RULE OF THE CHAMBER

Any person wishing to address City Council shall step up to the lectern, state their name and address in an audible tone of voice for the record, and unless further time is granted by the presiding officer, shall limit their address to three (3) minutes.
A person may not give up or relinquish all or a portion of their time to the person having the floor or another person in order to extend a person's time limit in addressing the Council.

Any person who does not wish to address Council from the lectern, may print their name, address and comment/question which he/she would like brought before Council on a card provided by the Clerk/Treasurer and return the card to the Clerk/Treasurer before the meeting begins. The Clerk/Treasurer will address the presiding officer at the start of Citizen Comments on the Agenda, notifying him of the card comment, and read the card into the record for response.

Those who want to use audio and image recording equipment in Council Chambers that requires a monopod, tripod or other auxiliary equipment for the audio and image devices shall notify the City Clerk before the meeting begins. Arrangements will be made to accommodate the request in a manner that minimizes the possibility of disrupting the meeting. No additional illuminating lights may be used in Council Chambers unless a majority of City Council members consent. Additionally, cell phones and pagers should be set to vibrate or silent mode when inside Council Chambers.

Should any person fail or refuse to comply with any Rules of the Chamber, after being informed of such noncompliance by the presiding officer, such a person may be deemed by the presiding officer to have committed a breach of the peace by disrupting the public meeting, and the presiding officer may then order such person excluded from the public meeting under Section 3 (6) of Open Meetings Act, Act 267 of 1976.

You will notice a numbering system under each heading. There is significance to these numbers. Each agenda Item is numbered consecutively beginning in January and continues through December of each calendar year.

The City of Monroe will provide necessary reasonable auxiliary aids and services to individuals with disabilities at the meeting/hearing upon one weeks' notice to the City Clerk/Treasurer. Individuals with disabilities requiring auxiliary aids or services should contact the City of Monroe by writing or calling: City of Monroe, City Clerk/Treasurer, 120 E. First St., Monroe, MI 48161, (734) 384-9138. The City of Monroe website address is www.monroemi.gov.

AGENDA - CITY COUNCIL REGULAR MEETING
MONDAY, JUNE 2, 2014
7:30 P.M.

I. CALL TO ORDER.

II. ROLL CALL.

III. INVOCATION/PLEDGE OF ALLEGIANCE.

IV. PRESENTATION.

Presentation by Colleen Hill-Stramsack of Hubbell, Roth, and Clark regarding the traffic study of Monroe Street between Third Street and Elm Avenue.

V. COUNCIL ACTION.

51 This item was postponed at the April 7, 2014 meeting.

The communication from the City Manager's Office, submitting a proposal from Ready, Heller & Ready, PLLC for the continuation of routine, general legal services for another two (2) year term and appointment, and recommending that Council strongly consider accepting Mr. Ready's legal services proposal and re-appointing him as City Attorney for the term of July 1, 2014 to June 30, 2016. It was moved by Council Member Iacoangeli and seconded by Council Member Vining that item 51 be postponed until the Jun 2, 2014 Regular Council Meeting.

104 Communication from the Director of Economic & Community Development, submitting Proposed Ordinance 14-003, an Ordinance to add Chapter 528, Property Tax Exemptions, to provide a service charge in lieu of taxes for a proposed multiple family dwelling project, of the Code of the City of Monroe.

Proposed Ordinance No. 14-003, up for its first reading and recommending that the public hearing and second reading be set for Monday, June 16, 2014.

105 Communication from the City Manager, submitting a response with staff recommendation related to a "petition" received from Toll Street residents and recommending that the attached letter be sent to each of the Toll Street residents who signed the April 28, 2014 petition, which was previously provided to the Mayor and City Council, and if residents express a subsequent interest in exploring the possibility of having a public storm water improvement installed to help improve the drainage from their properties, City staff can meet with them to discuss the Charter prescribed process and the potential costs of a project in greater detail.

VI. CONSENT AGENDA. (All items listed under the Consent Agenda are considered to be routine by Mayor and Council and will be approved by one motion, unless a Council member or citizen requests that an item be removed and acted on as a separate agenda item.)

A Approval of the Minutes of the Regular City Council Meeting held on Monday, May 19, 2014.

B Approval of payments to vendors in the amount of $_____.
Action: Bills be allowed and warrants drawn on the various accounts for their payment.

106 East Noble Avenue Water Main Replacement Bids.

1. Communication from the Director of Engineering & Public Services, reporting back on bids received for the East Noble Avenue Water Main Replacement, and recommending that Council award a contract for the East Noble Avenue Water Main Replacement project to Salenbien Properties, LLC in the amount of $381,783.70, that a total of $439,000 be encumbered to include a 15% contingency, and that the Finance Director be authorized to allocate the necessary funding to the appropriate fiscal year as needed from the Water Fund reserves, and further recommending that the Mayor and Clerk-Treasurer be authorized to sign the contracts on behalf of the City of Monroe.
2. Supporting documents.
3. Action: Accept, place on file and the recommendation be carried out.

107 Installation of New Public Sanitary Sewer – West Fourth Street Between Hubble and Harrison Streets – Special Assessment Resolution Number 4 – Sewer SAD #232.

1. Communication from the Director of Engineering & Public Services, submitting Resolution No. 4, which schedules the final public hearing on the assessment roll, and recommending that the attached Resolution No. 4 be adopted and that the public hearing on the assessment roll be scheduled for Monday, June 16, 2014 at 7:30 p.m. in the City Council Chambers.
2. Supporting documents.
3. Action: Accept, place on file and the resolution be adopted.

108 Public Safety Paramedic Vehicle Purchase – Ford Explorer.

1. Communication from the Director of Engineering & Public Services, submitting a contract to purchase a Ford Explorer to be used as a Public Safety Paramedic vehicle, and recommending that Council award a contract to purchase one (1) 2015 Utility Interceptor All Wheel Vehicle for a total price of $26,615 from Signature Ford of Owosso, Michigan, and further recommending that the Director of Engineering & Public Services be authorized to prepare a purchase order for the above amount.
2. Supporting documents.
3. Action: Accept, place on file and the recommendation be carried out.

109 Freedom of Information Act (FOIA) Procedures and Guidelines.

1. Communication from the City Manager, submitting proposed Procedures and Guidelines for the administration of the Michigan Freedom of Information Act, FOIA, and recommending that Council adopt the proposed FOIA Procedures and Guidelines.
2. Supporting documents.
3. Action: Accept, place on file and the resolution be adopted.

110 Freedom of Information Act (FOIA) Cost Recovery and Fee Schedule.

1. Communication from the City Manager, submitting proposed resolution to establish Procedures and Guidelines for the administration of the Freedom of Information Act (FOIA Cost Recovery and Fee Schedule and recommending that Council adopt the proposed resolution which will establish Freedom of Information Act fees.

2. Supporting documents.
3. Action: Accept, place on file and the resolution be adopted.

111 Traffic Committee Minutes of May 28, 2014 Meeting, Traffic Control Orders.

1. Communication from the Director of Engineering & Public Services, submitting the minutes of the Mayor's Traffic Committee meeting held on May 28, 2014 and a proposed resolution of support for the lane reconfiguration of Monroe Street, and recommending that Council place on file the minutes from the May 28, 2014 Mayor's Traffic Committee meeting, and approve the two (2) Traffic Control Orders 067-008 and 134-004, and further recommending that the attached resolution of support for the lane reconfiguration of Monroe Street be adopted, and that the Director of Engineering & Public Services be authorized to forward this to the appropriate personnel at the Michigan Department of Transportation.
2. Supporting documents.
3. Action: Accept, place on file and the resolution be adopted.

112 Upgrade to Laserfiche software.

1. Communication from the Finance Director, submitting an agreement to upgrade Laserfiche software for document imaging purposes, and recommending that Council approve entering into the agreement with General Code for the Laserfiche software upgrade, installation, and training in the amount of $65,865.94 and that a total of $71,00 be encumbered to allow for contingencies and GIS integration work, that the City Manager be authorized to sign any necessary agreements to execute the proposal and that the agreements not be executed until after the City Attorney has reviewed and approved them
2. Supporting documents.
3. Action: Accept, place on file and the recommendation be carried out.

113 Appointments Resolution.

1. Communication from the Mayor's Office, submitting a proposed resolution for appointments to various boards, commissions and committees, and recommending that the resolution be adopted.
2. Supporting documents.
3. Action: Accept, place on file and the resolution be adopted.

VII. COUNCIL COMMENTS.

VIII. MAYOR'S COMMENTS.

IX. CITY MANAGER COMMUNICATION.

X. CITIZEN COMMENTS

XI. QUATERLY EXECUTIVE CLOSED SESSION TO DISCUSS PENDING LITIGATION.

XII. ADJOURNMENT.

CITY OF MONROE
REGULAR COUNCIL MEETING
MONDAY, MAY 19, 2014

Regular meeting of the City Council of the City of Monroe, Michigan held on Monday, May 19, 2014 at 7:30 p.m. in the City Hall Council Chambers.

Present: Council Members Rafko, Sisk, Hensley, Iacoangeli, Vining, Molenda and Mayor Clark.

Sharon C. Malotky, Deputy City Clerk gave the invocation.

Mayor Clark led the pledge of allegiance to the flag.

Presentation.

1. Presentation by the River Raisin Watershed Council.

Carley Kratz gave a presentation about the River Raisin Watershed.

2. Presentation by Dan Swallow, Director of Economic & Community Development, and Keith Woodcock, Building Official, regarding Rental Housing Inspection and Property Maintenance Code Compliance Programs.

Keith Woodcock, Building Official gave a presentation regarding the Rental Housing Inspections and Property Maintenance Program.

Communication. (Communications are referred to city administration for action and report back, unless otherwise noted.)

94 Communication from Donald Kroeger, 433 Toll Street submitting a petition from the property owners adjacent to the easement between CSX Railroad and property owners land to request the drainage ditch be cleaned out and restored to its original size for drainage of storm water off their property at no additional cost to the property owners.

It was moved by Council Member Iacoangeli and seconded by Council Member Hensley that the communication from Donald Kroeger and the property owners on Toll Street be accepted and referred to the administration for action and report back to Council.
Ayes: 7 Nays: 0
Motion carried.

Council Action.

92 The communication from the Human Resources Director, reporting back on bids received for a Classification & Compensation Study review of all the non-union and employees groups, excluding public safety, and recommending that Council award a contract for the City's Classification & Compensation Study project to Municipal Consulting Services, Inc. in the amount of $42,170, and that the Finance Director be authorized to make a budget transfer of $45,000 from the General Fund Contingency to the Human Resources Department, and further recommending that the Mayor and Clerk-Treasurer be authorized to execute any necessary agreements on behalf of the City of Monroe.
It was moved by Council Member Iacoangeli and seconded by Council Member Molenda that item 92 be postponed until the next Regular Council Meeting to give the Attorney time to review the process that was used.

It was moved by Council Member Iacoangeli and seconded by Council Member Rafko that item 92 be placed on the floor for discussion.
Ayes: 7 Nays: 0
Motion carried.

Council Member Sisk stated that he is still uncomfortable with the entire process and feels that all bids using public money should be opened in the public. He further stated that we need to make sure the rules are followed and that there is no appearance of impropriety.

It was moved by Council Member Sisk and seconded by Council Member Rafko that item 92 be rebid, that the bids be opened publicly and that it be stated in the Request for Proposal that the bids will be opened publicly.

George Brown, City Manager expressed concern that the two companies who have already submitted bids have had their bids exposed and could now be at a disadvantage. He stated that the purchasing policy and ordinance were followed but that Council could amend the ordinance for future bids and proposals.

After discussion, a vote was taken on the motion.
Ayes: 3 Nays: 4 (Council Members Hensley, Iacoangeli, Molenda and Mayor Clark)
Motion failed.

It was moved by Council Member Hensley and seconded by Council Member Molenda that item 92 be accepted, placed on file and the recommendation be carried out.
Ayes: 4 Nays: 3 (Council Members Rafko, Sisk and Vining)
Motion failed.

It was moved by Council Member Iacoangeli and seconded by Council Member Rafko that the Human Resources Director and the City Manager solicit Requests for Proposals to receive the Compensation and Classification Study in conformance with the City's proposal procedures and that the proposals be received and opened at the City Clerk's Office, with the date and time certain.

George Brown, City Manager stated that it is his intention to revamp the Professional Services Proposal Policy that he issued in 2007 to add a provision that sealed Requests for Proposals will be opened by the City Clerk with date and time certain.

After discussion, a vote was taken on the motion.
Ayes: 7 Nays: 0
Motion carried.

Consent Agenda.

A. Approval of the Minutes of the Regular City Council Meeting held on Monday, May 5, 2014, and the Minutes of the Work Session held on Monday, May 12, 2014.

B. Approval of payments to vendors in the amount of $550,553.73.
Action: Bills be allowed and warrants drawn on the various accounts for their payment.

95 Raw Water Pump Station Chlorine Gas Detectors Replacement – Water Department.

1. Communication from the Director of Water & Wastewater Utilities, submitting a quote for the Pointe Aux Peaux Raw Water Pump Station chlorine bas detectors replacement, and recommending that a purchase order in the amount of $6,715 and a total amount of $7,000 be encumbered to include a 5% contingency be issued to RS Technical Services, Inc out of Lowell, MI to provide the replacement detectors as outlined in their quote (CO-10835) and that the bid process be waived, and further recommending that the Finance Director be authorized to amend the budget accounts listed to provide the adequate funding for this project up to the amounts shown.
2. Supporting documents.
3. Action: Accept, place on file and the recommendation be carried out.

96 Wastewater Department Collection System Annual Root Treatment Program.

1. Communication from the Director of Water & Wastewater Utilities, reporting back on bids received for its annual collection system root treatment program, and recommending that a purchase order in the amount of $17,544.04 and a total amount of $18,500 be encumbered to include a 5% contingency, be awarded to Duke's Root Control, Inc. for tree root chemical treatment of Section 2 in accordance with the bid specifications.
2. Supporting documents.
3. Action: Accept, place on file and the recommendation be carried out.

97 Wastewater Treatment Plant Fiscal Year 2014 – 2015 Chemicals / Sludge Hauling & Disposal Requirements.

1. Communication from the Director of Water & Wastewater Utilities, reporting back on bids received for Cationic Polymer and Liquid Ferric Chloride, for Sludge Hauling at the Monroe Wastewater Treatment Plant, and recommending that the purchase orders be awarded to the following vendors for the estimated chemicals / sludge hauling and disposal requirements at the Wastewater Treatment Plant based on the bid unit prices, and further recommending that the City Manager or his designee be authorized to sign all necessary documents on behalf of the City of Monroe (if needed), Liquid Ferric Chloride, PVS Technologies, Inc., $16,000; Cationic Polymer, Polydine, Inc., $64,240; WW Sludge Hauling, S & L Fertilizer Company, $158,025; and WW Sludge Disposal, Republic Services, $271,827.50.
2. Supporting documents.
3. Action: Accept, place on file and the recommendation be carried out.

98 Michigan Natural Resources Trust Fund Acquisition Grant Application for the River Raisin Heritage Corridor – East Area.

1. Communication from the Director of Economic and Community Development, submitting an amendment to a previously approved resolution R14-14, agenda item 39, at a Special Meeting on March 26, 2014, to include a specific dollar amount for both the total grant amount request and the local match committed, supporting the Michigan Natural Resources Trust Fund Application for the River Raisin Heritage Corridor East Area Riverfront Connection, and recommending that City Council amend its authorization and support for the submittal of a Michigan Natural Resources Trust Fund Acquisition Grant Application for the River Raisin Heritage Corridor Riverfront Connection; in the form of the attached amended resolution which includes specific dollar amounts for both the total grant amount requested and the local match committed.
2. Supporting documents.
3. Action: Accept, place on file and the resolution be adopted.

99 Asbestos and Led Based Paint Removal Bid.

1. Communication from the Director of Water & Wastewater Utilities, reporting back on bids received for Asbestos and Lead Based Paint Removal as part of the Energy Based Performance Contract, and recommending that a purchase order in the amount of $27,290 and a total amount of $44,000 be encumbered to include a 60% contingency, be awarded to Environmental Maintenance Engineers, Inc. out of Inkster, MI for Asbestos and Lead Based Paint Removal as part of the Energy Based Performance contract in accordance with the bid specifications.
2. Supporting documents.
3. Action: Accept, place on file and the recommendation be carried out.

100 Rauch Park Use Approval – Norfolk Southern Railroad Bridge Construction.

1. Communication from the Director of Engineering & Public Services, submitting a request from Ruhlin Company to enter into an agreement with the City of Monroe to use a portion of Rauch Park during the construction of Norfolk Southern Railroad Bridge, and recommending that the attached agreement between the City and the Ruhlin Company for the use of the portion of Rauch Park lying east of Winchester Street be approved, and that the Director of Engineering & Public Services be authorized to execute it on behalf of the City.
2. Supporting documents.
3. Action: Accept, place on file and the recommendation be carried out.

101 Downtown Monroe Business Network – Annual Fine Art Fair.

1. Communication from the City Manager's Office, reporting back on a request from the Downtown Monroe Business Network (DMBN) Fine Arts Fair Committee to hold the Annual Fine Art Fair in conjunction with the 2014 River Raisin Jazz Festival on August 9 & 10, 2014, for use of utilities, services, personnel from the City, closure of the affected streets, picnic tables, and extra trash cans, and recommending that Council approve the request contingent upon items being met as outlined by the administration, and that the City Manager be granted authority to alter/amend the event due to health and/or safety reasons.
2. Supporting documents.
3. Action: Accept, place on file and the recommendation be carried out.

102 East Noble Avenue Resurfacing Funding Contract with MDOT.

1. Communication from the Director of Engineering & Public Services, submitting a proposed resolution delineating the terms of the East Noble Avenue Resurfacing Funding Contract with the Michigan Department of Transportation, MDOT, and recommending that the attached resolution be approved, and that the local share of the costs be appropriated as detailed in the financial information below.
2. Supporting documents.
3. Action: Accept, place on file and the resolution be adopted.

103 Hydraulic Rescue Tool (Jaws of Life).

1. Communication from the Fire Chief, reporting back on bids received for a Hydraulic Rescue Tool (Jaws of Life) for use in vehicle extrication of crash victims, and recommending that a purchase order in the amount of $9,819.50 be awarded to Rescue Resources of Rockford, MI for the purchase of one (1) Genesis Rescue System in accordance with the bid specifications.
2. Supporting documents.
3. Action: Accept, place on file and the recommendation be carried out.

It was moved by Council Member Molenda and seconded by Council Member Sisk that items 95, 96, 97, 98, 99, 101 and 103 of the Consent Agenda be approved as presented and that items 100 and 102 be removed and considered separately.
Ayes: 7 Nays: 0
Motion carried.

100 The communication from the Director of Engineering & Public Services was presented, submitting a request from Ruhlin Company to enter into an agreement with the City of Monroe to use a portion of Rauch Park during the construction of Norfolk Southern Railroad Bridge, and recommending that the attached agreement between the City and the Ruhlin Company for the use of the portion of Rauch Park lying east of Winchester Street be approved, and that the Director of Engineering & Public Services be authorized to execute it on behalf of the City.

Council Member Iacoangeli expressed concern with Section 3. Compensation (b) Athletic Field stating that there has not been an athletic field proposed at Rauch Park and it is designated in the five year Parks and Recreation Plan as a park that will eventually be decommissioned for the National Park. He stated that he would rather follow the plans that the community has prepared and requested that we change that provision to state that the railroad will grade the surface pursuant to the City Engineer's criteria but it will not be used for an athletic field.

It was moved by Council Member Iacoangeli and seconded by Council Member Rafko that item 100 be accepted, placed on file and the recommendation carried out with the following amendment to Section 3. Compensation. (b) Athletic Field: The railroad will grade the surface pursuant to the City Engineer's criteria but it will not be used for an athletic field.

Council Member Molenda felt that if we give up something that has some value we should specify something else of value as replacement.

Mayor Clark commented that there are three other items of benefit under Section 3. Compensation: Sidewalk, Landscape berm and Landscape plantings.

George Brown, City Manager, suggested that we might want to go back to a monetary compensation.

Council Member Hensley felt that we could just eliminate the words "athletic field" and call it an open green space for kids to play. He also asked that staff make a brief presentation on this item.

Council Member Vining agreed with Council Member Iacoangeli stating that if it is not an athletic field we should follow the heritage plan and also asked Council to keep in mind that we want to talk about the development of the Labor Park area in the near future.

Council Member Iacoangeli amended his motion to state that "The Grantee shall grade and install a minimum of six inches of top soil surface with the appropriate seed mix in the central part of the park property, staked by the City Engineer and graded to the specifications consistent with an athletic field." The amended motion was seconded by Council Member Rafko.

A vote was then taken on the amended motion.
Ayes: 7 Nays: 0
Motion carried.

Patrick Lewis, Director of Engineering & Public Services gave a brief presentation stating that they have been working with the design team for the replacement of Norfolk Sout.hern's northbound track bridge; the bridge is over 100 years old and must be replaced. He further stated that the city has committed to allow them the use of Rauch Park for an access road and has granted them a Right of Way permit.

102 The communication from the Director of Engineering & Public Services was presented, submitting a proposed resolution delineating the terms of the East Noble Avenue Resurfacing Funding Contract with the Michigan Department of Transportation, MDOT, and recommending that the attached resolution be approved, and that the local share of the costs be appropriated as detailed in the financial information below.

Council Member Iacoangeli stated that he appreciates the fact that the City Engineer disclosed that they have evaluated the improvements to this road based on the Complete Streets Program and he hopes that in the future every time we do a street project that we do the evaluation to make sure that it can comply with complete streets.

It was moved by Council Member Iacoangeli and seconded by Council Member Hensley that item 102 be accepted, placed on file and the resolution be adopted.

Ayes: 7 Nays: 0
Motion carried.

Council Comments.

Council Member Rafko stated that it is nice to see that summer is finally here and the city is looking good.

Council Member Hensley reminded everyone to keep an eye out for people on bicycles, motorcycles and for pedestrians in this warmer weather.

Council Member Iacoangeli asked if there was coordinated planning going on relative to infrastructure improvements in regard to MDOT's sidewalk replacement near the River Raisin Centre for the Arts on Monroe Street.

Patrick Lewis, Director of Engineering & Public Services responded stating that the city was not aware it was happening until the last progress meeting. He stated that particular section of curb was not planned for replacement on their construction plans as they were bid and MDOT decided to do that work at the last minute. He is glad that they did but it really didn't lend itself to any coordination.

Council Member Iacoangeli asked for a status report on the Traffic Study. Patrick Lewis, City Engineer reported that the final version is due to him in the morning and he is expecting to see some interesting and intriguing conclusions. He is planning to present it to the Downtown Development Authority on Wednesday morning, the Traffic Committee a week from Wednesday, with possible presentation to Council by June 2nd.

Council Member Iacoangeli commented on a statement made by George Brown, City Manager at the Public Safety Work session. Mr. Brown stated that according to Public Act 78 the minimum educational requirement for Firefighters/Paramedics is an eighth grade education Council Member Iacoangeli stated that he researched the National Education Statistics Center Website and talked to Peggy Howard, Human Resources Director and found the city requires that a Firefighter/Paramedic must be a high school graduate and must possess a valid State of Michigan vehicular operator's license but because the city also requires that the applicants must possess a Firefighter 2 Certification and a State of Michigan Paramedic License, they obviously have a higher level of education than a high school graduate. He also called the Fire Department and found that out of the city's nine Firefighter/Paramedics, five have Associates degrees, three have Bachelor's degrees and one has a Master's degree.

Council Member Vining thanked everyone who came out to support the Arthur Lesow Community Center Art Auction and the Comprehensive Services for the Developmentally Disabled Masquerade Ball.

Council Member Molenda reminded everyone that the city has a very aggressive lawn maintenance ordinance and encouraged everyone to get out and mow their lawns and support the community's goal of keeping the city looking nice.

Mayor Clark reminded everyone to come downtown for the Memorial Day Parade.

George Brown, City Manager stated that the City took it upon themselves to override the eighth grade level requirement in Public Act 78 for Firefighters/Paramedics and the city also advertises and lists in the job description that an Associate's Degree is preferred.

Citizen's Comments.

Pat McElligott, 813 Reisig Street, stated that he would like to have more discussion on the value of the Classification and Compensation Study to the public and spoke about the blight issues stating that the city needs to expand on the Rental Housing Inspection Program to make all property owners compliant.

Richard Micka, 47 East Elm Avenue, spoke regarding the Norfolk Southern Bridge Project asking if there has been a permit requested from the Corps of Engineers and the Michigan Department of Environmental Quality, if there has been an environmental statement written, asked about access for public fishing at Rauch Park, and questioned if the February event at Rauch Park is a good idea considering the ice problems there this past winter.

Harold Caldwell, 311 Washington Street encouraged Council to adopt the Property Maintenance Program stating that it would really benefit the community.

Jeannie Black, 1737 Oak Street addressed several issues in the Orchard East area stating that something needs to be done to the playground that has been overlooked for many years and stated that she has brought a petition to Patrick Lewis, City Engineer asking that stop signs be put on Oak Street between Conant Avenue and Norwood Avenue because of the speeding issue in the area.

Jeannie Micka, 47 East Elm Avenue, thanked Council Member Vining for being so eloquent at the dedication of the Blue Star Marker at the Sawyer Homestead, stated that the International Wildlife Refuge's annual benefit dinner was well received and a successful fund raiser, and congratulated Waterloo School for their recent win.

Adjournment.

It was moved by Council Member Iacoangeli and seconded by Council Member Rafko that the meeting adjourn at 9:56 p.m. until the Regular Meeting on Monday, June 2, 2014 at 7:30 p.m.
Ayes: 7 Nays: 0
Motion carried.

Sharon C. Malotky
Deputy City Clerk

Robert E. Clark
Mayor

INVOICE APPROVAL BY INVOICE REPORT FOR CITY OF MONROE
EXP CHECK RUN DATES 05/20/2014 - 06/02/2014
BOTH JOURNALIZED AND UNJOURNALIZED
BOTH OPEN AND PAID
PRELIMANRY REPORT

Vendor Code	Vendor Name / Invoice	Description	Amount	Check #	Check Date
0000005195	AIR LIQUIDE AMERICA LP				
	55410814	LIQUID OXYGEN PURCHASE	998.22		
TOTAL FOR: AIR LIQUIDE AMERICA LP			998.22		
0000000443	AMERICAN CANCER SOCIETY				
	5/21/14	CASUAL DAYS FOR CHARITY PROGRAM DONATIONS	100.00		
TOTAL FOR: AMERICAN CANCER SOCIETY			100.00		
MISC	AP FEDERAL CREDIT UNION				
	05/28/2014	OVERPAYMENT OF 19-00302-000 (YETTAW)	648.30		
TOTAL FOR: AP FEDERAL CREDIT UNION			648.30		
0000005573	ARROW ENERGY INC				
	45332	CREDIT INV 44400 SALES TAX RATE INCORRECT	(42,758.18)		
	45333	CORRECTED INVOICE FOR INVOICE 44400 SALES TAX CORRECTED	42,885.83		
TOTAL FOR: ARROW ENERGY INC			127.65		
0000000081	ARTHUR LESOW COMMUNITY CENTER				
	5/21/14	CASUAL DAYS FOR CHARITY PROGRAM DONATION	100.00		
TOTAL FOR: ARTHUR LESOW COMMUNITY CENTER			100.00		
0000000106	B&L OFFICE MACHINES				
	12039	HP 4100 REFILL	68.95		
	12046	2 HP EX REFILLS	117.90		
TOTAL FOR: B&L OFFICE MACHINES			186.85		
0000005915	THE BANK OF NEW YORK MELLON				
	252-1784038	CAP IMP 2010 RECOVERY ZONE AGENT FEE	1,100.00		
	252-1787097	2008 CAPITAL IMPROVEMENT BOND AGENT FEE	750.00		
	252-1787098	2012 REFG BDS GOUT AGENT FEE	200.00		
	252-1787110	CAP IMP 2012 BDS (LTGO) AGENT FEE	200.00		
TOTAL FOR: THE BANK OF NEW YORK MELLON			2,250.00		
0000006540	BCA TRANSPORT LLC				
	32770-71-85-32823-4	SLUDGE HAULING	13,698.95		
	32846-70-96-32910-2	SLUDGE HAULING	11,828.58		
TOTAL FOR: BCA TRANSPORT LLC			25,527.53		
0000000204	CINTAS CORPORATION 306				
	306166914	SHOP TOWELS FOLDED RED	62.70		
	306166915	BLACK MATTS	194.17		
TOTAL FOR: CINTAS CORPORATION 306			256.87		
MISC	CLARK, JERILYN				
	5/23/14	REFUND GIRLS FAST PITCH SR LEAGUE FEE	29.00		

Vendor Code	Vendor Name / Invoice	Description	Amount	Check #	Check Date
TOTAL FOR: CLARK, JERILYN			29.00		
0000000283	ROBERT E CLARK				
	5/19/14	MILEAGE SEMCOG EXEC MEETING 5/15/14	43.68		
TOTAL FOR: ROBERT E CLARK			43.68		
0000006310	COLASANTI CONSTRUCTION SERVICES INC				
	958	OZONE SYSTEM MODIFICAITONS PER 12/23/13 COUNCIL	285,747.40		
TOTAL FOR: COLASANTI CONSTRUCTION SERVICES INC			285,747.40		
0000000296	COMPREHENSIVE RISK SERVICES INC				
	1991	CLAIM AUDIT	660.00		
	5/28/14	REIMBURSE CRS DISBURSEMENTS # 3641-3647	1,236.61		
TOTAL FOR: COMPREHENSIVE RISK SERVICES INC			1,896.61		
0000006494	CRYSTAL FLASH				
	774507	ASSESSOR VEHICLE FUEL 5/1 - 5/15/14	11.74		
	774508	BUILDING DEPT VEHICLE FUEL 5/1 - 5/15/14	220.53		
	774509	D P S VEHICLE FUEL 5/1 - 5/15/14	2,237.98		
	774510	ENGINEERING VEHICLE FUEL 5/1 - 5/15/14	103.61		
	774512	POLICE DEPT VEHICLE FUEL 5/1 - 5/15/14	4,807.27		
	774513	WASTEWATER VEHICLE FUEL 5/1 -5/15/14	934.30		
	774514	WATER DEPT VEHICLE FUEL 5/1 - 5/15/14	1,953.68		
TOTAL FOR: CRYSTAL FLASH			10,269.11		
0000005738	CV ENTERPRISES				
	10430	THREE PILLAR TROPHY	49.00		
TOTAL FOR: CV ENTERPRISES			49.00		
0000000353	DELTA DENTAL PLAN OF MICHIGAN				
	5/20/14	DENTAL INSURANCE PREMIUM JUNE 2014	1,699.50		
TOTAL FOR: DELTA DENTAL PLAN OF MICHIGAN			1,699.50		
MISC	DOMASICA, SUSAN				
	5/23/14	REFUND GIRLS FAST PITCH SR LEAGUE FEE	36.00		
TOTAL FOR: DOMASICA, SUSAN			36.00		
0000000380	H DOMINE ENTERPRISES INC				
	33458	PERFORM TANK TEST ON 12000 GAL TANK	680.00		
TOTAL FOR: H DOMINE ENTERPRISES INC			680.00		
MISC	DOZIER, TIM				
	5/23/14	REFUND GIRLS FAST PITCH SR LEAGUE FEE	34.00		
TOTAL FOR: DOZIER, TIM			34.00		
0000000333	DRACO				
	5/23/14	CLASS #17766 2009 IPMC FUNDAMENTALS-MI	300.00		

