



AGENDA
CHARTER TOWNSHIP OF MERIDIAN
MERIDIAN TRANSPORTATION COMMISSION
August 22, 2019

1. CALL MEETING TO ORDER
2. APPROVAL OF AGENDA
3. APPROVAL OF MINUTES
 - A. June 27, 2019
4. PUBLIC REMARKS
5. COMMUNICATIONS
6. COMMISSION DISCUSSION
 - A. Okemos Road bridge replacement
 - B. Bike lanes – Village of Okemos
 - C. Okemos / Hamilton intersection truck-turning
7. COMMISSION COMMENTS
8. NEXT MEETING DATES
 - A. October 24, 2019 Central Fire Station Community Room
 - B. Township Board Meeting September 3, 2019
9. ADJOURNMENT

DRAFT

CHARTER TOWNSHIP OF MERIDIAN
MERIDIAN TRANSPORTATION COMMISSION (MTC)
MEETING MINUTES OF JUNE 27, 2019

PRESENT: Chair Hackbarth, Vice-Chair Vagnozzi, Commissioners Deschaine, Potter and Lovell.

ABSENT: Commissioner Hudson and Kolbasa.

STAFF: Frank Walsh, Township Manager, Derek Perry, Director of Public Works and Engineering, Ken Plaga, Chief of Police, Jerry Richards, Planning Commission Representative and Mark Kieselbach, Director of Community Planning and Development.

1. Call Meeting to Order

Chair Hackbarth called the meeting to order at 7:14 p.m.

2. Approval of Agenda

Vice-Chair Vagnozzi moved to approve the agenda.

Seconded by Commissioner Lovell.

VOICE VOTE: Motion carried unanimously.

3. Approval of Minutes

Commissioner Deschaine moved to approve the minutes of May 23, 2019 as written.

Seconded by Vice-Chair Vagnozzi.

VOICE VOTE: Motion carried unanimously.

4. Public Remarks

A resident was given permission to comment on the Okemos Road bridge replacement during discussion Item 6A.

5. Communications

The Commission accepted the communication that had been received and placed on file.

6. Commission Discussion

A. Update on Okemos Road bridge replacement.

Chair Hackbarth welcomed Bill Conklin, Managing Director Ingham County Road Department and Kelly Jones, Director of Engineering Ingham County Road Department.

Ms. Jones gave an update on the public information meeting held on April 25, 2019. The public that attended the meeting were in favor of Alternative 3 and removal of the camelback bridge. Since the public information meeting Alternative 3 was modified to convert the left lane into a grass median between Mt. Hope Road and the Red Cedar River.

A portion of the left turn lane between the Red Cedar River and Clinton Street was also converted to a grass median. Alternative 4 was modified to include on-street bike lanes. (A copy of the information is on file).

- Alternatives 3 and 4 and removal of the camelback bridge would improve the hydrology of the Red Cedar River.
- Alternatives 3 and 4 were the best design for non-motorized traffic.
- Some Township Board members preferred Alternative 4 because of the additional green space.
- Possible pathway under new bridge would connect parks.
- Alternative 4 had the highest construction cost of approximately \$7.6 million (did not include acquisition cost).
- The Road Department would need the Township to help pay for the additional cost of approximately \$2 million.
- Township has paid for the non-motorized cost in other projects.

Commissioner Lovell moved the Transportation Commission recommend to the Township Board an alternative design that included the removal of the camelback bridge.

Seconded by Vice-Chair Vagnozzi.

VOICE VOTE: motion carried unanimously

- Cost to remove camelback bridge is approximately \$100,000.
- Bike lanes could be eliminated from bridge deck.

Chair Hackbarth moved that Township staff and staff from the Road Department work together on an alternative (s) design for the Transportation Commission's consideration.

Seconded by Vice-Chair Vagnozzi.

VOICE VOTE: motion carried unanimously

- Township needs to know how much money the Road Department has budgeted for the project.

B. Review/Recap of Community Conversation Meeting

- Commission members suggested they would staff a table at the Farmers' Market to promote the road bond proposal and the Redi-Ride millage.
- The Commission decided to discuss the road bond proposal at its August meeting.

C. Review of material from CATA.

- The Commission decided to discuss the updated information from CATA at its August meeting.

7. Commission Comments

None.

8. Next Meeting Dates

Transportation Commission's next meeting is August 22, 2019 at the Central Fire Station Community Room. Township Board's next meeting is July 9, 2019.

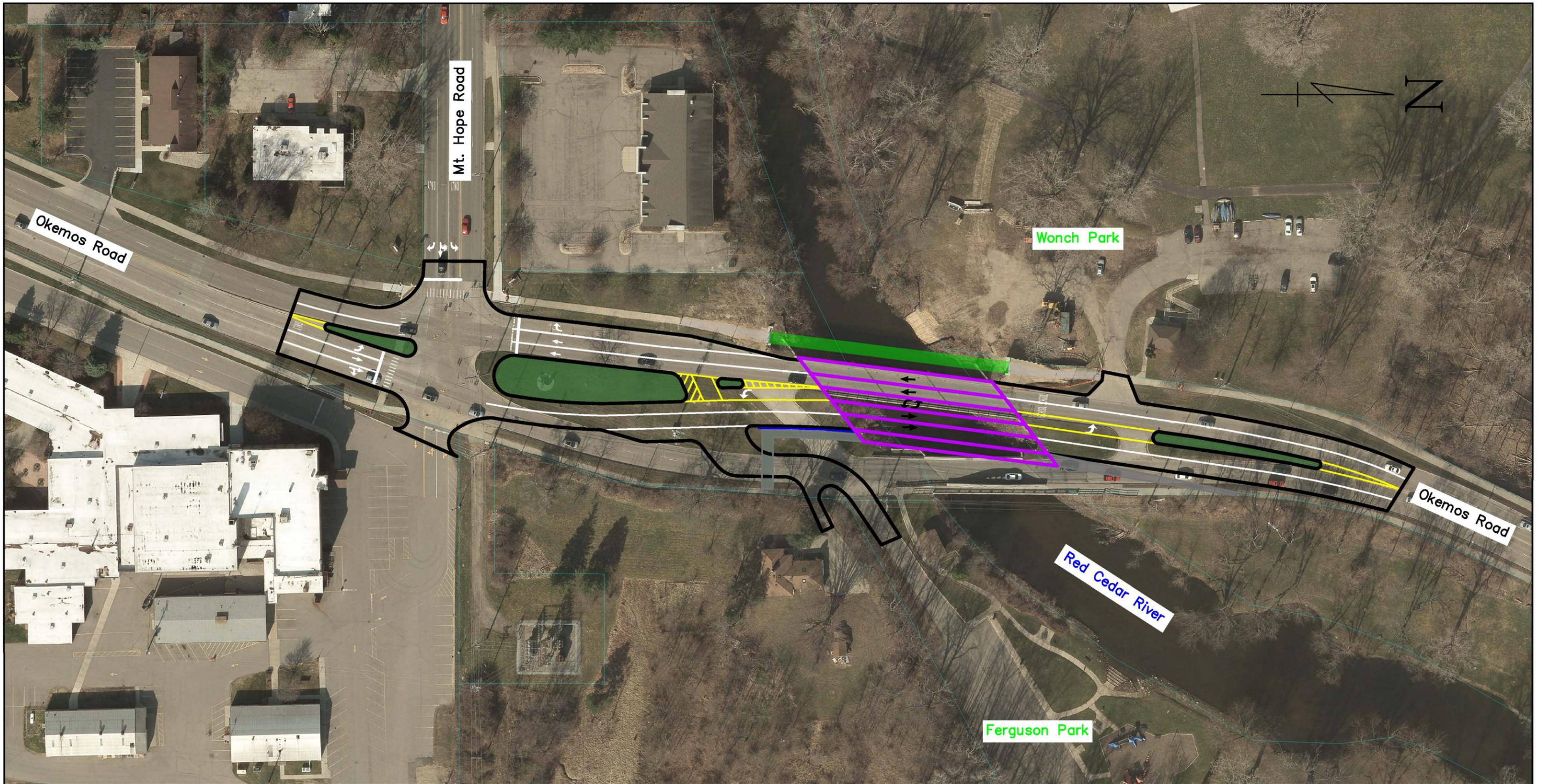
9. Adjournment

Chair Hackbarth moved to adjourn the meeting.

