

March 9, 2021

Innovative Design, PC  
1261 Leonard Ave. NE  
Grand Rapids, MI 49505

Attn: Mr. Mark Tomasik, Architect

Re: Site Plan Review  
1800 S. Garfield Ave-Burger King

HRC Job No. 20210244

Dear Mr. Tomasik;

Hubbell, Roth & Clark, Inc. is pleased to provide this traffic review of the proposed site plan for the Burger King at the northwest corner of Garfield Road and W South Airport in the Charter Township of Garfield. The proposed site plan will provide for suitable drive-through operation and site circulation. The site plan provides for the features noted below.

- ≡ W South Airport Road is a five-lane road with a center left turn lane near the proposed driveway and right turn taper. The driveway design is sufficient for the type of traffic expected and site conditions. The center left turn lane will aid with vehicles turning left into the driveway from the west. The right turn taper will aid in vehicle deceleration into the driveway from the east.
- ≡ The driveway is approximately 200 feet from the EB stop bar at the W South Airport Road/S Garfield Road signalized intersection. The intersection has left turn phases. The continuous center left turn lane, distance from the intersection and phasing should help to keep left turning vehicles into the Burger King from blocking EB W South Airport Road through traffic.
- ≡ The driveway on W South Airport Road has one exit lane that will be signed and marked as right turn only. This right turn only will provide for safer operation than allowing left turning vehicles. Given the additional driveway to the internal access road, there are other driveways farther from the signalized intersections for left turn maneuvers.
- ≡ The elimination of the landscaping in the driveway median will provide better sight distance for exiting vehicles. The proposed striped island will discourage exiting left turn maneuvers. However, keeping the existing or installing a new raised median would be recommended to further discourage the exiting left turn maneuver.
- ≡ The addition of the second drive through lane as well as pushing the building to the north will provide additional storage area for vehicles. This will eliminate the conflict with vehicles stacking onto W South Airport Road. Stacking of vehicles will be better positioned on site.
- ≡ Non-motorized traffic is accommodated with the addition of sidewalk along the main roads and through the driveway. The striped 5-foot pedestrian walk connecting sidewalk on W South Airport to the building entrance will provide access to the site for non-motorized traffic. Bike racks are provided for bicycle traffic.
- ≡ Barrier free parking spaces are positioned near the striped 5-foot pedestrian walk.
- ≡ The parking spaces are positioned so traffic backing out of parking spaces do not conflict with traffic in the drive through lanes.
- ≡ There is room to maneuver to pick up dumpsters without backing into vehicles parked as it is proposed on the opposite side of the site.
- ≡ The site plan provides for snow storage space outside the areas of parking and drive through traffic.

**Bloomfield Hills**  
555 Hulet Drive  
Bloomfield Hills, MI 48302  
248-454-6300

**Delhi Township**  
2101 Aurelius Rd.  
Ste. 2A  
Holt, MI 48842  
517-694-7760

**Detroit**  
535 Griswold Street  
Buhl Building  
Suite 1650  
Detroit, MI 48226-3698

**Howell**  
105 W. Grand River  
Howell, MI 48843  
517-552-9199

**Jackson**  
401 S. Mechanic St.  
Suite B  
Jackson, MI 49201  
517-292-1295

**Kalamazoo**  
834 King Highway  
Suite 107  
Kalamazoo, MI 49001  
269-665-2005

**Lansing**  
215 S. Washington  
SQ  
Suite D  
Lansing, MI 48933  
517-292-1488

If you have any questions or require any additional information, please contact the undersigned at [lmichaels@hrcengr.com](mailto:lmichaels@hrcengr.com) or (248) 454-6812.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.