Vendor Code	Vendor Name / Invoice	Description	Amount	Check #	Check Date
TOTAL FOR: DRACO			300.00		
000000359A	DTE ENERGY				
	7809-7 0414	0000-7809-7 STREET LIGHTS 4/1 - 4/30/14	35,072.17		
	7834-5 0414	0000-7834-5 AIRPORT 04/01 - 04/30/14	69.95		
TOTAL FOR: DTE ENERGY			35,142.12		
0000000418	EJ USA INC				
	3706864	6" Mechanical Joint Gate Valve	2,693.04		
TOTAL FOR: EJ USA INC			2,693.04		
0000000429	EMPCO INC				
	3302	TAILORED EXAM FORESTRY JOB LEADER	522.00		
TOTAL FOR: EMPCO INC			522.00		
MISC	EQUITY TRUST COMPANY CUSTODIAN				
	05/28/2014	OVERPAYMENT OF TAX 19-00109-000	229.53		
	05/28/2014	OVERPAYMENT OF TAXES 19-00142-000	318.74		
TOTAL FOR: EQUITY TRUST COMPANY CUSTODIAN			548.27		
MISC	FAVREAU, STEVE				
	5/23/14	REFUND GIRLS FAST PITCH SR LEAGUE FEE	29.00		
TOTAL FOR: FAVREAU, STEVE			29.00		
463A	FIFTH THIRD BANK				
	04-14 006314	FIFTH THIRD SERVICE CHARGES APRIL 2014	1,300.00		
TOTAL FOR: FIFTH THIRD BANK			1,300.00		
0000001819	FLORAL CITY TREE SERVICE				
	82281	FIRST DIPLODA TIP BLIGHT TREATMENT	198.00		
TOTAL FOR: FLORAL CITY TREE SERVICE			198.00		
MISC	GEIGER, TINA				
	5/21/14	REFUND BOYS MINOR FEE	32.40		
TOTAL FOR: GEIGER, TINA			32.40		
0000006390	GEOGRAPHIC INFORMATION SERVICES INC				
	3753	AMAZON CLOUD APRIL 2014	136.50		
TOTAL FOR: GEOGRAPHIC INFORMATION SERVICES INC			136.50		
0000006344	GLASCO UV LLC				
	35010	BALLAST	3,513.45		
TOTAL FOR: GLASCO UV LLC			3,513.45		
0000006391	HEALTH MANAGEMENT SYSTEMS OF AMERIC				
	6970614	EMPLOYEE ASSISTANCE PROGRAM ADJUSTED TO ACTUAL	222.11		

Vendor Code	Vendor Name / Invoice	Description	Amount	Check #	Check Date
TOTAL FOR: HEALTH MANAGEMENT SYSTEMS OF AMERIC			222.11		
0000000611	HOPPERT FARMS INC				
	3089-3154	11 YDS SCREENED TOPSOIL	220.00		
TOTAL FOR: HOPPERT FARMS INC			220.00		
0000006083	HYDRO-DESIGNS INC				
	32064-IN	2013/2014 CROSS CONNECTION INSPECTIONS / RE-INSPECTIONS A	1,563.00		
TOTAL FOR: HYDRO-DESIGNS INC			1,563.00		
MISC	KARI HUGHES				
	05/28/2014	OVERPAYMENT OF TAXES - 68-02023-000	8.47		
TOTAL FOR: KARI HUGHES			8.47		
MISC	KNEZEVICH, PIO PAUL & CHARLENE				
	05/28/2014	OVERPAYMENT OF 59-00524-000	10.95		
TOTAL FOR: KNEZEVICH, PIO PAUL & CHARLENE			10.95		
0000006193	LACAL EQUIPMENT INC				
	192370-IN	Street Sweeper 2-Speed Gear Box	5,415.15		
TOTAL FOR: LACAL EQUIPMENT INC			5,415.15		
MISC	LAFOUNTAIN, AARON				
	5/23/14	REFUND GIRLS FAST PITCH SR LEAGUE FEE	36.00		
TOTAL FOR: LAFOUNTAIN, AARON			36.00		
0000006337	LANZO LINING SERVICES INC FL				
	5/28/14 EST# 12	2013 SANITARY SEWER REHABILITATION PROGRAM PER 6/17/13 CO	24,200.00		
TOTAL FOR: LANZO LINING SERVICES INC FL			24,200.00		
0000000792	MAGLOCLEN				
	34-2M43	MAGLOCLEN MEMBERSHIP	400.00		
TOTAL FOR: MAGLOCLEN			400.00		
MISC	MCCARTY, MELISSA				
	5/23/14	REFUND GIRLS FAST PITCH SR LEAGUE FEE	29.00		
TOTAL FOR: MCCARTY, MELISSA			29.00		
0000001130	MICHIGAN MUNICIPAL LEAGUE				
	11615201	MML001087130 POOL RENEWAL PREMIUM	267,157.00		
TOTAL FOR: MICHIGAN MUNICIPAL LEAGUE			267,157.00		
0000001142	STATE OF MICHIGAN				
	AP 366166	PROGRESS BILLING ELM ST AND RR TRACKS	1,592.26		
TOTAL FOR: STATE OF MICHIGAN			1,592.26		

Vendor Code	Vendor Name / Invoice	Description	Amount	Check #	Check Date
0000000847	MONROE COUNTY COMMUNITY CREDIT UNIO				
	MCCCU013	APRIL COLLECTION EXPENSE CASH RECEIPTS	2,310.00		
TOTAL FOR: MONROE COUNTY COMMUNITY CREDIT UNIO			2,310.00		
0000001783	MONROE COUNTY FAIR ASSOCIATION				
	5/23/14	TEAM ENTRY FOR BOYS AND GIRLS FAIR JULY 2014	720.00		
TOTAL FOR: MONROE COUNTY FAIR ASSOCIATION			720.00		
0000000870	MONROE INDUSTRIAL SUPPLY CO				
	38-214	BETCO HAND SOAP & DEGREASER - AIRPORT	70.10		
TOTAL FOR: MONROE INDUSTRIAL SUPPLY CO			70.10		
0000000882	MONROE SPORTS VARSITY ATHLETIC				
	3535	KELLY GREEN LONG SLEEVE FRONT LOGO	63.00		
TOTAL FOR: MONROE SPORTS VARSITY ATHLETIC			63.00		
000000838B	CITY OF MONROE				
	FIR12001 0414	FIR -000120-0000-01 120 E FIRST 1/29 - 4/17/14	259.75		
	JONS22201 0414	JONS-000222-0000-01 222 JONES 1/31 - 5/1/14	153.34		
	SCOT7501 0414	SCOT-000075-0000-01 75 SCOTT 1/29 - 4/17/14	190.20		
	WASH4101 0414	WASH-000041-0000-01 41 WASHINGTON 1/29 - 4/17/14	9.90		
TOTAL FOR: CITY OF MONROE			613.19		
0000000780	MPACT				
	5/13/14	CHARTER COMMUNICATION FRANCHISE FEE (50%)	1,491.06		
	5/19/14	COMCAST FRANSHISE & PEG FEES	34,725.42		
	5/5/14	AT & T FRANCHISE & PEG FEES	12,436.41		
TOTAL FOR: MPACT			48,652.89		
0000000972	MT BUSINESS TECHNOLOGIES INC				
	ARIN107728T	RICOH COPIER PURCHASE	3,858.00		
TOTAL FOR: MT BUSINESS TECHNOLOGIES INC			3,858.00		
MISC	MUTTER, EMILY				
	5/19/14	REFUND CHARGED NON RESIDENT FEE	20.00		
TOTAL FOR: MUTTER, EMILY			20.00		
0000006110	RON NOEL LAWN SERVICE				
	5	2014-2018 LAWN MAINTENANCE CONTRACT - WORK GROUPS A, C, A	7,250.00		
	5	2014-2018 LAWN MAINTENANCE CONTRACT - WORK GROUPS A, C, A	7,250.00		
	5	2014-2018 LAWN MAINTENANCE CONTRACT - WORK GROUPS A, C, A	1,450.00		
TOTAL FOR: RON NOEL LAWN SERVICE			15,950.00		
0000001021	POLYDYNE INC				
	882964	CATONIC POLYMER FY13-14	4,985.20		

Vendor Code	Vendor Name / Invoice	Description	Amount	Check #	Check Date
TOTAL FOR: POLYDYNE INC			4,985.20		
0000001032	PRINTING SYSTEMS INC				
	84985	LETTERHEAD ENGINEERING PUBLIC SERVICE	221.81		
TOTAL FOR: PRINTING SYSTEMS INC			221.81		
0000006113	PVS TECHNOLOGIES INC				
	439386	SODIUM HYPOCHLORITE PURCHASE	2,999.82		
TOTAL FOR: PVS TECHNOLOGIES INC			2,999.82		
0000004442	RESOURCE SOFTWARE INTERNATIONAL LTD				
	60747	SHADOW CMS CALL ACCT MANUAL MAINTENANCE	375.00		
TOTAL FOR: RESOURCE SOFTWARE INTERNATIONAL LTD			375.00		
0000003459	ROSELAWN MEMORIAL PARK				
	4/30/14	FEES & EXPENSES FOR WOODLAND CEMETERY APRIL 2014	2,186.88		
TOTAL FOR: ROSELAWN MEMORIAL PARK			2,186.88		
0000006568	RUHLIG FARMS LLC				
	280752	FLOWERS FOR KENTUCKY MEMORIAL DISPLAY	2,088.00		
TOTAL FOR: RUHLIG FARMS LLC			2,088.00		
0000006563	SEVERANCE ELECTRIC CO INC				
	6972	REPLACEMENT TRAFFIC LIGHT FRONT & ROESSLER	1,655.00		
TOTAL FOR: SEVERANCE ELECTRIC CO INC			1,655.00		
MISC	TACKETT, MARK				
	5/21/14	REFUND WATER SERVICE FEE PAID	3,923.25		
TOTAL FOR: TACKETT, MARK			3,923.25		
0000006335	R J THOMAS MANUFACTURING COMPANY				
	166802	PLASTIC DOMB LID-ARCHED DOOR	3,312.50		
TOTAL FOR: R J THOMAS MANUFACTURING COMPANY			3,312.50		
0000001857	CHAD TOLSTEDT				
	5/13/14	MEALS TRAVEL TO EMU	5.93		
TOTAL FOR: CHAD TOLSTEDT			5.93		
0000001314	TRUCK & VAN-LAND				
	5/8/14	CUSTOM TRUCK CAP FOR NEW UNIT #311 (ENGINEERING SURVEY TR	2,157.00		
TOTAL FOR: TRUCK & VAN-LAND			2,157.00		
0000001265	TTL ASSOCIATES INC				
	9071-031	TESTING MONROE STREET WATER MAIN	120.00		
TOTAL FOR: TTL ASSOCIATES INC			120.00		
0000006559	U S LAWNS				

Vendor Code	Vendor Name / Invoice	Description	Amount	Check #	Check Date
	2193	GRASS SERVICE 733 WOODVILLE 5/9/14	45.00		
	2194	GRASS SERVICE 834 WOLVERINE 5/9/14	35.00		
	2195	GRASS SERVICE 838 WATERLOO 5/9/14	45.00		
	2196	GRASS SERVICE VARIOUS ADDRESSES 5/12/14	423.00		
	2197	GRASS SERVICE 314 HALF & 729 E 4TH 5/12/14	70.00		
TOTAL FOR: U S LAWNS			618.00		
0000006088	UNIQUE LASER ENGRAVING & KEEPSAKES				
	509	(5) 5.5 X 7.5 NAME PLATES	25.00		
TOTAL FOR: UNIQUE LASER ENGRAVING & KEEPSAKES			25.00		
0000001289	UNITED STATES POSTAL SERVICE				
	5/22/14	BUISNESS REPLY MAIL PERMIT # 313000	220.00		
TOTAL FOR: UNITED STATES POSTAL SERVICE			220.00		
0000006492	UNIVERSAL CONSOLIDATED ENTERPRISE				
	014-0521-001	DEMOLITION INCLUDING ASBESTOS ABATEMENT AT 520 ALMYRA	7,050.00		
	014-0521-002	DEMOLITION & ASBESTOS ABATEMENT AT 1020 E. FIRST ST.	10,300.00		
	014-0521-003	DEMOLITION & ASBESTOS ABATEMENT AT 728 E. FOURTH ST.	5,900.00		
TOTAL FOR: UNIVERSAL CONSOLIDATED ENTERPRISE			23,250.00		
0000005969	UV DOCTOR				
	7959	LAMPS	1,314.54		
TOTAL FOR: UV DOCTOR			1,314.54		
0000006179	VIENNA JUNCTION LF				
	25218	SLUDGE DISPOSAL FY 13-14	22,020.57		
	25375	SLUDGE DISPOSAL FY 13-14	19,014.05		
TOTAL FOR: VIENNA JUNCTION LF			41,034.62		
MISC	WEBB, CURTIS & CORLISS DAWKINS				
	05/28/2014	OVERPAYMENT OF TAXES - 49-01172-000	43.70		
TOTAL FOR: WEBB, CURTIS & CORLISS DAWKINS			43.70		
MISC	WEBB, CURTIS A & CORLISS R DAWKINS				
	05/28/2014	OVERPAYMENT OF TAXES - 49-01186-000	42.29		
TOTAL FOR: WEBB, CURTIS A & CORLISS R DAWKINS			42.29		
0000006569	WELLER AUTO PARTS INC				
	51786290	REAR AXLE ASSEMBLY FOR UNIT #50-06	1,620.00		
TOTAL FOR: WELLER AUTO PARTS INC			1,620.00		
0000001886	WOODLAND CEMETERY OPERATING FUND				
	4/30/14	WOODLAND CEMETERY EXPENSES APRIL 2014	846.61		
TOTAL FOR: WOODLAND CEMETERY OPERATING FUND			846.61		

Vendor Code	Vendor Name / Invoice	Description	Amount	Check #	Check Date
MISC	ZAREND, CONNIE				
	5/23/14	REFUND FAST PITCH LEAGUE FEE	29.00		
TOTAL FOR: ZAREND, CONNIE			29.00		
TOTAL - ALL VENDORS			841,279.77		

Balance Detail Report
City Of Monroe
05/ 29/ 2014 09:06

Account: 041200050 : 00099951243-Checking - General - USD
Start Date: 05/ 15/ 2014 00:00
End Date: 05/ 28/ 2014 23:59
Sorted By: Account Number, Date, Credit/ Debit
Orientation: Portrait

Report On: Previous Day Data
Transaction Groups: ACH Debit
ZBA Display: Both Credit and Debit

Bank ABA# : Fifth Third Bank (Northwestern Ohio) - 041200050

Account : 00099951243-Checking - General - USD

Date	Transaction Type	Customer Ref. #	Bank Ref. #	Credit Amount	Debit Amount
05/15/2014	ACH Debit Received		100107273568		9,825.94
	Description: CITYOFMONR 1243 TAX TRANS 3860046383 051514 OFFSET TRANSACTION				
05/27/2014	ACH Debit Received		100108583687		159.15
	Description: BANKSERV - ACH 1190000836 C3APAX RTNS REIMB 351400747 MONROECITYUTILMI 052714				

	Credits	Debits
Total Amount	0.00	9,985.09
Total Number of Items	0	2

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Balance Detail Report
City Of Monroe
05/ 29/ 2014 09:07

Account: 041200050 : 00080359653-Checking - Payroll - USD
Start Date: 05/ 15/ 2014 00:00
End Date: 05/ 28/ 2014 23:59
Sorted By: Account Number, Date, Credit/ Debit
Orientation: Portrait

Report On: Previous Day Data
Transaction Groups: ACH Debit
ZBA Display: Both Credit and Debit

Bank ABA# : Fifth Third Bank (Northwestern Ohio) - 041200050

Account : 00080359653-Checking - Payroll - USD

Date	Transaction Type	Customer Ref. #	Bank Ref. #	Credit Amount	Debit Amount
05/15/2014	ACH Debit Received		100107273560		747.83
	Description: CITYOFMONR 9653 MI TAX 3860046380 051514 OFFSET TRANSACTION				
05/15/2014	ACH Debit Received		100107273569		26,940.49
	Description: CITYOFMONR 9653 MI TAX 3860046380 051514 OFFSET TRANSACTION				
05/22/2014	ACH Debit Received		100104618911		134.62
	Description: FUNDS TRANSFER TO CK: XXXXXX7018 REF # 00614606996				
05/22/2014	ACH Debit Received		100103040041		2,166.90
	Description: CITYOFMONR 9653 CHILD SUPP 3860046380 052214 OFFSET TRANSACTION				
05/22/2014	ACH Debit Received		100103040035		2,384.12
	Description: CITYOFMONR 9653 RHCF 3860046380 052214 OFFSET TRANSACTION				
05/22/2014	ACH Debit Received		100103040046		2,596.87
	Description: CITYOFMONR 9653 DUES 3860046380 052214 OFFSET TRANSACTION				
05/22/2014	ACH Debit Received		100103040040		3,387.96
	Description: CITYOFMONR 9653 RHS 3860046380 052214 OFFSET TRANSACTION				
05/22/2014	ACH Debit Received		100103040033		4,439.06
	Description: CITYOFMONR 9653 NWRS 457 3860046380 052214 OFFSET TRANSACTION				
05/22/2014	ACH Debit Received		100103040032		10,037.28
	Description: CITYOFMONR 9653 ICMA 457 3860046380 052214 OFFSET TRANSACTION				
05/22/2014	ACH Debit Received		100103040034		69,107.31
	Description: CITYOFMONR 9653 PENSION 3860046380 052214 OFFSET TRANSACTION				
05/22/2014	ACH Debit Received		100103040053		226,326.91
	Description: CITYOFMONR 9653 PAYROLL 3860046380 052214 OFFSET TRANSACTION				
05/23/2014	ACH Debit Received		100104036886		841.35
	Description: FIFTH THIRD HSA PRETAX BENEFIT TRANS 5TH3RD HSA 9405386004638 CITY OF MONROE 052314				
05/23/2014	ACH Debit Received		100104036844		7,186.23
	Description: FIFTH THIRD HSA PRETAX BENEFIT TRANS 5TH3RD HSA 9405386004638 CITY OF MONROE 052314				
05/28/2014	ACH Debit Received		100103672649		81,299.64
	Description: CITYOFMONR 9653 TAX PYMT 3860046380 052814 OFFSET TRANSACTION				

	Credits	Debits
Total Amount	0.00	437,596.57
Total Number of Items	0	14

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CITY COUNCIL
AGENDA FACT SHEET

RELATING TO: Appointment of City Attorney

DISCUSSION: The two year appointment of City Attorney, Thomas Ready expires on June 30, 2014. Section 47 of the City Charter prescribes that that Council shall appoint "one (1) City Attorney, for a term of two (2) years."

Mr. Ready has submitted a proposal, for consideration by the Mayor and Council, for the continuation of providing rou ine, general legal services for another two year term and appointment. That proposal, dated February 14, 2014, is attached, and includes providing a monthly payment of $11,500 for up to 1,200 hours of services during each fiscal year. Mr. Ready proposes to provide the same range of services which are included in his April 24, 2012 engagement letter, which is also attached. Among others, the legal services proposed include those as general, corporate counsel and prosecution of ordinance violations, traffic infractions and OUIL incidents, among others.

By charter the Mayor and City Council have sole discretion regarding whom they appoint to be City Attorney. However, weighing factors such as Mr. Ready's long and capable service and experience with the City, the scope of services proposed to be provided and the reasonableness of the fee structure proposed, I recommend that the Mayor and Council strongly consider accepting Mr. Ready's legal services proposal and re-appointing him as City Attorney for the term of July 1, 2014 to June 30, 2016.

CITY MANAGER RECOMMENDATION:

- ☒ For
- ☐ For, with revisions or conditions
- ☐ Against
- ☐ No Action Taken/Recommended

APPROVAL DEADLINE: June 30, 2014

REASON FOR DEADLINE: City Attorney appointment expires on June 30, 2014

STAFF RECOMMENDATION: X For ☐ Against

REASON AGAINST: N/A

INITIATED BY: City Manager

PROGRAMS, DEPARTMENTS, OR GROUPS AFFECTED: All

FINANCES

COST AND REVENUE PROJECTIONS:

Cost of Total Project	$ 276,000
Cost of This Project Approval	$ 276,000
Related Annual Operating Cost	$ N/A
Increased Revenue Expected/Year	$ N/A

SOURCE OF FUNDS:

	City	Account Number	Amount
	General Fund Attorney Budget	101-25.210-818.005 FY15	$ 138,000
	General Fund Attorney Budget	101-25.210-818.005 FY16	$ 138,000
			$ N/A
			$ N/A
			$ N/A
	Other Funds		$ N/A
			$ N/A
			$ N/A
			$ N/A

Budget Approval: _____

FACT SHEET PREPARED BY: George A. Brown, City Manager **DATE:** March 13, 2014

REVIEWED BY: **DATE:**

COUNCIL MEETING DATE: March 17, 2014

READY, HELLER & READY, PLLC
ATTORNEYS AT LAW
204 South Macomb St.
Monroe, Michigan 48161
TEL (734) 242-7600
FAX (734) 242-0366
E-MAIL rsr@rsrllp.com

THOMAS D. READY
MICHAEL L. HELLER
JOHN F. READY
KENNETH J. LAURAIN

JOHN J. SULLIVAN
OF COUNSEL

February 14, 2014

Mr. George Brown, City Manager
City of Monroe
120 E. First Street
Monroe, MI 48161

george.brown@monroemi.gov

RE: Proposal for Legal Services; City of Monroe 2014

Dear Mr. Brown:

As you know, the office of READY, HELLER & READY, PLLC has been privileged to have provided legal services for the City of Monroe for a number of years. The current arrangement is described in the engagement letter dated April 24, 2012 and is set to expire on June 30, 2014 unless mutually extended or modified. We are enclosing a copy of that engagement letter for your reference.

A review of our records indicates that the compensation arrangement has remained the same since July 1, 2008. Consequently, we are proposing an engagement letter covering the period of time from July 1, 2104 through June 30, 2016 similar to the enclosure with the compensation paragraph to read as follows:

> "We will provide up to 1,200 hours of attorney services per fiscal year (July 1st through June 30) during the term of this agreement. We ask that the City pay on or prior to the first day of each month the sum of $11,500. In any fiscal year in which the hours of service exceed 1,200 hours they will be billed monthly at the rate of $135 per hour. We will account to the City on a monthly basis as to time spent on legal services. Out-of-pocket expenses directly attributable to services rendered to the City will be charged at cost and billed as they are incurred. We will endeavor to advise you of any foreseeable expenses that are likely to be significant."

Once again, we thank you and the City of Monroe for permitting us to serve.

Respectfully Submitted,

READY, HELLER & READY, PLLC

Thomas D. Ready

TDR/rmw
Encl.

READY, HELLER & READY, PLLC
ATTORNEYS AT LAW
204 South Macomb St.
Monroe, Michigan 48161
TEL (734) 242-7600
FAX (734) 242-0366
E-MAIL rsr@rsrllp.com

THOMAS D. READY
MICHAEL L. HELLER
JOHN F. READY
KENNETH J. LAURAIN

JOHN J. SULLIVAN
OF COUNSEL

April 24, 2012

Mr. George Brown, City Manager
City of Monroe
120 E. First Street
Monroe, MI 48161

Re: Engagement Letter
Our File Number: TDR-0661-07

Dear Mr. Brown:

Please accept this as our engagement letter to provide legal services to the City of Monroe. We propose to act as attorneys for the City of Monroe beginning July 1, 2012 under the following terms and conditions:

Term

The term of the representation will begin July 1, 2012 and will continue through June 30, 2014 unless mutually extended or modified. Representation may be terminated by either the City or by us with ninety (90) days written notice at any time.

Duties

We propose to represent the City of Monroe and to undertake the duties and responsibilities of the City Attorney as follows:

1. Thomas D. Ready agrees to be the named City Attorney as provided for in the Charter of the City of Monroe.

2. Provide general legal advice and support to the City Manager, City Council, and Department Heads. We will work closely with the City Manager.

3. Prepare and provide formal and informal written opinions and advice to the City Manager, City Council, Department Heads, Boards, and Commissions as required.

4. Make reasonable observation of the operations of the City as they relate to the requirements of the Constitution and Laws of the United States and the Constitution and

Laws of the State of Michigan, as well as the Charter and Ordinances of the City of Monroe.

5. Provide training to Department Heads, Boards, and Commissions as may be required.

6. Research, draft, and provide legal opinions as may be required.

7. Research and draft Ordinances and Resolutions as may be required.

8. Attend City Council Meetings unless excused. Review agendas in advance and be prepared to provide legal advice for any questions during the meetings which may be reasonably anticipated. Act as meeting parliamentarian. Attend other meetings as requested by City Manager.

9. Attend Board and Commission meetings as requested.

10. Coordinate and respond to Freedom of Information Requests as may be requested by the City Manager. Be familiar with and give opinions and direction regarding the Michigan Open Meetings Act, Freedom of Information Act, and Home Rule City Act.

11. Provide monthly statements detailing services provided and time spent.

12. Review and advise City on contracts as may be requested.

13. Serve as a member of the Board of Review.

14. Participate in Bankruptcy proceedings related to the operations of the City of Monroe as may be required.

15. Provide own library and continuing legal education except that the City will provide membership and expenses for Michigan Municipal League participation and Michigan Association of Municipal Attorneys participation.

16. Provide legal and support services for the City in court for prosecution of all City Ordinance violations and civil infractions. Organize and maintain police reports, tickets, complaints, related correspondence, pleadings, etc. relating to cases requiring prosecution.

    Review Police Reports, Tickets, and other materials and authorize complaints and warrants as required. Review facts and approve criminal search warrants as necessary. Review facts and prepare administrative search warrants as necessary. Appear in court for all necessary pre-trial hearings and motions. Provide discovery for defendants and defense counsel. Prepare for and conduct arraignments, pre-trial conferences, motion hearings, evidentiary hearings, formal hearings, bench trials, settlement conferences, jury selection, and jury trials as needed. Research and respond to motions and file briefs as

necessary. Review discovery and Freedom of Information Act requests pertaining to City cases.

17. Provide legal services to defend the City in all District Court Cases.

18. Manage City Court Docket and receive telephone calls and requests from defendants and attorneys, discuss cases, approve or disapprove requests for adjournments and other matters.

19. Attend code enforcement meetings, as requested, where City enforcement issues are addressed as part of a team approach. Represent the City of Monroe in administrative or legal proceedings regarding these matters.

20. Participate in training Police Officers as needed as part of their field training program and occasionally as needed thereafter.

21. Represent the City in all litigation not otherwise assigned to outside counsel and monitor litigation which is assigned to outside counsel.

Compensation

We will provide up to 1,200 hours of attorney services per fiscal year (July 1st through June 30) during the term of this agreement. We ask that the City pay on or prior to the first day of each month the sum of $11,000. In any fiscal year in which the hours of service exceed 1,200 hours they will be billed monthly at the rate of $125 per hour. We will account to the City on a monthly basis as to time spent on legal services. Out-of-pocket expenses directly attributable to services rendered to the City will be charged at cost and billed as they are incurred. We will endeavor to advise you of any foreseeable expenses that are likely to be significant.

Respectfully Submitted,

Ready, Heller & Ready, PLLC

Thomas D. Ready
Thomas D. Ready

Agreed to and Accepted by:

_____
Date

_____
George A. Brown, City Manager
City of Monroe

CITY COUNCIL
AGENDA FACT SHEET

RELATING TO: Ordinance 14-003, an Ordinance to Add Chapter 528, Property Tax Exemptions, an Ordinance to Provide for a Service Charge In Lieu of Taxes for a Proposed Multiple Family Dwelling Project

DISCUSSION: Lutheran Social Services of Michigan (LSSM) plans to apply to the Michigan State Housing Development Authority (MSHDA) to obtain an award of federal Low Income Housing Tax Credits (LIHTC) for a rehabilitation project at the Village Pines of Monroe located at the northwest corner of N. Telegraph Road and W. Lorain Street. If approved by MSHDA, LSSM would be able to offer tax credits in exchange for private investments in the rehabilitation project. MSHDA awards the LIHTC's on a competitive basis, with projects having to obtain a higher score relative to other applicants. One criterion where a project can gain additional "points" on their application is in the area of local support including, but not limited to, the establishment of an annual Service Charge to replace typical property taxes. This is commonly referred to as a Payment In Lieu of Taxes (PILOT).

Under Michigan State Housing Development Authority Act (PA 346 of 1966), municipalities can offer Service Charge arrangements or "PILOT's" for housing projects that receive federal financing. By adopting an ordinance to establish and outline the parameters of a Service Charge, the municipality can better control how it is implemented. The ordinance can stipulate the % of net annual shelter rent that would be due as part of a Service Charge, the term of the Service Charge (up to 50 years), and the geographic areas where the Service Charge is applied. Without an ordinance in place, the Act provides for an automatic 10% of net annual shelter rents, for a term that matches the term of the federal financing.

In the interest of better managing how and where Service Charge projects are established, it is advisable to pass an ordinance for each project. With the Service Charge in place, it helps the applicant (LSSM) be more competitive in obtaining MSHDA's support for the project, such as the LIHTCs. The City can also determine if they want to provide a financial incentive for the project, such as a lower % of net annual shelter rents than what is provided in the State Act. Based on the information provided, a 9% Service Charge would generate close to the current property tax revenue received from Village Pines of Monroe.

The City previously established a Service Charge program for the "Woodcraft Square" project in the southwest area of the City. While not established under the same State Act, the Monroe Housing Commission properties are assessed a similar annual service charge that is computed based on annual shelter rents. Therefore, this request from LSSM is not unprecedented, and falls in-line with similar property tax adjustments that have been made for other housing projects in the City.

The primary advantage for the City in pursuing the Service Charge ordinance for LSSM's Village Pines of Monroe project is assisting the property owner in obtaining financing for a major rehabilitation. As described in the attached letter from LSSM, they plan on making approximately $6,000,000.00 of improvements to the complex if they are able to obtain the financing. This spending, a significant portion of which will be with local vendors, will provide an economic benefit to the community as well as improve the housing stock in the City. The primary advantage for LSSM is that it allows them to better manage costs (exp. taxes) relative to rent and ensure the investors that there is more certainty in the calculated Service Charge they will pay on an annual basis.

As noted above, it is anticipated based on current financial reports that the 9% Service Charge will generate close to the current property taxes from the project, which were $99,200.12 Property Taxes + 991.99 Admin Fees = $100,192.11 Grand Total in 2013. However, due to the potential variability in rents, the City staff has proposed entering a "floor" or minimum Service Charge of $100,000.00, plus a cumulative annual inflation rate that is applied for property taxes in the City (See Section 528-4 B. Annual Service Charge. i.). This would help ensure that the City is kept whole in the event the rents decline due to a high vacancy rate or other property management issues. Other key provisions of the proposed ordinance include the application of this ordinance to this specific property only (Section 528-1 Findings; purpose; intent), addition of the administrative fee the City typically receives for processing property taxes (Sec. 528-4 C. Administrative Fee.), and maximum duration of the exemption at 20-years (Sec. 528-7 Duration.).

IT IS RECOMMENDED that City Council approve the first reading of Ordinance 14-003, an Ordinance to Add Chapter 528, Property Tax Exemptions, an Ordinance to Provide for a Service Charge In Lieu of Taxes for a Proposed Multiple Family Dwelling Project; and schedule the public hearing and second reading for the June 16, 2014 regular City Council meeting.

CITY MANAGER RECOMMENDATION:

- [x] For
- [ ] For, with revisions or conditions
- [ ] Against
- [ ] No Action Taken/Recommended

APPROVAL DEADLINE: June 16, 2014

REASON FOR DEADLINE: MSHDA's application cycle for Low Income Housing Tax Credits

STAFF RECOMMENDATION: X For ☐ Against

REASON AGAINST:

INITIATED BY: Lutheran Social Services of Michigan (LSSM)

PROGRAMS, DEPARTMENTS, OR GROUPS AFFECTED:

FINANCES

COST AND REVENUE PROJECTIONS:

Cost of Total Project	$ 0
Cost of This Project Approval	$ 0
Related Annual Operating Cost	$ 0
Increased Revenue Expected/Year	$ 0*

* Increase or difference in expected revenues would depend on property values for this and similar properties in the City.

SOURCE OF FUNDS:

	Account Number	Amount
City		
Other Funds		

Budget Approval: _____

FACT SHEET PREPARED BY: Dan Swallow, Director of Economic and Community Development **DATE:** 05/27/14

REVIEWED BY: George Brown, City Manager **DATE:**

COUNCIL MEETING DATE: June 2, 2014

ORDINANCE 14-003

AN ORDINANCE TO AMEND THE CODE OF THE CITY OF MONROE BY ADDING A NEW CHAPTER, WHICH SHALL BE DESIGNATED AS CHAPTER 528, PROPERTY TAX EXEMPTIONS, OF SAID CODE.