Seconded by Commissioner Deschaine.

VOICE VOTE: Motion carried unanimously.

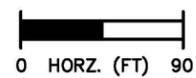
Meeting adjourned at 8:28 p.m.



OKEMOS ROAD BRIDGE
IMPROVEMENT PROJECT
ENVIRONMENTAL ASSESSMENT

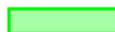


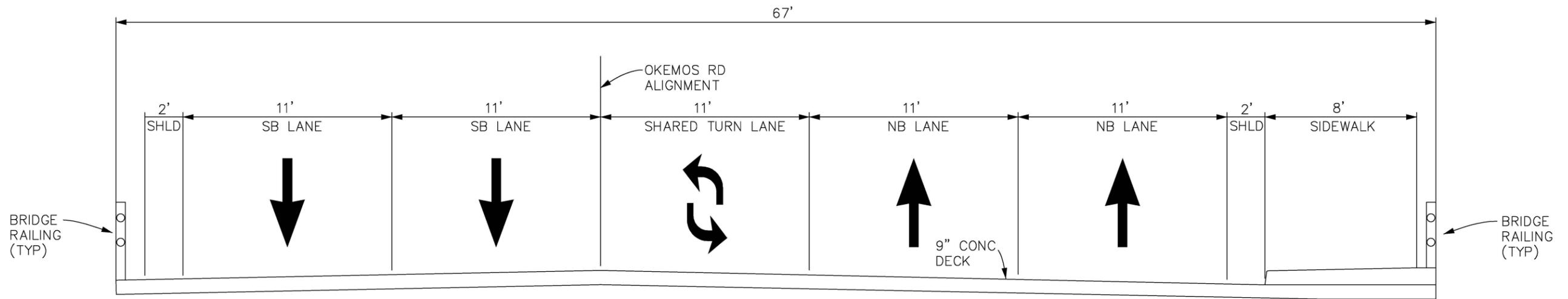
FIGURE 1
PREFERRED ALTERNATIVE



JULY 2019

LEGEND

- | | | | |
|---|----------------------------|---|---------------------------|
|  | EXISTING PEDESTRIAN BRIDGE |  | PROPOSED BRIDGE WORK |
|  | EXISTING RIGHT-OF-WAY |  | PROPOSED ROADWAY |
|  | EXISTING SIDEWALK |  | PROPOSED PAVEMENT MARKING |
|  | PROPOSED SIDEWALK |  | PROPOSED RETAINING WALL |



PREFERRED ALTERNATIVE
LOOKING NORTH

OKEMOS ROAD BRIDGE
IMPROVEMENT PROJECT
ENVIRONMENTAL ASSESSMENT



FIGURE 2
PREFERRED ALTERNATIVE CROSS SECTION

JULY 2019

ALTERNATIVES EVALUATION

Evaluation Criteria	Comments	Alternatives			
		Alternative 1 Reconstruct and Rehabilitate Bridges on Existing Alignment	Alternative 2 Build New Bridge on New Alignment – Maintain Cambelback Bridge	Alternative 3 Build New Bridge on New Alignment – Remove Camelback Bridge	Alternative 4 Build New Bridges on Existing Alignment – Remove Camelback Bridge
Functionality and Structural	Degree to which alternatives address structural deficiencies and meet current design standards	Low to Moderate Aesthetic deficiencies of northbound bridge would be rehabilitated. Northbound bridge would not meet current design standards or load requirements but would remain vehicular bridge. The southbound bridge would be reconstructed to meet current design standards.	High Aesthetics deficiencies of northbound bridge would be rehabilitated & adequately restored to serve as a pedestrian bridge. Bridge would retain its integrity. A new single, five-lane vehicular bridge would be constructed to meet current design standards.	High A new single five-lane bridge would be constructed to meet current design standards. Bridge would include northbound pedestrian facility. Both bridges would be demolished.	High Two new three-lane bridges would be constructed on the existing alignments to meet current design standards. Both bridges would be demolished.
Safety	Degree to which alternatives maintain safe and efficient traffic flow of vehicles, bicycles, and pedestrians along Okemos Road	Low to Moderate Maintains existing roadway/laneage and pedestrian facilities. New southbound bridge would meet current design standards. Northbound bridge would not meet current design standards or load requirements.	High Meets current design standards. Provides left turn lane into parks and provides pedestrian median at Mt. Hope/Okemos intersection.	High Meets current design standards. Provides left turn lane into parks & right-turn lane into Ferguson Park. Provides pedestrian median at Mt. Hope/Okemos intersection.	High Meets current design standards. Provides left turn lane into parks & and right-turn lane into Ferguson Park. Maintains pedestrian median at Mt. Hope/Okemos intersection.
Local Access/Community Impacts	Degree to which alternatives impact access to local roads, residences, schools, parks, and businesses	Low to Moderate Maintains existing access to parks via median crossover. Access to residence, school, and business, and Mt. Hope/Okemos intersection remains unchanged. Temporary access impacts during construction.	Low Provides direct access to parks & residence via left turn lane. Mt. Hope/Okemos intersection remains unchanged. Minimal community impacts. Temporary access impacts during construction.	Low Provides direct access to parks & residence via left turn lane. Mt. Hope/Okemos intersection remains unchanged. Minimal community impacts. Temporary access impacts during construction.	Low to Moderate Provides access to parks & residence via, median crossover, & service drive. Minimal community impacts. Temporary access impacts during construction.
Environmental Impacts	Degree to which alternatives impact surrounding resources (e.g., wetlands, cultural resources, noise, streams, biotic communities, etc.)	Low Minimal environment impacts	Low Minimal environment impacts	Low to moderate Requires demolition of camelback bridge. Temporary grading impact at parks. Other environmental impacts minimal.	Low to moderate Requires demolition of camelback bridge. May require full acquisition of residence. Temporary grading impact at Wonch Park & permanent right-of-way impacts at Ferguson Park (Section 4(f) & 6(f) impacts). Other environmental impacts minimal.
Right-of-Way Acquisition	Impacts to parcels, businesses, schools, parks, and residences caused by construction of project	Low No residential or business relocations No right-of-way acquisitions	Low to Moderate No residential or business relocations. No right-of-way acquisitions. Would require temporary grading permits at parks & residence.	Low to Moderate No residential or business relocations. No right-of-way acquisitions. Would require temporary grading permits at parks & residence.	Moderate No business relocations. May require full acquisition of residence. Temporary grading impact at Wonch Park. Right-of-way acquisition at Ferguson Park.
Planning Level Construction Cost	Includes construction, engineering costs for bridge and roadway improvements. Year 2019 dollars	\$3,134,000	\$5,558,000	\$5,706,000	\$7,499,000 (does not include cost of right-of-way/residential acquisition, assessed value \$55,600)
Hydraulic Improvements	Degree to which alternatives would reduce restrictions within the river and reduce backwater surface elevations	Low Existing northbound bridge abutments would remain in the river channel, disrupting and restricting natural flow of the river. Results in higher backwater surface elevations, increasing the potential of upstream flooding.	Low Existing northbound bridge abutments would remain in river channel, disrupting and restricting natural flow of river. Results in higher backwater surface elevations, increasing potential of upstream flooding. New bridge would span river channel.	High Northbound bridge abutments would be removed from stream channel, reducing backwater surface elevation. New bridge would span river channel (no abutments in river channel). New bridge would require a pier in the river channel.	High Northbound bridge abutments would be removed from stream channel, reducing backwater surface elevation. New bridge would span river channel (no abutments in river channel). New bridge would require a pier in the river channel. .
Non-motorized Facilities	Degree to which alternatives accommodate bicyclists and pedestrians	Moderate Existing pedestrian bridge on west side of Okemos Road and sidewalk on east of camelback bridge would remain.	Moderate to High Existing pedestrian bridge on west side of Okemos Road would remain. Northbound bridge would be used as pedestrian bridge.	High Existing pedestrian bridge would remain. Provides pedestrian facility on new bridge. May provide opportunity for pedestrian path between parks under bridge.	High Existing pedestrian bridge would remain. Provides pedestrian facility on northbound bridge and on-street bike lanes on both bridges. May provide opportunity for pedestrian path between parks under bridge.