Lia Michaels, P.E., PTOE, RSP1  
Transportation Manager

Attachment-Resume

pc: HRC; Larry Hummel



Lia Michaels is a manager for Hubbell, Roth & Clark, Inc. in our Transportation Department. She is responsible for overseeing a staff of traffic and civil engineers, for managing transportation projects and providing consulting services to several Michigan communities. Ms. Michaels is experienced in traffic engineering, including the design of traffic signals, pavement markings and signs and performing traffic and safety studies. Ms. Michaels is proficient in Highway Capacity Software, Synchro/SimTraffic, HCS, RODEL, and VISSIM. She has used these programs to analyze individual signalized, unsignalized, and roundabout locations, as well as corridors with a combination of all three intersection types.

**EDUCATION**

BS, Civil & Environmental Engineering,  
Michigan State University, 2006

MS, Civil & Environmental Engineering,  
Transportation  
Wayne State University, 2008

**EXPERIENCE**

With HRC since 2008  
13 years of experience

**PROFESSIONAL REGISTRATION/  
CERTIFICATION**

Professional Engineer,  
Michigan No. 58922

Professional Traffic Operations  
Engineer No. 3347

National Highway Institute Training  
Program, 2017 – Road Safety Audits/  
Assessments (NHI-380069)

Road Safety Professional, No. 300

**AFFILIATIONS**

American Public Works Association

American Society of Civil Engineers

Institute of Transportation Engineers

**PROFESSIONAL EXPERIENCE**

**TRAFFIC ENGINEERING**

**Traffic Studies**

- Martin Road Realignment – [RCOC/Commerce Township](#)
- Adams Road, Walton to Hamlin, Alternative Analysis – [RCOC/City of Rochester Hills/Oakland University](#)
- Four-year as-needed traffic engineering support contract – [City of Grand Rapids](#)
- Realize Cedar Street Complete Streets Study – [Delhi Charter Township/Ingham County Dept of Roads](#)
- Mound Road Benefit-Cost Analysis for INFRA Grant – [Macomb County Department of Roads](#)
- Rochester Road Re-evaluation of Environmental Assessment – [City of Troy](#)
- 1140 Broadway Traffic Impact Study Review – [City of Ann Arbor](#)
- 616 Developments Traffic Impact Study – [City of Grand Rapids](#)
- Wealthy Street Traffic Impact Study – [City of Grand Rapids](#)
- Planet Fitness Traffic Impact Study – [Moore & Bruggink](#)
- Westown Development Traffic Impact Study – [JAG Development](#)
- Fulton and Alpine Road Diet Study – [City of Grand Rapids](#)
- Ottawa Street Extension & Arena South Development Study – [Moore & Bruggink, Inc./City of Grand Rapids](#)
- Burton Street and Forest Hill Intersection Study – [City of Kentwood](#)
- Grand River Avenue Road Diet Study – [City of Howell/MDOT](#)
- Van Dyke (M-53) Road Diet Traffic Study – [City of Warren DDA/TIFA](#)
- Grand River Ave and M-5 Corridor Traffic Study – [City of Farmington Hills/MDOT](#)
- Orchard Lake Road Traffic Study – [City of Farmington Hills/RCOC](#)
- Rochester Road Traffic Study for Environmental Assessment Re-evaluation – [City of Troy](#)
- Evergreen Road Road Diet Traffic Study – [City of Southfield](#)

- Thirteen Mile Road, Farmington to Orchard Lake Road Diet Study – [City of Farmington Hills](#)
- U of M Central Campus Transit Center – [U of M Architecture, Engineering and Construction & City of Ann Arbor](#)
- West Avenue and Fourth Street Traffic Study – [City of Jackson](#)
- Supplemental Traffic and Needs Study for Tienken Rd Corridor, Sheldon to Dequindre – [RCOC](#)
- West Main Hill Traffic Study – [City of Kalamazoo](#)
- Alpine Avenue Road Diet Study – [City of Grand Rapids](#)
- Leonard Street Road Diet Study – [City of Grand Rapids](#)
- Speed Studies – [City of Rochester Hills](#)