AN ORDINANCE TO PROVIDE FOR A SERVICE CHARGE IN LIEU OF TAXES FOR A PROPOSED MULTIPLE FAMILY DWELLING PROJECT FOR PERSONS OF LOW INCOME TO BE FINANCED OR ASSISTED PURSUANT TO THE PROVISIONS OF THE MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY ACT OF 1966.

THE CITY OF MONROE ORDAINS:

SECTION 1. ADDITION OF CHAPTER 528: PROPERTY TAX EXEMPTIONS

Chapter 528 shall be added to read as follows:

Chapter 528: PROPERTY TAX EXEMPTIONS

§ 528-1 Findings; purpose; intent.

It is acknowledged that it is a proper public purpose of the State of Michigan and its political subdivisions to provide housing for its citizens of low income and to encourage the development and rehabilitation of such housing by providing for a service charge in lieu of property taxes in accordance with the State Housing Development Authority Act of 1966 (1966 PA 346, as amended, Michigan Compiled Laws 125.1401, et seq.). The City is authorized by this Act to establish or change the service charge to be paid in lieu of taxes by any or all classes of housing exempt from taxation under this Act by any amount it chooses, not to exceed the taxes that would be paid but for this Act. It is further acknowledged that such housing for persons of low income is a public necessity, and as the City will be benefitted and improved by such housing, the encouragement of the same by providing certain property tax exemption for such housing is a valid public purpose; further, that the continuance of the provisions of this Section for tax exemption and the service charge in lieu of taxes during the period contemplated in this Section are essential to the

determination of economic feasibility of housing developments which are constructed and financed in reliance on such tax exemption.

The City acknowledges that Lutheran Social Services of Michigan (the "Sponsor") has offered, subject to receipt of a commitment for low income housing tax credits from the Michigan State Housing Development Authority, to own, through Lutheran Housing Corporation–Monroe, rehabilitate and operate the 190-unit apartment housing development identified as Village Pines of Monroe located at 1600 Park Court in the City, and identified on the assessment roll as parcel number 58-55-69-00659-040, to serve persons of low income, and that the Sponsor has requested to pay the City on account of this housing development an annual service charge for public services in lieu of all taxes.

§ 528-2 Definitions.

As used in this chapter the following terms shall have the meaning indicated:

Authority means the Michigan State Housing Development Authority.

Act means the State Housing Development Authority Act of 1966, being Public Act 346 of 1966 of the State of Michigan, as amended.

Annual shelter rent means the total collections during an agreed annual period from all occupants of the housing development representing rent or occupancy charges, exclusive of charges for gas, electricity, heat, or other utilities furnished to the occupants.

Commitment for low income housing tax credits means a commitment for those tax credits allocated by the Authority provided pursuant to Section 42 of the Internal Revenue Code of the United States.

Housing development means a development which contains a significant element of housing for persons of low income and such elements of other housing, commercial, recreational, communal, and educational facilities as the Authority determines improve the quality of the development as it relates to housing for persons of low income.

Low income persons or families as used herein shall be the same meaning as found in Section 15(a)(7) of the Act.

Sponsor means the entity which has applied for low income housing tax credits or other financial assistance from the Authority for the housing development.

Utilities mean fuel, water, sanitary sewer service and/or electrical service which are paid by the housing development owner.

§ 528-3 Class of housing developments.

It is determined that the class of housing development to which the tax exemption shall apply and for which a service charge shall be paid in lieu of such taxes shall be housing for low income families or persons sponsored by a nonprofit organization which has received an allocation of low income housing tax credits, as provided in the Act. It is determined that Village Pines of Monroe is of this class.

§ 528-4 Establishment of annual service charge.

A. Exemption from Property Taxes. Village Pines of Monroe shall be exempt from all property taxes as of December 31 immediately following placement of the rehabilitated housing development into service with eligibility for the low income housing tax credits. The City, acknowledging that the Sponsor and the Authority have established the economic feasibility of the housing development in reliance upon the enactment and continuing effect of this ordinance and the qualification of the housing development for exemption from all property taxes and a payment in lieu of taxes as established in this ordinance, and in consideration of the Sponsor's offer and request, subject to receipt of low income housing tax credits from the Authority, to participate in the sponsorship of a housing development, agrees to accept payment of an annual service charge for public services in lieu of all property taxes.

B. Annual Service Charge. The annual service charge shall be as prescribed in sub-sections i and ii below; provided that such charge shall not exceed the amount of taxes which would otherwise have been paid on the housing development if the housing development were not tax exempt.

i. In any given year where no transfer of ownership of the housing development has occurred during the immediately preceding year, the established Annual Service Charge shall be the greater of the following:

a. Nine percent (9%) of the annual shelter rent; or

b. $100,000.00 for the first tax year of applicability, and for every tax year thereafter, $100,000 multiplied by the cumulative

inflation rate multiplier as utilized in MCL 211.27a (2) (a).

ii. In all years following a year where a transfer of ownership of the housing development has occurred, the established Annual Service Charge shall be the amount of taxes which would be paid on the housing development if the housing development were not tax exempt.

C. Administrative Fee. The Annual Service Charge shall be subject to a one percent (1%) administrative fee; which shall be calculated as a percentage of the established Annual Service Charge and included with the annual payment.

D. All payments received by the City, with the exception of the one percent (1%) administrative fee to be retained by the City, shall be distributed by the City to the taxing jurisdictions in the same proportion that the general property taxes would have been distributed in the previous calendar year.

§ 528-5 Contractual effect of ordinance.

In addition to the provisions of Section 15(a)(5) of the Act, a contract between the City and the Sponsor, with the Authority as third party beneficiary under the contract, to provide tax exemption and accept payments in lieu of taxes, as previously described, is effectuated by enactment of this Section. Provided, that in the event the annual service charge is not fully paid as provided in the following paragraph, the contract shall have no further effect and shall terminate. Provided further, that the unpaid annual service charge shall remain a debt due the City, and shall be recoverable by direct action of assumpsit.

§ 528-6 Payment of service charge.

The annual service charge in lieu of taxes as determined under this ordinance shall be payable in the same manner as general property taxes are payable to the City except that the

annual payment shall be due and payable on December 1 of each year, and paid on or before February 14 of each year.

§ 528-7 Duration.

This Section shall remain in effect and shall not terminate so long as the restriction on rents and incomes under the low income housing tax credit program remains in effect or the Authority has any interest in the housing development. Provided, however, that the term of this ordinance shall not exceed twenty (20) years from the date the housing development is placed into service with eligibility for the low income housing tax credits.

SECTION 2. REPEALER.

This Ordinance repeals and replaces all former ordinances or parts thereof conflicting or inconsistent with the provisions of this Ordinance.

SECTION 3. SAVINGS CLAUSE.

All proceedings pending and all rights and liabilities existing, acquired or incurred at the time this Ordinance takes effect are saved and may be consummated according to the law in force when they are/were commenced.

SECTION 4. SEVERABILITY.

If any section, subsection, sentence, clause or phrase of this Ordinance is declared unconstitutional by a court of competent jurisdiction, such decision or holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 5. EFFECTIVE DATE.

This Ordinance shall be in full force and effect Twenty (20) days after final passage and publication.

LUTHERAN SOCIAL SERVICES OF MICHIGAN
HOPE • COMPASSION • SOLUTIONS

ADMINISTRATIVE OFFICES
8131 E. Jefferson Ave.
Detroit, MI 48214-2691
Phone: 313.823.7700
Fax: 313.823.9604
www.lssm.org

March 19, 2014

Monroe City Council
City of Monroe
120 East First Street
Monroe, Michigan 48161
Attn: Daniel E. Swallow

Re: Request to the City of Monroe for consideration in granting a PILOT (Service Charge Payment in Lieu of Ad Valorem Property Tax Assessment) to facilitate Lutheran Social Services of Michigan to obtain an award of federal Low Income Housing Tax Credits (LIHTC) to refurbish Village Pines of Monroe Apartments

To the Monroe City Council,

Village Pines of Monroe is a 190 unit, affordable housing community for both seniors and families partially subsidized by the U.S. Department of Housing and Urban Development. This property is owned and managed by Lutheran Social Services of Michigan (LSSM). Our affordable units include (57) Section 8 subsidized apartments and (132) Section 236 units for families who are considered lower income. Our spacious one bedroom garden style apartments appeal to one or two person households. Many are occupied by senior citizens. Larger families prefer our townhouse style rental units with bedrooms on the second floor and full basements. All residents enjoy our mature landscaped grounds with accessible parking and children's play areas. We have 443 residents of which 178 are children. We have a wide diversity of households including single individuals, married couples with and without children, single parents and grandparents raising grandchildren. All of our residents are either gainfully employed or receive income from other sources due to both minimum and maximum income requirements. We have some residents that have lived here since the early 1970's, and several residents who return to us time and time again, after discovering they can't make ends meet in the market rate rental community. We accept financially qualified applicants regardless of their religion, race, color, sex, handicap, familial status or national origin. We do however conduct background screening for all potential residents including credit worthiness, criminal, prior landlord and sex offender. Persons with questionable backgrounds are not accepted as tenants.

Our current monthly rent schedules are as follows:

Federally Subsidized Section 8 Units*

24 - One Bedroom Units	$441	Contract Rent
8 - Two Bedroom Townhouses Type A	$469	Contract Rent
21 - Two Bedroom Townhouses Type B	$472	Contract Rent
4 – Three Bedroom Townhouses	$501	Contract Rent

* The resident pays only 30% of their adjusted income for the Contract Rent amount. HUD provides subsidy to cover the remaining balance of the Contract Rent.

Below Market Section 236 Units

32 - Two Bedroom Townhouses Type A	$429	Contract Rent
65 - Two Bedroom Townhouses Type B	$431	Contract Rent
36 - Three Bedroom Townhouses	$457	Contract Rent

Village Pines Section 236 rents are below market average for the Monroe community. Since LSSM is a non-profit organization and the demand for affordable rental housing in Monroe is strong, we have strived during the past 18 years to keep our rents low to serve families in need.

Finally LSSM owns and manages rental projects which provide quality social programming for the communities they are located in. Village Pines of Monroe maintains three playgrounds for small children and a community room for resident programs and activities. Our residents use the community room for many functions including Gatherings International Kids Club, Community Holiday & Resident Gatherings, Resident Computer Lab, Flagstar Financial Literacy Classes and Fire Safety for Children with the Monroe County Fire Department. We periodically provide free space for outside social service organizations. Some of the programs Village Pines of Monroe has hosted in the past include: Michigan State Extension Nutritional program; Children's Resource Network Center's Free Lunch Program; Identity Theft Education, hosted by the Michigan State Police; and, Community Coat and Food Drives to benefit the Salvation Army and the Philadelphia Homeless Shelter.

We also work cooperatively with other Monroe organizations to facilitate assisting families with affordable housing needs including the Department of Human Services, Monroe County Ment l Health Authority, Salvation Army, Philadelphia House II and the Monroe County Opportunity Program, to name a few.

However, since this project was constructed in the early 1970's we now find that our buildings and infrastructure are aging and certain elements of project are failing or are scheduled to fail during the next 5 – 10 years unless we perform some major upgrades. In addition although we keep the project well maintained, we need to add certain amenities missing from our apartments including central air conditioners and dishwashers to remain competitive in the residential rental marketplace.

Therefore Lutheran Social Services of Michigan (LSSM) is proposing to renovate Village Pines of Monroe. The proposed refinancing with federal Low Income Housing Tax Credits (LIHTC) and new debt will help to preserve this 42 year old affordable rental community for future generations. Planned renovations include much needed replacement of HVAC, hot water heaters and kitchen appliances with new, high efficiency products. In addition we need to upgrade our kitchen cabinets and countertops, bathroom fixtures, flooring, siding, pointing of brick, installing additional attic insulation, and landscaping will position this property to be financially viable and competitive for years to come. We anticipate the total construction cost for the project will be approximately $6,000,000 and will generate a significant economic stimulus within the Monroe community as we purchases materials and services from the local economy.

We did file a LIHTC application in the February 15, 2013 funding round however our application was not awarded tax credits since a couple of projects scored higher than our proposal. The Michigan State Housing Development Authority gave us recommendations for achieving additional points in future scoring. The most significant addition we could make to secure funding would be to have the city of Monroe grant us a PILOT, a.k.a. Payment in Lieu of Taxes. Our Attorney has prepared a PILOT proposal for the city of Monroe based upon Michigan st te law which we think you will find acceptable. It allows the city to maintain the current amount of property tax revenue received from our project while reclassifying the form of payment classification an approved PILOT. I would like the opportunity to discuss this request personally at a council study session in the ne r future.

The residents and staff of Village Pines of Monroe thank you for your consideration of our PILOT request which may finally enable us to refin nce our property. Hopefully, we can continue to serve the Monroe community with an affordable housing community that we can all be proud of.

Sincerely,

James Gilbert, Director of Subsidized Housing
Lutheran Social Services of Michigan

2013 Combined Taxes, CITY OF MONROE

TOTAL ALL DISTRICTS	REAL	PERSONAL	EXEMPT	LEASED LAND	TOTAL
PARCEL COUNT	1	0	0	0	1
TAXABLE VALUE	1,776,240	0	0	0	1,776,240
ASSESSED VALUE	3,232,030	0	0	0	3,232,030
SEV VALUE	3,232,030	0	0	0	3,232,030
PRE/MBT TAXABLE	0	0	0	0	0
NON PRE/MBT TAXABLE	1,776,240	0	0	0	1,776,240
(S) MONROE CTY OPER	24,380.67	0.00	0.00	0.00	24,380.67
(S) MONROE CTY REFUS	2,668.44	0.00	0.00	0.00	2,668.44
(S) MONROE CTY PORT	666.09	0.00	0.00	0.00	666.09
(S) MONROE CTY LETC	1,298.43	0.00	0.00	0.00	1,298.43
(S) STATE ED TAX-55	10,657.44	0.00	0.00	0.00	10,657.44
(S) CO OPERATING-55	8,517.42	0.00	0.00	0.00	8,517.42
(S) MONROE CTY BRIDG	746.02	0.00	0.00	0.00	746.02
(S) CTY PST RET HLTH	1,000.73	0.00	0.00	0.00	1,000.73
(W) SENIOR CITZ-55	888.12	0.00	0.00	0.00	888.12
(W) CO LIBRARY-55	1,776.24	0.00	0.00	0.00	1,776.24
(W) MONROE ISD-55	8,444.42	0.00	0.00	0.00	8,444.42
(W) 01 MONROE DBT-55	1,776.24	0.00	0.00	0.00	1,776.24
(W) 01 MONROE OPR-55	31,972.32	0.00	0.00	0.00	31,972.32
(W) COMM COLLEGE-55	3,871.13	0.00	0.00	0.00	3,871.13
(W) FAIRVIEW-55	355.24	0.00	0.00	0.00	355.24
(W) VETERANS-55	3.55	0.00	0.00	0.00	3.55
(W) MUSEUM-55	177.62	0.00	0.00	0.00	177.62
(W) 01 MONROE SFC-55	0.00	0.00	0.00	0.00	0.00
(*) SP. ASSESSMENTS	0.00	0.00	0.00	0.00	0.00
(S) ADMIN FEE	499.35	0.00	0.00	0.00	499.35
(W) ADMIN FEE	492.64	0.00	0.00	0.00	492.64
(S) TOTALS	50,434.59	0.00	0.00	0.00	50,434.59
(W) TOTALS	49,757.52	0.00	0.00	0.00	49,757.52
GRAND TOTALS	100,192.11	0.00	0.00	0.00	100,192.11

COMMUNICATION

TO: **Honorable Mayor Clark and City Council members**

FROM: **George A. Brown, City Manager**

SUBJECT: **Follow-up and staff recommendation related to "petition" received from Toll St. residents**

DATE: **May 29, 2014**

With the May 19, 2014 Council agenda, a communication in the form of a self-drafted petition was presented to the Mayor and Council, which requested that the City clean the "ditch" located on the western edge of properties fronting the western side of Toll St., between W. Elm Ave. and Lorain St. The Council referred that communication to City staff and the City Attorney for further review, feedback to Council and a recommendation for disposition.

The results of an on-site inspection and a review of Engineering Department records by City staff and a review of relative legal provisions by the City Attorney found the following:

- A swale, which is still somewhat evident at the very rear of the lots involved, does not appear in the formal infrastructure plans for the subdivision. There are no records on file that the swale was ever approved and accepted as a part of the City's public storm sewer system. No evidence was found that the swale was ever designed or constructed to the City's required standards for a public storm sewer. Considering these factors, City staff have determined that the swale, located at the back of the subject lots, is not part of the City's public infrastructure and is considered to be a private drainage improvement.
- Current City standards for the construction of a public storm sewer would provide for enclosed piping, inlets at each yard, and regular cross-yard easements allowing for ready maintenance access from Toll Street.
- Article VII, Section 26 of the Michigan Constitution provides that no city or village shall have the power to loan its credit for any private purpose. Public moneys of a municipal corporation cannot be lawfully used for the particular benefit of private individuals.
- Provisions in the City of Monroe Charter prescribe processes for the construction of public sewers and drains and the financing of the construction by special assessments upon the properties benefitting from the improvements. The construction of improvements to help improve storm drainage from private property have been undertaken by the City on a number of occasions in the recent past, under the methods prescribed by the City Charter, including the use of special assessments to provide most of the financing for the construction.

It is our recommendation that the attached letter be sent to each of the Toll St. residents who signed the April 28, 2014 petition, which was previously provided to the Mayor and City Council. If residents express a subsequent interest in exploring the possibility of having a public storm water improvement installed to help improve the drainage from their properties, City staff can meet with them to discuss the Charter prescribed process and the potential costs of a project in greater detail.

Cc: Patrick Lewis
Michelle LaVoy

June 3, 2014

Property Owner
Toll Street
Monroe, MI 48162

RE: Rear Yard Drainage Issue – Homes along the west side of Toll Street

Dear Property Owner:

As you might be aware, the issue of rear yard drainage for the homes on the west side of Toll Street has recently been the topic of discussion among numerous residents, particularly those between Lorain Street and Elm Avenue. Within the past month, an informal petition was circulated by an area resident and presented to the Monroe City Council, requesting that the City clean out a "drainage ditch" at no cost to the home owners. At their May 19, 2014 regular meeting, the City Council referred the petition to City staff and the City Attorney for review and recommendations.

The results of an on-site inspection and a review of Engineering Department records by City staff and a review of relative legal provisions by the City Attorney found the following:

- A swale, which is still somewhat evident at the very rear of the lots involved, does not appear in the formal infrastructure plans for the subdivision. There are no records on file that the swale was ever approved and accepted as a part of the City's public storm sewer system. No evidence was found that the swale was ever designed or constructed to the City's required standards for a public storm sewer. Considering these factors, City staff has determined that the swale, located at the back of the subject lots, is not part of the City's public infrastructure and is considered to be a private drainage improvement.
- Current City standards for the construction of a public storm sewer would provide for enclosed piping, inlets at each yard, and regular cross-yard easements allowing for ready maintenance access from Toll Street.
- Article VII, Section 26 of the Michigan Constitution provides that no city or village shall have the power to loan its credit for any private purpose. Public moneys of a municipal corporation cannot be lawfully used for the particular benefit of private individuals.
- Provisions in the City of Monroe Charter prescribe processes for the construction of public sewers and drains and the financing of the construction by special assessments upon the properties benefitting from the improvements. The

construction of improvements to help improve storm drainage from private property have been undertaken by the City on a number of occasions in the recent past, under the methods prescribed by the City Charter, including the use of special assessments to provide most of the financing for the construction.

The City has always strongly encouraged the construction of adequate, readily maintainable public infrastructure and, as noted above, the Charter does provide for such facilities to be initially installed under a Special Assessment District process. Special Assessment Districts spread the cost of any new project across the benefitting properties with annual payments spread for up to ten (10) years. Most often the City will provide payment for a fraction of the total cost of the project, as a City-at-large share. Some property owners may qualify for a State program which can help defer the payment of the assessment, until ownership of the property is transferred. The Engineering Department has information regarding this program.

Should any group of property owners choose to further pursue the construction of a public storm drain under the special assessment process, I have attached a copy of the City's petition form for your use. This is the form which must be used to solicit signatures from a majority of the affected property owners, in order to start the process for constructing a public storm drain and to initiate the associated necessary special assessment process. When completed, the petition should be returned to the Engineering Department for presentation to the City Council.

If you should have any further questions about this process, please feel to contact me.

Sincerely,

Patrick M. Lewis, P.E.
Director of Engineering and Public Services

Cc: Mayor Clark and City Council Members
George Brown, City Manager
William Walters, Superintendent of Public Services
Thomas Ready, City Attorney

CITY COUNCIL
AGENDA FACT SHEET

RELATING TO: EAST NOBLE AVENUE WATER MAIN REPLACEMENT – REPORT ON BIDS RECEIVED

DISCUSSION: The Engineering Department opened bids for the above project on Friday, May 23, 2014. There were four (4) bidders, and a bid tabulation is attached for your review. This contract consists of replacement of the existing 6" cast iron water main with new 8" water main on East Noble Avenue between Monroe and Macomb Streets and between Riverview Avenue and Michigan Avenue. In addition, new 8" main will be installed between the alley east of Baptiste Avenue and east of Mason Run Boulevard to connect existing dead end mains in the Mason Run Subdivision. Funding for this project was allocated through the 2014-15 Capital Improvements Program (CIP), and the completion date for all work is September 1 so that work can be completed prior to the resurfacing project in the same area.

The low bidder for the work is Salenbien Properties, LLC (also known as Salenbien Trucking and Excavating, Inc.) of Dundee. Their low bid of $381,783.70 is 6.6% above the Engineer's Estimate of $358,250.60. Salenbien has completed a variety of underground and general construction projects for the City of Monroe in recent years, including the Drinking Water Revolving Fund Group A project (2009), Woodville Avenue Water Main Replacement (2010), 2010-11 Water Main Replacement Program Group 1 (2010) along with subsequent major change orders, the South Roessler Street Sanitary Sewer (2012), North Monroe Street Pump Station Rehabilitation (2012), North Telegraph Road Water Main Replacement (2013), and Western / Huron Water Main Replacement and Resurfacing (ongoing). They are quite capable of completing the project work competently and quickly, and we would again recommend award to them without hesitation. Even though the pricing is above the Engineer's Estimate, there is sufficient funding in the budgeted line items to complete the project while also including the usual contingency amount of 15%

Technically, funding is not available for the work until July 1, and it is likely that the contractor will begin at least some activities prior to this date, though no invoices will be paid until after July 1. Should the Finance Director feel it necessary to allocate some of the funding to the 2013-14 fiscal year, we are also requesting that he be given the authority to do so.

IT IS RECOMMENDED that the City Council award a contract for the East Noble Avenue Water Main Replacement project to Salenbien Properties, LLC in the amount of $381,783.70, that a total of $439,000 be encumbered to include a 15% project contingency, and that the Finance Director be authorized to allocate the necessary funding to the appropriate fiscal year as needed from the Water Fund reserves. **IT IS FURTHER RECOMMENDED** that the Mayor and Clerk-Treasurer be authorized to sign the contracts on behalf of the City of Monroe.

CITY MANAGER RECOMMENDATION:

- [x] For
- [ ] For, with revisions or conditions
- [ ] Against
- [ ] No Action Taken/Recommended

APPROVAL DEADLINE: As soon as possible

REASON FOR DEADLINE: Contract work can commence as soon as the contracts are finalized.

STAFF RECOMMENDATION: X For ☐Against

REASON AGAINST: N/A

INITIATED BY: Department of Engineering and Public Services

PROGRAMS, DEPARTMENTS, OR GROUPS AFFECTED: City Council, Engineering Department, Water Department, adjacent property owners and residents

FINANCES

COST AND REVENUE PROJECTIONS:		Cost of Total Project	$439,000
		Cost of This Project Approval	$439,000
		Related Annual Operating Cost	$ N/A
		Increased Revenue Expected/Year	$ N/A
SOURCE OF FUNDS:	City	Account Number	Amount
	East Noble Water Main	591-40.538-972.000 15W01	$439,000
	Other Funds		

Budget Approval:

FACT SHEET PREPARED BY: Patrick M. Lewis, P.E., Director of Engineering and Public Services **DATE:** 05/27/14

REVIEWED BY: **DATE:**

COUNCIL MEETING DATE: June 2, 2014

EAST NOBLE AVENUE WATER MAIN REPLACEMENT - BID TABULATION				ENGINEER'S ESTIMATE		1 - SALENBIEN PROPERTIES, LLC		2 - E.R. ZEILER EXCAVATING, INC.		3 - LAWRENCE M. CLARKE, INC.		4 - EVERGREEN CIVIL, LLC	
ITEM NO.	DESCRIPTION	NO. OF UNITS	UNITS	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST
1	R&D SPOT CURB & GUTTER	90.0	LFT	$20.00	$ 1,800.00	$ 42.00	$ 3,780.00	$ 13.00	$ 1,170.00	$ 50.00	$ 4,500.00	$ 10.80	$ 972.00
2	R&D SIDEWALK	1059.4	SFT	$1.50	$ 1,589.10	$ 1.00	$ 1,059.40	$ 2.50	$ 2,648.50	$ 2.00	$ 2,118.80	$ 2.84	$ 3,008.70
3	R&D PAVEMENT & APPROACH	466.5	SYD	$10.00	$ 4,665.00	$ 9.00	$ 4,198.50	$ 18.00	$ 8,397.00	$ 15.00	$ 6,997.50	$ 12.50	$ 5,831.25
4	R&D EXISTING 6" WATER MAIN	20.0	LFT	$25.00	$ 500.00	$ 20.00	$ 400.00	$ 40.00	$ 800.00	$ 40.00	$ 800.00	$ 41.00	$ 820.00
5	R&D EXISTING PLUG & THRUST BLOCK	2.0	EA	$500.00	$ 1,000.00	$ 20.00	$ 40.00	$ 250.00	$ 500.00	$ 600.00	$ 1,200.00	$ 336.00	$ 672.00
6	R&D EXISTING BLOWOFF VALVE &	1.0	EA	$500.00	$ 500.00	$ 250.00	$ 250.00	$ 250.00	$ 250.00	$ 600.00	$ 600.00	$ 376.00	$ 376.00
7	R&S EXISTING VALVE & BOX	7.0	EA	$500.00	$ 3,500.00	$ 350.00	$ 2,450.00	$ 575.00	$ 4,025.00	$ 600.00	$ 4,200.00	$ 420.00	$ 2,940.00
8	R&S EXISTING HYDRANT	3.0	EA	$500.00	$ 1,500.00	$ 500.00	$ 1,500.00	$ 575.00	$ 1,725.00	$ 4,000.00	$ 12,000.00	$ 442.00	$ 1,326.00
9	R&S EXISTING 8" X 6" REDUCER	7.0	EA	$500.00	$ 3,500.00	$ 500.00	$ 3,500.00	$ 400.00	$ 2,800.00	$ 400.00	$ 2,800.00	$ 310.00	$ 2,170.00
10	R&S 8" X 8" x 8" TEE	1.0	EA	$500.00	$ 500.00	$ 500.00	$ 500.00	$ 400.00	$ 400.00	$ 600.00	$ 600.00	$ 370.00	$ 370.00
11	CUT & CAP EXISTING 6" WATER MAIN	6.0	EA	$750.00	$ 4,500.00	$ 800.00	$ 4,800.00	$ 740.00	$ 4,440.00	$ 1,000.00	$ 6,000.00	$ 452.00	$ 2,712.00
12	CUT & CAP EXISTING 8" WATER MAIN	2.0	EA	$750.00	$ 1,500.00	$ 500.00	$ 1,000.00	$ 875.00	$ 1,750.00	$ 1,500.00	$ 3,000.00	$ 550.00	$ 1,100.00
13	R&D ROCK	50.0	CYD	$150.00	$ 7,500.00	$ 100.00	$ 5,000.00	$ 350.00	$ 17,500.00	$ 20.00	$ 1,000.00	$ 200.00	$ 10,000.00
14	F&I 8" C-900 PVC WATER MAIN	1639.5	LFT	$55.00	$ 90,172.50	$ 54.00	$ 88,533.00	$ 65.00	$ 106,567.50	$ 70.00	$ 114,765.00	$ 82.00	$ 134,439.00
15	F&I 8" D.I. CL 52 POLYWRAPPED WATER MAIN	820.5	LFT	$70.00	$ 57,435.00	$ 68.00	$ 55,794.00	$ 75.00	$ 61,537.50	$ 90.00	$ 73,845.00	$ 96.50	$ 79,178.25
16	BORE TREE, UP TO 50' LENGTH	17.0	EA	$500.00	$ 8,500.00	$ 1,200.00	$ 20,400.00	$ 1,775.00	$ 30,175.00	$ 2,000.00	$ 34,000.00	$ 10,000.00	$ 170,000.00
17	F&I CLOSE SETTING HYD BR., COMPLETE	4.0	EA	$3,500.00	$ 14,000.00	$ 3,900.00	$ 15,600.00	$ 4,000.00	$ 16,000.00	$ 4,000.00	$ 16,000.00	$ 4,900.00	$ 19,600.00
18	F&I 8" X 8" X 6" D.I. TEE	4.0	EA	$500.00	$ 2,000.00	$ 800.00	$ 3,200.00	$ 370.00	$ 1,480.00	$ 500.00	$ 2,000.00	$ 960.00	$ 3,840.00
19	F&I 8" X 8" X 8" D.I. TEE	5.0	EA	$500.00	$ 2,500.00	$ 800.00	$ 4,000.00	$ 470.00	$ 2,350.00	$ 700.00	$ 3,500.00	$ 990.00	$ 4,950.00
20	F&I 8" X 8" X 8" D.I. CROSS	4.0	EA	$500.00	$ 2,000.00	$ 1,200.00	$ 4,800.00	$ 700.00	$ 2,800.00	$ 1,000.00	$ 4,000.00	$ 1,366.00	$ 5,464.00
21	F&I 8" 45-DEG. D.I. BEND & THRUST	10.0	EA	$400.00	$ 4,000.00	$ 400.00	$ 4,000.00	$ 290.00	$ 2,900.00	$ 400.00	$ 4,000.00	$ 627.00	$ 6,270.00
22	F&I 8" 22-1/2-DEG. D.I. BEND & THRUST BLOCK	4.0	EA	$400.00	$ 1,600.00	$ 400.00	$ 1,600.00	$ 290.00	$ 1,160.00	$ 400.00	$ 1,600.00	$ 615.00	$ 2,460.00
23	F&I 8" X 6" D.I. REDUCER	6.0	EA	$400.00	$ 2,400.00	$ 400.00	$ 2,400.00	$ 290.00	$ 1,740.00	$ 300.00	$ 1,800.00	$ 540.00	$ 3,240.00
24	F&I 8" SOLID SLEEVE	4.0	EA	$400.00	$ 1,600.00	$ 400.00	$ 1,600.00	$ 290.00	$ 1,160.00	$ 300.00	$ 1,200.00	$ 1,562.00	$ 6,248.00
25	F & I 8" D.I. CAP AND THRUST BLOCK	2.0	EA	$400.00	$ 800.00	$ 400.00	$ 800.00	$ 290.00	$ 580.00	$ 300.00	$ 600.00	$ 1,460.00	$ 2,920.00
26	F&I 8" GATE VALVE AND BOX	11.0	EA	$1,500.00	$ 16,500.00	$ 1,400.00	$ 15,400.00	$ 1,850.00	$ 20,350.00	$ 1,800.00	$ 19,800.00	$ 1,868.00	$ 20,548.00
27	RECONNECT WATER SERVICE, SHORT SIDE	25.0	EA	$1,000.00	$ 25,000.00	$ 1,000.00	$ 25,000.00	$ 1,150.00	$ 28,750.00	$ 2,000.00	$ 50,000.00	$ 585.00	$ 14,625.00
28	REPLACE WATER SERVICE, SHORT SIDE	3.0	EA	$1,500.00	$ 4,500.00	$ 1,500.00	$ 4,500.00	$ 1,500.00	$ 4,500.00	$ 2,500.00	$ 7,500.00	$ 700.00	$ 2,100.00
29	REPLACE WATER SERVICE, LONG SIDE	3.0	EA	$2,000.00	$ 6,000.00	$ 2,400.00	$ 7,200.00	$ 1,900.00	$ 5,700.00	$ 3,000.00	$ 9,000.00	$ 1,400.00	$ 4,200.00
30	F&I 2" TEMPORARY BLOWOFF	3.0	EA	$500.00	$ 1,500.00	$ 250.00	$ 750.00	$ 400.00	$ 1,200.00	$ 1,500.00	$ 4,500.00	$ 1,500.00	$ 4,500.00
31	F&I 1" CHLORINATION TAP	3.0	EA	$500.00	$ 1,500.00	$ 500.00	$ 1,500.00	$ 400.00	$ 1,200.00	$ 1,000.00	$ 3,000.00	$ 1,036.00	$ 3,108.00
32	F&I CONTROLLED DENSITY BACKFILL	366.4	CYD	$80.00	$ 29,312.00	$ 80.00	$ 29,312.00	$ 75.00	$ 27,480.00	$ 150.00	$ 54,960.00	$ 88.00	$ 32,243.20
33	F&I 6" CONCRETE PAVEMENT & APPROACH	325.2	SYD	$35.00	$ 11,382.00	$ 68.00	$ 22,113.60	$ 55.00	$ 17,886.00	$ 40.00	$ 13,008.00	$ 32.00	$ 10,406.40
34	F & I 8" CONCRETE PAVEMENT & APPROACH	141.7	SYD	$40.00	$ 5,668.00	$ 75.00	$ 10,627.50	$ 65.00	$ 9,210.50	$ 60.00	$ 8,502.00	$ 52.00	$ 7,368.40
35	F&I 6" CONCRETE ADA RAMP	109.3	SFT	$15.00	$ 1,639.50	$ 24.00	$ 2,623.20	$ 15.00	$ 1,639.50	$ 15.00	$ 1,639.50	$ 8.50	$ 929.05
36	F&I 4" CONCRETE SIDEWALK	1013.5	SFT	$5.00	$ 5,067.50	$ 5.00	$ 5,067.50	$ 5.00	$ 5,067.50	$ 5.00	$ 5,067.50	$ 3.75	$ 3,800.63
37	F&I MDOT 21A STONE	100.0	TON	$25.00	$ 2,500.00	$ 18.00	$ 1,800.00	$ 20.00	$ 2,000.00	$ 30.00	$ 3,000.00	$ 35.00	$ 3,500.00
38	F&I SPOT CURB & GUTTER	90.0	LFT	$25.00	$ 2,250.00	$ 36.00	$ 3,240.00	$ 30.00	$ 2,700.00	$ 40.00	$ 3,600.00	$ 25.00	$ 2,250.00
39	F&I HAND PATCH	25.8	TON	$150.00	$ 3,870.00	$ 180.00	$ 4,644.00	$ 350.00	$ 9,030.00	$ 300.00	$ 7,740.00	$ 200.00	$ 5,160.00
40	MAINTAIN WATER MAIN / SERVICE TRENCH	1.0	LS	$2,000.00	$ 2,000.00	$ 1.00	$ 1.00	$ 1,000.00	$ 1,000.00	$ 3,000.00	$ 3,000.00	$ 15,000.00	$ 15,000.00
41	TRAFFIC CONTROL	1.0	LS	$10,000.00	$ 10,000.00	$ 4,800.00	$ 4,800.00	$ 1,000.00	$ 1,000.00	$ 7,000.00	$ 7,000.00	$ 18,700.00	$ 18,700.00
42	SITE RESTORATION	1.0	LS	$10,000.00	$ 10,000.00	$ 12,000.00	$ 12,000.00	$ 4,000.00	$ 4,000.00	$ 15,000.00	$ 15,000.00	$ 10,425.00	$ 10,425.00
			TOTAL		$ 358,250.60		$ 381,783.70		$ 417,569.00		$ 519,443.38		$ 629,770.88

Note: Line item pricing in BOLD print represent differences between mathematical computation and bid form. Computed amounts shall govern.