Notes: The low/moderate/high rankings provide a qualitative comparison of relative impacts among the alternatives. These rankings were based on the professional judgment of the interdisciplinary project team. The alternative(s) which best address each individual evaluation criteria are highlighted in green. Preferred Alternative

July 24, 2019

Ingham County Road Department
William M. Conklin, P.E., Managing Director
301 Bush Street,
Mason, Michigan 48854

Attn: Mr. William Conklin, P.E., Director

Re: Village of Okemos, Supplement to June 24th, 2019 meeting
Design consideration for intersection corner radii

HRC Job No. 20171097

Dear Mr. Conklin:

Hubbell, Roth & Clark, Inc. (HRC) is submitting the following information to supplement the discussions held between HRC and Ingham County Road Department (ICRD) on June 24th, 2019 as it pertains to the infrastructure improvements for the Village of Okemos development in Meridian Township. The information presented is with regards to design considerations for the intersection corner radii of the southeast quadrant of the Okemos Rd and Hamilton Rd intersection.

HRC conducted an Autoturn analysis for NB Okemos right-turning movements at the intersection of Okemos Rd and Hamilton Rd under existing and proposed conditions and EB Hamilton left-turning movements at the roundabout of Marsh Rd and Hamilton Rd under existing conditions. The following are applicable comments resulting from each analysis. Please refer to Autoturn exhibits for more information.

≡ WB-62, Existing, Okemos/Hamilton intersection

- WB-62 vehicle is unable to make a NB Okemos right-turn into the outer EB Hamilton receiving lane. The vehicle encroaches significantly within the built section of the southeast quadrant of the intersection.
- WB-62 vehicle is unable to make a NB right-turn into the inner EB receiving lane without encroachment of the southeast curb of the intersection and encroaching on the WB Hamilton left turn lane. WB-62 vehicle overtakes both EB receiving lanes to facilitate the turn.

≡ WB-62, Existing, Marsh/Hamilton roundabout

- WB-62 vehicle is unable to make an EB Hamilton left-turn from the applicable inner EB Hamilton lane without partial encroachment of the outer EB Hamilton lane, encroachment of the central island extending past the mountable curb, and encroachment of the curb of the northwest quadrant of the roundabout.

Based on the above, a WB-62 turning movement is not the applicable radii design criteria for the future improvements

≡ WB-40, Proposed, Okemos/Hamilton intersection

- HRC is proposing to modify the southeast curb of the intersection of Okemos and Hamilton to accommodate a design vehicle of WB-40 using a simple curb radius with taper, per 2011 AASHTO A Policy on Geometric Design of Highways and Streets guidelines for WB-40 vehicles. This design minimizes the increase in the pedestrian crossing lengths while allowing a WB-40 vehicle to make a NB right-turn into the EB receiving lane clear of any lane or curb encroachments.

Delhi Township 2101 Aurelius Rd. Suite 2A Holt, MI 48842 517-694-7760	Detroit 535 Griswold St. Buhl Building, Ste 1650 Detroit, MI 48226 313-965-3330	Grand Rapids 801 Broadway NW Suite 215 Grand Rapids, MI 49504 616-454-4286	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
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If you have any questions or require any additional information, please contact the undersigned.
Very truly yours,

HUBBELL, ROTH & CLARK, INC.



James F. Burton, P. E.
Vice President

JB/gh

Enclosure

pc: HRC; Colleen Hill-Stramsak; File

Turning Movement Data

Start Time	Okemos Southbound						Hamilton Westbound						Okemos Northbound						Hamilton Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
6:00 AM	0	21	0	0	0	21	2	1	21	0	0	24	14	20	0	0	0	34	1	0	0	0	0	1	80
6:15 AM	0	15	0	0	0	15	0	0	34	0	0	34	3	15	0	0	0	18	1	0	0	0	0	1	68
6:30 AM	0	47	0	0	0	47	2	0	56	0	0	58	21	23	0	0	0	44	1	0	0	0	0	1	150
6:45 AM	0	55	0	0	0	55	6	2	58	0	0	66	49	46	0	0	0	95	6	2	0	0	0	8	224
Hourly Total	0	138	0	0	0	138	10	3	169	0	0	182	87	104	0	0	0	191	9	2	0	0	0	11	522
7:00 AM	0	57	0	0	0	57	5	2	77	0	0	84	47	44	0	0	0	91	4	1	1	0	0	6	238
7:15 AM	0	101	0	0	0	101	7	1	94	0	0	102	59	50	0	0	0	109	12	3	0	0	0	15	327
7:30 AM	0	161	0	0	0	161	6	2	144	0	0	152	67	98	0	0	0	165	12	2	0	0	0	14	492
7:45 AM	3	160	0	0	0	163	2	8	152	0	0	162	83	97	0	0	0	180	4	4	1	0	0	9	514
Hourly Total	3	479	0	0	0	482	20	13	467	0	0	500	256	289	0	0	0	545	32	10	2	0	0	44	1571
8:00 AM	2	129	0	0	0	131	4	7	143	0	0	154	67	103	0	0	0	170	5	6	0	0	0	11	466
8:15 AM	2	168	0	0	1	170	14	0	138	0	0	152	87	81	0	0	0	168	13	3	0	0	0	16	506
8:30 AM	2	139	0	0	0	141	9	9	155	0	0	173	104	107	0	0	1	211	12	4	4	0	0	20	545
8:45 AM	5	149	0	0	0	154	8	9	154	0	0	171	136	132	0	0	0	268	14	5	3	0	0	22	615
Hourly Total	11	585	0	0	1	596	35	25	590	0	0	650	394	423	0	0	1	817	44	18	7	0	0	69	2132
9:00 AM	3	97	0	0	0	100	12	15	108	0	0	135	103	119	0	0	0	222	7	4	3	0	0	14	471
9:15 AM	2	98	0	0	0	100	10	4	109	0	0	123	105	102	0	0	0	207	13	16	4	0	0	33	463
9:30 AM	1	96	0	0	0	97	6	6	84	0	0	96	98	96	0	0	0	194	5	9	4	0	0	18	405
9:45 AM	5	86	0	0	0	91	11	6	98	0	0	115	117	125	0	0	0	242	7	7	3	0	0	17	465
Hourly Total	11	377	0	0	0	388	39	31	399	0	0	469	423	442	0	0	0	865	32	36	14	0	0	82	1804
10:00 AM	5	85	0	0	0	90	8	9	94	0	0	111	91	127	0	0	0	218	5	8	6	0	0	19	438
10:15 AM	3	71	0	0	0	74	8	7	86	0	0	101	126	105	0	0	0	231	11	9	8	0	0	28	434
10:30 AM	8	120	0	0	0	128	5	10	89	0	0	104	107	128	0	0	0	235	10	12	3	0	0	25	492
10:45 AM	2	71	0	0	0	73	5	8	94	0	0	107	129	136	0	0	0	265	10	19	8	0	0	37	482
Hourly Total	18	347	0	0	0	365	26	34	363	0	0	423	453	496	0	0	0	949	36	48	25	0	0	109	1846
11:00 AM	8	104	0	0	0	112	8	13	118	0	0	139	121	142	0	0	0	263	18	15	6	0	0	39	553
11:15 AM	7	118	0	0	0	125	9	5	96	0	0	110	137	129	0	0	0	266	18	17	5	0	0	40	541
11:30 AM	7	95	0	0	0	102	9	8	129	0	0	146	162	162	0	0	0	324	9	11	6	0	0	26	598
11:45 AM	3	110	0	0	0	113	9	11	128	0	0	148	167	152	0	0	0	319	7	8	6	0	0	21	601
Hourly Total	25	427	0	0	0	452	35	37	471	0	0	543	587	585	0	0	0	1172	52	51	23	0	0	126	2293
12:00 PM	4	132	0	0	0	136	14	7	109	0	0	130	169	213	0	0	0	382	14	12	5	0	0	31	679
12:15 PM	5	131	0	0	0	136	9	9	135	0	0	153	168	178	0	0	0	346	18	18	1	0	0	37	672
12:30 PM	10	142	0	0	0	152	13	3	131	0	0	147	153	141	0	0	0	294	10	17	5	0	0	32	625
12:45 PM	5	134	1	0	0	140	10	12	172	0	1	194	155	139	1	0	0	295	18	17	7	0	0	42	671
Hourly Total	24	539	1	0	0	564	46	31	547	0	1	624	645	671	1	0	0	1317	60	64	18	0	0	142	2647
1:00 PM	4	141	0	0	0	145	6	4	128	0	0	138	135	150	0	0	0	285	18	14	6	0	0	38	606
1:15 PM	6	147	0	0	0	153	9	6	142	0	0	157	135	137	0	0	1	272	16	12	2	0	0	30	612