#### **Parking Studies**

- GVSU & Spectrum Health Parking Garage Study – [City of Grand Rapids](#)
- Milford Proving Grounds Parking Study – [General Motors Corporation](#)
- Site Circulation and Traffic Impact Assessment – [Yeshiva Beth Yehuda Schools](#)
- Warren Technical Center Parking Study – [General Motors Corporation](#)

#### **Safety Studies**

- Seventeen Statewide Road Safety Audits – [Michigan Department of Transportation Safety](#)
- Adams Road Review – [RCOC/Oakland University/Rochester Hills](#)
- School Crossing Review – [Shelby Township Police Department](#)
- Dixie Hwy Safety Study – [Charter Township of Springfield](#)
- Traffic Movement and Safety Study – [MAHLE Industries Inc.](#)
- [Dixie Hwy \(US-24\) Crash Analysis](#) – [MDOT Oakland TSC](#)
- Safety Studies, Surveys, and Program Evaluations – [MDOT & OHSP](#)
- Evaluation of Pedestrian Safety in the City of Detroit – [MDOT](#)

#### **Traffic Signal Operations**

- Orchard Lake Corridor Optimization – [City of Pontiac](#)
- Phase XIV Signal Optimization of 82 signals – [City of Grand Rapids](#)
- Baldwin Avenue Corridor Optimization – [City of Pontiac](#)
- 2019 & 2020 Signal Modeling and Timing Permits – [Ingham Country Road Department](#)
- Phase XI Signal Optimization of 66 signals – [City of Grand Rapids](#)
- Phase XII Signal Optimization of 66 signals – [City of Grand Rapids](#)
- Phase IX Signal Optimization of 65 signals – [City of Grand Rapids](#)
- Marquette Signal Optimization Project – [Johnson Controls/City of Marquette](#)
- Traffic Signal Optimization Phase 2 – [City of Detroit](#)
- Traffic Signal Optimization for 13 Intersections in Allegan and Cass Counties – [MDOT Southwest Region](#)
- Owen Road Signal Optimization – [City of Fenton](#)
- Division Street Signal Optimization – [City of Grand Rapids](#)

#### **ROADS/BRIDGES**

- Mound Road Reconstruction, I-696 to M-59, Owners Rep or Design-Build – [Macomb County Department of Roads](#)
- US-223 Rehabilitation from Ogden Highway to High Street in Lenawee County – [MDOT](#)
- US-23 Rehabilitation from Sayers Road to Alcona County Line – [MDOT](#)
- Orchard Lake Road Reconstruction and Rehabilitation, 13 to 14 Mile Road – [City of Farmington Hills/RCOC](#)
- Nine Mile and Halsted Intersection Improvements – [City of Farmington Hills](#)

- Realize Cedar Reconstruction – Delhi Charter Township/Ingham County Dept of Roads
- Rathmor and West Valley Water Main Replacement and Road Rehabilitation – [City of Bloomfield Hills](#)
- Trowbridge Road Reconstruction – [City of Bloomfield Hills](#)
- Country Club Drive Water Main Replacement and Road Paving – [City of Bloomfield Hills](#)
- Chesterfield Road and Lakewood Drive Water Main Replacement and Road Reconstruction – [City of Bloomfield Hills](#)