CITY COUNCIL
AGENDA FACT SHEET

RELATING TO: INSTALLATION OF NEW PUBLIC SANITARY SEWER – WEST FOURTH STREET BETWEEN HUBBLE AND HARRISON STREETS – SPECIAL ASSESSMENT RESOLUTION NUMBER 4 – SEWER SAD #232

DISCUSSION: The homes fronting the 200 and 300 blocks of West Fourth Street lack a public sanitary sewer, except most of those immediately adjacent to the corners of Hubble, Smith, and Harrison Streets. Over the years, the Wastewater Department has been made aware of numerous issues with the various shared private sewer lines serving these homes, but the situation worsened significantly in November 2011, when extremely heavy rains caused a number of flooding issues within the City. During this time period, the shared private sewer line now known to be serving 312, 311, 219, and 220 West Fourth and 404 Smith experienced a catastrophic failure, resulting in some property owners having to pump raw sewage out of their basements and into the roadway. In response to this urgent public health issue, the Wastewater Department did perform emergency repairs on this line, and the City Council passed Resolution 1 on December 19, 2011, which referred the project to the Engineering Department for survey and design of a new public main. At this time, it was believed that the work would be limited to the 300 block, but subsequent in-depth investigations into the routing of all homes in the area revealed that homes in the 200 block also shared the same line that did not connect to the public main on Smith Street as expected but actually bypassed it entirely, so the project has now expanded to this area as well. Due to the length of time needed for investigation of all of the house lead routings, coupled with the fact that the acute hazard had been mitigated, this project was originally postponed into 2013, then again into 2014 as the Engineering Department also sought funding to simultaneously reconstruct the roadway, which has now been secured through the 2014-15 Capital Improvements Program.

The City Charter provides for the installation of public sewers at the discretion of the City Council and provides for recovery of most of the cost by a Special Assessment against the benefiting properties. By Charter, a minimum of one-sixth of the project costs are borne by the Wastewater Fund. However, since the properties in the district have historically shared various private lines, they have still paid system depreciation and debt charges to the Wastewater Fund, and in consideration of this, the Wastewater Fund share of the assessable project costs is instead proposed to be 50%, consistent with other recent projects. The remaining share of the costs is then divided among the benefitting properties on a Residential Equivalent Unit (REU) basis, where each residential dwelling unit accounts for one share. It should be noted that 7 of the 8 corner lots already have direct taps to a public main, and are not included in the district. This project was declared to be a public necessity by the passage of Resolution 3 on May 5, and bids were opened on May 23. The low bidder is G.V. Cement Contracting, Co. of Brownstown Township.

Since the project costs are now known, cost estimates submitted with previous fact sheets have now been populated with "as bid" unit prices. While the overall bids were 5.4% below the Engineer's Estimate, the items associated with the sanitary sewer work were slightly above the estimate on balance. As a result, the estimated per-REU cost of $4,725.85 has increased to $4,825.14, which is a 2% increase. As before, a map of the proposed district has been attached with this fact sheet, as well as cost breakdowns for both the sanitary sewer component and the overall costs (including roadway paving and storm sewer replacement that will be paid 100% by the City), and a breakdown of the proposed assessments between properties in the district. Lastly, since the private lead routings serving the homes on these blocks are very complicated, a set of construction plans has been attached, which color-codes the location of the existing public mains, proposed new public main and leads, and the location of the different private sewer lines as verified by the Engineering and Wastewater Department staff. The next step in this process is Resolution 4, which schedules the final public hearing on the assessment roll for the June 16, 2014 City Council meeting, and we will recommend confirmation of the Special Assessment at that meeting as well. This district, if confirmed, would be known as Sewer Special Assessment District Number 232.

IT IS RECOMMENDED that the attached Resolution 4 be adopted, and that the public hearing on the assessment roll be scheduled for Monday, June 16, 2014 at 7:30 P.M. in the City Council Chambers.

CITY MANAGER RECOMMENDATION:

- [x] For
- [ ] For, with revisions or conditions
- [ ] Against
- [ ] No Action Taken/Recommended

APPROVAL DEADLINE: As soon as possible.

REASON FOR DEADLINE:

STAFF RECOMMENDATION: X For ☐Against

REASON AGAINST: N/A

INITIATED BY: Department of Engineering and Public Services

PROGRAMS, DEPARTMENTS, OR GROUPS AFFECTED: City Council, Engineering Department, Wastewater Department, adjacent property owners and residents

FINANCES

COST AND REVENUE PROJECTIONS:

Cost of Total Project	$270,043.32*
Cost of This Project Approval	$N/A
Related Annual Operating Cost	$N/A
Increased Revenue Expected/Year	$N/A

*Present estimate of costs, including construction estimate, 15% engineering and 10% contingencies for all project components including sanitary sewer installation, some storm sewer replacement, and roadway reconstruction.

SOURCE OF FUNDS:

City *	Account Number	Amount
Other Funds *		

*Funds will not be appropriated until confirmation of the Special Assessment District

Budget Approval:

FACT SHEET PREPARED BY: Patrick M. Lewis, P.E., Director of Engineering and Public Services **DATE:** 05/27/14

REVIEWED BY: **DATE:**

COUNCIL MEETING DATE: June 2, 2014

RESOLUTION NO. 4

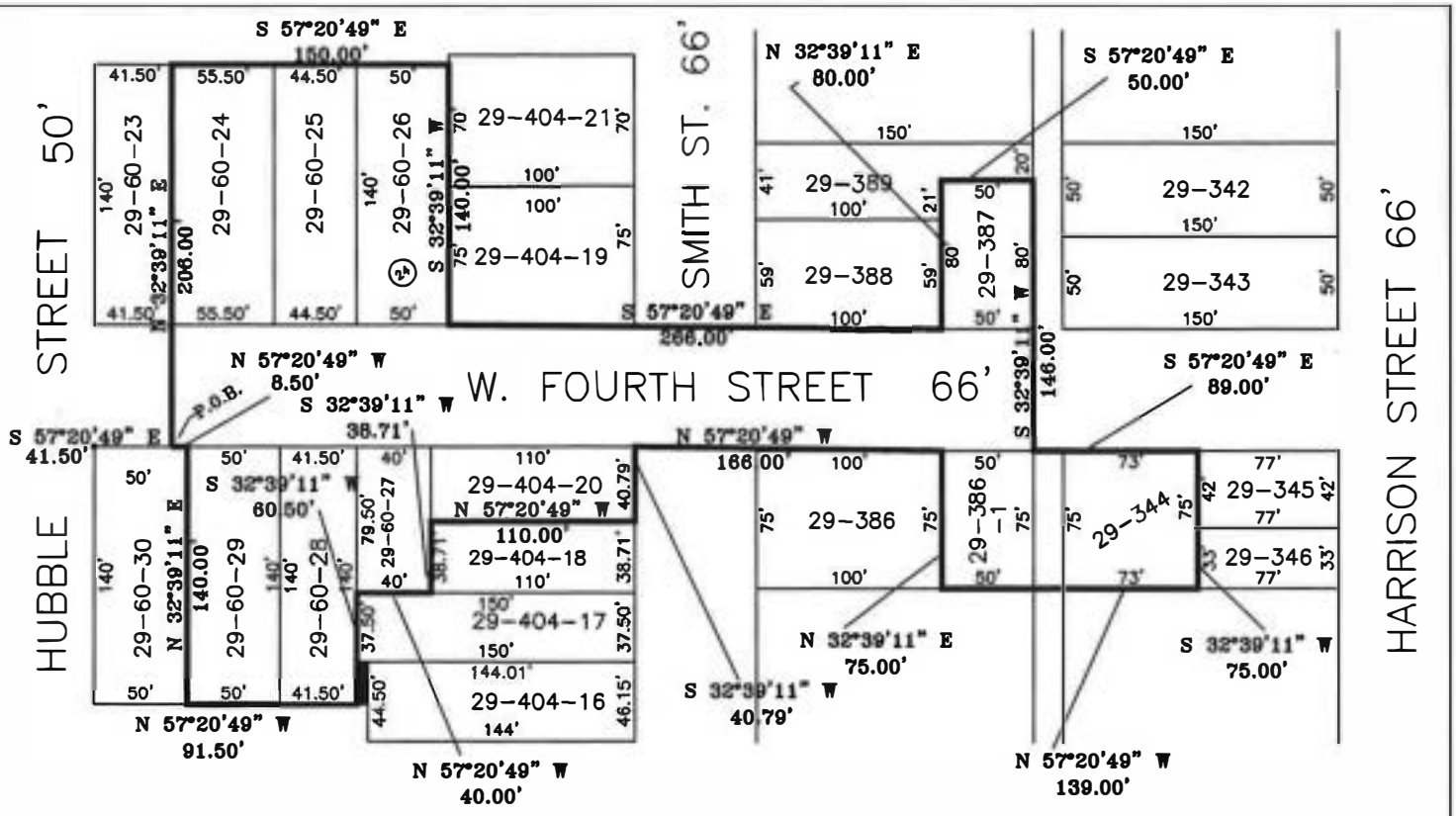
WHEREAS, the City Assessor has reported and filed a special assessment for the installation of a sanitary sewer of adequate size to service some or all of the properties located on West Fourth Street between Hubble Street and Harrison Street, known and designated as Sewer Special Assessment District 232; therefore be it;

RESOLVED, that the special assessment costs be spread over a period of ten (10) years with equal principal payments and interest charged at a rate of 3.30% on the unpaid balance, and be it further;

RESOLVED, that on June 16, 2014, at the Council Chambers in the City of Monroe, Michigan at 7:30 P.M., the Council will meet to review the special assessments so made; and that the City Clerk-Treasurer is directed to give notice of such review as required by the Charter.

WEST FOURTH STREET SANITARY SEWER AND PAVING - BID TABULATION				ENGINEER'S ESTIMATE		1 - GV CEMENT CONTRACTING, INC.		2 - SALENBIEN PROPERTIES, LLC	
ITEM NO.	DESCRIPTION	NO. OF UNITS	UNITS	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST
1	R&D CURB & GUTTER	1123.8	LFT	$ 12.00	$ 13,485.60	$ 6.50	$ 7,304.70	$ 10.00	$ 11,238.00
2	R&D SIDEWALK	899.7	SFT	$ 2.00	$ 1,799.40	$ 1.00	$ 899.70	$ 2.00	$ 1,799.40
3	R&D EXST'G. PAVEMENT	1105.3	SYD	$ 10.00	$ 11,053.00	$ 6.50	$ 7,184.45	$ 12.00	$ 13,263.60
4	R&D EXST'G ST. SEWER	62.5	LFT	$ 25.00	$ 1,562.50	$ 15.00	$ 937.50	$ 14.00	$ 875.00
5	R&D EXST'G STRUCTURE	5.0	EA	$ 1,000.00	$ 5,000.00	$ 450.00	$ 2,250.00	$ 500.00	$ 2,500.00
6	F&I 4' DIA STRUCTURE	4.0	EA	$ 2,000.00	$ 8,000.00	$ 1,500.00	$ 6,000.00	$ 2,400.00	$ 9,600.00
7	F&I 2' DIA. INLET	2.0	EA	$ 1,500.00	$ 3,000.00	$ 1,300.00	$ 2,600.00	$ 1,800.00	$ 3,600.00
8	TAP EXISTING STRUCTURE	2.0	EA	$ 500.00	$ 1,000.00	$ 400.00	$ 800.00	$ 800.00	$ 1,600.00
9	F&I ROCK (PROVISIONAL)	20.0	CYD	$ 150.00	$ 3,000.00	$ 250.00	$ 5,000.00	$ 100.00	$ 2,000.00
10	F&I 8" SDR 35 PVC SANITARY MAIN OR STORM	479.0	LFT	$ 55.00	$ 26,345.00	$ 68.00	$ 32,572.00	$ 52.00	$ 24,908.00
11	F&I 8"x6" PVC WYE	10.0	EA	$ 100.00	$ 1,000.00	$ 550.00	$ 5,500.00	$ 200.00	$ 2,000.00
12	F&I 6" SDR 35 PVC SANITARY MAIN	165.0	LFT	$ 50.00	$ 8,250.00	$ 40.00	$ 6,600.00	$ 68.00	$ 11,220.00
13	RECONNECT SANITARY SERVICE	8.0	EA	$ 500.00	$ 4,000.00	$ 500.00	$ 4,000.00	$ 1,200.00	$ 9,600.00
14	CUT & CAP SANITARY SEWER	3.0	EA	$ 500.00	$ 1,500.00	$ 350.00	$ 1,050.00	$ 250.00	$ 750.00
15	F&I 12" RCP STORM SEWER MAIN	80.0	LFT	$ 85.00	$ 6,800.00	$ 60.00	$ 4,800.00	$ 42.00	$ 3,360.00
16	ADJUST VALVE BOX	3.0	EA	$ 300.00	$ 900.00	$ 150.00	$ 450.00	$ 250.00	$ 750.00
17	ADJUST, CLEAN, & PLASTER STRUCTURE	2.0	EA	$ 750.00	$ 1,500.00	$ 350.00	$ 700.00	$ 650.00	$ 1,300.00
18	F & I EJIW #1040 WATERTIGHT CASTING (SANITARY)	4.0	EA	$ 750.00	$ 3,000.00	$ 550.00	$ 2,200.00	$ 500.00	$ 2,000.00
19	F&I EJIW #1040 CASTING (STORM)	1.0	EA	$ 750.00	$ 750.00	$ 450.00	$ 450.00	$ 500.00	$ 500.00
20	F & I EJIW #7045 CASTING	3.0	EA	$ 750.00	$ 2,250.00	$ 550.00	$ 1,650.00	$ 500.00	**$ 1,500.00**
21	F&I CONTROL DENSITY BACKFILL	540.0	CYD	$ 90.00	$ 48,600.00	$ 70.00	$ 37,800.00	$ 80.00	$ 43,200.00
22	SUBGRADE UNDERCUTTING	50.0	CYD	$ 25.00	$ 1,250.00	$ 18.00	$ 900.00	$ 32.00	$ 1,600.00
23	SUBGRADE MANIPULATION	1355.3	SYD	$ 5.00	$ 6,776.50	$ 5.00	$ 6,776.50	$ 4.00	**$ 5,421.20**
24	F&I 6" CONCRETE PAVEMENT	168.9	SYD	$ 32.00	$ 5,404.80	$ 33.00	$ 5,573.70	$ 40.00	$ 6,756.00
25	F&I 8" CONCRETE PAVEMENT W/INTEGRAL CURB	1186.4	SYD	$ 35.00	$ 41,524.00	$ 36.00	$ 42,710.40	$ 42.00	**$ 49,828.80**
26	F&I 4" CONCRETE SIDEWALK	508.2	SFT	$ 4.00	$ 2,032.80	$ 3.50	$ 1,778.70	$ 5.00	$ 2,541.00
27	F&I 6" CONCRETE ADA RAMP	391.5	SFT	$ 10.00	$ 3,915.00	$ 18.00	$ 7,047.00	$ 14.00	$ 5,481.00
28	F&I BITUMINOUS HAND PATCH	58.0	TON	$ 150.00	$ 8,700.00	$ 250.00	$ 14,500.00	$ 180.00	$ 10,440.00
29	TRAFFIC CONTROL	1.0	LS	$ 3,000.00	$ 3,000.00	$ 3,000.00	$ 3,000.00	$ 5,500.00	$ 5,500.00
30	SITE RESTORATION	1.0	LS	$ 3,000.00	$ 3,000.00	$ 3,000.00	$ 3,000.00	$ 12,000.00	$ 12,000.00
			TOTAL		**$ 228,398.60**		**$ 216,034.65**		**$ 247,132.00**

Note: Line item pricing in BOLD print represent differences between mathematical computation and bid form. Computed amounts shall govern.



SANITARY SEWER SPECIAL ASSESSMENT DISTRICT NO. 232

Commencing at the easterly right-of-way of Hubble Street (50' R/W) and the southerly right-of-way West Fourth Street (66' R/W);
thence S 57°20'49" E 41.50 feet to the point of beginning;
thence N 32°39'11" E 206.00 feet; thence S 57°20'49" E 150.00 feet;
thence S 32°39'11" W 140.00 feet; thence S 57°20'49" E 266.00 feet;
thence N 32°39'11" E 80.00 feet; thence S 57°20'49" E 50.00 feet;
thence S 32°39'11" W 146.00 feet; thence S 57°20'49" E 89.00 feet;
thence S 32°39'11" W 75.00 feet; thence N 57°20'49" W 139.00 feet;
thence N 32°39'11" E 75.00 feet; thence N 57°20'49" W 166.00 feet;
thence S 32°39'11" W 40.79 feet; thence N 57°20'49" W 110.00 feet;
thence S 32°39'11" W 38.71 feet; thence N 57°20'49" W 40.00 feet;
thence S 32°39'11" W 60.50 feet; thence N 57°20'49" W 91.50 feet;
thence N 32°39'11" E 140.00 feet;
thence N 57°20'49" W 8.50 feet to the point of beginning.

SCALE 1" = 100'

REVISIONS		
NO.	DRAWN BY:	DATE:

DWG. OF RECORD

DATE: _____

CITY OF MONROE, MICHIGAN
ENGINEERING DEPARTMENT

W. FOURTH STREET SANITARY SEWER SPECIAL ASSESSMENT DISTRICT NO. 232 HUBBLE STREET TO SMITH STREET

SCALE: 1"=100'

FILE NO. A-XXX

DATE: APRIL 2014

SHEET NO. 1 OF 1

APPROVED: _____
CITY ENGINEER

Low Bid Cost Breakdown

WEST FOURTH STREET SANITARY SEWER AND PAVING - ALL WORK ITEMS				LOW BID COSTS	
ITEM NO.	DESCRIPTION	NO. OF UNITS	UNITS	UNIT PRICE	COST
1	R&D CURB & GUTTER	1123.8	LFT	$ 6.50	$ 7,304.70
2	R&D SIDEWALK	899.7	SFT	$ 1.00	$ 899.70
3	R&D EXST'G. PAVEMENT	1105.3	SYD	$ 6.50	$ 7,184.45
4	R&D EXST'G ST. SEWER	62.5	LFT	$ 15.00	$ 937.50
5	R&D EXST'G STRUCTURE	5.0	EA	$ 450.00	$ 2,250.00
6	F&I 4' DIA STRUCTURE	4.0	EA	$ 1,500.00	$ 6,000.00
7	F&I 2' DIA. INLET	2.0	EA	$ 1,300.00	$ 2,600.00
8	TAP EXISTING STRUCTURE	2.0	EA	$ 400.00	$ 800.00
9	F&I ROCK (PROVISIONAL)	20.0	CYD	$ 250.00	$ 5,000.00
10	F&I 8" SDR 35 PVC SANITARY MAIN OR STORM	479.0	LFT	$ 68.00	$ 32,572.00
11	F&I 8"x6" PVC WYE	10.0	EA	$ 550.00	$ 5,500.00
12	F&I 6" SDR 35 PVC SANITARY MAIN	165.0	LFT	$ 40.00	$ 6,600.00
13	RECONNECT SANITARY SERVICE	8.0	EA	$ 500.00	$ 4,000.00
14	CUT & CAP SANITARY SEWER	3.0	EA	$ 350.00	$ 1,050.00
15	F&I 12" RCP STORM SEWER MAIN	80.0	LFT	$ 60.00	$ 4,800.00
16	ADJUST VALVE BOX	3.0	EA	$ 150.00	$ 450.00
17	ADJUST, CLEAN, & PLASTER STRUCTURE	2.0	EA	$ 350.00	$ 700.00
18	F & I EJIW #1040 WATERTIGHT CASTING (SANITARY)	4.0	EA	$ 550.00	$ 2,200.00
19	F&I EJIW #1040 CASTING (STORM)	1.0	EA	$ 450.00	$ 450.00
20	F & I EJIW #7045 CASTING	3.0	EA	$ 550.00	$ 1,650.00
21	F&I CONTROL DENSITY BACKFILL	540.0	CYD	$ 70.00	$ 37,800.00
22	SUBGRADE UNDERCUTTING	50.0	CYD	$ 18.00	$ 900.00
23	SUBGRADE MANIPULATION	1355.3	SYD	$ 5.00	$ 6,776.50
24	F&I 6" CONCRETE PAVEMENT	168.9	SYD	$ 33.00	$ 5,573.70
25	F&I 8" CONCRETE PAVEMENT W/INTEGRAL CURB	1186.4	SYD	$ 36.00	$ 42,710.40
26	F&I 4" CONCRETE SIDEWALK	508.2	SFT	$ 3.50	$ 1,778.70
27	F&I 6" CONCRETE ADA RAMP	391.5	SFT	$ 18.00	$ 7,047.00
28	F&I BITUMINOUS HAND PATCH	58.0	TON	$ 250.00	$ 14,500.00
29	TRAFFIC CONTROL	1.0	LS	$ 3,000.00	$ 3,000.00
30	SITE RESTORATION	1.0	LS	$ 3,000.00	$ 3,000.00
			CONSTRUCTION COST		$ 216,034.65
			CONSTRUCTION COST TOTAL		**$ 216,034.65**
			CONTINGENCIES (10%)		**$ 21,603.47**
			ENGINEERING (15%)		**$ 32,405.20**
			PROJECT TOTAL COST		**$ 270,043.32**

Low Bid Cost Breakdown

WEST FOURTH STREET SANITARY SEWER AND PAVING - SANITARY SEWER COSTS ONLY				LOW BID COSTS	
ITEM NO.	DESCRIPTION	NO. OF UNITS	UNITS	UNIT PRICE	COST
2	R&D SIDEWALK	473.9	SFT	$ 1.00	$ 473.85
6	F&I 4' DIA STRUCTURE	4.0	EA	$ 1,500.00	$ 6,000.00
8	TAP EXISTING STRUCTURE	2.0	EA	$ 400.00	$ 800.00
9	F&I ROCK (PROVISIONAL)	20.0	CYD	$ 250.00	$ 5,000.00
10	F&I 8" SDR 35 PVC SANITARY MAIN	471.0	LFT	$ 68.00	$ 32,028.00
11	F&I 8"x6" PVC WYE	10.0	EA	$ 550.00	$ 5,500.00
12	F&I 6" SDR 35 PVC SANITARY MAIN	165.0	LFT	$ 40.00	$ 6,600.00
13	RECONNECT SANITARY SERVICE	8.0	EA	$ 500.00	$ 4,000.00
14	CUT & CAP SANITARY SEWER	3.0	EA	$ 350.00	$ 1,050.00
18	F & I EJIW #1040 WATERTIGHT CASTING	4.0	EA	$ 550.00	$ 2,200.00
21	F&I CONTROL DENSITY BACKFILL	270.0	CYD	$ 70.00	$ 18,900.00
26	F&I 4" CONCRETE SIDEWALK	168.9	SFT	$ 3.50	$ 591.15
29	TRAFFIC CONTROL	1.0	LS	$ 3,000.00	$ 3,000.00
30	SITE RESTORATION	1.0	LS	$ 3,000.00	$ 3,000.00
X	*ALLOWANCE FOR TRENCH PAVEMENT REPLACEMENT	1.0	LS	$ 11,220.00	$ 11,220.00
	*(SYD of trench pavement replacement due to sanitary but absorbed in new road - SYD unit cost equal to sum of items 1 and 25 on roadway estimate for 264.0 SYD of *area*)				
			CONSTRUCTION COST		$ 100,363.00
			CONSTRUCTION COST TOTAL		**$ 100,363.00**
			CONTINGENCIES (10%)		**$ 10,036.30**
			ENGINEERING (15%)		**$ 15,054.45**
			PROJECT TOTAL COST		**$ 125,453.75**
	(ASSESSABLE COSTS ARE 50% OF TOTAL SANITARY COSTS)		**ASSESSABLE COSTS**		**$ 62,726.88**
			RESIDENTIAL EQUIV. UNITS		**13**
			ASSESSMENT PER REU		**$ 4,825.14**

Low Bid Cost Breakdown

WEST FOURTH STREET SANITARY SEWER AND PAVING - PAVING COSTS ONLY				LOW BID COSTS	
ITEM NO.	DESCRIPTION	NO. OF UNITS	UNITS	UNIT PRICE	COST
1	R&D CURB & GUTTER	1123.8	LFT	$ 6.50	$ 7,304.70
2	R&D SIDEWALK	425.8	SFT	$ 1.00	$ 425.80
3	R&D EXST'G. PAVEMENT	1105.3	SYD	$ 6.50	$ 7,184.45
4	R&D EXST'G ST. SEWER	62.5	LFT	$ 15.00	$ 937.50
5	R&D EXST'G STRUCTURE	5.0	EA	$ 450.00	$ 2,250.00
7	F&I 2' DIA. INLET	2.0	EA	$ 1,300.00	$ 2,600.00
10	F&I 8" SDR 35 PVC SANITARY MAIN OR STORM	8.0	LFT	$ 68.00	$ 544.00
15	F&I 12" RCP STORM SEWER MAIN	80.0	LFT	$ 60.00	$ 4,800.00
16	ADJUST VALVE BOX	3.0	EA	$ 150.00	$ 450.00
17	ADJUST, CLEAN, & PLASTER STRUCTURE	2.0	EA	$ 350.00	$ 700.00
19	F&I EJIW #1040 CASTING (STORM)	1.0	EA	$ 450.00	$ 450.00
20	F & I EJIW #7045 CASTING	3.0	EA	$ 550.00	$ 1,650.00
21	F&I CONTROL DENSITY BACKFILL	270.0	CYD	$ 70.00	$ 18,900.00
22	SUBGRADE UNDERCUTTING	50.0	CYD	$ 18.00	$ 900.00
23	SUBGRADE MANIPULATION	1355.3	SYD	$ 5.00	$ 6,776.50
24	F&I 6" CONCRETE PAVEMENT	168.9	SYD	$ 33.00	$ 5,573.70
25	F&I 8" CONCRETE PAVEMENT W/INTEGRAL CURB	1186.4	SYD	$ 36.00	$ 42,710.40
26	F&I 4" CONCRETE SIDEWALK	340.0	SFT	$ 3.50	$ 1,190.00
27	F&I 6" CONCRETE ADA RAMP	391.5	SFT	$ 18.00	$ 7,047.00
28	F&I BITUMINOUS HAND PATCH	58.0	TON	$ 250.00	$ 14,500.00
X	*ALLOWANCE FOR TRENCH PAVEMENT REPLACEMENT	1.0	LS	$ (11,220.00)	$ (11,220.00)
			CONSTRUCTION COST		$ 115,674.05
			CONSTRUCTION COST TOTAL		**$ 115,674.05**
			CONTINGENCIES (10%)		**$ 11,567.41**
			ENGINEERING (15%)		**$ 17,351.11**
			PROJECT TOTAL COST		**$ 144,592.57**

SEWER SPECIAL ASSESSMENT DISTRICT 232 - ASSESSMENT BREAKDOWN

Based on low bids

PARCEL ID	PROPERTY ADDRESS	OWNER NAME	OWNER ADDRESS	OWNER CITY	REUs	ASSESSMENT
29-00060-024	322 W. Fourth Street	Church, Joel	322 W. Fourth Street	Monroe, MI 48161	1	$4,825.14
29-00060-025	318 W. Fourth Street	Brown, Charles / Deborah	318 W. Fourth Street	Monroe, MI 48161	1	$4,825.14
29-00060-026	312 W. Fourth Street	Sowards, William L.	312 W. Fourth Street	Monroe, MI 48161	1	$4,825.14
29-00060-027	311 W. Fourth Street	Marcero, Jonathon & Donald J.	311 W. Fourth Street	Monroe, MI 48161	1	$4,825.14
29-00060-028	317 W. Fourth Street	Brown, Ricky & Helen	2703 Nadeau Road	Monroe, MI 48162	1	$4,825.14
29-00060-029	321 W. Fourth Street	Sauro, Joseph W.	309 W. Third St., Apt. 1	Monroe, MI 48161	3	$14,475.42
29-00344-000	211 W. Fourth Street	Braden, Rachel Ann	211 W. Fourth Street	Monroe, MI 48161	2	$9,650.28
29-00386-001	219 W. Fourth Street	Kurtz, Mary E.	13510 Cambridge, Apt. 208	Southgate, MI 48195	1	$4,825.14
29-00387-000	220 W. Fourth Street	Ourilan, Jack	220 W. Fourth Street	Monroe, MI 48161	1	$4,825.14
29-00404-020	404 Smith Street	Davis, James & Jacqueline	404 Smith Street	Monroe, MI 48161	1	$4,825.14
TOTAL					13	$62,726.82
				COST PER REU		$4,825.14

W FOURTH ST (66' R/W)

0' 10' 20' 40' 60'
SCALE: INCHES TO FEET

NOTES:

CONTRACTOR SHALL LOCATE & VERIFY ALL SERVICE LEADS IN THE FIELD DURING INSTALLATION, INCIDENTAL. THE SERVICE LEADS COULD NOT BE CONFIRMED BY TELEVISING THE SANITARY SEWER DUE TO THE POOR CONDITION OF THE SANITARY SEWER.