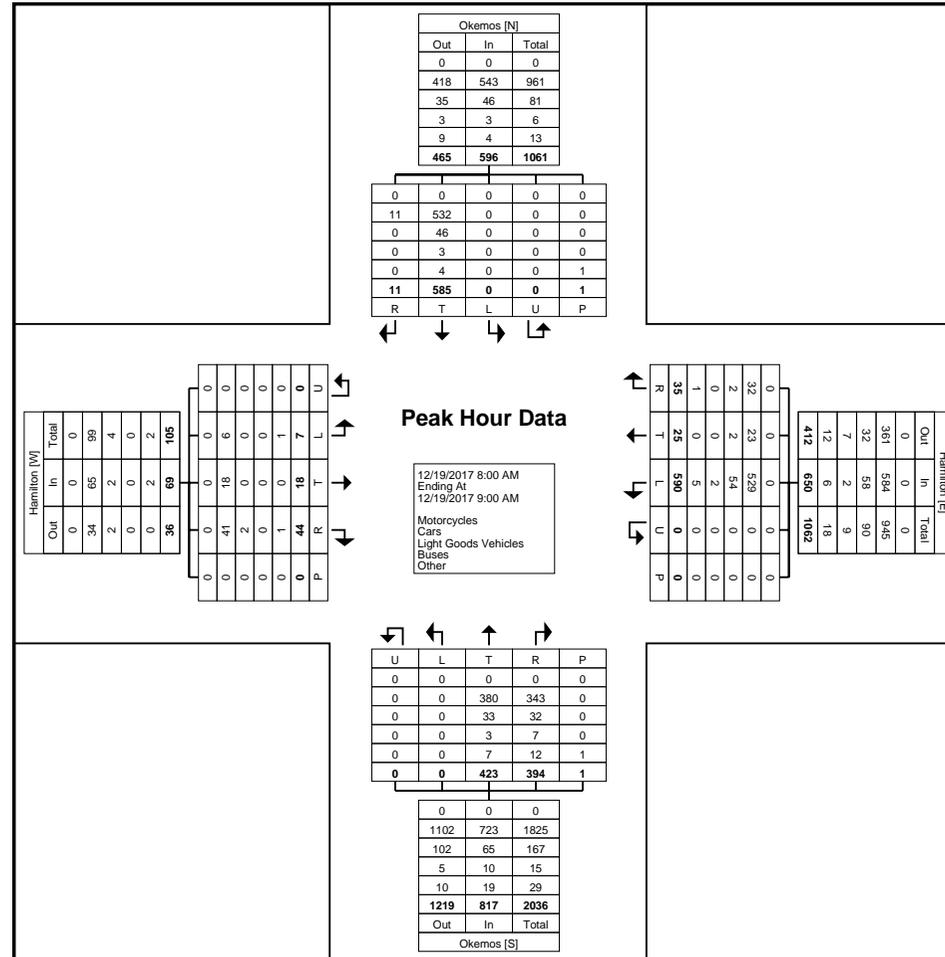
1:30 PM	7	153	0	0	0	160	9	10	156	0	0	175	144	139	0	0	1	283	14	16	6	0	0	36	654
1:45 PM	6	148	1	0	0	155	15	15	141	0	0	171	131	155	0	0	1	286	9	15	11	0	0	35	647
Hourly Total	23	589	1	0	0	613	39	35	567	0	0	641	545	581	0	0	3	1126	57	57	25	0	0	139	2519
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2:15 PM	5	147	0	0	0	152	7	11	146	0	0	164	112	125	0	0	0	237	11	7	7	0	0	25	578
2:30 PM	4	139	0	0	0	143	7	9	137	0	0	153	136	148	0	0	0	284	11	14	5	0	1	30	610
2:45 PM	5	146	0	0	0	151	12	9	164	0	0	185	153	158	0	0	0	311	14	14	6	0	0	34	681
Hourly Total	19	552	0	0	0	571	30	36	587	0	1	653	515	550	0	0	0	1065	58	48	25	0	1	131	2420
3:00 PM	4	155	0	0	0	159	6	13	156	0	0	175	165	188	0	0	0	353	14	14	8	0	0	36	723
3:15 PM	3	162	0	0	0	165	6	5	161	0	0	172	160	157	1	0	0	318	34	11	7	0	0	52	707
3:30 PM	3	152	0	0	0	155	16	12	159	0	0	187	159	176	0	0	0	335	16	26	5	0	0	47	724
3:45 PM	6	149	0	0	0	155	7	15	164	0	0	186	157	199	0	0	0	356	20	15	9	0	0	44	741
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4:00 PM	6	145	0	0	0	151	12	10	157	0	0	179	228	224	1	0	0	453	16	15	6	0	0	37	820
4:15 PM	3	174	0	0	2	177	11	9	130	0	0	150	209	213	0	0	1	422	17	13	8	0	0	38	787
4:30 PM	4	158	0	0	1	162	8	11	157	0	0	176	211	201	0	0	1	412	13	14	9	0	0	36	786
4:45 PM	3	137	0	0	0	140	10	7	160	0	0	177	201	194	0	0	0	395	14	15	13	0	0	42	754
Hourly Total	16	614	0	0	3	630	41	37	604	0	0	682	849	832	1	0	2	1682	60	57	36	0	0	153	3147
5:00 PM	5	182	0	0	0	187	10	15	158	0	0	183	205	201	0	0	1	406	14	34	10	0	0	58	834
5:15 PM	8	163	0	0	0	171	7	10	161	0	0	178	240	228	0	0	0	468	17	33	8	0	2	58	875
5:30 PM	4	147	0	0	0	151	15	15	138	0	0	168	218	229	0	0	1	447	21	28	15	0	0	64	830
5:45 PM	8	129	0	0	2	137	15	12	133	0	0	160	223	208	0	0	0	431	27	26	12	0	0	65	793
Hourly Total	25	621	0	0	2	646	47	52	590	0	0	689	886	866	0	0	2	1752	79	121	45	0	2	245	3332
6:00 PM	3	126	0	0	0	129	18	13	158	0	0	189	170	185	0	0	0	355	17	14	8	0	0	39	712
6:15 PM	3	160	0	0	0	163	11	7	136	0	0	154	159	137	0	0	0	296	21	17	4	0	0	42	655
6:30 PM	5	124	0	0	0	129	12	12	150	0	0	174	155	128	0	0	0	283	15	18	5	0	0	38	624
6:45 PM	0	118	0	0	0	118	12	7	137	0	0	156	115	113	0	0	0	228	11	15	4	0	0	30	532
Hourly Total	11	528	0	0	0	539	53	39	581	0	0	673	599	563	0	0	0	1162	64	64	21	0	0	149	2523
7:00 PM	2	116	0	0	0	118	6	2	124	0	0	132	115	111	0	0	0	226	8	13	6	0	0	27	503
7:15 PM	2	99	0	0	0	101	5	5	134	0	0	144	106	100	0	0	1	206	5	9	2	0	0	16	467
7:30 PM	5	113	0	0	0	118	7	11	90	0	0	108	79	95	0	0	0	174	1	8	1	0	0	10	410
7:45 PM	0	98	0	0	0	98	5	1	88	0	0	94	65	74	0	0	0	139	9	10	3	0	0	22	353
Hourly Total	9	426	0	0	0	435	23	19	436	0	0	478	365	380	0	0	1	745	23	40	12	0	0	75	1733
8:00 PM	2	99	0	0	0	101	7	4	104	0	0	115	62	65	0	0	0	127	7	11	2	0	0	20	363
8:15 PM	2	112	0	0	0	114	4	4	109	0	0	117	53	63	0	0	0	116	13	12	3	0	0	28	375
8:30 PM	1	88	0	0	0	89	3	1	100	0	0	104	52	52	0	0	0	104	8	9	4	0	0	21	318
8:45 PM	2	82	0	0	0	84	2	2	87	0	0	91	32	44	0	0	0	76	6	6	2	0	0	14	265
Hourly Total	7	381	0	0	0	388	16	11	400	0	0	427	199	224	0	0	0	423	34	38	11	0	0	83	1321
9:00 PM	1	76	0	0	0	77	2	4	82	0	0	88	43	54	0	0	0	97	7	10	6	0	0	23	285
9:15 PM	1	66	0	0	0	67	0	1	62	0	0	63	31	45	0	0	0	76	2	8	0	0	0	10	216
9:30 PM	0	62	0	0	0	62	0	0	52	0	0	52	39	44	0	0	0	83	4	7	2	0	0	13	210
9:45 PM	0	63	0	0	0	63	0	1	47	0	0	48	32	44	0	0	0	76	3	3	1	0	0	7	194
Hourly Total	2	267	0	0	0	269	2	6	243	0	0	251	145	187	0	0	0	332	16	28	9	0	0	53	905
10:00 PM	0	57	1	0	0	58	0	1	57	0	0	58	40	35	0	0	0	75	3	4	0	0	0	7	198
10:15 PM	1	53	0	0	0	54	3	3	34	0	0	40	22	23	0	0	0	45	2	3	2	0	0	7	146
10:30 PM	0	39	0	0	0	39	3	3	35	0	0	41	17	26	0	0	0	43	1	1	1	0	0	3	126
10:45 PM	0	15	0	0	0	15	0	0	26	0	0	26	13	16	0	0	0	29	0	3	2	0	0	5	75
Hourly Total	1	164	1	0	0	166	6	7	152	0	0	165	92	100	0	0	0	192	6	11	5	0	0	22	545
11:00 PM	0	28	0	0	0	28	0	0	26	0	0	26	12	18	0	0	0	30	1	1	0	0	0	2	86
11:15 PM	0	15	0	0	0	15	2	0	19	0	0	21	12	9	0	0	0	21	1	2	0	0	0	3	60
11:30 PM	0	17	0	0	0	17	0	2	14	0	0	16	9	8	0	0	0	17	4	2	0	0	0	6	56
11:45 PM	0	9	0	0	0	9	1	1	12	0	0	14	4	9	0	0	0	13	1	0	0	0	0	1	37

