, and curb and gutter re-pair/replacement. Lori prepared the comprehensive traffic analyses along the corridor comprised of a safety study, access management review, and an operational and geometric study, which included proper placement of new crossovers and traffic signals. The study also analyzed several alternatives using Synchro models for the intersection of M-24 and Clarkston Road, including additional lanes on the boulevard, a roundabout, loop ramp, and right-turn only option. User delays were estimated utilizing the Synchro models for various construction alternatives. Signal optimization will be conducted and timing permits will also be prepared for the final package for the mitigated conditions.
- M-59 at Crooks Road Interchange Reconstruction Design-Build, MDOT - Traffic Engineer responsible for preparing signing, pavement markings and maintenance of traffic plans for the design-build delivery of an interchange reconstruction. The project included reconstruction of interchange ramps and approaches associated with widening Crooks Road from a two-lane bridge to a four-lane structure with non-motorized paths on each side. The aggressive schedule required design and construction be completed one year from notice to proceed.
- M-153 at Beck Road Intersection Improvements Study, M-25 in Canton Township, Wayne County, MI - Project Engineer for a complete traffic and real estate study on M-153 at Beck Road including the evaluation of the feasibility of a 5-lanes intersection at the location. A traffic study was conducted to analyze current and future traffic needs in the intersection and along M-153 and Beck Road as described above. Proposed developments in the area were accounted including plans by the Canton Township which will impact on this intersection. Three improvement alternatives were developed for an area including significant suburban residential developments.
- Corridor Safety Study of M-29, Macomb County, MI - Lead Project Engineer responsible for conducting a comprehensive corridor crash analysis to identify high-crash areas and road features traffic engineering elements on this 2.6-mile project. Crashes were obtained from MDOT CRIS and sorted by location using the MDOT Physical Reference numbers. Corridor crashes, and signalized and unsignalized high-crash locations were analyzed by crash type, severity and selected characteristics. The results of the crash analysis were used to identify corrective treatments for the M-29 (23 Mile Road) design project.
- Henry Ford Health System Traffic Impact Study, West Bloomfield, MI - Project Engineer responsible for determining the traffic impacts of the Henry Ford Health System Campus, which included collecting traffic data, preparing diagrams, and using the software packages CORSIM, aaSIDRA and HCS 2000 to model the impacts of the existing and proposed roadway design alternatives. Analyses of the proposed roadway included using CORSIM and aaSIDRA to model six roundabouts planned in Oakland County, and to model the impacts of hospital traffic at the roundabouts.
- Traffic Impact Study, Lowe's of White Lake Township, Oakland County, MI - Project Engineer responsible for data collection and analysis to determine the impacts of a proposed Lowe's warehouse. A traffic signal warrant study was also conducted.

Martin R. Parker, PE

Role

Traffic Engineering Support

Education

MS Civil Engineering, University of Virginia, 1977

BS Civil Engineering, University of Virginia, 1975

Registration

Professional Engineer, MI, VA

Professional Affiliations

- Institute of Transportation Engineers
- American Society of Civil Engineers
- Transportation Research Board

Presentations

Maximizing Traffic Safety in Michigan, Traffic Safety Summit, East Lansing, March 2007

School Site Planning for Safe Transportation, Designing Healthy Livable Communities Conference, East Lansing, Nov. 2006

Safe Routes to School and Safety Audits, Transportation Forum, East Lansing, 2003

Martin Parker, Senior Transportation Engineer, provides comprehensive traffic engineering and safety management services to governmental agencies and private sector concerns. His expertise includes highway and non-motorized trail planning, design, operations analysis, and evaluation for vehicular and non-motorized modes. Martin has considerable experience working with multiple stakeholders including planning commissions, regional and national agencies, developers, Departments of Transportation, and the public. His projects include intersection and roundabout design with ADA requirements, bike and pedestrian access trails and parking studies. He has 48 years of experience and has written numerous traffic and safety reports and training manuals for the Federal Highway Administration and state and local agencies.

Representative Project Experience

- City of Battle Creek Non-Motorized Transportation Network Master Plan - Traffic Engineer responsible for determining the need and feasibility of developing trails and other pedestrian and bike accommodations to link origins with major destinations such as the downtown area. The effort involved coordination and input from City officials, MDOT, Calhoun County, schools, and interest groups; conducting two public hearings; and developing conceptual plans for bicycle lanes on three major streets. During plan development the City requested signing and marking expertise to implement bicycle lanes along two existing street corridors. These were the first bicycle lanes in Battle Creek in the modern era. The plan was completed and approved in 2006 with implementation scheduled as each new road improvement segment is designed and constructed. Full implementation of the plan was forecast over a 20-year period, however, due to public interest 60 percent of the plan was implemented by 2010.
- Davison Township Non-Motorized Connectivity Study. Traffic Engineer responsible for identifying the need, location, and conceptual design of non-motorized accommodations in Davison Township. The objective of the study was to develop a plan for providing connectivity between residential areas and attractions such as schools, parks, trails, etc. Special attention was given to providing non-motorized accommodations at street intersections. Two public hearing were held to obtain input and to preview the final plan. The plan is currently being implemented by the Township.
- West Bloomfield Trail Extension, West Bloomfield Township Parks and Recreation Commission, Oakland County, MI - Worked on the crossings for this project that involved the design of a 2.75 mile multiple purpose trail along the existing alignment of an abandoned railroad. It included nearly 13,000 feet of aggregate path meeting the requirements of the AASHTO Guide for the Development of Bicycle Facilities, 2004. Additionally, the project contained a 400 foot boardwalk over a protected wetland, multiple scenic outlooks, ADA compliant roadway crossings, and the installation of a rectangular Rapid Flashing Beacon.