#### **Traffic & Pedestrian Signal Design**

- Cedar Street and Delhi Commerce Drive – [Delhi Township Downtown Development Authority](#)
- Orchard Lake Five Signal Modernizations – [City of Pontiac](#)
- Baldwin Avenue Signal Modernizations and Upgrades – [City of Pontiac](#)
- Martin Luther King Jr. Blvd Signal Modernizations – [City of Pontiac](#)
- Wisner at Ganson, North and Argyle Signal Modernizations – [City of Jackson](#)
- Steward and Ganson Signal Modernizations – [City of Jackson](#)
- Lansing and Waverly Signal Upgrades – [Ingham County Road Department](#)
- Signal Modernization at M-3 and 15 Mile Road – [MDOT](#)
- M-1 and Long Lake Signal Modifications – [City of Bloomfield Hills](#)
- T Greenwood Avenue Reconstruction – [City of Jackson](#)
- Livernois Road Reconstruction – Road Commission for Oakland County
- Hamlin Road Reconstruction – [City of Rochester Hills](#)
- Traffic signal upgrades at Fulton/Market Monroe, 44<sup>th</sup>/Kalamazoo and 44<sup>th</sup>/Breton – [City of Grand Rapids](#)
- East Paris Fiber CMAQ Project – [City of Grand Rapids](#)
- Signal modernizations at Fuller/Fulton, Leonard/Diamond and Leonard/Turner – [City of Grand Rapids](#)
- Howard/Michigan Street Fiber and Signal CMAQ Project – [City of Kalamazoo](#)
- Drake Road and KL Avenue Traffic Study – [City of Kalamazoo](#)
- Burdick and Drake CMAQ Projects – [City of Kalamazoo](#)
- Greenwood and Morrell Signal Modernization – [City of Jackson](#)
- 2016, 2017, & 2018 Signal Modernization Programs – [Gifflele/City of Ferndale](#)
- Pitcher Street Rehabilitation – [City of Kalamazoo](#)
- Realize Cedar Reconstruction – [Delhi Charter Township/Ingham County Dept of Roads](#)
- Traffic Signal Safety Projects – [City of Grand Rapids](#)
- Sashabaw Road Rehabilitation and Signal Modernizations – [Independence Township/RCOC](#)
- Gunn and Adams HAWK signal – [RCOC](#)
- Joslyn Signal Modernizations and Staging – [City of Pontiac](#)
- Canal Road Signal Upgrades and Staging – [City of Sterling Heights](#)
- University Signal Modernizations and Staging – [City of Pontiac](#)
- Marquette Signal Modernization Project – [Johnson Controls/City of Marquette](#)
- Eddington Boulevard Realignment at Rochester Road – [City of Rochester Hills](#)
- Fourth/Horton/Stonewall Intersection Realignment – [City of Jackson](#)
- Nine Mile Road and Halsted Road CMAQ Project – [City of Farmington Hills](#)
- Safe Routes to School Grants – [City of Southfield & Highland Township](#)
- Allen Road and Outer Drive Signal Modernization – [Wayne County Department of Public Services](#)
- Dodge Park Road Reconstruction, 16 Mile to Utica – [City of Sterling Heights](#)
- Sprinkle Road Safety Project – Road Commission of Kalamazoo County
- West Q Avenue and 10th Street Signal Design – [Road Commission of Kalamazoo County](#)

- Mack Avenue Traffic Signals Design – [Wayne County Department of Public Services](#)
- Improvements to Belleville Road and Costco Truck Depot Driveway – [V3 Companies](#)
- Farmington Road Reconstruction, 10 Mile to 11 Mile – [City of Farmington Hills](#)
- Holmes Road Reconstruction Phase III – [Washtenaw County Road Commission](#)
- Haggerty Road Reconstruction – [Road Commission for Oakland County](#)
- Radar Speed Displays Project and Analysis – [J. Ranck Electric Inc./City of Rochester Hills](#)