Hourly Total	0	69	0	0	0	69	3	3	71	0	0	77	37	44	0	0	0	81	7	5	0	0	0	12	239
12:00 AM	0	18	0	0	0	18	0	0	14	0	0	14	6	12	0	0	0	18	2	0	0	0	0	2	52
12:15 AM	0	11	0	0	0	11	0	1	7	0	0	8	7	3	0	0	0	10	1	1	0	0	0	2	31
12:30 AM	0	14	0	0	0	14	0	1	4	0	0	5	4	3	0	0	0	7	0	2	1	0	0	3	29
12:45 AM	0	8	0	0	0	8	0	0	3	0	0	3	5	7	0	0	0	12	1	0	0	0	0	1	24
Hourly Total	0	51	0	0	0	51	0	2	28	0	0	30	22	25	0	0	0	47	4	3	1	0	0	8	136
1:00 AM	1	6	0	0	0	7	3	0	4	0	0	7	2	5	0	0	0	7	0	1	0	0	0	1	22
1:15 AM	1	5	0	0	0	6	0	0	2	0	0	2	8	11	0	0	0	19	0	0	0	0	0	0	27
1:30 AM	0	8	0	0	0	8	1	0	1	0	0	2	4	6	0	0	0	10	0	0	0	0	0	0	20
1:45 AM	0	3	0	0	0	3	0	0	1	0	0	1	3	6	0	0	0	9	0	1	0	0	0	1	14
Hourly Total	2	22	0	0	0	24	4	0	8	0	0	12	17	28	0	0	0	45	0	2	0	0	0	2	83
2:00 AM	0	4	0	0	0	4	0	0	5	0	0	5	1	3	0	0	0	4	0	1	0	0	0	1	14
2:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	2	2	0	0	0	4	0	0	0	0	0	0	6
2:30 AM	0	1	0	0	0	1	0	0	1	0	0	1	5	5	0	0	0	10	1	0	0	0	0	1	13
2:45 AM	0	2	0	0	0	2	0	0	2	0	0	2	0	6	0	0	0	6	0	0	0	0	0	0	10
Hourly Total	0	9	0	0	0	9	0	0	8	0	0	8	8	16	0	0	0	24	1	1	0	0	0	2	43
3:00 AM	0	6	0	0	0	6	0	0	2	0	0	2	2	1	1	0	0	4	0	1	0	0	0	1	13
3:15 AM	0	1	0	0	0	1	0	0	5	0	0	5	1	0	0	0	0	1	0	0	0	0	0	0	7
3:30 AM	0	3	0	0	0	3	0	0	0	0	0	0	2	4	0	0	0	6	0	1	0	0	0	1	10
3:45 AM	0	3	0	0	0	3	0	0	1	0	0	1	3	7	0	0	0	10	0	0	0	0	0	0	14
Hourly Total	0	13	0	0	0	13	0	0	8	0	0	8	8	12	1	0	0	21	0	2	0	0	0	2	44
4:00 AM	0	2	0	0	0	2	0	0	7	0	0	7	1	5	0	0	0	6	0	0	0	0	0	0	15
4:15 AM	0	5	0	0	0	5	0	0	4	0	0	4	1	2	0	0	0	3	0	1	0	0	0	1	13
4:30 AM	0	10	0	0	0	10	1	0	5	0	0	6	4	8	0	0	0	12	1	0	0	0	0	1	29
4:45 AM	0	7	0	0	0	7	0	0	9	0	0	9	11	4	0	0	0	15	2	0	0	0	0	2	33
Hourly Total	0	24	0	0	0	24	1	0	25	0	0	26	17	19	0	0	0	36	3	1	0	0	0	4	90
5:00 AM	0	7	0	0	0	7	0	1	8	0	0	9	3	8	0	0	0	11	0	0	0	0	0	0	27
5:15 AM	0	11	0	0	0	11	0	3	12	0	0	15	6	7	0	0	0	13	1	0	0	0	0	1	40
5:30 AM	0	14	0	0	0	14	1	2	23	0	0	26	10	14	0	0	0	24	1	0	0	0	0	1	65
5:45 AM	1	14	0	0	0	15	1	1	31	0	0	33	11	21	0	0	0	32	1	1	0	0	0	2	82
Hourly Total	1	46	0	0	0	47	2	7	74	0	0	83	30	50	0	0	0	80	3	1	0	0	0	4	214
Grand Total	224	7886	3	0	6	8113	513	473	8028	0	2	9014	7820	8207	4	0	9	16031	764	774	308	0	3	1846	35004
Approach %	2.8	97.2	0.0	0.0	-	-	5.7	5.2	89.1	0.0	-	-	48.8	51.2	0.0	0.0	-	-	41.4	41.9	16.7	0.0	-	-	-
Total %	0.6	22.5	0.0	0.0	-	23.2	1.5	1.4	22.9	0.0	-	25.8	22.3	23.4	0.0	0.0	-	45.8	2.2	2.2	0.9	0.0	-	5.3	-
Motorcycles	0	1	0	0	-	1	0	0	1	0	-	1	0	2	0	0	-	2	0	0	0	0	-	0	4
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars	203	7115	3	0	-	7321	472	439	7227	0	-	8138	7235	7419	3	0	-	14657	712	717	284	0	-	1713	31829
% Cars	90.6	90.2	100.0	-	-	90.2	92.0	92.8	90.0	-	-	90.3	92.5	90.4	75.0	-	-	91.4	93.2	92.6	92.2	-	-	92.8	90.9
Light Goods Vehicles	20	657	0	0	-	677	35	29	697	0	-	761	467	640	1	0	-	1108	38	49	23	0	-	110	2656
% Light Goods Vehicles	8.9	8.3	0.0	-	-	8.3	6.8	6.1	8.7	-	-	8.4	6.0	7.8	25.0	-	-	6.9	5.0	6.3	7.5	-	-	6.0	7.6
Buses	0	19	0	0	-	19	0	1	33	0	-	34	34	35	0	0	-	69	6	2	0	0	-	8	130
% Buses	0.0	0.2	0.0	-	-	0.2	0.0	0.2	0.4	-	-	0.4	0.4	0.4	0.0	-	-	0.4	0.8	0.3	0.0	-	-	0.4	0.4
Single-Unit Trucks	1	74	0	0	-	75	5	3	58	0	-	66	75	82	0	0	-	157	8	5	1	0	-	14	312
% Single-Unit Trucks	0.4	0.9	0.0	-	-	0.9	1.0	0.6	0.7	-	-	0.7	1.0	1.0	0.0	-	-	1.0	1.0	0.6	0.3	-	-	0.8	0.9
Articulated Trucks	0	19	0	0	-	19	1	0	12	0	-	13	9	29	0	0	-	38	0	0	0	0	-	0	70
% Articulated Trucks	0.0	0.2	0.0	-	-	0.2	0.2	0.0	0.1	-	-	0.1	0.1	0.4	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.2
Bicycles on Road	0	1	0	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	3
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.1	0.0	-	-	0.1	0.0

Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	22.2	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	6	-	-	-	-	2	-	-	-	-	7	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	77.8	-	-	-	-	100.0	-	-

Turning Movement Peak Hour Data (8:00 AM)

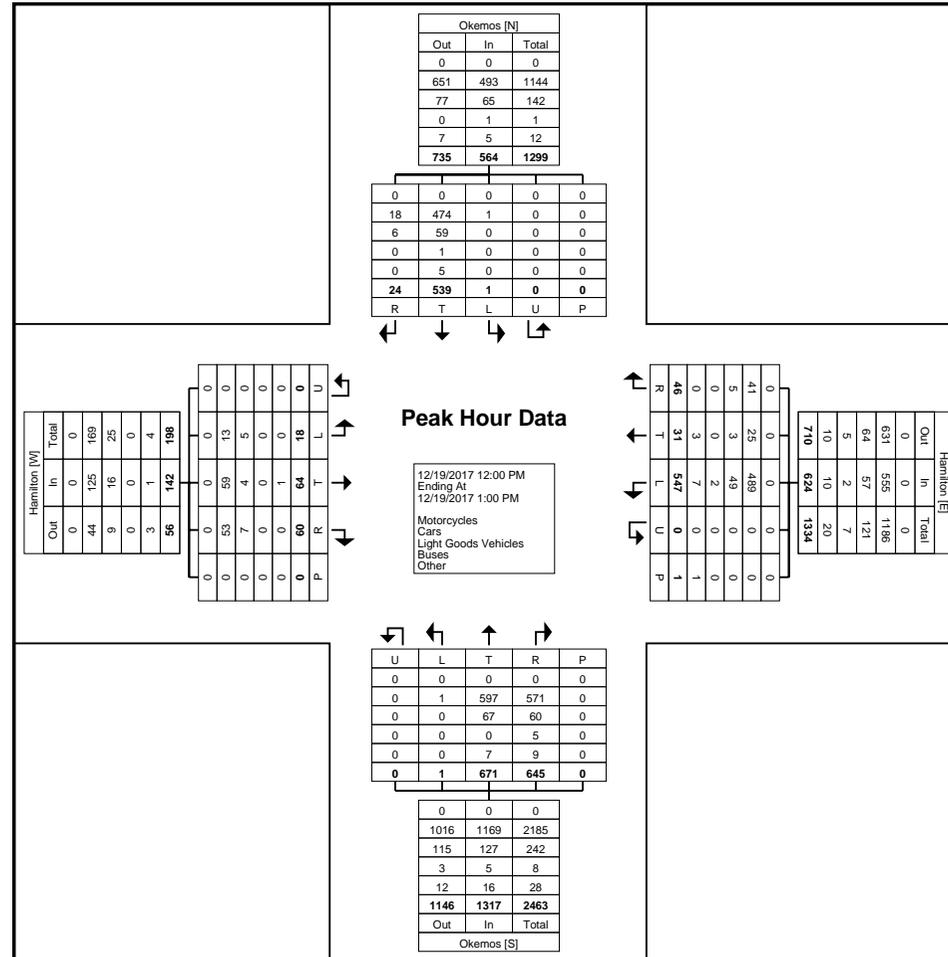
Start Time	Okemos Southbound						Hamilton Westbound						Okemos Northbound						Hamilton Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
8:00 AM	2	129	0	0	0	131	4	7	143	0	0	154	67	103	0	0	0	170	5	6	0	0	0	11	466
8:15 AM	2	168	0	0	1	170	14	0	138	0	0	152	87	81	0	0	0	168	13	3	0	0	0	16	506
8:30 AM	2	139	0	0	0	141	9	9	155	0	0	173	104	107	0	0	1	211	12	4	4	0	0	20	545
8:45 AM	5	149	0	0	0	154	8	9	154	0	0	171	136	132	0	0	0	268	14	5	3	0	0	22	615
Total	11	585	0	0	1	596	35	25	590	0	0	650	394	423	0	0	1	817	44	18	7	0	0	69	2132
Approach %	1.8	98.2	0.0	0.0	-	-	5.4	3.8	90.8	0.0	-	-	48.2	51.8	0.0	0.0	-	-	63.8	26.1	10.1	0.0	-	-	-
Total %	0.5	27.4	0.0	0.0	-	28.0	1.6	1.2	27.7	0.0	-	30.5	18.5	19.8	0.0	0.0	-	38.3	2.1	0.8	0.3	0.0	-	3.2	-
PHF	0.550	0.871	0.000	0.000	-	0.876	0.625	0.694	0.952	0.000	-	0.939	0.724	0.801	0.000	0.000	-	0.762	0.786	0.750	0.438	0.000	-	0.784	0.867
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars	11	532	0	0	-	543	32	23	529	0	-	584	343	380	0	0	-	723	41	18	6	0	-	65	1915
% Cars	100.0	90.9	-	-	-	91.1	91.4	92.0	89.7	-	-	89.8	87.1	89.8	-	-	-	88.5	93.2	100.0	85.7	-	-	94.2	89.8
Light Goods Vehicles	0	46	0	0	-	46	2	2	54	0	-	58	32	33	0	0	-	65	2	0	0	0	-	2	171
% Light Goods Vehicles	0.0	7.9	-	-	-	7.7	5.7	8.0	9.2	-	-	8.9	8.1	7.8	-	-	-	8.0	4.5	0.0	0.0	-	-	2.9	8.0
Buses	0	3	0	0	-	3	0	0	2	0	-	2	7	3	0	0	-	10	0	0	0	0	-	0	15
% Buses	0.0	0.5	-	-	-	0.5	0.0	0.0	0.3	-	-	0.3	1.8	0.7	-	-	-	1.2	0.0	0.0	0.0	-	-	0.0	0.7
Single-Unit Trucks	0	4	0	0	-	4	1	0	4	0	-	5	10	7	0	0	-	17	1	0	1	0	-	2	28
% Single-Unit Trucks	0.0	0.7	-	-	-	0.7	2.9	0.0	0.7	-	-	0.8	2.5	1.7	-	-	-	2.1	2.3	0.0	14.3	-	-	2.9	1.3
Articulated Trucks	0	0	0	0	-	0	0	0	1	0	-	1	2	0	0	0	-	2	0	0	0	0	-	0	3
% Articulated Trucks	0.0	0.0	-	-	-	0.0	0.0	0.0	0.2	-	-	0.2	0.5	0.0	-	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (8:00 AM)