- Five Mile Road Corridor Improvement Plan in Redford Township, Wayne County, MI - Lead Traffic Engineer responsible for examining the feasibility of reducing the number of through lanes on Five Mile Road for four to two and to provide parallel on-street parking on both sides of the roadway and creating a pedestrian friendly environment in the commercial district. Synchro microscopic traffic simulation models were used to analyze and evaluate existing and proposed conditions during the peak hours. A final report was prepared that determined that removing two through lanes on Five Mile Road from Kinloch to Aubrey and adding two on-street parking lanes would have a small effect on the level of service at the three signalized intersections in the study area. Pedestrian mid-block crossings with median treatments were also recommended. The plan was presented for funding and implementation at meetings held with the Township and Wayne County officials. Final streetscape plans with traffic calming bump-outs, ADA compliant ramps, and median treatments are being prepared by Wade Trim.
- M-24 Improvements from Harmon Road to Goldengate, City of Auburn Hills and Charter Township of Orion, Oakland County, MI, MDOT - Lead Traffic Engineer for approximately 5 miles of cold milling, pavement repairs, and HMA overlay. The work also includes redesign of major intersections and relocation of crossovers to adequately serve traffic demands, signal upgrades/replacement, guardrail, and curb and gutter repair/replacement. Martin also prepared the Small Business Development Plan for the Non-Freeway Signing prequalification on this Pilot project and is conducting the training and QA/QC oversight to assist the subconsultant to obtain the full prequalification.
- M-85 Reconstruction from Sibley to Goddard, MDOT, MI - Lead Traffic Engineer responsible for traffic engineering operations on this four-mile urban arterial boulevard through four communities. Responsibilities include conducting operational analyses, crash analyses on the corridor, highway capacity analyses at 18 signalized intersections and a signal optimization study for the corridor. Provided analyses of access management on the corridor, investigating pedestrian accommodations and providing ADA-compliant ramps, analyzing on-street parking, and preparing permanent traffic signing and marking plans. The project also included Intersection Safety and Operational Investigations at the intersections of M-85 (Fort Street) and Pennsylvania Road, and M-85 and Quarry Road and traffic signal warrant studies at three intersections. The studies identified highway engineering deficiencies contributing to safety risks associated with the unusual geometry at the intersections. Work included collecting traffic data, preparing crash analysis and collision diagrams, performing traffic conflict and human factors analyses, conducting capacity analyses using HCS 2000. Multi-modal Design on the M-85 bus stop locations included connected sidewalks and ADA improvements.
- M-97 (Groesbeck Highway) Reconstruction from Hayes Road to 14 Mile Road, MDOT, MI - Project Manager responsible for traffic safety and operational studies, signal operations study, MOT plans, and signing plans for this 3.6-mile urban arterial project. Identified existing operational deficiencies and evaluated the impacts of alternative improvements. Led the operational studies including the signal optimization study. An evaluation was conducted to determine if the number of through lanes can be reduced from 7 to 5. Other design features such as need for right-turn lanes at major streets and commercial enterprises were examined. Conducted pedestrian accommodations studies and an access management study and design exceptions. Signal timing along the corridor was to be optimized to reduce delay and travel time and increase average travel speeds. Other design features such as the need for right-turn lanes at major streets and commercial enterprises were examined. Also responsible for conducting pedestrian accommodations studies and an access management study and design exceptions. Signal timing along the corridor will be optimized based on improving bandwidths, reducing delay and travel time and increasing average travel speeds. A benefit to cost analysis will also be conducted and timing permits will be prepared for implementation after construction.

Matthew J. Stacey, PE

Role

Road Design Engineering
Support

Education

MS, Civil Engineering,
University of Michigan, 1994

BS, Civil Engineering,
University of Michigan, 1993

Registration

Professional Engineer - MI, FL

Professional Affiliations

American Society of Civil
Engineers
ACEC Transportation
Committee

Training

- Principals Training (2014)
- Complete Streets (ITE) (2010)
- Pedestrian Crossings (ASCE) (2014)
- Project Management (2006)
- Engineering Leadership (2003)
- Planning and Design of Service Interchanges (2002)
- EPE Analysis and Documentation (2001)
- Bentley Storm & Sanitary SC Training (2001)
- InRoads Design Software (1999)
- Highway Railroad Grade Crossing (1998)
- Pavement Rehabilitation
- ASCE Hydraulics & Hydrology Workshop (1997)
- Highway Sight Distance (1997)
- Pavement Design (1997)
- National Environmental Protection Agency and the Decision Making Process (1997)

Matt has managed the design of many surface transportation projects throughout Michigan including urban and rural arterial reconstruction and resurfacing projects. He is experienced in dealing with a multitude of traffic maintenance issues, geometrics, drainage, and complex road design parameters, as well as varying formats for plan preparation such as log projects and full sized plans. His experience also includes projects with a multitude of local stakeholder issues and environmental concerns, along with the challenges of integrating the design of complete streets and multi-modal facilities into road design projects. He has a proven track record of successful design and completion of road design projects for many entities including MDOT, local municipalities and county road agencies making him an ideal candidate to provide road design support as needed.

Representative Project Experience

- M-24 Improvements from Harmon Road to Goldengate Road, City of Auburn Hills & Charter Township of Orion, MDOT Oakland TSC - Project Manager for about 5 miles of roadway rehabilitation and resurfacing along a boulevard section of roadway comprised of significant operational and intersection improvements along with crossover relocation, concrete repairs, milling and resurfacing, drainage system upgrades to accommodate increased runoff, driveway modifications for access management improvements, ADA sidewalk ramp upgrades, 4 miles of safety path, traffic signal modernizations, pavement marking and upgrading of traffic signs.
- M-85, Fort Street, Sibley Road to Goddard Road, MDOT - Lead Road Engineer for the design and preparation of plans for four miles of boulevard reconstruction running through Southgate, Riverview, Lincoln Park, and Wyandotte. Analyzed and designed drainage, geometric and intersection improvements, and complex traffic maintenance. The project also included coordination of right-of-way issues and public involvement.
- M-85 (Fort Street) Reconstruction from Miller Street to Springwells Street, City of Detroit, Wayne County, MI - Lead Road Design Engineer for the design and preparation of plans for 0.98 miles of total reconstruction of M-85 in southeast Michigan. The project includes analysis and design of geometric and intersection improvements, in-depth traffic analysis of crossovers and turning movements, utility coordination, traffic signal design, signing upgrades and complex traffic maintenance. It included coordination of right-of-way issues and public involvement.
- M-97 Rehabilitation from South of Hayes to 14 Mile Road, Cities of Warren, Roseville, Fraser in Macomb County, MI, MDOT - Project Manager for the rehabilitation of 3.55 miles of urban arterial roadway. Project elements included HMA milling and

resurfacing, curb and gutter replacement, water main replacement, sidewalk construction, ADA ramp installation, traffic signal replacement and modernization, access management, right-of-way plan and document preparation, and drainage improvements. The project also featured a sidewalk connectivity study to review gaps in the sidewalk system as re-development has occurred on the corridor. An additional 1 mile of sidewalk was installed on the corridor in addition to every major signalized intersection receiving pedestrian facility crossing upgrades and improved signal timing to safely cross pedestrians while maintaining vehicle progression.