TAPS AT MAIN ARE PER PLAN STATIONING, LEAD ROUTING UNKNOWN.

AT ADDRESSES LISTED BELOW, THE CONTRACTOR IS REQUIRED TO RECONNECT THE EXIST'G. SANITARY LEAD TO THE NEW LEAD:
404 SMITH ST.
311 W. 4TH
312 W. 4TH
318 W. 4TH
322 W. 4TH

AT ADDRESSES LISTED BELOW, THE CONTRACTOR IS REQUIRED TO RUN A NEW LEAD TO 3' BEYOND BACK OF CURB AND CAP WITH WATER TIGHT CAP:
317 W. 4TH
321 W. 4TH

ADDRESSES LISTED BELOW, ARE NOT INCLUDED IN THIS PROJECT, HAVE EXST'G LEADS TO A PUBLIC SAN. SEWER:
328 SMITH ST.
326 W. 4TH
327/329 W. 4TH

REMOVE & DESPOSE ROADWAY PAVEMENT PER TYPICAL CROSS SECTION

REMOVE & DISPOSE F&I CONCRETE DRIVE OR SIDEWALK REPLACE IN 6"/8" DRIVE OR 4"/6" WALK/RAMP

000.00 EXISTING ELEVATION

000.00 PROPOSED ELEVATION, GUTTER AND C.L.

LEGEND
SHRUB, TREE, FIPFIP/POST, MAGNETIC NAIL, BENCHMARK, MAILBOX, SIGN, TELEPHONE POLE, MANHOLE, MAINLINE VALVE, FIRE HYDRANT, STOP BOX, CATCH BASIN, STORM INLET, GAS LINE VENT, GAS LINE VALVE, FENCE LINE

HUBBLE ST. (50' R/W)

402 W. FOURTH ST. 29-00060-021
326 W. FOURTH ST. 29-00060-031
323 W. FOURTH ST. 29-00060-024
318 W. FOURTH ST. 29-00060-025
312 W. FOURTH ST. 29-00060-026
329 SMITH ST. 29-00404-019
401 & 403 W. FOURTH ST. 29-00060-032
328 & 329 W. FOURTH ST.
321 W. FOURTH ST. 29-00060-029
317 W. FOURTH ST. 29-00060-028
311 W. FOURTH ST. 29-00060-027
404 SMITH ST. 29-00404-020

MATCH EXISTING PAVEMENT 0+38.8

F&I (1)6"x6" PVC WYE, STA. 0+38.8, STA. 1+03.4, STA. 1+28, STA. 1+49.2, STA. 1+73.8, STA. 1+82.9, STA. 2+69
F&I 6" SANITARY SEWER AT 1.0% MIN. AS NECESSARY TO RECONNECT, TYPICAL EACH SERVICE LOCATION

(2)CUT & CAP EXST'G PRIVATE SAN. AT MAIN

F&I 4' DIA. SANITARY MANHOLE W/EJIW #1040 WATERTIGHT CASTING, STA. 0+60.4 RIM = 596.93

R&D SIDEWALK F&I 4" SIDEWALK, TYP. ALL LOCATIONS

R&D 20.0 SFT CONC. SIDEWALK F&I 20.0 SFT 6" ADA COMPLIANT RAMP SAWCUT FULL DEPTH, INCIDENTAL

PRIVATE SANITARY BLIND TIE NEAR CURB APPROX. LOCATION

321 & 323 EXST'G SEWERS LEADS ROUTE SOUTH OUT BACK OF HOUSE THEN TO HUBBLE

R&D APPROACH F&I 6" CONCRETE, TYP. ALL LOCATIONS

R&D 103.7 SFT CONC. SIDEWALK F&I 103.7 SFT 6" ADA COMPLIANT RAMP SAWCUT FULL DEPTH, INCIDENTAL

MATCH EXISTING PAVEMENT HAND PATCH AGAINST NEW CONCRETE AS NEEDED

R&D 56.1 SFT CONC. SIDEWALK F&I 56.1 SFT 6" ADA COMPLIANT RAMP SAWCUT FULL DEPTH, INCIDENTAL

TAP EXST'G. STRUCTURE R&S OLD CASTING (INCIDENTAL) F&I NEW CASTING EAST JORDAN #7045, ADJUST, CLEAN, & PLASTER C.B. STRUCTURE

R&D EXST'G. STRUCTURE F&I 2' DIA. INLET W/EJIW #7045 CASTING, STA. 3+29.8 RIM = 594.98

R&D EXST'G ST. PIPE (INCIDENTAL) F&I 12" RCP STORM SEWER

MATCH EXISTING PAVEMENT HAND PATCH AGAINST NEW CONCRETE AS NEEDED

ADJUST VALVE BOX

F&I 8" PVC SDR 35 SANITARY SEWER

R&D 64.5 SFT CONC. SIDEWALK F&I 64.5 SFT 6" ADA COMPLIANT RAMP SAWCUT FULL DEPTH, INCIDENTAL

ADJUST VALVE BOX

R&D EXST'G. STRUCTURE F&I 4' DIA. STRUCTURE W/EJIW #7045, STA. 3+60.3 RIM = 596.96

R&D EXST'G. STRUCTURE F&I 8 LFT 8"835 PVC MAIN

SEE SHEET 2

SMITH ST. (66' R/W)

R&D 65.3 SFT CONC. SIDEWALK F&I 65.3 SFT 6" ADA COMPLIANT RAMP SAWCUT FULL DEPTH, INCIDENTAL

ADJUST VALVE BOX

(2)TAP EXST'G. BRICK STRUCTURE PROVIDE A CONCRETE COLLAR TO SEAL MANHOLE
ADJUST, CLEAN AND PLASTER STRUCTURE
F&I EJIW #1040 WATERTIGHT CASTING, RIM = 587.49

0+00 1+00 2+00 3+00 4+00

ANY REMOVAL OF ABANDON 4" C.I. WM. FOR INSTALLATION OF ANY NEW STORM OR SANITARY SEWER MAINS OR MANHOLES WILL BE INCIDENTAL.

Existing Public Main

Proposed New Public Main

Not in District — Tie in on N/S Frontage

Private System A

Private System B

Private System C

Private System D

598 596 594 592 590 588 586 584 582 580

EXISTING CENTERLINE W. FOURTH STREET

PROPOSED CENTERLINE
0+38.8 TO 0+50 BLEND TO MATCH
0+50 TO 0+50 @ +0.185% (GUTTERS @ MIN. 0.3%)
0+50 TO 3+00 @ +0.3%
3+00 TO 4+00 VARIES

8" PVC VK

ROCK

REVISIONS

NO.	DRAWN BY:	DATE:

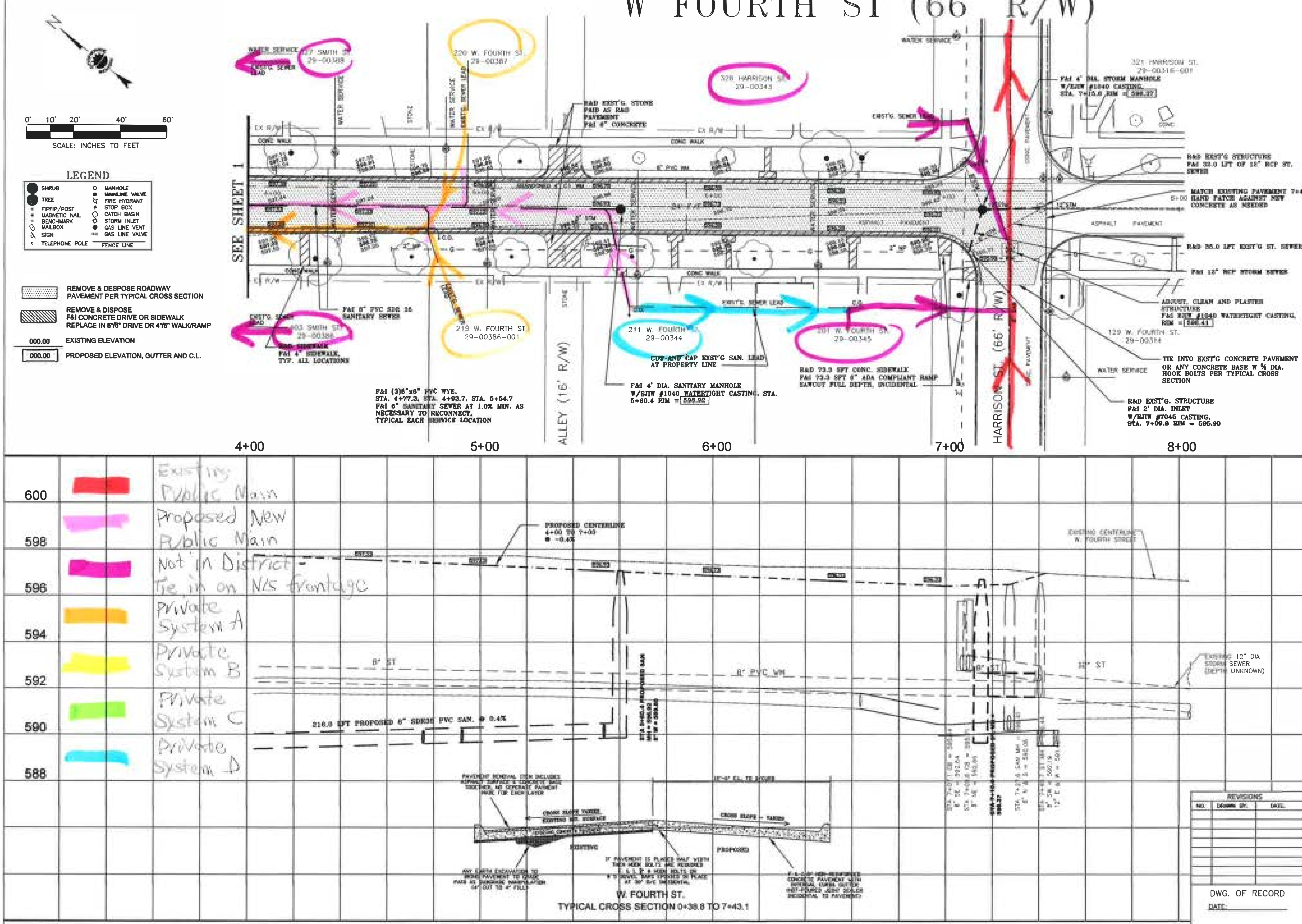
DWG. OF RECORD
DATE:

CITY OF MONROE, MICHIGAN
ENGINEERING DEPARTMENT
W FOURTH ST
SANITARY SEWER AND PAVING
HUBBLE ST TO HARRISON ST

SCALE: 1"=20' 1"=2'
FILE NO. F—
DATE: MAY, 2014
SHEET NO. 1 OF 2

APPROVED: _____
CITY ENGINEER

W FOURTH ST (66' R/W)



SCALE: INCHES TO FEET
0' 10' 20' 40' 60'
LEGEND
SHRUB
TREE
FIPFIP/POST
MAGNETIC NAIL
BENCHMARK
MAILBOX
SIGN
TELEPHONE POLE
MANHOLE
MAINLINE VALVE
FIRE HYDRANT
STOP BOX
CATCH BASIN
STORM INLET
GAS LINE VENT
GAS LINE VALVE
FENCE LINE
REMOVE & DESPOSE ROADWAY PAVEMENT PER TYPICAL CROSS SECTION
REMOVE & DISPOSE F&I CONCRETE DRIVE OR SIDEWALK REPLACE IN 8"/6" DRIVE OR 4"/6" WALK/RAMP
000.00 EXISTING ELEVATION
000.00 PROPOSED ELEVATION, GUTTER AND C.L.
SEE SHEET 1
327 SMITH ST 29-00388
220 W. FOURTH ST. 29-00387
328 HARRISON ST 29-00343
321 HARRISON ST. 29-00316-001
403 SMITH ST 29-00386
219 W. FOURTH ST 29-00386-001
211 W. FOURTH ST. 29-00344
201 W. FOURTH ST. 29-00345
129 W. FOURTH ST. 29-00314
ALLEY (16' R/W)
HARRISON ST. (66' R/W)
WATER SERVICE
R&D EXST'G. STONE PAID AS R&D PAVEMENT F&I 6" CONCRETE
F&I 8" PVC SDR 35 SANITARY SEWER
F&I (3)6"x6" PVC WYE. STA. 4+77.3, STA. 4+93.7, STA. 5+54.7 F&I 6" SANITARY SEWER AT 1.0% MIN. AS NECESSARY TO RECONNECT. TYPICAL EACH SERVICE LOCATION
F&I 4' DIA. SANITARY MANHOLE W/EJIW #1040 WATERTIGHT CASTING, STA. 5+60.4 RIM = 596.92
CUT AND CAP EXST'G SAN. LEAD AT PROPERTY LINE
R&D 73.3 SFT CONC. SIDEWALK F&I 73.3 SFT 6" ADA COMPLIANT RAMP SAWCUT FULL DEPTH, INCIDENTAL
F&I 4' DIA. STORM MANHOLE W/EJIW #1040 CASTING. STA. 7+15.6 RIM = 596.37
R&D EXST'G STRUCTURE F&I 33.0 LFT OF 12" RCP ST. SEWER
MATCH EXISTING PAVEMENT 7+43.1 HAND PATCH AGAINST NEW CONCRETE AS NEEDED
R&D 35.0 LFT EXST'G ST. SEWER
F&I 12" RCP STORM SEWER
ADJUST, CLEAN AND PLASTER STRUCTURE F&I EJIW #1040 WATERTIGHT CASTING, RIM = 596.41
TIE INTO EXST'G CONCRETE PAVEMENT OR ANY CONCRETE BASE W 5/8 DIA. HOOK BOLTS PER TYPICAL CROSS SECTION
R&D EXST'G. STRUCTURE F&I 2' DIA. INLET W/EJIW #7045 CASTING. STA. 7+09.6 RIM = 595.90
4+00
5+00
6+00
7+00
8+00
600
598
596
594
592
590
588
Existing Public Main
Proposed New Public Main
Not in District - Tie in on N/S frontage
Private System A
Private System B
Private System C
Private System D
PROPOSED CENTERLINE 4+00 TO 7+03 @ -0.4%
EXISTING CENTERLINE W. FOURTH STREET
EXISTING 12" DIA STORM SEWER (DEPTH UNKNOWN)
8" ST
8" PVC WM
12" ST
216.0 LFT PROPOSED 8" SDR35 PVC SAN. @ 0.4%
W. FOURTH ST.
TYPICAL CROSS SECTION 0+38.8 TO 7+43.1

NOTES:

CONTRACTOR SHALL LOCATE & VERIFY ALL SERVICE LEADS IN THE FIELD DURING INSTALLATION, INCIDENTAL. THE SERVICE LEADS COULD NOT BE CONFIRMED BY TELEVISING THE SANITARY SEWER DUE TO THE POOR CONDITION OF THE SANITARY SEWER.

TAPS AT MAIN ARE PER PLAN STATIONING, LEAD ROUTING UNKNOWN.

AT ADDRESSES LISTED BELOW, THE CONTRACTOR IS REQUIRED TO RECONNECT THE EXST'G. SANITARY LEAD TO THE NEW LEAD:
211 W. 4TH
219 W. 4TH
220 W. 4TH

ADDRESSES LISTED BELOW, ARE NOT INCLUDED IN THIS PROJECT, HAVE EXST'G LEADS TO A PUBLIC SAN. SEWER:
201 W. 4TH
328 HARRISON ST.
327 SMITH ST.
403 SMITH ST.

ANY REMOVAL OF ABANDON 4" C.I. W.M. FOR INSTALLATION OF ANY NEW STORM OR SANITARY SEWER MAINS OR MANHOLES WILL BE INCIDENTAL.

REVISIONS		
NO.	DRAWN BY	DATE

DWG. OF RECORD

DATE:

CITY OF MONROE, MICHIGAN
ENGINEERING DEPARTMENT

W FOURTH ST
SANITARY SEWER AND PAVING
HUBBLE ST TO HARRISON ST

SCALE: 1"=20'
1"=2'

FILE NO. F—

DATE: MAY, 2014

SHEET NO. 2 OF 2

APPROVED: ______ CITY ENGINEER

CITY COUNCIL
AGENDA FACT SHEET

RELATING TO: PUBLIC SAFETY PARAMEDIC VEHICLE PURCHASE – FORD EXPLORER

DISCUSSION: The City's Stores and Equipment Fund, an Internal Service Fund, is responsible for the maintenance and purchase of most City vehicles, including all in the Building, Engineering, Police, Planning, Assessing, and Public Services Departments, and selected vehicles in the Water, Wastewater, and Fire Departments. The Stores and Equipment Fund is managed by the Department of Public Services, and like most City functions, has been attempting to focus on capital replacement of its assets in an appropriate and timely fashion. Fortunately, over the last few years, the fund is beginning to show a positive trend due to right-sizing of the staffing levels and promoting efficiency through incorporation of the Police vehicles to the fleet while maintaining the same staffing levels as before.

At the present time, the City's large fire apparatus vehicles are being used for paramedic calls, and for runs consisting of this response alone, are greatly fuel-inefficient. In recognition of this, the Director of Public Safety and other appropriate command personnel have requested the purchase of a new vehicle to be used for this purpose, rather than continuing to use the larger vehicles on all runs. Funding for this vehicle was allocated in the 2013-14 Fiscal Year Stores and Equipment Budget, and once put into service, the Department of Public Services will charge a monthly rental rate and it will become an asset of the fund. It has been determined that Ford Explorer is adequate for use, and this unit will thus be the same type and size as the Police Command and K-9 units. The use of generally similar sizes and models is yet another way that the Department is attempting to increase our efficiency of service as well.

The Stores and Equipment Supervisor has investigated various alternatives for purchase of this unit. She has determined, as has been the case in past years for a variety of vehicles, that the pooled bids for the Urban counties and the State of Michigan are by far the greatest advantage due to their massive volume, with the lowest bid again this year being through Macomb County. While we would welcome the opportunity to purchase from the local Ford dealership, they have repeatedly indicated that they cannot come close to the aforementioned bid pricing. A listing of all items included in the base price, as well as all available options and the selected options package has been attached to this Fact Sheet, and the total price is $26,615.00.

IT IS RECOMMENDED that the City Council award a contract to purchase one (1) 2015 Utility Interceptor All Wheel Vehicle for a total price of $26,615.00 from Signature Ford of Owosso, Michigan. **IT IS FURTHER RECOMMENDED** that the Director of Engineering and Public Services be authorized to prepare a purchase order for the above amount.

CITY MANAGER RECOMMENDATION:

- [x] For
- [ ] For, with revisions or conditions
- [ ] Against
- [ ] No Action Taken/Recommended

APPROVAL DEADLINE: N/A

REASON FOR DEADLINE:

STAFF RECOMMENDATION: X For ☐Against

REASON AGAINST: N/A

INITIATED BY: Department of Engineering and Public Services

PROGRAMS, DEPARTMENTS, OR GROUPS AFFECTED: City Council, Public Safety Department, Department of Public Services, traveling public

FINANCES

COST AND REVENUE PROJECTIONS:

Cost of Total Project	$26,615.00
Cost of This Project Approval	$26,615.00
Related Annual Operating Cost	$ N/A
Increased Revenue Expected/Year	$ N/A

SOURCE OF FUNDS:

	Account Number	Amount
City		
Vehicles – Stores & Equip.	641-60.521-981.000	$26,615.00
Other Funds		

Budget Approval:

FACT SHEET PREPARED BY: Patrick M. Lewis, P.E., Director of Engineering and Public Services **DATE:** 05/27/14

REVIEWED BY: **DATE:**

COUNCIL MEETING DATE: June 2, 2014

Macomb County Bid Price
(Bid #12-07, MY2013) in the
State of Michigan
2015 Utility Police Interceptor
Major Standard Equipment

MECHANICAL
- Alternator – 220-Amp
- Axle Ratio – 3.65 (AWD), 3.39 (FWD)
- Battery – H.D. maintenance-free 78A/750-CCA
- Brakes – 4-Wheel Heavy-Duty Disc w/H.D. Front and Rear Calipers
- Column Shifter
- Drivetrain – All-Wheel-Drive
- Electric Power-Assist Steering (EPAS) – Heavy-Duty
- Engine – 3.7L V6 Ti-VCT
- Engine Hour Meter
- Engine Oil Cooler
- Fuel Tank – 18.6 gallons
- Suspension – independent front & rear
- Transmission – 6-speed automatic

EXTERIOR
- Antenna, Roof-mounted
- Cladding – Lower bodyside cladding (Black)
- Door Handles – Black (MIC)
- Exhaust True Dual
- Front Door-Lock Cylinders (Front Driver / Passenger / Liftgate)
- Glass – 2nd and 3rd Row Privacy Glass
- Grille – Black
- Headlamps – Halogen Projector (Bi- Functional)
- Liftgate – Manual 1-Piece – Fixed Glass w/Door-Lock Cylinder
- Mirrors – Black Caps (MIC), Power Electric Remote, Manual Folding with Integrated Spotter (integrated blind spot mirrors not included when equipped with BLIS®)
- Spare – Full size 18" Tire w/TPMS
- Spoiler – Painted Black
- Tail lamps – LED
- Tailgate Handle – Painted Black
- Tires – 245/55R18 A/S BSW
- Wheel-Lip Molding – Black (MIC)
- Wheels – 18" x 8.0 painted black steel with wheel hub cover
- Windshield – Acoustic Laminated

INTERIOR/COMFORT
- Cargo Hooks
- Climate Control – Single-Zone Manual
- Door-Locks
  — Power
  — Rear-Door Handles and Locks Operable
- Floor – Flooring – Heavy-Duty Thermoplastic Elastomer
- Glove Box – Locking/non-illuminated
- Grab Handles – (1 – Front-passenger side, 2-Rear)
- Lighting
  — Overhead Console with sunglass holder
  — 1st row task lights (driver and passenger)
  — Dome Lamp – 1st row (red/white)
  — 2nd/3rd row overhead map light
- Mirror – Day/night Rear View
- Particulate Air Filter

INTERIOR / COMFORT (continued)
- Power-Adjustable Pedals (Driver Dead Pedal)
- Powerpoints – (2) First Row
- Scuff Plates – Front & Rear
- Seats
  — 1st Row Police Grade Cloth Trim, Dual Front Buckets
  — 1st Row – Driver 6-way Power track (fore/aft. Up/down, tilt with manual recline, 2-way manual lumbar)
  — 1st Row – Passenger 2-way manual track (fore/aft. with manual recline)
  — Built-in steel intrusion plates in both driver/passenger seatbacks
  — 2nd Row Vinyl, 60/40 Split Bench Seat (manual fold-flat, no tumble) – fixed seat track
- Speed (Cruise) Control
- Speedometer – Calibrated
- Steering Wheel – Manual / Tilt, Urethane wheel finish w/Silver Painted Bezels) with Speed Controls and Redundant Audio Controls
- Sun visors, color-keyed, non illuminated
- Universal Top Tray – Center of I/P for mounting aftermarket equipment
- Windows, Power, 1-touch Down Driver-Side with disable feature

SAFETY/SECURITY
- AdvanceTrac® w/RSC® (Roll Stability Control™) w/Hydraulic Brake Assist
- Airbags, 2nd generation driver & front-passenger, side seat, Roll Curtain Airbags and Safety Canopy®
- Anti-Lock Brakes (ABS) with Traction Control
- Belt-Minder® (Front Driver / Passenger)
- Child Safety Locks (capped)
- LATCH (Lower Anchors and Tethers for Children) system on rear outboard seat locations
- Seat Belts, Pretensioner/Energy-Management System w/adjustable height in 1st Row
- SOS Post-Crash Alert System™
- Tire Pressure Monitoring System (TPMS)

FUNCTIONAL
- Easy Fuel® Capless Fuel-Filler
- Front door tether straps (driver/passenger)
- MyFord®
  — AM/FM / CD / MP3 Capable / Clock / 6 speakers
  — 4.2" Color LCD Screen Center-Stack "Smart Display"
  — 5-way Steering Wheel Switches, Redundant Controls
- Power pigtail harness
- Recovery Hooks, Rear Only
- Simple Fleet Key (w/o microchip, easy to replace)
- Two-way radio pre-wire
- Windows – Rear Defroster
- Wipers – Front Speed-Sensitive Intermittent; Rear Dual Speed Wiper

Police Interceptor Utility Base Prices

[×] Utility All Wheel Drive (3.7L V6 FFV, 305 HP, 131 MPH) **K8A/500A** **$25,283.00**

[ ] Utility All Wheel Drive (3.5L V6 GTDI EcoBoost, 365 HP, 148 MPH, 99T/44C) **K8A/500A** **$28,214.00**

Payment Terms: Net 10 days

VEHICLE BRAND AND MODEL: Ford Utility Police Interceptor

BID PRICE EXPIRES: TBD.

Subject to change without notice by Ford Motor Company

VEHICLE COLOR: Order Code		**Interior Trim Color Charcoal Black - 9W -**
Arizona Beige Clearcoat Metallic	[AQ]	[ ]
Medium Brown Metallic	[BU]	[ ]
Dark Toreador Red Clearcoat Metallic	[JL]	[ ]
Dark Blue	[LK]	[ ]
Norsea Blue Clearcoat Metallic	[KR]	[ ]
Royal Blue	[LM]	[ ]
Light Blue Metallic	[LN]	[ ]
Ultra Blue Clearcoat Metallic	[MM]	[ ]
Smokestone Clearcoat Metallic	[HG]	[ ]
Silver Grey Metallic	[TN]	[ ]
Ingot Siver Clearcoat Metallic	[UX]	[ ]
Black Clearcoat	[UA]	[ ]
Oxford White Clearcoat	[YZ]	[ ]
Kodiak Brown Metallic	[J1]	[ ]
Deep Impact Blue	[J4]	[ ]
Sterling Grey Metallic	[UJ]	[ ]
Medium Titanium Clearcoat Metallic	[YG]	[ ]
Fire Engine Bright Red (Extra Cost Paint $750)	**[12R13]**	**[×]**

INTERCEPTOR OPTIONAL FEATURES:

Flooring/Seats	**Code**	**$Cost**
[ ] 1st and 2nd row carpet floor covering	16C	125.00
[ ] 2nd Row Cloth Seats	FW/ 88F	60.00
[ ] Rear Console Plate (Not available with Interior Upgrade Pkg – 65U)	85R	35.00
[ ] Interior Upgrade Package • 1st and 2nd Row Carpet Floor Covering • Cloth Seats - Rear • Center Floor Console less shifter w/unique Police console finish plate – Includes Console Top Plate – Finish 3 (incl. 2 cup holders) • Floor Mats, front and rear (Carpeted) **Note**: Not available with (67G), (67H) & (67U)	**65U**	**350.00**
Lamps		
[ ] Dark Car Feature – Courtesy lamp disable when any door is opened	43D	20.00
[ ] Daytime Running Lamps	942	45.00
[ ] Side Marker Lights in Skull Caps	63B	225.00
[ ] Rear Quarter Glass Side Marker Lights	63L	415.00
[×] Dome Lamp – Red/White in Cargo Area	17T	50.00
[ ] Pre-wiring for grille lamp, siren, and speaker	60A	50.00
[ ] Spot Lamp – Driver Only (Incandescent Bulbs)	51Y	215.00
[×] Spot Lamp – Driver Only (LED Bulbs)	51R	395.00
[ ] Spot Lamp – Dual (driver and passenger) (Incandescent Bulbs)	51Z	350.00
[ ] Spot Lamp – Dual (driver and passenger) (LED Bulbs)	51S	620.00
Body		
[ ] Glass – Solar Tint 2nd and 3rd Row (Deletes Privacy Glass)	92G	120.00
[ ] Roof Rack Side Rails – Black	68Z	100.00
[ ] Deflector Plate	76D	300.00
Wheels		
[ ] Wheel Covers (18" Full Face Wheel Cover)	65L	60.00
[ ] 18" Painted Aluminum Wheel	64E	435.00
Misc		
[ ] Engine Block Heater	41H	35.00
[ ] License Plate Bracket – Front	153	N/C
[×] Badge Delete (Police Interceptor Badge Only)	16D	N/C
[ ] 100 Watt Siren/Speaker (includes bracket and pigtail)	18X	275.00

Misc Con't.