#### **Traffic Signing & Pavement Marking Plans**

- Greenwood Avenue Reconstruction – [City of Jackson](#)
- Hamlin Road Reconstruction – [City of Rochester Hills](#)
- Livernois Road Reconstruction – [Road Commission for Oakland County](#)
- Realize Cedar Reconstruction – [Delhi Charter Township/Ingham County Dept of Roads](#)
- Review of Passing Zones – [Jackson County Department of Transportation](#)
- RAM Trail, Phase I, along Holt Road – [Delhi Charter Township/Ingham County Dept of Roads](#)
- Sashabaw Road Widening, Flemings Lake to DTE Energy Drive – [Independence Charter Township/RCOC](#)
- Dodge Park Road Reconstruction, 16 Mile to Utica – [City of Sterling Heights](#)
- Burdick Street and Drake Road CMAQ Projects – [City of Kalamazoo](#)
- Bridge Street Reconstruction – [City of Grand Rapids](#)
- Joslyn Road Rehabilitation – [City of Pontiac](#)
- University Drive Rehabilitation – [City of Pontiac](#)
- South Boulevard Rehabilitation – [City of Pontiac](#)
- Hoover Road, 10 Mile to I-696 – [City of Warren](#)
- Tienken Road Rehabilitation, Adams to Livernois – [Road Commission for Oakland County](#)
- I-75 & Sashabaw Road Interchange Improvements – [Independence Charter Township/RCOC](#)
- Drake Road Rehabilitation – [City of Farmington Hills](#)
- East Main Street Safety Project – [Kalamazoo County Road Commission](#)
- Thirteen Mile Road Reconstruction, Hoover to ITE – [City of Warren](#)
- Evergreen Road Reconstruction, 10 Mile to I-696 – [City of Southfield](#)
- Scio Church Road and Wagner Road Roundabout – [Washtenaw County Road Commission](#)
- M-24 Safety Project, Dockham Road – [MDOT Davison TSC](#)
- Pontiac Trail and 7 Mile – [Washtenaw County Road Commission](#)
- S. Boulevard and Livernois – [Cities of Troy & Rochester Hills, RCOC](#)
- Colfax Street and Gill Road Reconstruction – [City of Farmington Hills](#)
- Geddes Avenue Improvements Project – [City of Ann Arbor](#)
- Woodward Avenue ADA Ramp Design – [MDOT](#)
- Upgrade of 33 Miles Non-Freeway Signing in Traverse City TSC – [MDOT](#)
- Upgrade of 56 Miles Non-Freeway Signing in Cadillac and Traverse City TSC – [MDOT](#)
- Upgrade of 48 Miles Non-Freeway Signing in [Grand Rapids and Cadillac TSC](#) – [MDOT](#)
- Upgrade of 56 Miles Non-Freeway Signing in Alpena TSC – [MDOT](#)
- Upgrade of 129 Miles Non-Freeway Signing in Berrien County – [MDOT](#)
- Upgrade of 4 Miles Non-Freeway Signing in Oakland TSC – [MDOT](#)

#### **Roundabout Analysis & Design**

- Waldon and Clintonville – [RCOC](#)

- Gunn and Adams Roundabout – RCOC
- Franklin and 11 Mile – City of Southfield
- Scio Church Road & Wagner – Washtenaw County Road Commission
- Burton and Forest Hill – City of Kentwood
- Orchard Lake Road, four intersections – City of Farmington Hills/RCOC
- Evergreen Road, two intersections – City of Southfield
- Pontiac Trail and 7 Mile - Washtenaw County Road Commission
- Ransom and Harrison intersection – City of Kalamazoo
- Greenly Street and West Shore Drive intersection – Ottawa County Road Commission

#### INTELLIGENT TRANSPORTATION SYSTEMS

- ITS Camera Installations in Kent County – MDOT
- Design-Build US-12 at Willow Run Traffic Signals & ITS – Bergmann/Toebe/MDOT
- University Drive over I-75 Design-Build Project – Bergmann/MDOT Oakland TSC
- Connected Vehicle Test Bed – City of Detroit
- Design-Build Nine Dynamic Message Signs, Fiber Optic & Related Infrastructure – J. Ranck Electric, Inc. & MDOT
- MDOT Grand Rapids Design-Build, M-6, and I-96 – J. Ranck Electric Inc. & MDOT
- MDOT North and Superior Region Design-Build – J. Ranck Electric Inc. & MDOT
- Howard/Michigan Street Fiber and Signal CMAQ Project – City of Kalamazoo
- Overhead fiber optic and traffic signal upgrades for Sprinkle Road – Road Commission of Kalamazoo County
- Drake Road fiber communication and signal improvements CMAQ Project – City of Kalamazoo
- Burdick Street fiber communication and signal improvements CMAQ Project – City of Kalamazoo