- M-153/Beck Road Intersection Improvements, Canton Township, MDOT - Project Manager for the widening of M-153 at Beck Road to a five-lane section with shoulders that accommodate future widening of Beck Road. The project included significant geometric improvements to the intersection, preparation of right-of-way and access management plans, drainage improvements, utility coordination, and signal optimization with adjacent intersections, as well as complex maintenance of traffic. To alleviate congestion and safety concerns at this intersection, M-153 was widened from 2 to 5 lanes including paved shoulders in conjunction with curb and gutters. Drainage outletted to the environmentally sensitive Rouge River watershed via the north branch of the Fellows Creek located within the project limits. A combination of traditional storm sewer pipes in an underground system, along with swales, ditches, spillways, french drains and culverts were used to drain the site. The flat nature of the road combined with the high water elevation of the outlet required significant analysis to come up with the viable designs that fit within the project constraints. This project also required significant stakeholder coordination with the County, Township and various residents and businesses where widening the road directly affected the various owners property frontages.
- M-25 / M-24 resurfacing project, Unionville, MI, MDOT Bay City TSC – Project manager for the resurfacing of 5 miles of roadway along a rural and urban stretch of roadway including the widening of shoulders for use as an identified bike lane in rural stretches of the roadway, and complete reconstruction of the sidewalk facilities in the urban section of Unionville. A 1-mile stretch of roadway through Unionville was converted from a 4-lane to 3-lane section, providing a center left turn lane for safe left turning movements of vehicles, and converting a through lane for use as on-street parking. This road diet served to reduce crashes, lower speeds along the roadway, and provide a buffer of parked cars as shielding for pedestrians.
- Belleville Roads Signals and Resurfacing, Charter Township of Van Buren, MI - Project Manager for the upgrade of 6 traffic signals along Belleville Road in the heart of Van Buren Township and the installation of a new traffic signal for a proposed development and new traffic generator. Signals were upgraded to box-span configurations using mast-arms and new controllers to synchronize and coordinate the system for better traffic progression along the corridor along with improved pedestrian signals. A half-mile stretch of the 5-lane roadway at the interchange of Belleville Road and I-94 was also milled and resurfaced to improve rideability. Two traffic signals control the freeway entrance and exit ramps. Re-timing of the signals and their interconnection was used to increase safety, decrease traffic queues at the freeway exit ramps and to provide better progression through the interchange.

Jill N. Bosserd, EIT

Role

Signal Design Engineer

Education

BSCE, Michigan State University, 2001

Continuing Education

Introductory Controller Seminar, Carrier & Gable, 2002

Flashing Yellow Arrow Seminar, Carrier & Gable, 2007

Designing Pedestrian Facilities for Accessibility, 2010

Registration

EIT, Michigan, 2002

Professional Affiliations

- Institute of Transportation Engineers
- International Municipal Signal Association

Jill Bosserd is a Traffic Engineer with 13 years of experience. Her background with a variety of transportation projects has focused on traffic signal design and operations. Jill has served as project engineer for hundreds of traffic signal modernizations throughout the state, and her experience includes performing traffic signal design work and calculations, developing pay items and special provisions for construction using e-proposal, preparing quantity and engineers estimates, developing traffic signal timing plans, and preparing timing permits using MDOT's clearance interval calculation spreadsheet and the Michigan Timing Plan Preparation Guidelines. Other project responsibilities include mitigating intersection operational deficiencies using Highway Capacity Software and Synchro, and performing signal optimization studies using Synchro and SimTraffic.

Representative Project Experience

- M-59 at Crooks Road Interchange Reconstruction (Design-Build) City of Rochester Hills, Oakland County, MI - Project Engineer responsible for developing traffic signal plans associated with the design-build delivery of an interchange reconstruction. The traffic signal design scope included the modernization of the signals at Crooks Road and the eastbound M-59 ramps, Crooks Road and the westbound M-59 ramps, and Crooks Road and Star Batt Drive, as well as the preparation of traffic signal staging plans for multiple stages of construction. All three signals were upgraded to box spans with video detection (using Autoscope Cameras) and countdown pedestrian signals. The Star Batt Drive intersection also included the design of ADA compliant pushbutton placement and sidewalk ramps. Traffic signal staging plans were also prepared for the Crooks Road and Northfield Drive intersection, which included temporarily removing a mast arm and utilizing a temporary diagonal span. Jill's project responsibilities included preparing the traffic signal designs (including performing the necessary design calculations) and coordinating with utilities, the MDOT Signals Unit, and the electrical contractor performing the signal work.
- M-97 Rehabilitation from South of Hayes to 14 Mile Road, Cities of Warren, Roseville, Fraser in Macomb County, MI, MDOT - Project Engineer responsible for signal design as part of a roadway rehabilitation project along M-97 from Martin Road to 14 Mile Road. The signal design scope included upgrading diagonal spans to box spans, installing side street and left-turn actuation, upgrading to the flashing yellow arrow left-turn signal at intersections with permissive/protected left-turn phasing, and upgrading pushbutton placement and sidewalk ramps to ADA compliance at 7 intersections, as well as preparing traffic signal staging plans for multiple stages of construction. Due to the severe skew of the intersections, suspended box spans were utilized at several locations to meet cone of vision requirements. Louvers were also used

at select locations to prevent driver confusion at intersection approaches where the signal for opposing traffic may also be visible. Jill's primary responsibilities included preparing the traffic signal designs (including performing the necessary design calculations), coordinating with utility companies and the MDOT Signals Unit, developing pay items and special provisions for construction, preparing project cost estimates, and developing the project proposal using e-proposal.