[ ] Aux Air Conditioning	17A	548.00
[ ] Noise Suppression Bonds (Ground Straps)	60R	100.00
[ ] My Speed Fleet Management	43S	60.00

Audio/Video

[ ] Rear View Camera (Req. Electrochromic Rearview Mirror – Video is Displayed in rear view mirror. Includes 53M)	21B/53M	500.00
[ ] SYNC® Basic (Voice Activated Communication System)	53M	275.00
[ ] Remappable (4) switches on steering wheel (less Voice, not avail. w/SYNC)	61R	139.00
[ ] Remappable (4) switches on steering wheel (with Voice, requires SYNC)	61S	155.00

Doors/Windows

[ ] Hidden Door Lock Plunger	52H	140.00
[ ] Hidden Door Lock Plunger and Rear Door Handle Inoperable	52P	160.00
[ ] Rear Door Handles Inoperable/Locks Operable	68L	35.00
[ ] Rear Door Handles Inoperable/Locks Inoperable	68G	35.00
[ ] Windows-Rear window power delete, operable from front driver side switches	18W	25.00
[ ] Lock system; Single Key/All Vehicles Keyed Alike	59_	50.00

Keyed Alike 1284x= **59B** Keyed Alike 1294x= **59C** Keyed Alike 0135x= **59D**
Keyed Alike 1435x= **59E** Keyed Alike 0576x= **59F** Keyed Alike 0151x= **59G**
Keyed Alike 1111x= **59J**

Safety & Security

[ ] Ballistic Door Panels – Driver Front Door Only	90D	1585.00
[ ] Ballistic Door Panels – Driver & Pass Front Doors	90E	3170.00
[ ] BLIS® – Blind Spot Monitoring with Cross Traffic Alert (Inc. 21B&53M)	55B/21B/53M	906.00
[ ] Mirrors– Heated, Non BLIS	549	60.00
[ ] Lockable Gas Cap for Easy Fuel Capless Fuel-Filler	19L	20.00
[ ] Perimeter Anti-Theft Alarm – Activated by Hood, Door, or Decklid	593/595	353.00
[ ] Glass – Solar Tint 2nd Row Only (Deletes Privacy Glass)	92R	85.00
[ ] Remote Keyless Entry w/2 Key Fobs (w/o Keypad) (N/A w/Keyed Alike)	595	251.00
[×] Extra Key $3.00x_4_= $12.00	**Parts**	**3.00 ea**
[ ] Extra Remote Key Fob $50.00x___=	Parts	50.00 ea
[ ] Remote Starter	Parts	450.00
[ ] Reverse Sensing	76R	264.00
[ ] Trailer Hitch and Wiring	OHP	395.00
[ ] Gun Vault (Not Available with (17A) Aux Air Conditioning)	63V	230.00
[×] Front Headlamp/Police Interceptor Housing Only	**86P**	**125.00**

– Pre-drilled hole for side marker police use, does not include LED installed lights (eliminates need to drill housing assemblies)
– Pre-molded side warning LED holes with standard twist lock sealed capability (does not include LED installed lights)
Note: Not available with options: 66A and 67H

[ ] Front Headlamp Lighting Solution	**66A**	**817.00**

– Includes base projector beam headlamp plus two (2) multi-function Park/Turn/Warn (PTW) bulbs for Wig-wag simulation and two (2) white hemispheric lighthead LED side warning lights.
– Includes pre-wire for grille LED lights, siren and speaker (60A)
– Wiring, LED lights included. Controller "not" included
Note: Not available with option: 67H

[ ] Police Wire Harness Connector Kit – Front	**47C**	**105.00**

• For connectivity to Ford PI Package solutions includes:
• (2) Male 4-pin connectors for siren
• (5) Female 4-pin connectors for lighting/siren/speaker
• (1) 4-pin IP connector for speakers
• (1) 4-pin IP connector for siren controller connectivity
• (1) 8-pin sealed connector
• (1) 14-pin IP connector
Note: See Upfitters guide for further detail www.fordpoliceinterceptorupfit.com

[ ] Tail Lamp Lighting Solution	**66B**	**402.00**

– Includes base LED lights plus two (2) rear integrated hemispheric lighthead white LED side warning lights in taillamps
– LED lights only. Wiring, controller "not" included
Note: Not available with option: 67H

[ ] **Police Wire Harness Connector Kit – Rear** — **21P** — **130.00**

- **For connectivity to Ford PI Package solutions includes:**
- (1) 2-pin connector for rear lighting and (1) 2-pin connector
- (6) Female 4-pin connectors and (6) Male 4 pin connectors
- (1) 10-pin connector

Note: See Upfitters guide for further detail www.fordpoliceinterceptorupfit.com

[ ] **Rear Lighting Solution** — **66C** — **427.00**

– Includes two (2) backlit flashing linear high-intensity LED lights (driver's side red / Passenger side blue) mounted to inside liftgate glass)
– Includes two (2) backlit flashing linear high-intensity LED lights (driver's side red / Passenger side blue) installed on inside lip of liftgate (lights activate when liftgate is open)
– LED lights only. Wiring, controller "not" included
Note: Not available with option: 67H

[ ] **Ultimate Wiring Package** — **67U** — **502.00**

– Rear console mounting plate (85R) – contours through 2nd row; channel for wiring
– Pre-wiring for grille LED lights, siren and speaker (60A)
– Wiring harness I/P to rear (overlay)
  o Two (2) light cables – supports up to six (6) LED lights (engine compartment/grille)
  o Two (2) 50-amp battery and ground circuits in RH rear-quarter
  o One (1) 10-amp siren/speaker circuit engine cargo area
– Rear hatch/cargo area wiring – supports up to six (6) rear LED lights
  o Recommend Police Wire Harness Connector Kits 47C and 21P
Note: Not available with options: 65U, 67G, 67H

[ ] **Police Interceptor 24 – Cargo Wiring Upfit Package** — **67G** — **1189.00**

– Rear console plate (85R) – contours through 2nd row; channel for wiring
– Wiring overlay harness with lighting and siren interface connections
– Vehicle Engine Harness:
  o Two (2) light connectors – supports up to six (6) LED lights (engine compartment)
  o Two (2) grille light connectors
  o Two (2) 50 amp battery ground circuits in right hand rear-quarter power distribution junction block
  o One (1) 10-amp siren/speaker circuit (engine to cargo area)
– Whelen Lighting PCC8R Control Head
– Whelen PCC8R Light Relay Center (mounted behind 2nd row seat)
– Light Controller / Relay Center Wiring (jumper harness)
– Whelen Specific Cable (console to cargo area) Connects PCC8R to Control Head
– Pre-wiring for grille LED lights, siren and speaker (60A)
– Does "not" include LED lights
  o Recommend Police Wire Harness Connector Kits 47C and 21P
Note: Not available with options: 65U, 67H and 67U

[ ] **Ready for the Road Package All-in Complete Package** — **67H** — **3002.00**

Includes Police Interceptor Packages 66A, 66B, 66C plus:
– Whelen Cencom Light Controller Head with dimmable backlight
– Whelen Cencom Relay Center / Siren / Amp w/Traffic Advisor (mounted behind 2nd row seat)
– Light Controller / Relay Cencom Wiring (wiring harness) w/additional input/output pigtails
– High current pigtail
– Whelen Specific WECAN Cable (console to cargo area) connects Cencom to Control Head
– Pre-wiring for grille LED lights, siren and speaker (60A)
– Rear console plate (85R) – contours through 2nd row; channel for wiring
– Grille linear LED Lights (Red / Blue)
– 100-Watt Siren / Speaker
– Hidden Door-Lock Plunger / Rear-Door Handles Inoperable (52P)
– Wiring Harness:
  oTwo (2) 50 amp battery and ground circuits in RH rear-quarter
Note: Not available with options: 66A; 66B; 66C; 67G, 67U

VINYL WRAP OPTIONS

[ ] **Two-Tone Vinyl Package #1** • Roof Vin • RH/LH Front Doors Vinyl • RH/LH Rear Doors Vinyl	91A	750.00
[ ] **Two-Tone Vinyl Package #2** • Roof Vinyl • Hood Vinyl	91B	750.00
[ ] **Two-Tone Vinyl Package #3** • Roof Vinyl • RH/LH Front Doors Only Vinyl	91C	645.00
[ ] **Two-Tone Vinyl Package #8** • Roof Vinyl (Vinyl Wrap in Police White (YZ) Only)	91H	440.00
[ ] **Two-Tone Vinyl Package #9** • RH/LH Front Doors Only Vinyl (Vinyl Wrap in Police White (YZ) Only)	91J	275.00
[ ] **Vinyl Word Wrap** – "POLICE" located on LH/RH sides of vehicle ("White" lettering)	91D	715.00
[ ] **Reflective Vinyl Word Wrap** – "POLICE" located on LH/RH sides of vehicle ("Black" lettering)	91E	715.00
[ ] **Reflective Vinyl Word Wrap** – "POLICE" located on LH/RH sides of vehicle ("White" lettering)	91F	715.00
[ ] **Vinyl Word Wrap** – "SHERIFF" located on LH/RH sides of vehicle ("White" lettering)	91G	715.00

Extended Warranty Options for Police Interceptor Utility

Extended Warranty Option's ($100.00 Deductible) 100,000 Mile Coverage

[ ] 5-Year Premium Care Warranty (500 Plus Components Coverage)	2150.00
[ ] 4-Year Premium Care Warranty (500 Plus Components Coverage)	2110.00
[ ] 3-Year Premium Care Warranty (500 Plus Components Coverage)	2080.00
[ ] 5-Year Extra Care Warranty (113 Essential Components Coverage)	1955.00
[ ] 4-Year Extra Care Warranty (113 Essential Components Coverage)	1925.00
[ ] 3-Year Extra Care Warranty (113 Essential Components Coverage)	1905.00
[ ] 5-Year Base Care Warranty (84 Major Components Coverage)	1860.00
[ ] 4-Year Base Care Warranty (84 Major Components Coverage)	1840.00
[ ] 3-Year Base Care Warranty (84 Major Components Coverage)	1820.00

Total Price $_____ea

CITY COUNCIL
AGENDA FACT SHEET

RELATING TO: **Freedom of Information Act (FOIA) Procedures and Guidelines**

DISCUSSION: Section 15.234(3) of the Michigan Freedom of Information Act (aka FOIA) requires that the "public body" establish procedures and guidelines for the administration of some of the provisions of the Act. Attached to this communication you will find a copy of proposed FOIA Procedures and Guidelines which have been drafted by the office of the City Attorney, in consultation with the City Clerk and the City Manager.

I am respectfully recommending that the City Council adopt the proposed FOIA Procedures and Guidelines.

CITY MANAGER RECOMMENDATION:

- ☒ For
- ☐ For, with revisions or conditions
- ☐ Against
- ☐ No Action Taken/Recommended

APPROVAL DEADLINE: N/A

REASON FOR DEADLINE:

STAFF RECOMMENDATION: ☒For ☐Against

REASON AGAINST:

INITIATED BY: City Attorney, City Clerk and City Manager

PROGRAMS, DEPARTMENTS, OR GROUPS AFFECTED: All

FINANCES

COST AND REVENUE PROJECTIONS:

Cost of Total Project	$N/A
Cost of This Project Approval	$
Related Annual Operating Cost	$
Increased Revenue Expected/Year	$

SOURCE OF FUNDS:

	Account Number	Amount
City	N/A	$N/A
		$
		$
		$
		$
Other Funds		$
		$
		$
		$

Budget Approval: _____

FACT SHEET PREPARED BY: George A. Brown, City Manager **DATE:** May 28, 2014

REVIEWED BY: N/A **DATE:**

COUNCIL MEETING DATE: June 2, 2014

CITY OF MONROE
FREEDOM OF INFORMATION ACT

(FOIA)

PROCEDURES AND GUIDELINES

1. STATEMENT OF PROCEDURES AND GUIDELINES

It is the a policy of the City of Monroe (City) that all persons, except those persons incarcerated in state, local, or federal correctional facility, are entitled to full and complete information regarding the affairs of government and the official acts of those who represent them as public officials and public employees, consistent with State Law, as well as the Charter and applicable ordinances of the City of Monroe. [MCL 15.231]

The FOIA provides for public access to public records for which no exemption applies under MCL 15.243 (Attached Exhibit A) and prescribes the powers and duties of certain public officials and public bodies. It shall be the City's Policy to comply with the sprit and intent of the FOIA, throughout all departments.

It shall be the responsibility of each department to ensure compliance with this policy and regulation.

2. DEFINITIONS

The definitions used in this procedures and guidelines are the same as those definitions used in the FOIA. [MCL 15.232]

"Custodial Department" means the department(s) under whose care, control or possession the requested public records would be found, if the public records exist.

3. FOIA COORDINATOR

The City Manager is designated as the Monroe FOIA Coordinator to accept and process requests for public records under the FOIA, pursuant to City Council Resolution 97-006.

The FOIA Coordinator may designate another individual to act on his or her behalf in accepting and processing requests for City public records, and in approving a denial. [MCL 15.236 (3)]

The City Manager, as FOIA Coordinator, designates the Chief of Police as FOIA Coordinator for Monroe Police Department records. The Monroe Police Department has established a Standard Operating Procedure for the release of information in accordance with the FOIA which is separate from these procedures and guidelines. (Contact the Monroe Police Department for a copy of its Standard Operating Procedure.)

The City Manager, as FOIA Coordinator, designates the Clerk/Treasurer, in his or her capacity as keeper of the records (Charter §65), as FOIA Coordinator for all other City FOIA requests.

The FOIA Coordinators shall keep a copy of all written requests together with a copy of all associated correspondence for one year plus one day from the date of submission of the request.[MCL 15.233 (2)]

4. WRITTEN REQUESTS FOR PUBLIC RECORDS

Any person seeking to inspect, copy or receive copies of public records pursuant to the FOIA shall submit a written request that describes the public records sufficiently to enable the public records to be located. [MCL 15.233 (1)]

Any person seeking to subscribe to future issuance of public records that are created, issued, or disseminated on a regular basis shall submit a written request that describes the public records sufficiently to enable the public records to be located. A subscription is valid for up to six months, at the request of the subscriber, and shall be renewable. [MCL 15.233 (1)]

A written request may be submitted in person, by mail, facsimile, electronic mail or other electronic means. A FOIA Request form may be obtained from the Clerk/Treasurer's Office.

Any City employee receiving a FOIA Request shall promptly forward the request to the Clerk/Treasurer's Office. [MCL 15.233 (1)]

Exemption from Written Requests for Public Records

Oral requests for public records do not constitute a FOIA Request, unless the person making the request is either temporarily or permanently disabled, so that he or she is unable to make the request in writing. In this case, a City employee shall assist the person and fill out the FOIA Request form for the person making the request.

4. FOIA REQUEST RESPONSE

The FOIA requires a response within five-business days, unless otherwise agreed to in writing by the person making the request. [MCL 15.235 (2)] Written requests received in person or by regular or certified mail shall be deemed to have been received on the actual date received. Written requests received by facsimile, electric mail, or other electronic means shall be deemed to have been received on the next business day. [MCL 15.235 (1)]

The Clerk/Treasurer shall respond to the request in writing by doing one of the following:

1) Granting the request.

2) Issuing a notice to the requestor denying the request.

3) Granting the request in part and issuing a notice to the requestor denying the request in part.

4) Issuing a notice extending the period during which the City shall respond to the request by not more than ten (10) additional days. No more than one extension shall be issued. [MCL 15.235 (2)]

Failure to respond to a FOIA Request constitutes denial of request. [MCL 15.235 (3)]

Exempt Material

If a public record contains material which is not exempt from disclosure, as well as material which is exempt from disclosure under MCLA 15.243 (Attached Exhibit A), the City shall separate the exempt and nonexempt material and make the nonexempt material available for examination and copying. [MCLA 15.244 (1)]

The City is not required to make a compilation, summary, or report of information. [MCLA 15.233(4)]

5. PROCESSING OF FOIA REQUESTS

Any City employee receiving a FOIA Request shall promptly forward the request to the Clerk/Treasurer's Office, as FOIA Coordinator. [MCL 15.233 (1)]

Clerk/Treasurer shall immediately prepare an Interdepartmental Activity Form and forward it together with the FOIA Request to the custodial department(s).

The custodial department(s) shall immediately initiate a search for the requested public records. If such public record exists, the department director, or his/her designee, shall review the public records to determine if there is any exempt information, subject to redaction.

If there is no exempt material, the Interdepartmental Activity Form is completed and forwarded, along with the copies of the public records, to the Clerk/Treasurer's Office.

If there is exempt material, the department director, with City Attorney's concurrence, shall separate exempt from non exempt information. The Interdepartmental Activity Form is completed, generally describing the information exempted, and forwarded, along with the copies of the public records, to the Clerk/Treasurer's Office.

The Clerk/Treasurer shall prepare and mail the FOIA Request transmittal letter to the requestor. A copy of the transmittal letter shall be forwarded to the City Manager and the custodial department(s).

Review Only Requests

Upon receipt of a FOIA Request to review public records the, Clerk/Treasurer and the custodial department(s) shall proceed as stated above. With the exception that the custodial department(s) does not need to copy the requested public records, but shall set aside the requested public records for review and wait for scheduling of the review.

The Clerk/Treasurer shall coordinate and schedule with the requestor and the custodial department(s) the time, date and location for review of the public records.

The Clerk/Treasurer or a representative of the custodial department shall be present at all times to protect the public records from loss, unauthorized alteration, mutilation or destruction. [MCLA 15.233 (3)]

No public record shall be removed without prior approval.

7. TRANSMITTAL LETTERS

Granting Request

The transmittal letter granting the request shall contain the following:

1. The amount of money the requestor owes for processing the request.

2. Where the requestor may pay for and pick-up the requested public records.

Denial in Whole or in Part

The transmittal letter denying the request in whole or in part shall contain the following:

1. The amount of money the requestor owes for processing the request, if request is denied in part.

2. Where the requestor may pay for and pick-up the requested public records, if request is denied in part.

3. An explanation under the exemption provisions of the Freedom of Information Act or other statute for that the public record, or portion of that public record, is exempt from disclosure, if that is the reason for denial. [MCLA 15.235 (4)(a)]

4. A certificate that the public record does not exist under the name given by the requestor or by any other name reasonable known to the City, if that is the reason for denial. [MCLA 15.235 (4)(b)]

5. A description of the public record or information on a public record which is separated or deleted pursuant to MCLA 15.243 (Attached Exhibit A), if separation or deletion is made. [MCLA 15.235 (4)(c)]

6. An explanation of the Requestor's right to do one of the following: a) Submit to the City Manager a written appeal that specifically states the word "appeal" and identifies the reason or reasons for reversal of the disclosure denial; or b) Commence an action in the Circuit Court to compel the City's disclosure of the public records within 180 days after City's final determination to deny the request. [MCLA 15.235 (4)(d) & 15.240 (1)(b)]

7. Notice of the right to receive attorneys' fees and damages as provided in MCLA 15.240 if, after judicial review, the Circuit Court determines that the City has not complied with the Freedom of Information Act and orders disclosure of all or part of the public record. [MCLA 15.235 (4)(e)]

Extension of Time

The transmittal letter extending the period for responding, by not more than 10 business days, shall specify the reasons for the extension and the date by which the City will grant or deny in whole or in part the request. [MCL 15.235 (6)]

8. FEES

The City may charge a fee for a public record search, the necessary copying of a public record for inspection, or for the providing a copy of a public record. [MCL 15.233 (1)] A fee shall not be charged for the cost of search, examination, review, and the deletion and separation of exempt from nonexempt information unless failure to charge a fee would result in unreasonably high costs to the City, and the City specifically identifies the nature of these unreasonably high costs. [MCL15.234 (3)]

Fees shall be as prescribed from time to time by the FOIA Coordinator and approved by resolution of Council.

The City may require a good faith deposit from the requestor if the fees exceed $50.00. The deposit shall not exceed ½ the total fee. [MCLA 15.234 (2)] The City may refuse to process a FOIA request if the requestor fails to pay a good faith deposit properly requested by the City. [AG Opinion 6977]

The City may require that its fees be paid in full prior to actual delivery of the copies. However, the City may not refuse to process a subsequent FOIA request on the grounds that the requestor failed to pay fees charged on a prior FOIA request. [AG Opinion 6977]

Review Only Request Fees

If the requested public record contains redaction, copying costs shall be for the necessary copying in order to make the public record ready for review. The requestor shall pay for any and

all copies requested upon or after review. Labor costs should include the time required to oversee the requestor during review of the public records. Costs for Review Only requests shall be as set forth above.

9. EXCEPTIONS TO FEES

The FOIA does not apply to public records prepared and/or sold under an act or statute. [MCLA 15.234 (4)]

An individual who submits an affidavit (copy attached) stating facts of inability to pay because of indigency shall be furnished a copy of public record without charge for the first $20.00. [MCLA 15.234 (1)]

The FOIA Coordinator may waive or reduce the charge for furnishing public records if it is determined that it is in the public interest because it primarily benefits the general public. [MCLA 15.234 (a)]

10. APPEALS

If the Clerk/Treasurer or Monroe Police Department, as designated FOIA Coordinator, makes a final determination to deny all or a portion of a request, the requestor may do one of the following at his or her option:

1) Submit a written appeal to the City Manager that states the word "appeal" and identifies the reason or reasons for reversal of the denial.

2) Commence an action in the circuit court to compel the City's disclosure of the public records within 180 days of the City's final determination to deny the request. [MCLA 15.240 (1)]

Any City employee receiving a FOIA Appeal shall promptly forward the appeal to the Clerk/Treasurer.

Upon receipt of a FOIA Appeal, the Clerk/Treasurer shall review the appeal to see if the criteria stated in (1) above is met. If the criteria stated in (1) above is not met, the Clerk/Treasurer shall immediately prepare a response rejecting the appeal as not meeting statutory requirements. If the criteria stated in (1) above is met, the Clerk/Treasurer shall immediately collect and forward all the public records necessary to the City Manager for decision on the appeal.

The City Manager shall, within ten days of receiving the written appeal, do one of the following:

1) Issue a written notice reversing the disclosure denial. Notice shall indicate where the requestor may pick up and pay for the newly disclosed public records.

2) Issue a written notice to the requestor upholding the disclosure denial.

3) Reverse the disclosure denial in part and issue written notice to the requestor upholding the disclosure denial in part. Notice shall indicate where the requestor may pick up and pay for the newly disclosed public records.

4) Under *unusual circumstances*, issue a notice extending for not more than ten-business days the period which City Manager shall respond to the written appeal. Not more than one notice of extension for a particular appeal shall be issued. [MCLA 15.240 (2)]

Unusual circumstances means any one or a combination of the following, but only to the extent necessary for the proper processing of the request:

- The need to search for, collect, or appropriately examine or review a voluminous amount of separate and distinct public records pursuant to a single request.

- The need to collect the requested public records from numerous field offices, facilities, or other establishments which are located apart form the particular office receiving or processing the request. [MCLS 15.232 (g)]

If the City Manager fails to respond to the appeal or if it upholds all or a portion of the disclosure denial, the requestor may seek judicial review of nondisclosure by commencing an action in circuit court within 180 days after final determination to deny the request.

11. EXCEPTIONS TO POLICY

There will be no exceptions to this policy, unless otherwise approved in advance by the City Manager. In no case, will the intent or provisions of the FOIA be compromised.

12. RELATIONSHIP TO PREVIOUSLY ESTABLISHED PROCEDURES

No qualifying statement, previously established rules or procedures shall be used to negate the sprit or intent of this administrative regulation or the FOIA. If the FOIA or any amendments thereto conflict with the administrative regulation in whole or in par, the FOIA shall govern,

Exhibit A

15.243 Exemptions from disclosure; withholding of information required by law or in possession of executive office.

(1) A public body may exempt from disclosure as a public record under this act:

(a) Information of a personal nature where the public disclosure of the information would constitute a clearly unwarranted invasion of an individual's privacy.

(b) Investigating records compiled for law enforcement purposes, but only to the extent that disclosure as a public record would do any of the following:

(i) Interfere with law enforcement proceedings.

(ii) Deprive a person of the right to a fair trial or impartial administrative adjudication.

(iii) Constitute an unwarranted invasion of personal privacy.

(iv) Disclose the identity of a confidential source, or if the record is compiled by a law enforcement agency in the course of a criminal investigation, disclose confidential information furnished only by a confidential source.

(v) Disclose law enforcement investigative techniques or procedures.

(vi) Endanger the life or physical safety of law enforcement personnel.

(c) A public record that if disclosed would prejudice a public body's ability to maintain the physical security of custodial or penal institutions occupied by persons arrested or convicted of a crime or admitted because of a mental disability, unless the public interest in disclosure under this act outweighs the public interest in nondisclosure.

(d) Records or information specifically described and exempted from disclosure by statute.

(e) A public record or information described in this section that is furnished by the public body originally compiling, preparing, or receiving the record or information to a public officer or public body in connection with the performance of the duties of that public officer or public body, if the considerations originally giving rise to the exempt nature of the public record remain applicable.

(f) Trade secrets or commercial or financial information voluntarily provided to an agency for use in developing governmental policy if:

(i) The information is submitted upon a promise of confidentiality by the public body.

(ii) The promise of confidentiality is authorized by the chief administrative officer of the public body or by an elected official at the time the promise is made.

(iii) A description of the information is recorded by the public body within a reasonable time after it has been submitted, maintained in a central place within the public body, and made available to a person upon request. This subdivision does not apply to information submitted as required by law or as a condition of receiving a governmental contract, license, or other benefit.

(g) Information or records subject to the attorney-client privilege.

(h) Information or records subject to the physician-patient privilege, the psychologist-patient privilege, the minister, priest, or Christian Science practitioner privilege, or other privilege recognized by statute or court rule.

(i) A bid or proposal by a person to enter into a contract or agreement, until the time for the public opening of bids or proposals, or if a public opening is not to be conducted, until the deadline for submission of bids or proposals has expired.

(j) Appraisals of real property to be acquired by the public body until (i) an agreement is entered into; or (ii) 3 years have elapsed since the making of the appraisal, unless litigation relative to the acquisition has not yet terminated.

(k) Test questions and answers, scoring keys, and other examination instruments or data used to administer a license, public employment, or academic examination, unless the public interest in disclosure under this act outweighs the public interest in nondisclosure.

(l) Medical, counseling, or psychological facts or evaluations concerning an individual if the individual's identity would be revealed by a disclosure of those facts or evaluation.

(m) Communications and notes within a public body or between public bodies of an advisory nature to the extent that they cover other than purely factual materials and are preliminary to a final agency determination of policy or action. This exemption does not apply unless the public body shows that in the particular instance the public interest in encouraging frank communications between officials and employees of public bodies clearly outweighs the public interest in disclosure. This exemption does not constitute an exemption under state law for purposes of section 8(h) of the open meetings act, 1976 PA 267, MCL 15.268. As used in this subdivision, "determination of policy or action" includes a determination relating to collective bargaining, unless the public record is otherwise required to be made available under 1947 PA 336, MCL to 423.217.

(n) Records of law enforcement communication codes, or plans for deployment of law enforcement personnel, that if disclosed would prejudice a public body's ability to protect the public safety unless the public interest in disclosure under this act outweighs the public interest in nondisclosure in the particular instance.

(o) Information that would reveal the exact location of archaeological sites. The secretary of state may promulgate rules in accordance with the administrative procedures act of 1969, 1969 PA 306, MCL 24.201 to 24.328, to provide for the disclosure of the location of archaeological sites for purposes relating to the preservation or scientific examination of sites.

(p) Testing data developed by a public body in determining whether bidders' products meet the specifications for purchase of those products by the public body, if disclosure of the data would reveal that only 1 bidder has met the specifications. This subdivision does not apply after 1 year has elapsed from the time the public body completes the testing.

(q) Academic transcripts of an institution of higher education established under section 5, 6, or 7 of article VIII of the state constitution of 1963, if the transcript pertains to a student who is delinquent in the payment of financial obligations to the institution.

(r) Records of any campaign committee including any committee that receives money from a state campaign fund.

(s) Unless the public interest in disclosure outweighs the public interest in nondisclosure in the particular instance, public records of a law enforcement agency, the release of which would do any of the following:

(i) Identify or provide a means of identifying an informer.
(ii) Identify or provide a means of identifying a law enforcement undercover officer or agent or a plain clothes officer as a law enforcement officer or agent.
(iii) Disclose the personal address or telephone number of law enforcement officers or agents or any special skills that they may have.
(iv) Disclose the name, address, or telephone numbers of family members, relatives, children, or parents of law enforcement officers or agents.
(v) Disclose operational instructions for law enforcement officers or agents.
(vi) Reveal the contents of staff manuals provided for law enforcement officers or agents.
(vii) Endanger the life or safety of law enforcement officers or agents or their families, relatives, children, parents, or those who furnish information to law enforcement departments or agencies.
(viii) Identify or provide a means of identifying a person as a law enforcement officer, agent, or informer.
(ix) Disclose personnel records of law enforcement agencies.
(x) Identify or provide a means of identifying residences that law enforcement agencies are requested to check in the absence of their owners or tenants.

(t) Except as otherwise provided in this subdivision, records and information pertaining to an investigation or a compliance conference conducted by the department of consumer and industry services under article 15 of the public health code, 1978 PA 368, MCL 333.16101 to, before a complaint is issued. This subdivision does not apply to records and information pertaining to 1 or more of the following:
(i) The fact that an allegation has been received and an investigation is being conducted, and the date the allegation was received.
(ii) The fact that an allegation was received by the department of consumer and industry services; the fact that the department of consumer and industry services did not issue a complaint for the allegation; and the fact that the allegation was dismissed.

(u) Records of a public body's security measures, including security plans, security codes and combinations, passwords, passes, keys, and security procedures, to the extent that the records relate to the ongoing security of the public body.

(v) Records or information relating to a civil action in which the requesting party and the public body are parties.

(w) Information or records that would disclose the social security number of any individual.

(x) Except as otherwise provided in this subdivision, an application for the position of president of an institution of higher education established under section 4, 5, or 6 of article VIII of the state constitution of 1963, materials submitted with such an application, letters of recommendation or references concerning an applicant, and records or information relating to the process of searching for and selecting an individual for a position described in this subdivision, if the records or information could be used to identify a candidate for the position. However, after 1 or more individuals have been identified as finalists for a position described in this subdivision, this subdivision does not apply to a public record described in this

subdivision, except a letter of recommendation or reference, to the extent that the public record relates to an individual identified as a finalist for the position.

(2) A public body shall exempt from disclosure information that, if released, would prevent the public body from complying with section 444 of subpart 4 of part C of the general education provisions act, title IV of Public Law 90-247, 20 U.S.C. 1232g, commonly referred to as the family educational rights and privacy act of 1974.

(3) This act does not authorize the withholding of information otherwise required by law to be made available to the public or to a party in a contested case under the administrative procedures act of 1969, 1969 PA 306, MCL 24.201 to 24.328.

(4) Except as otherwise exempt under subsection (1), this act does not authorize the withholding of a public record in the possession of the executive office of the governor or lieutenant governor, or an employee of either executive office, if the public record is transferred to the executive office of the governor or lieutenant governor, or an employee of either executive office, after a request for the public record has been received by a state officer, employee, agency, department, division, bureau, board, commission, council, authority, or other body in the executive branch of government that is subject to this act.

History: 1976, Act 442, Eff. Apr. 13, 1977 ;--Am. 1978, Act 329, Imd. Eff. July 11, 1978 ;--Am. 1993, Act 82, Eff. Apr. 1, 1994 ;--Am. 1996, Act 553, Eff. Mar. 31, 1997 ;--Am. 2000, Act 88, Imd. Eff. May 1, 2000 .

CITY COUNCIL
AGENDA FACT SHEET

RELATING TO: **Freedom of Information Act (FOIA) Cost Recovery and Fee Schedule**

DISCUSSION: Section 15.234(3) of the Michigan Freedom of Information Act (aka FOIA) requires that the "public body" establish procedures and guidelines for the administration of some of the provisions of the Act. Within prescribed limitations, the FOIA permits the City (i.e. public body) to recover some of the costs associated with responding to FOIA requests. A process and cost-schedule for determining allowable cost recovery is usually included as a component of the procedures and guidelines. Included in the "Freedom of Information Act Procedures and Guidelines", presented as a separate item on the agenda, is a provision which reads: "Fees shall be as prescribed from time to time by the FOIA Coordinator and approved by resolution of Council". Attached to this communication is a resolution to establish FOIA fees which are compliant with the Act and reflect the City's current costs.

I am respectfully recommending that the City Council adopt the proposed resolution which will establish Freedom of Information Act fees.

CITY MANAGER RECOMMENDATION:

- ☒ For
- ☐ For, with revisions or conditions
- ☐ Against
- ☐ No Action Taken/Recommended

APPROVAL DEADLINE: N/A

REASON FOR DEADLINE:

STAFF RECOMMENDATION: ☒For ☐Against

REASON AGAINST:

INITIATED BY: City Attorney, City Clerk and City Manager

PROGRAMS, DEPARTMENTS, OR GROUPS AFFECTED: All

FINANCES

COST AND REVENUE PROJECTIONS:

Cost of Total Project	$N/A
Cost of This Project Approval	$
Related Annual Operating Cost	$
Increased Revenue Expected/Year	$

SOURCE OF FUNDS:

	Account Number	Amount
City	N/A	$N/A
		$
		$
		$
		$
Other Funds		$
		$
		$
		$

Budget Approval: _____

FACT SHEET PREPARED BY: George A. Brown, City Manager **DATE:** May 28, 2014

REVIEWED BY: N/A **DATE:**

COUNCIL MEETING DATE: June 2, 2014

RESOLUTION

WHEREAS, the City of Monroe has adopted the Procedures and Guidelines for the implementation of the Freedom of Information Act (FOIA); and

WHERAS, the City FOIA Coordinator, pursuant to Section 8 of the Procedures and Guidelines, wishes to establish the following fees:

Fees are limited as follows:

Actual mailing costs.

Actual cost of duplication or publication:

Black & White Copies		Color Copies	
$.05	per 8 ½ x 11 page.	$.10	per 8 ½ x 11 page.
$.05	per 8 ½ x 14 page.	$.10	per 8 ½ x 14 page.
$.05	per 11x 17 page.	$.10	per 8 ½ x 14 page.

$2.00 per Map/Blueprint

$5.00 per Duplication of Audio Recording

$20.00 per Duplication of Video Recording

Other forms of media should be charged at the actual cost.

Duplication or publication preformed by an outside vendor should be charged at the actual invoiced cost.

Labor Costs: Cost of labor incurred shall be charged at the hourly wage, including fringe benefits [AG Opinion #7017], of the lowest paid employee capable of retrieving the public records. [MCLA 15.234 (3)] That means if the lowest paid employee is absent and a higher paid employee performs FOIA tasks, the costs are calculated at the lowest paid employees wage.

NOW, THEREFORE, BE IT RESOLVED, that this Mayor and Council adopt the above listed fee schedule.

CITY COUNCIL
AGENDA FACT SHEET

RELATING TO: TRAFFIC COMMITTEE MINUTES OF MAY 28, 2014, TRAFFIC CONTROL ORDERS, AND RESOLUTION OF SUPPORT FOR SOUTH MONROE STREET LANE RECONFIGURATION

DISCUSSION: The Mayor's Traffic Committee meeting was held on May 28, 2014, and the minutes are attached for your information. There are two (2) Traffic Control Orders representing regulatory changes recommended by the Committee as follows:

Traffic Control Order 067-008 provides for a new center left turn lane to allow for turns into the Post Office from West Front Street, and also prohibits westbound left turns onto Smith Street in order to avoid conflicts with eastbound left turns into the Post Office in this very limited space. Traffic Control Order 134-004 reverts O'Brien Street to its parking condition prior to 2013. From January 2013 through present, parking has been allowed for most of the south side of the roadway between the western dead end and Island Street as well. Traffic Control Order 134-004 again prohibits parking on the south side of roadway, while continuing to allow parking on the north side as it was prior to 2013.