Turning Movement Peak Hour Data (12:00 PM)

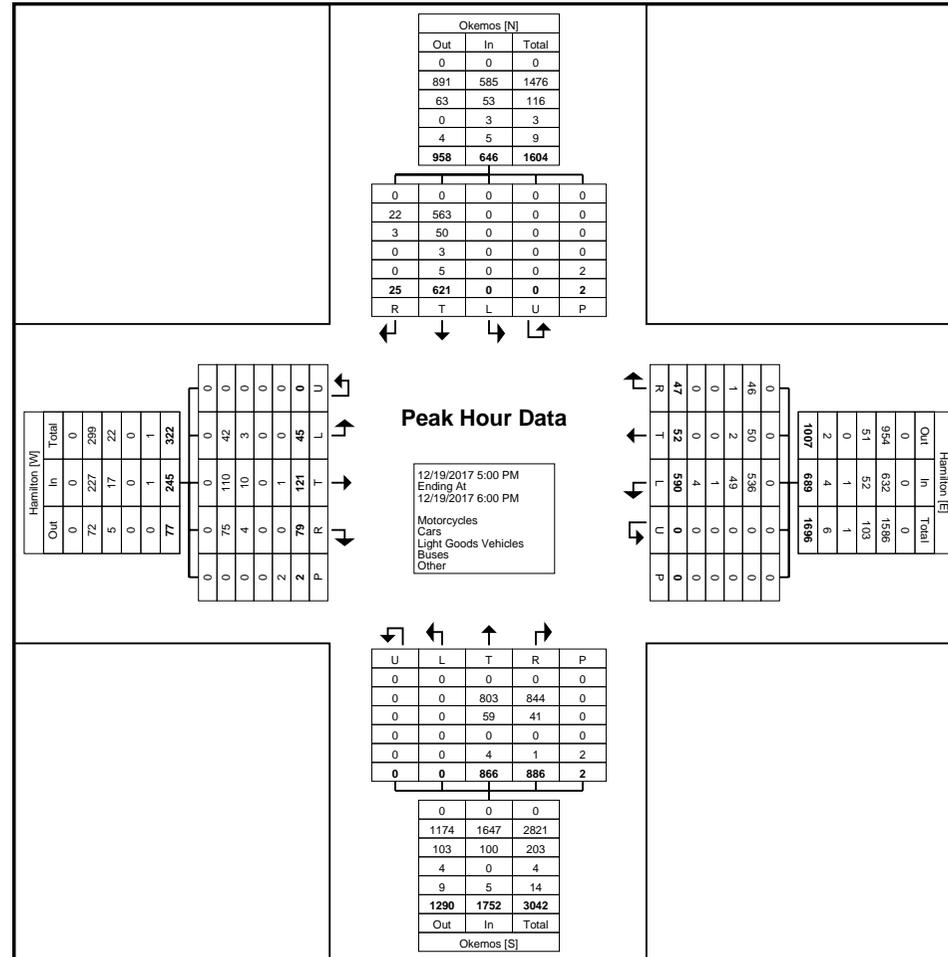
Start Time	Okemos Southbound						Hamilton Westbound						Okemos Northbound						Hamilton Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
12:00 PM	4	132	0	0	0	136	14	7	109	0	0	130	169	213	0	0	0	382	14	12	5	0	0	31	679
12:15 PM	5	131	0	0	0	136	9	9	135	0	0	153	168	178	0	0	0	346	18	18	1	0	0	37	672
12:30 PM	10	142	0	0	0	152	13	3	131	0	0	147	153	141	0	0	0	294	10	17	5	0	0	32	625
12:45 PM	5	134	1	0	0	140	10	12	172	0	1	194	155	139	1	0	0	295	18	17	7	0	0	42	671
Total	24	539	1	0	0	564	46	31	547	0	1	624	645	671	1	0	0	1317	60	64	18	0	0	142	2647
Approach %	4.3	95.6	0.2	0.0	-	-	7.4	5.0	87.7	0.0	-	-	49.0	50.9	0.1	0.0	-	-	42.3	45.1	12.7	0.0	-	-	-
Total %	0.9	20.4	0.0	0.0	-	21.3	1.7	1.2	20.7	0.0	-	23.6	24.4	25.3	0.0	0.0	-	49.8	2.3	2.4	0.7	0.0	-	5.4	-
PHF	0.600	0.949	0.250	0.000	-	0.928	0.821	0.646	0.795	0.000	-	0.804	0.954	0.788	0.250	0.000	-	0.862	0.833	0.889	0.643	0.000	-	0.845	0.975
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars	18	474	1	0	-	493	41	25	489	0	-	555	571	597	1	0	-	1169	53	59	13	0	-	125	2342
% Cars	75.0	87.9	100.0	-	-	87.4	89.1	80.6	89.4	-	-	88.9	88.5	89.0	100.0	-	-	88.8	88.3	92.2	72.2	-	-	88.0	88.5
Light Goods Vehicles	6	59	0	0	-	65	5	3	49	0	-	57	60	67	0	0	-	127	7	4	5	0	-	16	265
% Light Goods Vehicles	25.0	10.9	0.0	-	-	11.5	10.9	9.7	9.0	-	-	9.1	9.3	10.0	0.0	-	-	9.6	11.7	6.3	27.8	-	-	11.3	10.0
Buses	0	1	0	0	-	1	0	0	2	0	-	2	5	0	0	0	-	5	0	0	0	0	-	0	8
% Buses	0.0	0.2	0.0	-	-	0.2	0.0	0.0	0.4	-	-	0.3	0.8	0.0	0.0	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.3
Single-Unit Trucks	0	4	0	0	-	4	0	2	5	0	-	7	9	4	0	0	-	13	0	1	0	0	-	1	25
% Single-Unit Trucks	0.0	0.7	0.0	-	-	0.7	0.0	6.5	0.9	-	-	1.1	1.4	0.6	0.0	-	-	1.0	0.0	1.6	0.0	-	-	0.7	0.9
Articulated Trucks	0	1	0	0	-	1	0	0	2	0	-	2	0	3	0	0	-	3	0	0	0	0	-	0	6
% Articulated Trucks	0.0	0.2	0.0	-	-	0.2	0.0	0.0	0.4	-	-	0.3	0.0	0.4	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.2
Bicycles on Road	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	3.2	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Turning Movement Peak Hour Data Plot (12:00 PM)

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Okemos Southbound						Hamilton Westbound						Okemos Northbound						Hamilton Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
5:00 PM	5	182	0	0	0	187	10	15	158	0	0	183	205	201	0	0	1	406	14	34	10	0	0	58	834
5:15 PM	8	163	0	0	0	171	7	10	161	0	0	178	240	228	0	0	0	468	17	33	8	0	2	58	875
5:30 PM	4	147	0	0	0	151	15	15	138	0	0	168	218	229	0	0	1	447	21	28	15	0	0	64	830
5:45 PM	8	129	0	0	2	137	15	12	133	0	0	160	223	208	0	0	0	431	27	26	12	0	0	65	793
Total	25	621	0	0	2	646	47	52	590	0	0	689	886	866	0	0	2	1752	79	121	45	0	2	245	3332
Approach %	3.9	96.1	0.0	0.0	-	-	6.8	7.5	85.6	0.0	-	-	50.6	49.4	0.0	0.0	-	-	32.2	49.4	18.4	0.0	-	-	-
Total %	0.8	18.6	0.0	0.0	-	19.4	1.4	1.6	17.7	0.0	-	20.7	26.6	26.0	0.0	0.0	-	52.6	2.4	3.6	1.4	0.0	-	7.4	-
PHF	0.781	0.853	0.000	0.000	-	0.864	0.783	0.867	0.916	0.000	-	0.941	0.923	0.945	0.000	0.000	-	0.936	0.731	0.890	0.750	0.000	-	0.942	0.952
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Motorcycles	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars	22	563	0	0	-	585	46	50	536	0	-	632	844	803	0	0	-	1647	75	110	42	0	-	227	3091
% Cars	88.0	90.7	-	-	-	90.6	97.9	96.2	90.8	-	-	91.7	95.3	92.7	-	-	-	94.0	94.9	90.9	93.3	-	-	92.7	92.8
Light Goods Vehicles	3	50	0	0	-	53	1	2	49	0	-	52	41	59	0	0	-	100	4	10	3	0	-	17	222
% Light Goods Vehicles	12.0	8.1	-	-	-	8.2	2.1	3.8	8.3	-	-	7.5	4.6	6.8	-	-	-	5.7	5.1	8.3	6.7	-	-	6.9	6.7
Buses	0	3	0	0	-	3	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	4
% Buses	0.0	0.5	-	-	-	0.5	0.0	0.0	0.2	-	-	0.1	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Single-Unit Trucks	0	5	0	0	-	5	0	0	4	0	-	4	1	4	0	0	-	5	0	1	0	0	-	1	15
% Single-Unit Trucks	0.0	0.8	-	-	-	0.8	0.0	0.0	0.7	-	-	0.6	0.1	0.5	-	-	-	0.3	0.0	0.8	0.0	-	-	0.4	0.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	50.0	-	-	-	-	-	100.0	-	-