- Signal Modernization Design at 17 Locations in the University Region, Livingston, Monroe & Washtenaw Counties, MI, MDOT - Project Engineer responsible for the modernization of 17 traffic signals in the University Region. The modernizations included upgrading diagonal spans to box spans, installing wireless vehicle detection, upgrading pedestrian facilities and pushbutton placement to ADA compliance, and installing radio interconnect. Three of the project locations included the design of railroad pre-signals and the preparation of railroad permit applications. Jill's primary project responsibilities include preparing the traffic signal designs (including performing the necessary design calculations), coordinating with utilities, local maintaining agencies, the MDOT Signals Unit and Brighton TSC, developing pay items and special provisions for construction, preparing project cost estimates, and developing the project proposal using e-proposal. The project is scheduled for an early 2015 letting.
- Traffic Signal Modernization, Canton Township, MI - Project Engineer responsible for providing traffic signal design services for modernizing seven signals and the design of one new signal for Canton Township. Design scope included upgrading to Category III mast arms and installing LED illuminated case signs and street name signs, video traffic detection, and battery back-up systems.
- Rectangular Rapid Flashing Beacon (RRFB) for M-222 Reconstruction Project, Prein & Newhof, Allegan, MI - Project Engineer responsible for preparing plans for a Rectangular Rapid Flashing Beacon (RRFB) installation for a mid-block crossing on M-222 in the City of Allegan in conjunction with a roadway reconstruction project. The RRFB system provides a system of warning lights mounted to a pedestrian crossing sign that are activated by a pedestrian pushbutton. The warning lights remain dark until activated by the pushbutton, and then a wig-wag rapid flashing indication alerts motorists that a pedestrian is crossing the street. A light indication also faces the pedestrian so as to inform them when the device is activated. The RRFB at this particular location utilizes solar power with a 65 watt solar engine.
- Capital Avenue Corridor Analysis, Battle Creek, MI - Project Engineer for a corridor analysis along Capital Avenue, from Columbia Avenue to Territorial Avenue, in Battle Creek. The analysis was conducted to determine the traffic impacts of reducing Capital Avenue from a four-lane cross-section to a three-lane cross-section in order to include bike lanes along both sides of the road. The corridor was modeled in Synchro to compare the existing and proposed traffic impacts. SimTraffic was used to observe the expected corridor performance, and compare existing and proposed delay and travel times.
- Signal Modernization at 20 Locations in the Southwest Region; Allegan, Kalamazoo & St. Joseph Counties, MI - Project Engineer for the modernization of 20 existing traffic signals throughout the Southwest Region along BL-94, US-131, and various other routes. The project scope entails upgrading existing signals to box spans, installing vehicle and pedestrian actuation, upgrading to countdown pedestrian signals, designing ADA compliant pedestrian facilities, designing railroad and fire station pre-emption, and upgrading existing flashing beacons. The project includes several intersections in historical districts, requiring coordination with MDOT's Environmental Historians. Jill's primary project responsibilities include preparing the traffic signal designs (including performing the necessary design calculations), coordinating with utilities, local maintaining agencies, the MDOT Signals Unit and Kalamazoo TSC, developing pay items and special provisions for construction, preparing project cost estimates, and developing the project proposal using e-proposal.

M-85 (Fort Street) from Sibley Road to Goddard Road



Client: Michigan Department of Transportation

Completion Date: November 2013

Services:

- Design and preparation of plans
- Staged construction
- Drainage design
- Intersection improvements
- Traffic analysis of crossovers and turning movements
- Traffic signal design
- Signing upgrades

The M-85 project in the Downriver area of southeast Michigan included design and preparation of plans for four miles of total reconstruction of a boulevard (Fort Street) in the cities of Southgate, Riverview, Lincoln Park and Wyandotte. The project included analysis and design of a complex drainage system, geometric and intersection improvements, in-depth traffic analysis of crossovers and turning movements, traffic signal design, signing upgrades and complex traffic maintenance. The project also included coordination of right-of-way issues and public involvement.

Several traffic studies were conducted as part of this project. Three intersections were evaluated for safety and operations including two five-point intersections. The geometry of all three was altered to improve operations and increase the safety of the intersections. These changes varied from elimination of movements, adding turn lanes, and changing signalization. Wade Trim also evaluated the parking and access management. On-street parking was reconfigured to create "bump-outs" along the corridor. These bump-outs were designed to eliminate parking in clear vision triangles at side

streets and driveways. We worked with local businesses and the communities along the corridor to balance driveway openings with on-street parking. Several driveways were identified for closure or combination with other driveways.

A pedestrian study was conducted of the corridor. Field observations of pedestrian movements and destinations were completed. From this information, safe and convenient crosswalks and non-motorized paths were identified. We worked with the communities, MDOT and the FHWA to identify sidewalk gaps and locations to add sidewalk to improve pedestrian mobility. Several traffic staging concepts, signal warrant, capacity and crash analyses were conducted as part of the project.

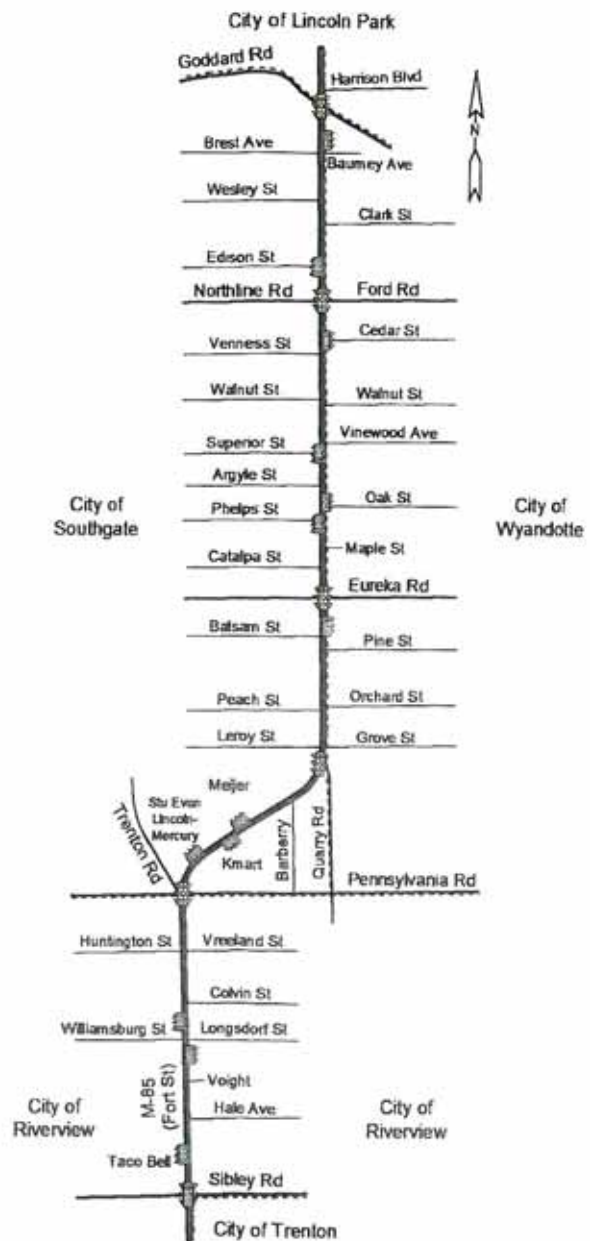
A corridor signal timing analysis was conducted to determine the optimized signal timings on the corridor with the new design improvements, including additional pedestrian phases. The results indicated that optimizing the signals alone, without equipment or geometric improvements, would have significant impact. By adding safety and operational features such as pedestrian

M-85 (Fort Street) from Sibley Road to Goddard Road (Cont'd)

phases including push-buttons at all major intersections, the mitigated conditions were better than optimizing signals without the geometric improvements. Signal timing permits were prepared for the optimized condition with geometric and operational improvements.