The major item that requires City Council action but that does not at present require formal regulatory action, is a request to the Michigan Department of Transportation MDOT to consider a reconfiguration of Monroe Street (M-125) between Third Street and Elm Avenue from its present five (5) lanes to generally three (3) lanes, with one travel lane in each direction and a shared center turn lane through most of this area. The exception to this, as presently modeled, would be the installation of a dedicated left turn lane for each direction between First and Front Streets to address the possibility of stacking in either direction impacting the through lanes if the left turn queue does not clear in a particular signal cycle. While we have had preliminary discussions with MDOT about the possibility of a lane reconfiguration, they will not formally review any concept until the City Council adopts a resolution specifically asking for the change. A proposed resolution of suppo t has been attached to this Fact Sheet, along with the staff analysis for this item from the Traffic Committee meeting, the MDOT "Road Diet" checklist, and the consultant report, all of which can provide further detail on the proposal and the process. We are hopeful that should Council support the lane reconfiguration, MDOT will be able to review and approve in time for the striping changes to be made in conjunction with the completion of the resurfacing project in July.
It should be noted that, as noted in the resolution, the Downtown Development Authority (DDA) also reviewed the report and voted to support moving it through the process to City Council, as did the Traffic Committee.

IT IS RECOMMENDED that the City Council place on file the minutes from the May 28, 2014 Mayor's Traffic Committee meeting, and approve the two (2) Traffic Control Orders listed above. **IT IS FURTHER RECOMMENDED** that the attached resolution of support for the lane reconfiguration of Monroe Street be adopted, and that the Director of Engineering and Public Services be authorized to forward this to the appropriate personnel at the Michigan Department of Transportation.

CITY MANAGER RECOMMENDATION:

- [x] For
- [ ] For, with revisions or conditions
- [ ] Against
- [ ] No Action Taken/Recommended

111

APPROVAL DEADLINE: N/A

REASON FOR DEADLINE:

STAFF RECOMMENDATION: X For ☐Against

REASON AGAINST: N/A

INITIATED BY: Department of Engineering and Public Services

PROGRAMS, DEPARTMENTS, OR GROUPS AFFECTED: Engineering Department, Department of Public Services, Police Department, traveling public, adjacent residents and businesses

FINANCES

COST AND REVENUE PROJECTIONS:

Cost of Total Project	$N/A
Cost of This Project Approval	$*
Related Annual Operating Cost	$N/A
Increased Revenue Expected/Year	$N/A

*Exact costs for the lane reconfiguration of Monroe Street between Third Street and Elm Avenue will not be fully known until MDOT has had an opportunity to review the report and provide any conditions or modifications, and can advise the City of its financial participation. Striping costs should be minimal, particularly if accomplished as a part of the current resurfacing project, signage costs should be under $1,000, and City participation in paving costs for a new parking lane on the west side of the roadway where none exists now could be in the range of $5,000 to $10,000 if MDOT requires reimbursement. Should signal modifications prove necessary, these could exceed $10,000 per location as well.

SOURCE OF FUNDS:

	Account Number	Amount
City		
Other Funds		

Budget Approval: _____

FACT SHEET PREPARED BY: Patrick M. Lewis, P.E., Dir. of Engineering and Public Services **DATE:** 05/28/14

REVIEWED BY: **DATE:**

COUNCIL MEETING DATE: June 2, 2014

RESOLUTION OF SUPPORT OF M-125 ROAD DIET

WHEREAS, Monroe Street (M-125) is under the jurisdiction of the Michigan Department of Transportation (MDOT) throughout its entire length within the corporate boundaries of the City of Monroe; and

WHEREAS, this roadway traverses historic downtown Monroe; and

WHEREAS, this roadway in its present configuration presents a significant barrier to downtown commerce, pedestrian travel, parking, and urban livability due to its width and travel speeds; and

WHEREAS, the City of Monroe has engaged a consulting engineering firm, Hubbell, Roth, and Clark, Inc. (HRC), to review and analyze various options to determine whether a reconfiguration of the travel lanes of the section of this roadway between Third Street and Elm Avenue, including transitions to this area, is feasible; and

WHEREAS, the report and traffic model prepared by said firm also reviewed other applicable considerations as set forth in the MDOT "Road Diet Checklist" (MDOT Form 1629) such that all relevant items have been reasonably addressed or can be further refined in consultation with MDOT personnel in the context of their review of said report and traffic model, and

WHEREAS, the report and traffic model delineates that the peak hour Level of Service at all intersections within study area will be "D" or better as required by MDOT if the section of roadway between Third Street and Elm Avenue is converted to a single shared through / right lane in each direction, with one or more dedicated "left turn only" lanes at various intersections and a continuous two-way left turn lane through the midblock areas, and

WHEREAS, no negative crash pattern was projected by the lane reconfiguration proposed within the report versus the present condition, and

WHEREAS, a reduction in the number of travel lanes along this section of roadway will provide for additional on-street parking on the west side of the roadway and facilitate traffic calming, and

WHEREAS, the report has been considered by the Downtown Development Authority board at their May 21, 2014 meeting, the Mayor's Traffic Committee at their May 28, 2014 meeting, and a

presentation was given detailing the proposed lane reconfiguration with opportunities for comment at the June 2, 2014 City Council meeting,

NOW, THEREFORE, BE IT RESOLVED, that the Monroe City Council hereby asks MDOT to consider the report and traffic model prepared by HRC and to allow for the lane reconfiguration of Monroe Street contemplated therein, with any such minor refinements deemed necessary by MDOT staff, including any necessary striping, signage, or signal modifications, with cost participation between the City and MDOT for these changes consistent with present MDOT policies and applicable State law, said participation to be set forth in subsequent contract documents.

CITY OF MONROE
MAYOR'S TRAFFIC COMMITTEE MINUTES
May 28, 2014

Meeting was called to order by Mayor Clark on Wednesday, May 28, 2014 at 5:00 P.M. in the City Council Chambers.

Members Present: Mayor Clark, Councilman Hensley, Councilman Sisk, Lt. Greg Morgel, James Crammond (arrived at 5:03), Scott Davidson, Michael Miletti, Dennis Polczynski (arrived at 5:01), Anthony Webb

Members Excused: Scott Davidson

Clerk / Staff: Patrick Lewis, Director of Engineering and Public Services

Citizens Commenting: Jane Smith, 808 O'Brien
Robert Lyons, 805 O'Brien
Janie Black, 1737 Oak

1. Approval of the Traffic Committee minutes from the February 26, 2014 meeting.

   Motion: It was moved by Councilman Hensley and supported by Michael Miletti to approve the minutes from the February 26, 2014 meeting.

   Action: The motion passed unanimously (6-0).

2. Report back from the Engineering Department on the parking surveys for O'Brien Street

   Motion: It was moved by Michael Miletti and supported by Councilman Sisk to accept the Engineering Department recommendation to prohibit parking on the south side of the street.

   Action: The motion passed unanimously (8-0).

3. Request from citizen Robert Duffey to remove the "stop ahead" sign on westbound Noble Avenue at Godfroy Avenue

   Motion: It was moved by Councilman Hensley and supported by Lt. Morgel to remove the "stop ahead" sign.

   Action: The motion passed unanimously (8-0).

4. Request from citizen Debbie Thompson to remove parking from one side of Baptiste Avenue and other streets within the Mason Run Subdivision

Motion: It was moved by Michael Miletti and supported by Anthony Webb to refer this issue to a neighborhood survey for Baptiste Avenue between Elm and Noble, Mason Run Boulevard from Elm to north of Fontaine, and Fontaine Street.

Action: The motion passed unanimously (8-0).

5. Request from citizen Janie Black of 1737 Oak Street and other residents to install an all-way stop at the intersection of Oak Street and Glenwood

Motion: It was moved by Michael Miletti and supported by Dennis Polcyzski to refer this issue to the Police Department.

Action: The motion passed unanimously (8-0).

6. Report back on the lane reconfiguration study of Monroe Street between Third Street and the River Raisin

Motion: It was moved by Michael Miletti and supported by James Crammond to forward this item to the City Council for consideration of a three-lane cross section.

Action: The motion passed 6-2 (Polcyzski, Morgel).

7. Update from staff on a request from citizen Anthony Donofrio to install a left turn arrow at the intersection of West Front Street and South Roessler Street.

Motion: It was moved by Councilman Hensley and supported by Councilman Sisk to take no action on the request.

Action: The motion passed unanimously (8-0).

8. Update from staff on a request from Traffic Committee member Dennis Polczynski to prohibit left turns from Telegraph Road onto Custer Drive in both directions.

Motion: It was moved by Councilman Hensley and supported by Dennis Polyczyski to refer back to the Engineering Department to coordinate with MDOT on possible options for restricting northbound left turns.

Action: The motion passed unanimously (8-0).

9. Request from the Engineering Department to review West Front Street between Smith Street and Harrison Street for addition of a shared left turn lane and potential left turn prohibition at Smith Street.

Motion: It was moved by Councilman Sisk and supported by Michael Miletti to re-stripe West Front Street to include a center turn lane between Smith and Harrison Streets, and to prohibit left turns from westbound Front Street onto Smith Street.

Action: The motion passed unanimously (8-0).

10. Request from citizen Harold Caldwell to establish a set street sweeping schedule to coincide with trash collection

Action: Staff is continuing to work on this item, so no motion was necessary.

11. Adjournment

Motion: It was moved by Michael Miletti and supported by Anthony Webb to adjourn the meeting.

Action: The motion was passed unanimously (8-0) and the meeting was adjourned at 6:34 P.M.

CITY OF MONROE

TRAFFIC CONTROL ORDER

ORDER NO. 067-006 PROPOSED

EFFECTIVE DATE: June 2014
When official traffic control signs conforming to the mandate of this order shall have been erected.

PAGE ONE

The following regulations shall apply to West Front Street:

Parking

1. Signed 1-hour parking, with enforcement times of 8:00 A.M. to 5:00 P.M., Monday through Saturday, four (4) motorcycle parking spaces, located immediately east of the driveway to the City-owned parking lot west of 12 West Front Street.
2. Signed 1-hour parking, with enforcement times of 8:00 A.M. to 5:00 P.M., Monday through Saturday, all remaining spaces from Harrison Street to South Monroe Street, both sides.
3. "No Parking" from South Telegraph Road to Harrison Street, north side.
4. "No Parking" from South Telegraph Road to a location 150 feet east of the east curb line of West Third Street, south side.
5. "No Parking" from a location 60 feet west of the west curb line of Adams Street to a location 30 feet east of Adams Street, south side.
6. "No Parking" from a location 190 feet west of the west curb line of Smith Street to Harrison Street, south side.
7. Permitted parking, with no time limitations, between South Telegraph Road and West First Street, in all other areas, south side.

Intersection Control

8. Traffic signals with pedestrian signals and special left turn phases for all four directions shall be placed at the intersection of South Telegraph Road and West Front Street.
9. Traffic signals with pedestrian signals shall be placed at the intersection of West Front Street and South Roessler Street.
10. Traffic signals with pedestrian signals and a special left turn phase for northbound South Monroe Street traffic shall be placed at the intersection of South Monroe Street and West Front Street.
11. "No Left Turn" for westbound traffic at the intersection of West Front Street and West Third Street / Union Street.
12. **"No Left Turn" for westbound traffic at the intersection of West Front Street and Smith Street.**

CITY OF MONROE

TRAFFIC CONTROL ORDER

ORDER NO. 067-006 PROPOSED

EFFECTIVE DATE: June 2014
When official traffic control signs conforming to the mandate of this order shall have been erected.

PAGE TWO

The following regulations shall apply to West Front Street:

Roadway Geometry

13. West Front Street traffic shall be one-way westbound between South Monroe Street and West First Street, and shall be a two-lane street in this area.
14. West Front Street shall be a three-lane street from South Telegraph Road to 250 feet east of South Roessler Street, with the center lane reserved for left turns only.
15. **West Front Street shall be a three-lane street from Smith Street to Harrison Street, with the center lane reserved for left turns only.**

The following Traffic Control Orders shall hereby be rescinded: 067-005

City Traffic Engineer

Date

City Clerk-Treasurer

Date

CITY OF MONROE

TRAFFIC CONTROL ORDER

ORDER NO. 134-004 PROPOSED

EFFECTIVE DATE: June 2014
When official traffic control signs conforming to the mandate of this order shall have been erected.

The following regulations shall apply to O'Brien Street:

Parking

1. "No Parking" from ~~Island Street~~ **the western terminus** to West Front Street, south side.
2. ~~"No Parking" from the alley at the western terminus of the roadway to a location 80 feet east of the east property line of the alley, south side.~~
3. "No Parking from 7:00 A.M. to 3:30 P.M. School Days" from West Front Street to a location 140 feet north and west of West Front Street, north side.
4. Permitted parking, with no time limitations, all other locations, both sides.

Intersection Control

5. O'Brien Street shall STOP at West Front Street.

The following Traffic Control Orders shall hereby be rescinded: 134-003

City Traffic Engineer

City Clerk-Treasurer

Date

Date

Agenda Item #6: Report back on the lane reconfiguration study of Monroe Street between Third Street and the River Raisin

In the past, various downtown stakeholders have expressed interest in potential geometric modifications to South Monroe Street that would allow for parking on the west side of the roadway, particularly between Second and Front Street where there are adjacent businesses and institutions that could benefit from the existence of this parking. While in the past many such proposals to do so have taken the form of comprehensive physical modifications that would widen the roadway area (and narrow the sidewalks) to allow space for the existing five (5) lanes of traffic and east side parking, plus additional room for west side parking. The most recent comprehensive report and analysis of this idea is believed to have occurred in 2003 when the Engineering Department did a full traffic analysis of the corridor from Third to Front Streets, and this report is available if desired. No specific actions ever took place as a result of that report.

Since the Michigan Department of Transportation (MDOT) is resurfacing South Monroe Street this season, the idea of creating west side parking has again been brought forth. However, given that it is virtually impossible to adjust the location of curb lines at this late date in the project (which is expected to be completed through this area as early as July), efforts at this point have revolved around conversion of the roadway from five (5) lanes to either four (4) or three (3) lanes. When the Engineering Department initially approached MDOT about the process for such a review, we were provided with a checklist of items that would be required before such a "road diet" would be considered. As most of you are well aware, most of this process was followed as well with the recent conversion of North Dixie Highway from four (4) to three (3) lanes.

At the March 17 City Council meeting, the required traffic study for this initiative was approved by the City Council, with funding also supplied by the Downtown Development Authority. This study was awarded to Hubble, Roth, and Clark, Inc. following a review of competing proposals. After extensive consultation with MDOT, review of existing traffic models, analysis of the likely crash implications, and other factors, they have now completed their report, which is attached for your review. While MDOT essentially nixed the four-lane option due to concerns over forcing left-turning vehicles into a shared through lane in each direction, these operations were still analyzed along with the three-lane options. After extensive refinements of signal cycle and phase lengths, removal of the protected left turn arrows at both Front (northbound) and First (southbound), and creation of double opposing left turn lanes between Front and First that was suggested by the City, it was determined that a three-lane option appears to be feasible. This option would allow for parallel parking on each side of the roadway between Second and Front Streets, and would allow for left turns at all intersections. Although the SEMCOG demand model only shows slightly more than a 1% growth in total by 2025, should the roadway be converted to three (3) lanes from the present five (5), it would predict a 15% decrease. While some decrease could be expected due to the limitations on capacity that would be imposed by a narrower section, it was felt that MDOT would not accept this assumption, and the study assumed no growth over time, which is fairly realistic given the recent past trends.

Since it appears that a three-lane section is theoretically feasible such that MDOT will review and potentially allow this change, at least on a trial basis, the Engineering Department is supportive to moving this through the review process to provide for a City Council decision at their June 2 meeting. Should this potential road diet be successful, it would provide additional parking and traffic calming to the downtown area.

IT IS RECOMMENDED that the Traffic Committee provide a motion of support to the City Council asking for MDOT to review this corridor for a three-lane cross section.

ROAD DIET CHECKLIST

The items below should be considered during scoping and design of Road Diets on state trunkline. All items should be addressed prior to field implementation.

ENGINEERING OPERATIONS COMMITTEE

All Road Diets must go to the Engineering Operations Committee (EOC) for information only. All items within this section should be completed before EOC is informed of the Road Diet.

- If the local municipality (city, village, township) within which the Road Diet is being considered has adopted a Transportation Plan, Master Plan and/or Complete Streets Policy, the Road Diet has been incorporated into that plan/policy and the regional planning agency and/or MPO has provided a letter or resolution in support of the Road Diet.

- The local municipality's governing body has passed a formal resolution in support of the Road Diet.

- A public meeting to which all road users were invited, including area residents/business owners and commuters, has been held.

- If the Road Diet will result in on-street parallel parking where it does not currently exist, a formal agreement between MDOT and the local municipality indicating the local municipality's responsibility in participating in funding the project and future maintenance of the on-street parallel parking areas has been drafted.

- A SYNCHRO analysis has been performed under proposed conditions and future traffic volumes (a) and shows that a reasonable Level of Service (LOS) will be maintained during the peak hour at all signalized and major un-signalized intersections. A reasonable LOS is defined as D or better for urban and C or better for rural/between. All individual intersection movements with LOS D or worse have been further analyzed, and delay mitigation techniques have been identified and incorporated into the design. Seasonal fluctuations in traffic volumes have been analyzed, where appropriate.

- If the Road Diet is located in a CMAQ nonattainment or maintenance area, the new lane configuration has been analyzed for air quality conformity and determined to be acceptable.

- If the Road Diet is to utilize safety funding, a Time of Return analysis has been completed and found to be within the required threshold.

COMPLETE STREETS

- Additional accommodations for non-motorized users (i.e. bike lanes, pedestrian refuge islands) have been considered and, where appropriate, incorporated into the design of the Road Diet. It is predicted that the Road Diet will result in an improvement in pedestrian mobility.

If bus routes exist within the Road Diet influence area, additional accommodations for maintenance of safe loading and unloading zones have been considered and, where appropriate, incorporated into the design of the Road Diet.

The impacts of trucks and busses stopping for at-grade railroad crossings within the Road Diet influence area have been determined and, if necessary, accommodations have been incorporated into the design of the Road Diet.

GEOMETRIC OPERATIONS

Turning movements at all signalized and major unsignalized intersections have been analyzed for the appropriate design vehicle and determined to be acceptable.

Where on-street parallel parking is proposed, all affected intersections have been analyzed for intersection sight distance and determined to be acceptable.

Potential timing and/or phasing changes to existing traffic signals have been identified and vetted through the Traffic Signals Unit for incorporation into the Road Diet.

A Highway Safety Manual analysis has been performed and predicts an overall crash reduction as a result of the Road Diet under future traffic volumes (a).

A cost estimate that accounts for all above items has been developed for the Road Diet.

(a) Future traffic volumes refer to 10-20 years out when reestablishment of curb lines is required; 3 years out when only striping and signing changes are required.

South Monroe Street (M-125) Traffic Study Report

FOR

City of Monroe

MAY 2014

Prepared by:

HUBBELL, ROTH & CLARK, INC.
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555 Hulet Drive • P.O. Box 824
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Table of Contents

Section 1 - Introduction

The City of Monroe requested a Traffic Study and Analysis of various lane configurations on South Monroe Street (M-125) between Third Street and Elm Avenue in downtown Monroe. The study area is shown in Figure 1. The City of Monroe would like to install on-street parking on the west (southbound) side of South Monroe Street (M-125) between Front Street and Second Street in downtown Monroe. MDOT will be resurfacing South Monroe Street (M-125) in the summer of 2014. The resurfacing project is an opportunity to stripe the road to a new lane configuration that allows for additional on-street parking by reducing the number of travel lanes. Because M-125 is under MDOT jurisdiction a traffic study is required to make sure safety and operations will not be compromised by the project.

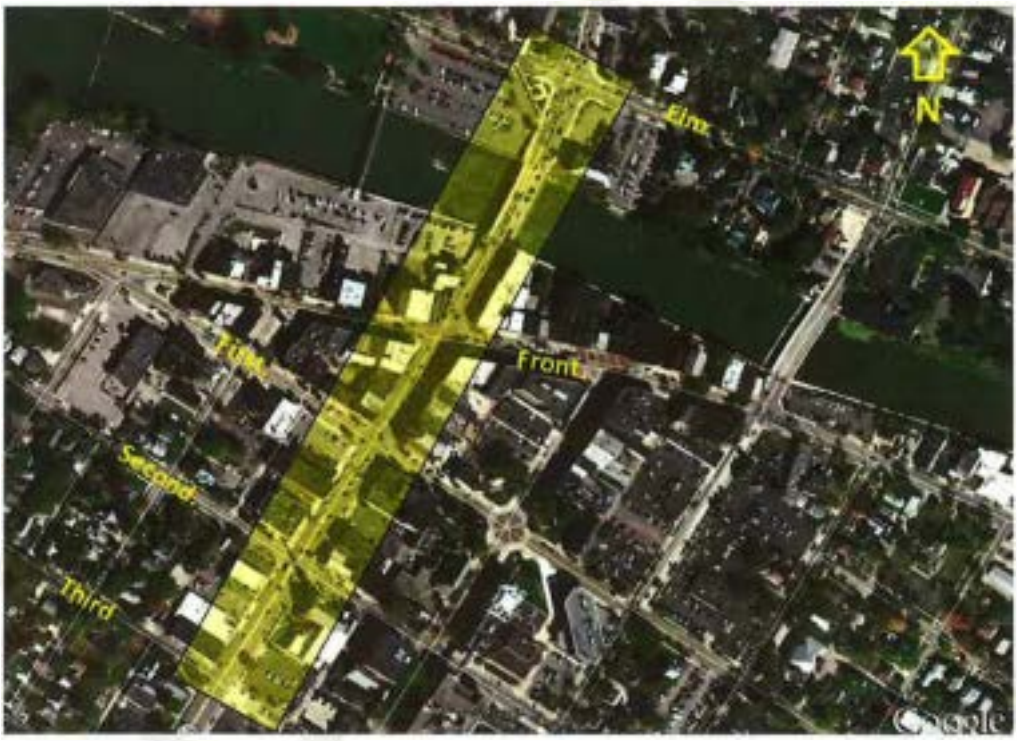

Figure 1. Study Area

The study involved the following steps:

- Held coordination meeting with MDOT and Monroe to finalize scope and study area
- Collected turning movement counts for eight hours (from 7 AM to 9 AM, 11 AM to 1 PM, and 2 PM to 6 PM) at the intersections of:
  - Monroe and Third
  - Monroe and Second
  - Monroe and First
  - Monroe and Front
  - Monroe and Elm

- Requested 2017 traffic projections for the study area from SEMCOG. Data received from SEMCOG was compared with recent trends in traffic volumes to arrive at a growth factor to project volumes to 2017. MDOT requested traffic projections for the year 2025 and changes in traffic distribution patterns based on road capacity
- Reviewed Synchro model of study area prepared for MDOT with 2008 turning movement counts using the techniques outlined in the Transportation Research Board Highway Capacity Manual
- Updated Synchro model of study area and conducted capacity analysis of four alternatives using 2014 turning movement counts and the techniques outlined in the Transportation Research Board Highway Capacity Manual
- Alternatives Analysis - the following four alternatives were studied using Synchro 7 software to determine level of service, delay and queue lengths for each alternative during AM, PM and Off Peak periods:
  - Existing Five Lane Configuration
  - Four Lane Cross Section
  - Three Lane Cross Section
- Performed a safety analysis using Highway Safety Manual to predict overall crash reduction as a result of the proposed geometry on two segments in the study area - Monroe between Front and First and Monroe between First and Second as well as three signalized intersections
- Develop Conceptual Designs – Based on the results of the alternatives analysis, the preferred concept will be further developed as required by MDOT's Road Diet Checklist (Form 1629).
  - Sight Distance Analysis – HRC field verified sight distance at all study intersections
  - AutoTurn Analysis – Since South Monroe Street is an MDOT truck route, HRC will use AutoTurn to verify that trucks are able to maneuver from street to street along the study area
  - Concept Sketches – HRC will show the concepts developed on an aerial for inclusion in the final report and for the City's use at public meetings
  - Cost Estimate – HRC provided a cost estimate for improvements identified in the study
- Coordinated data findings with Monroe and MDOT
- Prepared a report with our findings and recommendations.

Section 2 - Existing Conditions

2.1 Study Area Overview

Monroe Street (M-125) in Monroe County is an urban minor, north-south arterial and an alternate route for US-24 bringing trucks and traffic into downtown Monroe. South Monroe Street, south of the River Raisin, is approximately 65 feet wide, has four through lanes with a continuous center left-turn lane. On-street parking is allowed on the east side of the road from the bridge over the river to Fifth Street. The posted speed is 30 MPH. The land uses are a mix of institutional, commercial, office and parking lots. The older sections of the downtown have traditional, zero lot line building fronts but the sidewalk is wide.

2.2 Traffic Volumes

The most recent traffic counts were taken by MDOT just south of Front Street on Tuesday, June 18, 2013 and show a total of 27,585 in a 24 hour period. The hourly distribution is shown in Table 2.0. It should be noted that the Macomb Street bridge over the River Raisin was closed when these counts were taken and Monroe Street was a likely detour for local traffic, increasing traffic volumes.

Table 2.0: S. Monroe St. (M-125) – 24-Hour Counts South of Front Street (06/18/2013)

Start Time	NB	SB	TOTAL
0:00	93	87	180
1:00	56	45	101
2:00	38	27	65
3:00	40	30	70
4:00	80	47	127
5:00	196	101	297
6:00	420	219	639
7:00	642	457	1099
8:00	754	626	1380
9:00	818	673	1491
10:00	964	796	1760
11:00	990	886	1876
12:00	1084	969	2053
13:00	1154	918	2072
14:00	1126	954	2080
15:00	1119	1009	2128
16:00	1137	1043	2180
17:00	1015	1032	2047
18:00	858	769	1627
19:00	730	645	1375
20:00	631	554	1185
21:00	492	361	853
22:00	328	246	574
23:00	172	154	326
Total	**14,937**	**12,648**	**27,585**

Historically, traffic volumes on Monroe Street have shown some variability. The Southeast Michigan Council of Government's (SEMCOG) database provides traffic volumes from the past 10 years as shown in Table 2.1. The volume trend shows an increase in the past 5 years as compared to several years of decreases. Table 2.2 shows the percentage of commercial vehicles in the traffic flow. The data is from MDOT's database.

Table 2.1: Historical 24 Hour Traffic Volumes on Monroe Street (2003-2010)

Collection Date	NB	SB	Total	% Change
2003	13659	10248	23907	
2004	13516	10065	23581	-1.4%
2006	12487	10176	22663	-3.9%
2008	12953	8480	21433	-5.4%
2010	12034	11623	23657	10.4%
2013	14937	12648	27585	16.6%
Average	**13264**	**10540**	**23804**	**3.3%**

Table 2.2: MDOT Commercial AADT

Date	2-Way	% Commercial
2003	280	1.0%
2004	300	1.2%
2006	190	0.8%
2008	250	1.0%
2010	230	0.9%
2012	230	0.9%
Average	**247**	**1.0%**

2.3 Intersection Volumes

The Synchro analysis included the following five (5) signalized intersections in the model of the Monroe Street corridor:

- Monroe and Third
- Monroe and Second
- Monroe and First
- Monroe and Front
- Monroe and Elm

MDOT provided the City with turning movement counts taken in the fall of 2008 for AM, OFF and PM peak periods for a signal optimization project on Monroe Street. Because the count data included in the MDOT Synchro models were more than three (3) years old, HRC collected turning movement counts at the study intersections on Tuesday, 4/1/2014 during the AM (7AM-9AM), OFF (11AM-1PM) and PM (2PM-6PM) peak hours. Due to technical problems on 4/1/14, turning movement counts were collected

again on Wednesday, 4/9/14, at the intersection of Monroe and Third. Turning movement counts are included in Appendix A.

Section 3 - Existing Capacity Analysis

HRC conducted a capacity analysis for the five (5) signalized intersections in the study area using Synchro 7. Existing models for the AM, OFF and PM peak hours for were provided by MDOT. These models were developed as part of a signal optimization job for MDOT. Traffic volumes were updated based on turning movement counts taken by HRC in 2014

The procedures for analysis and criteria of signalized intersections are outlined in the 2010 Highway Capacity Manual. This manual defines level of service for signalized intersections in terms of control delay. Delay may be measured in the field, or it may be estimated. Delay is a complex measure, and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the volume to capacity ratio for the lane group or approach in question. Table 3.0 indicates the control delay criteria used for determining level of service (LOS) for signalized intersections.

Table 3.0: Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (Seconds)
A	<10
B	>10 to ≤ 20
C	>20 to ≤ 35
D	>35 to ≤ 55
E	>55 to ≤ 80
F	>80

Level of Service A describes operations with very low control delay up to 10.0 sec per vehicle. This occurs when progression is exceptionally favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level of Service B describes operations with control delay in the range of 10.1 to 20.0 sec per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average delay.

Level of Service C describes operations with control delay in the range of 20.1 to 35.0 sec per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level of Service D describes operations with control delay in the range of 35.1 to 55.0 sec per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

Level of Service E describes operations with control delay in the range of 55.1 to 80.0 sec per vehicle. This is considered to be above the limit of acceptable delay for an urban roadway in the study area. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.

Level of Service F describes operations with control delay in excess of 80.1 sec per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Results of the existing conditions capacity analysis during the AM, OFF and PM peak hours are provided in Table 3.1. The Synchro reports are provided in Appendix B. In general the intersection level of service is a LOS A, B or C. Only the intersection of Monroe Street and Elm Avenue has a LOS D in the PM peak hour, with eastbound Elm at a LOS E in the AM and OFF peak and a LOS F in the PM peak. Westbound Elm experiences a LOS E in the PM peak. The highlighted movements are LOS E or F.

Table 3.1: Existing Conditions (2014 Volumes)

Intersection	Approach	AM Peak		OFF Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Monroe Street & Third Street	EB	B	19.4	C	25.8	C	28.0
	WB	C	22.3	C	26.0	C	25.7
	NB	A	9.3	A	2.7	A	7.8
	SB	B	11.8	A	4.8	A	4.5
	Overall	B	13.6	A	9.3	B	11.8
Monroe Street & Second Street	EB	C	23.5	B	19.2	C	24.5
	WB	C	24.7	C	20.8	C	27.8
	NB	A	4.5	A	4.1	A	7.9
	SB	A	2.3	A	2.6	A	2.4
	Overall	A	4.2	A	4.7	A	6.6
Monroe Street & First Street	EB	C	28.4	C	21.8	C	28.0
	NB	A	7.4	A	9.0	A	6.0
	SB	A	2.5	A	3.4	A	4.7
	Overall	B	10.1	A	9.3	A	9.5
Monroe Street & Front Street	WB	C	25.1	C	21.7	C	33.7
	NB	A	2.4	A	3.3	A	3.1
	SB	C	28.2	C	27.7	C	19.8
	Overall	B	17.3	B	16.8	B	17.2
Monroe Street & Elm Avenue	EB	E	65.8	E	72.2	F	126.3
	WB	D	41.8	C	33.4	E	63.8
	NB	A	7.4	A	9.8	C	21.6
	SB	C	20.8	B	19.1	B	18.7
	Overall	C	30.2	C	30.6	D	49.0

Section 4 - Alternatives Analysis

4.1 Growth Rate

Based on SEMCOG's projections for the existing conditions, they expect the daily traffic volumes to increase by 1.22% on NB Monroe Street between Third Street and Front Street and increase by 1.35% on SB Monroe Street between Third Street and Front Street between the years 2010 to 2025. However, the proposed changes to the existing corridor call for three and four lane alternatives instead of the existing five lane conditions causing the capacity of the corridor to change. Based on the proposed geometric changes of the alternatives, SEMCOG projects a decrease in traffic volumes of 15% over the entire corridor due to traffic being redistributed across the network and more specifically, vehicles taking alternative routes across the river. A 15% decrease was not seen as realistic for the purposes of a road diet study so the same traffic volumes were used in all alternatives.