Turning Movement Peak Hour Data Plot (5:00 PM)



HUBBELL, ROTH & CLARK, INC
CONSULTING ENGINEERS SINCE 1915

Hubbell, Roth & Clark, Inc.
555 Hulet Drive

Bloomfield Hills, Michigan, United States 48302
248.454.6300 gheqimi@hrc-engr.com

Count Name: Hamilton & Okemos
Site Code:
Start Date: 12/19/2017
Page No: 12

Traffic Code for Cities, Townships, and Villages. The penalties and procedures prescribed pursuant to the Uniform Traffic Code for Cities, Townships, and Villages are applicable to violations thereof occurring in the Township.

- (b) References in the Uniform Traffic Code for Cities, Townships, and Villages to "governmental unit" shall mean the Charter Township of Meridian.
- (c) The following sections and subsections of the Uniform Traffic Code for Cities, Townships and Villages are hereby amended or deleted as set forth and additional sections and subsections are added as indicated. Subsequent section numbers used in this subsection shall refer to the like-numbered sections of the Uniform Traffic Code.

Section 2.50 is hereby amended to read:

Section 2.50. Truck Routes.

- (1) Purpose. The purpose of this ordinance is to protect the surface of public roads and streets, to protect residential property located near such roads and streets, and generally provide for the health, safety, and welfare of the public and particularly children residing on or near public roadways, and to reduce residents' exposure to the nuisance of excessive noise and dust. This ordinance establishes and regulates truck traffic routes; prohibits truck traffic on other roads; and provides penalties for the violation thereof.
- (2) Definition of terms. The terms in this chapter shall be defined as follows unless the context specifically indicates otherwise.
 - (a) Implement of husbandry. Every vehicle which is designed for agricultural purpose and exclusively used by the owner thereof in the conduct of agricultural operations.
 - (b) Road. Any street, highway or route with Meridian Township.
 - (c) Semitrailer. Every vehicle with or without motive power, designed for carrying persons or property and for being drawn by a motor vehicle and so constructed that some part of its weight and that of its load rests upon or is carried by some other vehicle.
 - (d) Trailer. Every vehicle with or without motive power, designed for carrying persons or property and for being drawn by a motor vehicle and so constructed that no part of its weight rests upon the towing vehicle.
 - (e) Truck. Every motor vehicle which is designed, used, or maintained primarily for the transportation of property, except a pickup truck or a van designed so as to carry loads of no more than one ton.
 - (f) Truck-tractor. Every motor vehicle designed and used primarily for drawing other vehicles and not so constructed as to carry a load other than a part of the weight of the vehicle and load so drawn.
 - (g) Person. Includes an agency, company, organization, firm, association, partnership, joint venture, corporation, trust or equivalent entity or a combination of any of them, as well as, a natural person.
- (3) Rule of construction. Any word or term not defined herein shall be considered to be defined in accordance with its common or standard definition.

- (4) Truck routes. The following roads in Meridian Township, to the exclusion of all other roads, are hereby designated as truck routes and classified for truck traffic:
- (a) Abbott Road.
 - (b) Central Park Drive.
 - (c) College Road.
 - (d) Farm Lane.
 - (e) Forest Road, from College Road to Farm Lane.
 - (f) Grand River Avenue (M-43).
 - (g) Hagadorn Road, from Jolly Road to Lake Lansing Road.
 - (h) Hamilton Road, from Okemos Road to Marsh Road.
 - (i) Haslett Road.
 - (j) Jolly Road.
 - (k) Lake Lansing Road.
 - (l) Marsh Road.
 - (m) Meridian Road.
 - (n) Mount Hope Road, from Hagadorn west to the Township boundary.
 - (o) Okemos Road, from Jolly Road to Central Park Drive.
 - (p) Park Lake Road, from Haslett Road north to the Township/county line.
 - (q) Saginaw Highway (M-78).
- (5) Prohibition against travel on other than truck routes. Except as expressly permitted under this ordinance, no person shall operate a truck or truck-tractor and semi-trailer or truck-tractor and trailer combination, or truck and trailer combination in Meridian Township on any road other than a designated truck route.
- (6) Exemptions. The truck route limitation prescribed in this ordinance shall not apply to:
- (a) Fire trucks or other emergency vehicles or vehicle on emergency business involved in the saving of life or property; or
 - (b) Implements of husbandry incidentally moved upon a road; or
 - (c) Road repair, construction, or maintenance vehicles engaged in the repair, construction, or maintenance of the road on which they are traveling within the Township; or
 - (d) Garbage service vehicles while involved in the provision of services to residents of the Township.

- (7) Pickups, deliveries, service calls. A vehicle which would otherwise be restricted to truck routes and which is being used to make pickups, deliveries, or service calls or to provide municipal or utility services in the Township on roads other than designated truck routes shall restrict its travel to a minimum and shall not be driven or moved on other than truck routes, except when being used to make pickups, deliveries or service calls or to provide municipal or utility services within the Township. Such vehicle shall be driven in such a manner as to leave a permitted truck route and proceed to its destination or destinations in the Township by the most direct route. Upon completion of the pickups, deliveries, or service calls, or the provision of municipal or utility services, the vehicle shall return to the nearest permitted truck route or leave the Township by the most direct route. This section shall not be interpreted as permitting a vehicle otherwise restricted to a truck route from entering or leaving the Township by other than a truck route.
- (8) Special permits. The Township Manager shall have authority to grant a written permit in special cases which would otherwise be in violation of the provisions of this ordinance. Such permits, however, shall not be given for more than one round trip and in no case shall a permit be valid for a longer period than 10 days from the date of issue. Such permit shall describe the vehicle, the time and dates of travel, and the route to be taken by the vehicle. The Township Board shall, by resolution, set a fee for special permits.
- (9) Signs. The Township Board shall procure and have posted appropriate signs along the designated truck routes as required by the laws of the State of Michigan.
- (10) Penalties. Any person who violates any provision of this ordinance is responsible for a civil infraction and shall be liable for a fine of not more than \$100 and the costs of prosecution for the first violation. Upon a finding of responsibility for subsequent violations, such person shall be liable for a fine of not more than \$500 and the costs of prosecution.

State law reference: Authority to adopt Uniform Traffic Code by reference, MCL 257.951.

§ 74-4. Interpretation.

In the event of a conflict between the Uniform Traffic Code for Cities, Townships and Villages as adopted in this chapter and this chapter, the provisions of this chapter shall control. In the event of a conflict between the provisions of this chapter and the Michigan Vehicle Code (MCL § 257.1 et seq.), the Michigan Vehicle Code shall control. In the event of conflict between the Uniform Traffic Code for Cities, Townships and Villages as adopted in this chapter and the Michigan Vehicle Code (MCL § 257.1 et seq.), the Michigan Vehicle Code shall control.

§ 74-5. through § 74-25. (Reserved)