A detailed drainage study involved designing a system that would be satisfactory to MDOT and the Southgate-Wyandotte Drainage District. This system included a parallel pipe for detention, flapgates and "duckbills" as part of the design. Wade Trim used the current MDOT criteria for gutter spread and developed a unique storm water configuration that would enhance the constructibility of the project – a rain garden in the median.

Part-width construction of the roadway will be completed during three stages. Maintenance of traffic plans and traffic signal staging plans were developed to maintain two lanes of traffic in each direction. Several sub-stages of construction were developed for the major signalized intersections.



M-97 Reconstruction from South of Hayes to 14 Mile Road

**Client:**

Michigan Department of Transportation

Completion Date: 2011

Services:

- Traffic operations and safety improvements
- Signal operations study
- MOT plans
- Signing plans

This project for the Michigan Department of Transportation involved the reconstruction of 3.55 miles of urban arterial roadway in the Cities of Warren, Roseville and Fraser in Macomb County, MI.

Project elements included HMA milling and resurfacing, curb and gutter replacement, sidewalk construction, ADA ramp installation, traffic signal replacement and modernization, access management, right-of-way plan and document preparation, pedestrian bridge removal, and drainage improvements. Wade Trim also worked with SMART bus system to develop plans for service both during and after construction.

Wade Trim was responsible for conducting the traffic safety and operational studies, signal operations study, MOT plans, and signing plans for this 3.6 mile urban arterial project. The purpose of the studies are to identify existing operational deficiencies and evaluate the impacts of alternative improvements. The studies consisted of mobility analyses, geometric analyses, and a signal optimization study. Wade Trim is responsible for leading the operational studies including the signal optimization study. To analyze

traffic operations on this 11 signal network, Synchro and SimTraffic 7 software are being used. An evaluation was conducted to determine if the number of lane through lanes can be reduced from 7 to 5. Other design features such as the need for right-turn lanes at major streets and commercial enterprises was examined. Also responsible for conducting pedestrian accommodations studies and an access management study and design exceptions. Signal timing along the corridor will be optimized based on improving bandwidths, reducing delay and travel time and increasing average travel speeds. A benefit to cost analysis will also be conducted and timing permits will be prepared for implementation after construction.

I-275 Bike Path Asset Management Study



Client:
Michigan Department of Transportation

Completion Date: 2008

Services:

- Mobile GIS/GPS Data Acquisition
- Asset Condition Assessment
- Detailed Flip Book
- PDFs and ArcReader Project

Wade Trim performed an Asset Management Study for the I-275 Bike Path in southeast Michigan. The bike path parallels Interstate-275 for 42 miles, from the City of Novi in the north, through western Wayne County and into Monroe County, MI.

The study was a comprehensive analysis of how to best rehabilitate and manage the existing bike path in the I-275 Corridor, as well as determine the feasibility of expanding the trail south to the City of Monroe.

Wade Trim staff used hand-held GPS receivers synchronized with tablet PCs operating GIS software and a digital camera to document many existing conditions of the bike path, to include: pavement conditions, obstacles, vegetation overgrowth, safety concerns, culvert locations, bridges/underpasses, fence location and type, excessive slopes, existing and potential trailheads, and design standards.

A flip book of the entire bike path was created which maps the bike path overlaying orthophotography, with point and line symbols, pictures and descriptive text describing the condition of each segment of the bike path.

Village of Milford Non-Motorized Trail

Client: Village of Milford

Completion Date: 2009

Services:

- Conceptual Planning
- Grant Writing
- Survey
- Engineering/Design
- Construction Engineering/Inspection



Wade Trim provided planning, grant writing, and engineering design and construction services for an approximately one-mile long, non-motorized trail in the Village of Milford. The trail connects to the Milford-Kensington Trail and traverses from the Milford Dam at the Huron River, through Hubbell Pond Park, and connects to the Milford YMCA, Milford Library, and downtown Milford. Wade Trim assisted the Village obtain \$65,000 from the Community Foundation for Southeastern Michigan for the development of construction documents as well as nearly \$300,000 from the Michigan Department of Natural Resources toward construction.

The 10-foot wide, asphalt cross-section trail was located to avoid impacts on nearby wetlands, significant woodlands, and slopes. It also takes advantage of the spectacular views of the Huron River, Mill Pond, and downtown Milford. The trail was completed in 2009.





OTHER CLIENTS

We understand that the City requires Wade Trim will have the City of Birmingham as its first priority when assisting the City on issues that involve other road agencies or other private interests.

1. Wade Trim's average percentage of income earned from the Michigan Department of Transportation over the last 3 years is 5.74 percent.
2. Wade Trim has not done any work for the Road Commission of Oakland County in the last 3 years.
3. Our percentage of income from private firms on private projects in Oakland County over the last 3 years averages out to less than 1 percent.

As a part of this disclosure, Wade Trim verifies that should we be selected for this position, Wade Trim will be prepared to phase out all relationships with developers that are currently active in the development of private properties within the City of Birmingham.



CONSULTANT APPROACH

Lori Pawlik will attend the identified Board meetings, including any study sessions, or any other identified city functions that may be necessary as part of our service to the Board (i.e. public information meetings, City Commission meetings, etc.). Lori will review plans, make recommendations to the Board, conduct studies as needed to provide the Board with the services desired and engineering recommendations to implement multi-modal improvements to Birmingham's road and non-motorized facilities network. Prior to engaging in any work requested by the Board, Lori will review the scope of services, assess project needs, determine the proper staffing, and develop a work plan to successfully execute the task or project. The estimated hours will be compiled and used with the provided rate schedule to develop a cost which will be presented to the Board for their approval prior to any work taking place.

As shown in the Personnel Section 2, Wade Trim has available staff with a variety of expertise in designing a multitude of projects. This flexibility will be used in proposing the right staff for each work assignment and preparing the project understanding.

Lori's role, in addition to performing the work desired by the Board, includes assigning the proper staff to projects and assignments that require Wade Trim's additional resources. It is our goal and intention to provide the best available staff to produce quality work and recommendations. A key element to meeting the Board's needs is providing staff that has the proper level of expertise required for tasks and assignments. At times, we may have our senior staff directing our junior staff or technicians in order to accomplish the assignment in the most cost efficient manner.



5

CONSULTING FEES

Since there is a very broad scope of services to be provided on this project, compensation for Wade Trim work is expected to be based upon the hourly rates, plus reimbursable expenses for travel, copying, etc.

Our Statement of Qualifications includes Wade Trim's proposed hourly rates for all personnel or subconsultants expected to work on various assignments, along with rates for typical reimbursable expenses expected in the execution of these duties.

Wade Trim's 2014 Billing Rate Schedule follows on the next two pages.

Figure 1 Staff Hourly Rates

Team Member	Role		Hourly Rate
Lori Pawlik, PE	Lead Traffic	Professional Engineer II	\$115
Matt Stacey, PE	Road Design	Professional Engineer III	\$150
Martin Parker, PE	Traffic Support	Senior Professional	\$170
Jill Bosserd, EIT	Signal Design	Engineer II	\$85

Figure 2 Billing Rate Schedule

**Wade Trim Billing Rate Schedule
Transportation (North)
With Equipment Billed Separately
Effective January 2014**

Labor Cost Classification Code	Title	2014 Rate Per Hour
236	Professional Engineer III	\$150.00
235	Professional Engineer II	\$115.00
234	Professional Engineer I	\$95.00
233	Engineer III	\$145.00
232	Engineer II	\$85.00
231	Engineer I	\$70.00
246	Professional Planner III	\$140.00
245	Professional Planner II	\$105.00
244	Professional Planner I	\$90.00
243	Planner III	\$100.00
242	Planner II	\$75.00
241	Planner I	\$65.00
256	Prof. Landscape Architect III	\$150.00
255	Prof. Landscape Architect II	\$95.00
254	Prof. Landscape Architect I	\$90.00
253	Landscape Architect III	\$90.00
252	Landscape Architect II	\$70.00
251	Landscape Architect I	\$60.00
266	Professional Scientist III	\$135.00
265	Professional Scientist II	\$95.00
264	Professional Scientist I	\$80.00
263	Scientist III	\$105.00
262	Scientist II	\$70.00
261	Scientist I	\$55.00
286	Professional Surveyor III	\$135.00
285	Professional Surveyor II	\$105.00
284	Professional Surveyor I	\$90.00
283	Surveyor III	\$90.00
282	Surveyor II	\$70.00
281	Surveyor I	\$65.00
785	Surveyor Technician V	\$105.00
784	Surveyor Technician IV	\$85.00
783	Surveyor Technician III	\$75.00
782	Surveyor Technician II	\$55.00
781	Surveyor Technician I	\$45.00
716	Construction Technician VI	\$115.00
715	Construction Technician V	\$100.00
714	Construction Technician IV	\$90.00
713	Construction Technician III	\$85.00
712	Construction Technician II	\$75.00
711	Construction Technician I	\$60.00
726	CADD Technician VI	\$110.00
725	CADD Technician V	\$90.00
724	CADD Technician IV	\$85.00
723	CADD Technician III	\$75.00
722	CADD Technician II	\$60.00
721	CADD Technician I	\$45.00
736	Engineering Specialist II	\$140.00
735	Engineering Specialist I	\$105.00
734	Engineering Technician IV	\$110.00
733	Engineering Technician III	\$80.00
732	Engineering Technician II	\$65.00
731	Engineering Technician I	\$45.00

**Wade Trim Billing Rate Schedule
Transportation (North)
With Equipment Billed Separately
Effective January 2014**

756	Project Specialist III/Manager	\$165.00
755	Project Specialist II	\$130.00
754	Project Specialist I	\$95.00
753	Project Aide III	\$110.00
752	Project Aide II	\$75.00
751	Project Aide I	\$55.00
203	Senior Principal	\$245.00
202	Principal	\$235.00
201	Senior Professional	\$170.00

Outside expenses and subconsultants at cost times 1.15.

Special billing rates will apply in matters requiring expert witnesses or other consulting as it relates to legal matters.

Reviewed and Revised Annually

Other Direct Costs	Rate
Computer Aided Design & Drafting (CADD)	\$6.25/hour
Survey Equipment	\$6.00/hour
Field Vehicle	\$0.63/mile
Robotic Survey Equipment	\$15.00/hour
SSES - Includes Van and Standard Equipment	\$14.75/hour
SSES - Equipment (Van and Miscellaneous)	\$8.50/hour
GPS Equipment	\$20.00/hour
First Order Leveling Equipment	\$20.00/hour
Construction Vehicle	\$16.00/hour
Traxler Nuclear Densimeter	\$5.50/hour
Cylinder Breaking	\$12.00/cylinder
Concrete Testing Equipment	\$5.00/hour
Photocopies	\$0.10/copy
Color Copies	\$0.25/copy
Color Printer (per print)	\$0.15/print
Travel	\$0.56/mile
Laptop Computers	\$9.50/day
3-D Laser Scanner	\$95.00/hour
OCE Printer	\$1.40/sheet
OCE Printer/Mylars	\$4.00/sheet
Flow Meter (single site)	\$625.00
Flow Meter (dual site)	\$875.00
Sampler (monthly)	\$500.00
Saximeter	\$12.00/hour
Rain Gauge (monthly)	\$225.00
Recorder (monthly)	\$150.00



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Transportation Engineer Interview Evaluation Sheet

FIRM NAME: _____

REVIEWER NAME: _____

CRITERIA	SCORE	PERCENTAGE OF IMPORTANCE
<p>How does Multi-Modal philosophy apply to Birmingham's existing conditions and specific challenges?</p> <ul style="list-style-type: none"> Clearly demonstrates an understanding of the City's constraints and street network Demonstrates willingness and ability to work creatively and with technical soundness to explore options within City constraints Knowledge of Multi-Modal principles and design best practices, particularly in highly urbanized area Experience drafting Multi-Modal recommendations for constrained environments The consultant offers a comprehensive approach to implementing the Multi-Modal Plan Evidence of effective implementation of Multi-Modal plans prepared by consultant The consultant demonstrates knowledge of the tools used to evaluate the implementation and outcomes of multi-modal transportation plans. 	/30	30%
<p>Experience of firm with municipal transportation engineering</p> <ul style="list-style-type: none"> Experience with other similar jurisdictions acting in the role of Traffic Engineer with or without Multi-Modal components Experience with conducting studies relative to various modifications that a road jurisdiction will undertake to address current transportation-related problems Experience with operating computer generated simulations in conjunction with road and/or traffic signal design Conveys understanding of the scope and nature of the municipal transportation engineering work, including working with neighborhood groups to mediate problems and find solutions that address problems both for the public and the City Evidence that all designs, including Multi-Modal components, are first based on nationally recognized standards, such as AASHTO 	/30	30%
<p>Experience of firm acting as transportation review agent for private developments</p> <ul style="list-style-type: none"> Demonstrates previous experience with wide variety of private development proposals. Understands how to critique private developer studies and proposals relative to the possible negative impact the proposal may have on the surrounding transportation system. Demonstrates ability to work with Planning Board or others to help modify private development designs where needed to be in the best interest of the City and general public. 	/20	20%

Content and Quality <ul style="list-style-type: none"> • The consultant follows presentation timing guidelines (10 to 15 minutes). • The lead project manager is in attendance. • The presenters are engaging and able to “sell” new ideas to the public. • The consultant provides comprehensive responses to the Committee’s questions. • Ability to handle conflicting opinions • Proven ability to balance all modes 	/20	20%
TOTAL SCORE	/100	100%

Is That All They Want? Millennials and Bike Lanes

Young Adults Are Prize Residents in Cities, and Urban Planners Say They Want to Bike to Work

BY FAWN JOHNSON

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City planners think that dedicated bike lanes are one of the best ways to attract young adult residents. ODD ANDERSEN/AFP/Getty Images

August 4, 2014 Think "millennials," and a host of images pop up: smart phones, tattoos, an affection for craft beer, and an allergy to owning cars. This generation of young people, roughly 14 to 34, is the subject of intense research from marketers to demographers, all trying to determine how they will impact our culture.

And all they want it is bike lanes. At least, that's what the head of a downtown business coalition in the millennial-hub of Denver thinks. In an interview with the [Denver Business Journal](http://www.bizjournals.com/denver/news/2013/10/18/tami-door-downtowns-diminutive.html?s=&page=all) [http://www.bizjournals.com/denver/news/2013/10/18/tami-door-downtowns-diminutive.html?s=&page=all] last year, Downtown Denver Partnership President Tami Door said the city's burgeoning tech sector is having a hard time attracting young workers because they want to bike to work.

"The number one thing they want is bike lanes. Ten years ago we never would have thought that walkability or bike lanes would

be economic development tools," she said.

Door makes it sound deceptively simple. I confess that I am not a millennial (squarely GenX, thank you), but I still think most people go to cities for jobs, not for bike lanes. Yet I am told by millennials who live in Denver that Door isn't overstating the issue. Jennifer Hill, a housing researcher with the Sonoran Institute in Colorado, told me that she and her husband selected their apartment in Denver based largely on whether they could bike or walk to work.

This tells me that Door is probably right that urban planning aimed at fulfilling the needs of the next generation of workers—in this case by giving them bike lanes—can be a boon to a city's economic development generally. She also isn't alone. The Pew Charitable Trusts [recently asserted](http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2014/06/in-bid-for-millennials-cities-and-states-promote-cycling) [http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2014/06/in-bid-for-millennials-cities-and-states-promote-cycling] that the bike craze erupting in cities is specifically designed to attract millennials. "Communities across the country are weighing similar routes, believing that a cycling-friendly reputation will help them attract millennials and the creative and economic energy that comes with them," author Tim Henderson said.

Certainly, the research supports Door's maxim that if you build bike paths, sidewalks, and car-free malls, the millennials will come. Three of the nation's top cities for millennials—Washington D.C., Denver, and Seattle—all boast fairly extensive campaigns to encourage biking. (For an interesting look at the growth of bike lanes in Washington, check out this [interactive map](http://mapstory.org/maps/1736/) [http://mapstory.org/maps/1736/] from Greater Greater Washington.)

Millennials' lifestyles are more conducive to biking. They are more likely to congregate in cities. Almost one-third of them (32 percent) live in central cities, according to the [Pew Research Center](http://www.pewsocialtrends.org/files/2010/10/millennials-confident-connected-open-to-change.pdf) [http://www.pewsocialtrends.org/files/2010/10/millennials-confident-connected-open-to-change.pdf]. They are more likely to exercise, especially the men. Almost two-thirds of millennial men (63 percent) surveyed by Pew said they did some form of vigorous exercise in the past 24 hours. That's compared with 46 percent of the overall population.

What's more, they are [less likely to own cars](http://www.fastcoexist.com/3027876/millennials-dont-care-about-owning-cars-and-car-makers-cant-figure-out-why) [http://www.fastcoexist.com/3027876/millennials-dont-care-about-owning-cars-and-car-makers-cant-figure-out-why]. From 2007 to 2011, the number of cars purchased by people aged 18 to 34 fell almost 30 percent, and according to a study from the AAA Foundation for Traffic Safety. They aren't eager to get driver's licenses. In 2011, the percentage of 16-24 year olds who had driver's licenses fell to its lowest percentage since 1963 at 67 percent, [according to](http://uspis.org/sites/pisr/files/reports/A%20New%20Direction%20vUS.pdf) [http://uspis.org/sites/pisr/files/reports/A%20New%20Direction%20vUS.pdf] the Public Interest Research Group.

One key component of millennial urban planning that Door did not mention is transit, a critical need for any city resident who doesn't want to drive. Seattle is in the middle of a war of wills on this one, with residents of its center city overwhelmingly voting in April to increase sales taxes by 1 cent to preserve the current bus system. The folks in the surrounding counties voted against the proposal. It will be on the ballot again in November. For an example of progressive millennial ranting on this topic, see [this article](http://www.thestranger.com/seattle/grab-your-ballot-save-bus-service-do-it-now/Content?oid=19181734) [http://www.thestranger.com/seattle/grab-your-ballot-save-bus-service-do-it-now/Content?oid=19181734]. (Warning: Bad language.)

Here's my problem with the focus on biking and transit when it comes to pleasing millennials—it can't be the only factor. Businesses still need to anchor in cities to make their economies thrive. And unless those coveted employers are in retail, their biggest concern is overhead costs. (Retail employers tend to value access to customers slightly higher than overhead costs). If a city can't help the businesses stay solvent, all the bike lanes in the world aren't going to make it healthy economically.

For our insiders: How do bike lanes impact car traffic in cities? Do they fundamentally change the city's economy? Do a city's residents drive less when bike lanes are available? Do mass transit options have a bigger impact on traffic? What are the benefits of bike lanes? The disadvantages? Is it true that bike lanes tend to be used more by younger people? If so, is that a good thing? What alternative transportation modes are the most important in attracting business to a city?

[Note: This is a moderated blog on transportation issues. Comments are approved on a case-by-case basis. Contact me if you want to be a regular commenter.]

From the Transportation Insiders

Comments

Community

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Chris McCahill • 16 hours ago

As one of those bike enthusiasts that this article's talking about, I'd have to say that most of the Millennials I know are not. Most still live in suburbs. One thing I believe we have in common is that we want to be near a variety of amenities. For many, though, a 15-minute drive is close enough as long as there's good housing, good schools, and a certain quality of life. Travel options probably aren't very high on everyone's list.

At the same time, bike lanes, transit, and safe walking environments are signs of some pretty great places. And once people find themselves in those places, they're easily lured out of their cars, at least some of the time. I'm not sure anyone believes bike lanes, alone, will attract people (Millennial or otherwise), but many are beginning to learn that they're an important part of the package. Cities that can get away with less driving (or tamer driving) gain other benefits: streets can be safer and more pleasant; homes and buildings can replace parking lots; and cities can be more productive.

Bike lanes sometimes (not always) have a small impact on car traffic, but what's lost in vehicle flow is often made up for in overall efficiency and productivity of the street. A new study by researchers at Portland State found that bike traffic increases by 20 to 170% on streets with protected bike lanes, while 10% of users say they would have chosen a different mode if the bike lanes weren't there. Protected bike lanes were actually least favorable among older age groups. In general, however, older age groups have seen the largest increases in bicycle use over the past decade.

^ | ▾ • Reply • Share ›



Troy Butts • 19 hours ago

the appeal of automobiles has dropped partially because of cost. both insurance and the vehicle itself. car payments have elevated so high that now you can

be looking at 5 to 7 years for a car loan at prices comparable to a house payment. With the reduction in available mid level job market most younger individuals are having to choose between having a car or enough money left over to have a life. Because lets be real the odds that they are thinking about the environmental impact is unlikely. At least not for another 15 years or so.

^ | v • Reply • Share ›



Henry Guzman • 19 hours ago

Good read. I agree with the premise of the article, however the writer needs to broaden the scope. Understand young at heart Baby Boomers also like bike lanes for all the same reasons and more. I am a co-organizer for a 1700 member social bike group in Denver and a smaller one in Colorado Springs. We bike to breweries! People of all ages participate, but yes, most are 20 years younger than I.

I recently bought a home in Colorado Springs due to closeness to north south and east west bike trails. Although I work from home, I still need the work-life balance of riding to the city to shop and play.

^ | v • Reply • Share ›



Moaz Ahmadmoa • a day ago

Millenials just want bike lanes? No...they want the safety, security & access to opportunity that comes along with bike lanes.

Cheers, Moaz

6 ^ | v • Reply • Share ›



josephsinger • a day ago

You did not mention Portland (big bike city) or Minneapolis.

2 ^ | v • Reply • Share ›



Isaac Forquer → josephsinger
• 20 hours ago

What this guy said. A huge part of my decision to live and work in Portland is the bikeability of the metro area.

^ | v • Reply • Share ›



Christopher Porter • 3 days ago

I chose to live in Vancouver based on the bike-ability and quality of life. Then I found a company that would hire me. I've never really considered myself a millennial, although Wikipedia's definition says I am.



Lee Crandell • 4 days ago

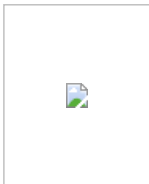
Yes, businesses are the anchor that makes a city's economy thrive, but good employees are the anchor that makes a business thrive. And try to find good employees if your business can't offer them a decent quality of life in your neighborhood.

9 ^ | v • Reply • Share ›



David Pickeral • 4 days ago

Regardless of mode it is clear that the Millennials, in contrast to any previous generation (and fully consistent with having been the first group of humans raised on the Internet) base their choices far more on the availability of information about how to get around using a wide range of options for a particular trip than optimizing the consistent use of a particular mode. Whether bicycling, car sharing, ridesharing, carpools, mass transit, or even walking the expectation is that precise information about



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2014-08-15

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The Cities That Spend The Most On Bike Lanes Later Reap The Most Reward

<http://www.fastcoexist.com/3034354/the-cities-that-spend-the-most-on-bike-lanes-later-reap-the-most-reward>

Investing in a network of fully separated bike lanes could save cities huge sums in the long-term. But too little investment in wimpy infrastructure could actually decrease enthusiasm for cycling.

For every dollar spent to build new separated bike lanes, cities could save as much as \$24 thanks to lower health care costs and less pollution and traffic, according to a [new study](#) from researchers in New Zealand.

"At the moment in most car-dominated cities, it's easy to justify spending transport money on new roads as a response to increasing car use, despite the negative impacts this has on the environment and people's health now and in the future," says lead author [Alexandra Macmillan](#). "We wanted to explore some policy choices that were realistic, affordable, transformative and healthy."



While there's already research backing up the facts that [biking makes us happier, more energetic, better able to concentrate, less fat](#), and generally healthier--and that bike lanes make more people ride, and [even boost local business](#)--this study may be the first to look at how different types of bike infrastructure investments pay cities back later.

The researchers looked at Auckland, New Zealand, which is currently not a particularly bike-friendly place, and used computer simulations to model different scenarios for new bike-related investments, including regular bike lanes, lanes shared with buses, and fully separated lanes.

They found huge differences: If the city built a network of separated lanes and slowed down traffic speeds, it could increase cycling by 40% by 2040, but adding a few lanes in a few places might only increase bike traffic by 5%. The more people ride, the more the cost savings would add up for Auckland--the biggest factor being a reduction in health care costs. A smaller investment would have little impact at all; the city is so bike-unfriendly that major changes are needed.



In cities dominated by cars, a small increase in cycling tends to lead to more biking injuries and deaths, making other people more afraid to ride. The way to overcome that problem, the researchers found, is to make a bigger commitment to better bike lanes.

"We found that significant infrastructure investment is needed to overcome this dampening effect of fears about cycling safety; that high quality changes to main roads and local streets are the best place to start for cities with low cycling and high car use; and that these investments can have benefits an order of magnitude greater than the costs if you get them right," says MacMillan.

Though the study focused on Auckland, the researchers think that the general principles would apply to other cities where cars rule the road. "Auckland is very similar in design and transport patterns to many US cities, so we expect our findings to be relevant to the US," MacMillan explains. The exact savings would be different; the study wasn't trying to predict exact numbers, but show how different scenarios compare to each other.

The study is already beginning to influence policymakers in Auckland, and the researchers hope that it will continue to make a difference. "The tide is turning, I believe, in New Zealand and in many other countries that have neglected the bicycle in the last two decades," says Alastair Woodward, a co-author of the study.

"It makes sense in so many ways to bring back the bike, and this is happening. But only slowly. We hope our study, and others like it, will strengthen the arm of policymakers who are trying to shift the status quo."

[Photos: Flickr user [Paul Krueger](#)]



[Adele Peters](#)

Adele Peters is a writer who focuses on sustainability and design and lives in Oakland, California. She's worked with GOOD, BioLite, and the Sustainable Products and Solutions program at UC Berkeley. [Continued](#)

August 15, 2014 | 3:13 PM

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