4.2 Alternatives Analyzed

HRC conducted a capacity analysis for the five signalized intersections in the study area using Synchro 7 software. Existing models for the AM, Off and PM peak hours for Monroe Street from Third Street to Elm Avenue were obtained from MDOT. These models were developed as part of a signal optimization job for M-125 and the models were updated based on collected turning movement counts. The intersection geometry and signal timing plans were also checked for accuracy as the models were created in 2008.

The analysis included lane configuration changes between Third Street and Front Street, intersections south of Third and north of Front were left unchanged. The following alternatives were analyzed:

- Existing conditions - five lanes (two lanes in each direction and a shared turn lane)
- Four lanes (two lanes in each direction)
- Three lanes (one lane in each direction with a shared turn lane)
- Three lanes (one lane in each direction with a shared turn lane) with modified signal timing and side by side left turn lanes between Front and First Streets

Tables 4.0 – 4.2 compared the capacity analysis by alternative for the AM peak hour, Off peak hour and PM peak hour respectively. Any movement with an unacceptable LOS E or F was highlighted in the tables. The Synchro reports are provided in Appendix C.

Table 4.0: Capacity Analyses for Alternatives - AM Peak Hour (2014 Volumes)

Intersection	Approach	Existing		Four-Lane		Three-Lane	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Monroe Street & Third Street	EB	B	19.4	B	19.4	C	20.8
	WB	C	22.3	C	22.3	C	23.8
	NB	A	9.3	A	9.3	A	9.6
	SB	B	11.8	B	11.7	B	12.7
	Overall	B	13.6	B	13.5	B	14.5
Monroe Street & Second Street	EB	C	23.5	C	23.5	C	23.5
	WB	C	24.7	C	24.7	C	24.7
	NB	A	4.5	A	4.6	B	14.0
	SB	A	2.3	A	2.2	A	5.4
	Overall	A	4.2	A	4.3	B	10.8
Monroe Street & First Street	EB	C	28.4	C	28.4	C	27.8
	NB	A	7.4	A	7.4	F	94.9
	SB	A	2.5	A	3.4	A	4.3
	Overall	B	10.1	B	10.4	D	51.6
Monroe Street & Front Street	WB	C	25.1	C	25.1	C	25.4
	NB	A	2.4	A	4.9	A	3.4
	SB	C	28.2	C	28.2	D	40.4
	Overall	B	17.3	B	18.3	C	21.4
Monroe Street & Elm Avenue	EB	E	65.8	E	65.8	E	63.2
	WB	D	41.8	D	41.8	D	44.2
	NB	A	7.4	A	7.1	A	8.6
	SB	C	20.8	C	20.8	C	20.8
	Overall	C	30.2	C	30.1	C	29.8

Table 4.1: Capacity Analyses for Alternatives - OFF Peak Hour (2014 Volumes)

Intersection	Approach	Existing		Four-Lane		Three-Lane	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Monroe Street & Third Street	EB	C	25.8	C	25.8	C	25.8
	WB	C	26.0	C	26.0	C	26.0
	NB	A	2.7	A	2.7	A	2.7
	SB	A	4.8	A	4.5	A	5.7
	Overall	A	9.3	A	9.2	A	9.7
Monroe Street & Second Street	EB	B	19.2	B	19.2	B	19.2
	WB	C	20.8	C	20.8	C	20.8
	NB	A	4.1	A	4.3	B	18.2
	SB	A	2.6	A	2.9	A	8.4
	Overall	A	4.7	A	4.9	B	14.0
Monroe Street & First Street	EB	C	21.8	C	21.8	C	21.8
	NB	A	9.0	A	8.9	F	153.7
	SB	A	3.4	A	4.8	A	4.5
	Overall	A	9.3	A	9.8	E	69.5
Monroe Street & Front Street	WB	C	21.7	C	21.7	C	21.7
	NB	A	3.3	A	8.6	A	4.2
	SB	C	27.7	C	27.7	D	46.2
	Overall	B	16.8	B	18.9	C	24.5
Monroe Street & Elm Avenue	EB	E	72.2	E	72.2	E	72.2
	WB	C	33.4	C	33.4	C	33.4
	NB	A	9.8	B	14.4	B	14.8
	SB	B	19.1	B	19.1	B	19.1
	Overall	C	30.6	C	32.0	C	32.1

Table 4.2: Capacity Analyses for Alternatives - PM Peak Hour (2014 Volumes)

Intersection	Approach	Existing		Four-Lane		Three-Lane	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Monroe Street & Third Street	EB	C	28.0	C	28.0	C	28.0
	WB	C	25.7	C	25.7	C	25.7
	NB	A	7.8	A	7.8	A	7.8
	SB	A	4.5	A	4.5	A	9.1
	Overall	B	11.8	B	11.9	B	13.7
Monroe Street & Second Street	EB	C	24.5	C	24.5	C	24.5
	WB	C	27.8	C	27.8	C	27.9
	NB	A	7.9	A	8.4	C	21.7
	SB	A	2.4	A	2.6	A	7.5
	Overall	A	6.6	A	7.0	B	15.0
Monroe Street & First Street	EB	C	28.0	C	28.0	C	28.1
	NB	A	6.0	A	6.0	F	84.5
	SB	A	4.7	A	7.4	A	9.7
	Overall	A	9.5	B	10.6	D	42.0

Intersection	Approach	Existing		Four-Lane		Three-Lane	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Monroe Street & Front Street	WB	C	33.7	C	33.7	C	33.7
	NB	A	3.1	B	11.0	A	6.3
	SB	C	19.8	C	19.8	C	32.1
	Overall	B	17.2	C	20.0	C	23.0
Monroe Street & Elm Avenue	EB	F	126.3	F	126.3	F	126.3
	WB	E	63.8	E	63.8	E	63.8
	NB	C	21.6	C	21.6	C	21.6
	SB	B	18.7	B	18.7	B	18.7
	Overall	D	49.0	D	49.0	D	49.0

The majority of the corridor had very few congestion issues with two exceptions. First, the intersection of Monroe and First has an unacceptable level of service on the NB approach in the three lane configuration alternative. The analysis noted NB traffic was not able to clear the intersection in the given time due to time given to the protected left turn phase for SB traffic. The City of Monroe and HRC discussed targeted intersection improvements. The traffic volume for SB left turns was small so the dedicated left turn phase could be eliminated. The center left turn lane is only 300 feet long and shared with NB left turning traffic at Monroe and Front. A parallel left turn lane for SB Monroe was proposed that would neither conflict with SB through traffic nor NB left turning traffic. The capacity analysis for the corridor was reanalyzed with the geometric change at Monroe and First and with a permitted left turn phase at both Monroe and Front and Monroe and First.

Secondly, the intersection of Monroe and Elm has an unacceptable level of service on EB Elm in all the capacity analyses. In the PM peak hour, WB Elm also has a LOS E. The project will not change the geometry at this intersection but the existing signal timings heavily favor the NB and SB approaches, causing a large delay for the EB and WB approaches. The signal timings were optimized. The results of this Synchro analysis are shown in Table 4.3.

Table 4.3: Capacity Analyses for 3-Lane Peak Hour Alternative with Permitted Left Turn Phase at First and Front Streets and Retimed Elm Avenue

Intersection	Approach	AM		OFF		PM	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Monroe Street & Third Street	EB	B	20.8	C	25.8	C	28.1
	WB	C	23.9	C	26.0	C	25.8
	NB	C	27.1	A	8.1	B	16.0
	SB	B	10.5	A	4.6	A	8.3
	Overall	B	19.2	B	11.6	B	16.0
Monroe Street & Second Street	EB	C	23.5	B	19.2	C	24.5
	WB	C	24.7	C	20.8	C	27.9
	NB	B	11.3	A	9.6	B	16.8
	SB	A	7.1	A	7.3	A	9.0
	Overall	A	10.0	A	9.5	B	13.6

Intersection	Approach	AM		OFF		PM	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Monroe Street & First Street	EB	C	27.8	C	21.8	C	28.1
	NB	B	10.9	A	6.2	A	7.3
	SB	A	3.7	A	5.1	A	8.9
	Overall	B	11.8	A	9.2	B	11.8
Monroe Street & Front Street	WB	C	25.4	C	21.7	C	33.9
	NB	A	9.8	A	8.3	B	14.3
	SB	B	19.5	C	23.6	B	11.9
	Overall	B	15.8	B	17.3	B	18.3
Monroe Street & Elm Avenue	EB	C	33.2	C	31.0	D	40.9
	WB	C	28.6	C	25.0	C	33.9
	NB	B	18.3	C	22.1	C	31.2
	SB	C	21.5	C	23.4	C	26.4
	Overall	C	24.2	C	25.1	C	32.1

Using the 2014 turning movement counts, the combination of the signal timing changes and the removal of the protected left turn phase at Monroe and First and Monroe and Front corrected all congestion issues through the corridor with all approaches operating at a LOS D or better.

To determine how much growth could occur and still have acceptable levels of service throughout the corridor, area wide growth rates were applied in Synchro. The results showed that during each peak additional capacity for growth is available, the following growth percentages per peak still provide acceptable levels of service within the study area:

- AM Peak - 29%
- OFF Peak - 18%
- PM Peak - 13%

Section 5 - Safety Analysis

Traffic crashes were reviewed for the Monroe Street study area from Third Street to Elm Avenue. Five years (2006 through 2010) of traffic crash data was obtained from the Traffic Improvement Association's Traffic Crash Analysis Tool (TCAT). TCAT is an online search tool for traffic crashes in Michigan. Crashes were reviewed at each signalized intersection as well as the segments between.

Traffic crashes were analyzed for crash type and severity. Severity classifications of crashes include Fatal, Injury Type A, Injury Type B, Injury Type C or Property Damage Only. The severity of a crash is determined by the most severe injury present in the crash. Injury Type A refers to an incapacitating injury that prevents a person from walking, driving or continuing normal activities which he or she was capable of performing prior to the crash. Injury Type B is described as any injury that is evident at the scene of the crash, but the injury is not fatal or incapacitating. Injury Type C refers to an injury reported by an occupant, but not visible to the officer completing the crash report. In a Property Damage Only crash, no injuries result from the crash. There were no fatal crashes in the study area. The UD-10s (traffic crash reports) for the Injury Type A crashes are included in Appendix D.

5.0 Intersection Crashes

A crash analysis was performed for each of the five signalized intersections on Monroe Street from Third to Elm including:

- Monroe and Third
- Monroe and Second
- Monroe and First
- Monroe and Front
- Monroe and Elm

Crashes within 200 feet of the signalized intersections were included. The total number of crashes for five years, crash frequency per year and crash rate is shown for each intersection in Table 5.0. The crash rates per million entering vehicles were calculated using the following equation:

$$Crash\ Rate = \frac{\#\ crashes \times 1\ million}{ADT \times 365 \frac{days}{year} \times \#\ years}$$

The ADT includes the inbound traffic from all legs of the intersection and was calculated assuming the PM peak hour turning movement counts are 8 percent of the daily traffic. Because the crash data was for the period 2006 through 2010, the 2008 PM peak hour counts were used to calculate the ADT. Table 5.0 shows the crash rates by intersection.

Table 5.0: Intersection Crash Summary

Intersection	5-Year Crash Total	ADT Entering Intersection (vpd)	Crash Rate (pmev)	Average Crash Frequency (#/yr)
Monroe & Third	38	32088	0.649	7.6
Monroe & Second	22	26188	0.460	4.4
Monroe & First	44	29913	**0.806**	8.8
Monroe & Front	47	33613	**0.766**	9.4
Monroe & Elm	82	37213	**1.207**	16.4

According to SEMCOG's "Crash Analysis Process" published in January 2012, the average crash rates for intersections in urban areas based on the average daily traffic volume entering the intersection is as follows:

- 20,001-30,000, crash rate is 0.72
- 30,001-40,000, crash rate is 0.71
- 70,001-80,000, crash rate is 0.77

The bold numbers in Table 5.0 are rates above the average crash rates from SEMCOG. The intersection of Monroe and Elm has the highest crash frequency and rate in the study area. According to SEMCOG, this intersection is ranked 9th in crash frequency in Monroe County.

Table 5.1 shows the severity of crashes at each intersection. Table 5.2 shows the number of crashes by year. Copies of the crash reports (UD-10) for the Injury Type A crashes are provided in Appendix D.

Table 5.1: Intersection Crash Severity Summary 2006 - 2010

Intersection	Fatal	A	B	C	PDO	Total
Monroe & Third	0	0	6	5	27	38
Monroe & Second	0	1	0	6	15	22
Monroe & First	0	0	2	8	34	44
Monroe & Front	0	1	1	7	38	47
Monroe & Elm	0	0	3	10	69	82

Table 5.2: Intersection Crash Summary by Year 2006 - 2010

Intersection	2006	2007	2008	2009	2010	Total
Monroe & Third	4	7	9	9	9	38
Monroe & Second	5	2	1	7	7	22
Monroe & First	10	9	11	9	5	44
Monroe & Front	7	5	10	20	5	47
Monroe & Elm	16	13	18	22	13	82

Because parking is currently permitted on northbound S. Monroe Street in the study area, the crashes were reviewed to see the frequency and severity of crashes related to on-street parking. The crashes on S. Monroe Street between Front and Third totaled 96 for the years 2006-2010. Of these, 8 crashes were parking related and resulted in property-damage only. The preferred alternative will provide a buffer between the parking lane and the travel lane, which is expected to reduce the frequency of parking related crashes.

5.1 Segment Crashes

The spacing of the intersections in the corridor study area is so close that most of the crashes are occurring within the influence of the intersection. On average, the distance between intersections is 360 feet and the intersection crash analysis examined crashes within 200 feet of the intersection. Therefore, a segment crash analysis would only duplicate crashes already examined at the intersections.

5.2 Highway Safety Manual Analysis

The Highway Safety Manual (HSM) is a resource manual that provides safety knowledge and tools in a useful form to facilitate improved decision making based on safety performance. The HSM provides a predictive method for estimating expected average crash frequency, crash severity and crash types of a network, facility or individual site. Chapter 12 specifically describes the predictive method for urban and suburban arterials which was used for this analysis.

The predictive model for urban arterial facilities is used to estimate the expected average crash frequency for a given time period with known characteristics. The estimate relies on estimates made using the predictive models which are combined with observed crash data using the Empirical Bayes (EB) Method. MDOT has developed spreadsheets for use in analyzing Michigan roads with the HSM, using locally developed factors.

Based on HSM analysis, the three lane (modified) option shows virtually no difference from a safety perspective than the five lane alternative.

Section 6 - Concepts

6.0 MDOT Road Diet Checklist

MDOT has developed a checklist of items to be included in a traffic study to analyze a Road Diet (Form 1629). The following subsections describe additional items of the MDOT checklist not covered by the capacity analysis (level of service in Synchro).

6.1 Sight Distance

Because the corridor lies in downtown Monroe, the proximity of the buildings to the roadways was a concern to determine if drivers had adequate sight distances. To test this, each approach at the five intersections had to be driven to determine if the intersections were safe for both vehicles and pedestrians. Under the existing road geometry and road conditions, there were no sight distance issues experienced at any of the five intersections. Based on the preferred alternative having a narrower road width, the proposed geometry would not have sight distance issues either.

6.2 Cost Estimate

A cost estimate will be provided after a final alternative is approved.

6.3 Intersection Turning Radius

No geometric changes are planned at this time; only pavement markings will be changed. The preferred alternative will actually increase the available turning radius for the intersections by reducing the effective width of the Monroe Street.

6.4 Concept Sketch

A concept sketch showing the lane configuration for the preferred alternative is shown on the next page. The preferred alternative is a three lane option with side by side left turn lanes between Front and First Streets. This option requires the removal of the protected left turn phase for Front and First Streets, which give much needed green time to northbound Monroe Street at First Street and additional time for southbound Monroe Street at Front Street. This option provides on-street parking on both sides of South Monroe Street between Second and Front.

There will be a buffer space between the parking stalls and the travel lane to improve visibility and maneuverability within the parking area. The option to install a bike lane was not pursued due to the ability to only install for a few blocks without the ability to extend north or south.

JOB NO. 20140132	HUBBELL, ROTH & CLARK, INC.	SHEET NO.
DATE 5/28/2014	CONSULTING ENGINEERS 555 HULET DRIVE P.O. BOX 824 BLOOMFIELD HILLS, MICH. 48303-0824	1 OF

Section 7 - Conclusions and Recommendations

The City of Monroe requested a Traffic Study and Analysis of various lane configurations on South Monroe Street (M-125) between Third Street and Elm Avenue in downtown Monroe. The study area is shown in Figure 1. The City of Monroe would like to install on-street parking on the west (southbound) side of South Monroe Street (M-125) between Front Street and Second Street in downtown Monroe.

MDOT will be resurfacing South Monroe Street (M-125) in the summer of 2014. The resurfacing project is an opportunity to stripe the road to a new lane configuration that allows for additional on-street parking by reducing the number of travel lanes. Because M-125 is under MDOT jurisdiction a traffic study is required to make sure safety and operations will not be compromised by the project.

The analysis included lane configuration changes between Third Street and Front Street, intersections south of Third and north of Front were left unchanged. The following alternatives were analyzed:

- Existing conditions - five lanes (two lanes in each direction and a shared turn lane)
- Four lanes (two lanes in each direction)
- Three lanes (one lane in each direction with a shared turn lane)
- Three lanes (one lane in each direction with a shared turn lane) with modified signal timing and side by side left turn lanes between Front and First Streets

Using the 2014 turning movement counts, the combination of the signal timing changes and the removal of the protected left turn phase at Monroe and First and Monroe and Front corrected all congestion issues through the corridor with all approaches operating at a LOS D or better.

The preferred alternative is a three lane option with side by side left turn lanes between Front and First Streets. This option requires the removal of the protected left turn phase for Front and First Streets, which will require traffic signal modifications. This option provides on-street parking on both sides of South Monroe Street between Second and Front. The buffer space between the parking stalls and the travel lane will improve visibility and maneuverability within the parking area.

MDOT will need to approve any alternative that is chosen.

Appendix A –
Turning Movement Counts

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: COB
Weather: Clear
Location: Monroe/3rd

File Name : monroe_third
Site Code : 00000000
Start Date : 4/9/2014
Page No : 1

Groups Printed- Unshifted

	MONROE From North					THIRD From East					MONROE From South					THIRD From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:15 AM	24	118	6	0	148	16	20	10	2	48	0	76	0	1	77	9	8	19	1	37	310
07:30 AM	35	190	8	2	235	33	34	7	0	74	2	151	6	0	159	6	19	18	3	46	514
07:45 AM	38	172	9	0	219	18	50	17	1	86	2	152	2	1	157	12	18	28	1	59	521
Total	97	480	23	2	602	67	104	34	3	208	4	379	8	2	393	27	45	65	5	142	1345
08:00 AM	29	116	4	0	149	10	19	8	0	37	0	116	2	0	118	7	9	27	0	43	347
08:15 AM	16	117	1	0	134	16	16	3	1	36	0	97	1	0	98	4	5	22	2	33	301
08:30 AM	16	114	4	1	135	15	21	8	3	47	0	101	1	0	102	6	7	28	1	42	326
08:45 AM	31	148	6	0	185	8	20	5	0	33	2	111	4	0	117	7	14	24	1	46	381
Total	92	495	15	1	603	49	76	24	4	153	2	425	8	0	435	24	35	101	4	164	1355
*** BREAK ***																					
11:00 AM	16	116	4	0	136	16	24	7	0	47	3	113	4	0	120	7	11	26	0	44	347
11:15 AM	16	134	6	1	157	26	22	11	0	59	2	141	2	2	147	8	16	15	2	41	404
11:30 AM	21	149	4	1	175	18	23	13	2	56	2	142	4	0	148	8	11	30	1	50	429
11:45 AM	13	137	6	0	156	18	16	11	1	46	1	178	6	4	189	8	11	30	0	49	440
Total	66	536	20	2	624	78	85	42	3	208	8	574	16	6	604	31	49	101	3	184	1620
12:00 PM	23	175	5	0	203	27	24	13	1	65	5	159	4	1	169	10	16	35	2	63	500
12:15 PM	21	155	9	0	185	19	28	12	3	62	2	147	6	1	156	6	12	24	2	44	447
12:30 PM	26	169	6	1	202	16	24	9	5	54	2	140	1	0	143	5	17	31	2	55	454
12:45 PM	24	157	5	0	186	18	31	15	0	64	5	143	5	0	153	9	17	24	1	51	454
Total	94	656	25	1	776	80	107	49	9	245	14	589	16	2	621	30	62	114	7	213	1855
*** BREAK ***																					
02:00 PM	13	174	5	1	193	15	27	17	4	63	2	134	3	0	139	8	9	24	3	44	439
02:15 PM	23	152	6	1	182	18	32	11	6	67	9	171	7	3	190	5	8	24	1	38	477
02:30 PM	20	171	7	3	201	17	37	9	0	63	4	163	7	0	174	13	15	37	4	69	507
02:45 PM	24	162	12	2	200	19	30	19	5	73	2	167	6	1	176	12	13	35	4	64	513
Total	80	659	30	7	776	69	126	56	15	266	17	635	23	4	679	38	45	120	12	215	1936
03:00 PM	26	152	8	4	190	19	24	12	0	55	6	182	3	0	191	7	27	34	3	71	507
03:15 PM	21	166	13	2	202	23	28	12	4	67	3	149	9	0	161	17	17	33	2	69	499
03:30 PM	30	171	5	0	206	16	38	8	2	64	3	186	5	1	195	12	13	26	0	51	516
03:45 PM	28	157	2	0	187	12	39	14	2	67	5	191	8	0	204	6	19	42	0	67	525
Total	105	646	28	6	785	70	129	46	8	253	17	708	25	1	751	42	76	135	5	258	2047

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: COB
Weather: Clear
Location: Monroe/3rd

File Name : monroe_third
Site Code : 00000000
Start Date : 4/9/2014
Page No : 2

Groups Printed- Unshifted

	MONROE From North					THIRD From East					MONROE From South					THIRD From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	22	159	8	0	189	20	24	8	2	54	4	193	7	1	205	11	20	39	1	71	519
04:15 PM	18	154	4	2	178	19	34	9	0	62	1	172	12	4	189	6	16	35	4	61	490
04:30 PM	28	183	7	3	221	15	29	11	7	62	1	185	7	1	194	13	24	43	0	80	557
04:45 PM	17	174	4	1	196	22	36	10	4	72	1	196	6	0	203	6	26	42	0	74	545
Total	85	670	23	6	784	76	123	38	13	250	7	746	32	6	791	36	86	159	5	286	2111
05:00 PM	19	168	8	1	196	12	29	6	0	47	6	194	10	0	210	10	13	46	2	71	524
05:15 PM	13	151	9	3	176	15	23	10	1	49	3	167	5	4	179	12	14	37	3	66	470
05:30 PM	18	148	9	3	178	14	21	11	1	47	10	181	7	0	198	6	21	39	4	70	493
05:45 PM	18	163	9	2	192	18	27	15	2	62	5	157	5	0	167	5	18	26	2	51	472
Total	68	630	35	9	742	59	100	42	4	205	24	699	27	4	754	33	66	148	11	258	1959
Grand Total	687	4772	199	34	5692	548	850	331	59	1788	93	4755	155	25	5028	261	464	943	52	1720	14228
Apprch %	12.1	83.8	3.5	0.6		30.6	47.5	18.5	3.3		1.8	94.6	3.1	0.5		15.2	27	54.8	3		
Total %	4.8	33.5	1.4	0.2	40	3.9	6	2.3	0.4	12.6	0.7	33.4	1.1	0.2	35.3	1.8	3.3	6.6	0.4	12.1	

	MONROE From North					THIRD From East					MONROE From South					THIRD From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	24	118	6	0	148	16	20	10	**2**	48	0	76	0	**1**	77	9	8	19	1	37	310
07:30 AM	35	**190**	8	**2**	**235**	**33**	34	7	0	74	**2**	151	**6**	0	**159**	6	**19**	18	**3**	46	514
07:45 AM	**38**	172	**9**	0	219	18	**50**	**17**	1	**86**	2	**152**	2	1	157	**12**	18	**28**	1	**59**	**521**
08:00 AM	29	116	4	0	149	10	19	8	0	37	0	116	2	0	118	7	9	27	0	43	347
Total Volume	126	596	27	2	751	77	123	42	3	245	4	495	10	2	511	34	54	92	5	185	1692
% App. Total	16.8	79.4	3.6	0.3		31.4	50.2	17.1	1.2		0.8	96.9	2	0.4		18.4	29.2	49.7	2.7		
PHF	.829	.784	.750	.250	.799	.583	.615	.618	.375	.712	.500	.814	.417	.500	.803	.708	.711	.821	.417	.784	.812

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Job Number: 20140132
Counted By: COB
Weather: Clear
Location: Monroe/3rd

File Name : monroe_third
Site Code : 00000000
Start Date : 4/9/2014
Page No : 3

	MONROE From North					THIRD From East					MONROE From South					THIRD From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	23	**175**	5	0	**203**	**27**	24	13	1	**65**	**5**	**159**	4	1	**169**	**10**	16	**35**	**2**	**63**	**500**
12:15 PM	21	155	**9**	0	185	19	28	12	3	62	2	147	**6**	1	156	6	12	24	2	44	447
12:30 PM	**26**	169	6	**1**	202	16	24	9	**5**	54	2	140	1	0	143	5	**17**	31	2	55	454
12:45 PM	24	157	5	0	186	18	**31**	**15**	0	64	5	143	5	0	153	9	17	24	1	51	454
Total Volume	94	656	25	1	776	80	107	49	9	245	14	589	16	2	621	30	62	114	7	213	1855
% App. Total	12.1	84.5	3.2	0.1		32.7	43.7	20	3.7		2.3	94.8	2.6	0.3		14.1	29.1	53.5	3.3		
PHF	.904	.937	.694	.250	.956	.741	.863	.817	.450	.942	.700	.926	.667	.500	.919	.750	.912	.814	.875	.845	.928
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	18	154	4	2	178	19	34	9	0	62	1	172	**12**	**4**	189	6	16	35	4	61	490
04:30 PM	**28**	**183**	7	**3**	**221**	15	29	**11**	**7**	62	1	185	7	1	194	**13**	24	43	0	**80**	**557**
04:45 PM	17	174	4	1	196	**22**	**36**	10	**4**	**72**	1	**196**	6	0	203	6	**26**	42	0	74	545
05:00 PM	19	168	**8**	1	196	12	29	6	0	47	**6**	194	10	0	**210**	10	13	**46**	2	71	524
Total Volume	82	679	23	7	791	68	128	36	11	243	9	747	35	5	796	35	79	166	6	286	2116
% App. Total	10.4	85.8	2.9	0.9		28	52.7	14.8	4.5		1.1	93.8	4.4	0.6		12.2	27.6	58	2.1		
PHF	.732	.928	.719	.583	.895	.773	.889	.818	.393	.844	.375	.953	.729	.313	.948	.673	.760	.902	.375	.894	.950

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: TJC
Weather: Clear
Location: Monroe/2nd

File Name : Monroe_Second
Site Code : 00000000
Start Date : 4/1/2014
Page No : 1

Groups Printed- Unshifted - Bank 1 - Bank 2

	MONROE ST Southbound					2ND ST Westbound					MONROE ST Northbound					2ND ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	52	1	0	53	1	0	1	0	2	1	78	3	0	82	1	0	0	0	1	138
07:15 AM	0	88	2	0	90	1	2	4	2	9	5	115	0	0	120	1	0	0	2	3	222
07:30 AM	1	149	3	0	153	1	1	1	1	4	2	172	2	0	176	0	0	1	0	1	334
07:45 AM	0	123	1	0	124	0	1	5	0	6	8	167	3	1	179	1	1	1	0	3	312
Total	1	412	7	0	420	3	4	11	3	21	16	532	8	1	557	3	1	2	2	8	1006
08:00 AM	1	115	2	1	119	2	3	5	0	10	5	105	2	1	113	1	1	1	0	3	245
08:15 AM	1	117	2	0	120	1	2	6	0	9	4	117	2	0	123	1	0	0	1	2	254
08:30 AM	2	104	4	1	111	4	2	8	1	15	7	111	3	0	121	1	0	1	0	2	249
08:45 AM	0	112	1	0	113	2	4	6	0	12	8	143	3	1	155	3	1	1	1	6	286
Total	4	448	9	2	463	9	11	25	1	46	24	476	10	2	512	6	2	3	2	13	1034
*** BREAK ***																					
11:00 AM	3	135	1	0	139	14	1	5	6	26	7	160	5	1	173	0	2	1	1	4	342
11:15 AM	2	125	2	0	129	5	4	12	1	22	4	153	5	0	162	1	1	3	3	8	321
11:30 AM	0	134	4	1	139	5	1	5	5	16	3	152	5	3	163	0	2	2	1	5	323
11:45 AM	1	148	4	0	153	6	3	9	1	19	8	174	6	0	188	3	3	3	2	11	371
Total	6	542	11	1	560	30	9	31	13	83	22	639	21	4	686	4	8	9	7	28	1357
12:00 PM	3	180	3	1	187	8	4	10	4	26	9	160	1	2	172	3	1	0	1	5	390
12:15 PM	6	159	0	0	165	7	5	4	3	19	8	145	2	0	155	6	1	1	2	10	349
12:30 PM	0	142	1	0	143	6	2	4	1	13	12	180	2	1	195	3	4	0	1	8	359
12:45 PM	2	148	1	1	152	4	3	9	1	17	6	156	4	0	166	7	0	2	4	13	348
Total	11	629	5	2	647	25	14	27	9	75	35	641	9	3	688	19	6	3	8	36	1446
*** BREAK ***																					
02:00 PM	1	154	5	1	161	8	2	5	3	18	2	183	1	3	189	3	1	1	1	6	374
02:15 PM	2	124	6	4	136	10	3	11	2	26	3	171	2	2	178	3	1	2	6	12	352
02:30 PM	3	178	2	1	184	7	4	9	3	23	10	158	2	2	172	3	1	2	2	8	387
02:45 PM	4	199	1	0	204	10	3	6	1	20	4	203	2	0	209	2	5	3	4	14	447
Total	10	655	14	6	685	35	12	31	9	87	19	715	7	7	748	11	8	8	13	40	1560
03:00 PM	6	160	3	3	172	6	2	8	2	18	7	175	2	1	185	3	2	1	0	6	381
03:15 PM	1	151	1	2	155	4	4	16	2	26	0	142	1	0	143	4	2	1	2	9	333
03:30 PM	1	195	2	0	198	6	4	13	1	24	2	146	1	0	149	2	3	1	3	9	380
03:45 PM	3	206	3	3	215	9	6	10	1	26	2	185	2	1	190	3	1	3	7	14	445
Total	11	712	9	8	740	25	16	47	6	94	11	648	6	2	667	12	8	6	12	38	1539

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: TJC
Weather: Clear
Location: Monroe/2nd

File Name : Monroe_Second
Site Code : 00000000
Start Date : 4/1/2014

Groups Printed- Unshifted - Bank 1 - Bank 2

	MONROE ST Southbound					2ND ST Westbound					MONROE ST Northbound					2ND ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	5	213	2	0	220	7	6	14	3	30	3	156	3	0	162	5	3	2	0	10	422
04:15 PM	3	162	2	2	169	2	3	14	0	19	5	174	5	0	184	4	1	2	5	12	384
04:30 PM	3	190	5	0	198	3	7	12	5	27	4	154	0	0	158	6	1	2	1	10	393
04:45 PM	2	204	3	1	210	7	4	12	0	23	6	191	3	1	201	6	4	3	4	17	451
Total	13	769	12	3	797	19	20	52	8	99	18	675	11	1	705	21	9	9	10	49	1650
05:00 PM	2	237	4	0	243	3	8	16	0	27	2	183	3	0	188	5	0	5	7	17	475
05:15 PM	0	184	6	0	190	1	1	9	0	11	1	189	1	0	191	3	2	2	0	7	399
05:30 PM	1	158	1	0	160	4	0	2	1	7	5	173	3	1	182	5	2	1	3	11	360
05:45 PM	1	162	2	2	167	5	1	5	7	18	1	154	1	1	157	1	1	2	1	5	347
Total	4	741	13	2	760	13	10	32	8	63	9	699	8	2	718	14	5	10	11	40	1581
Grand Total	60	4908	80	24	5072	159	96	256	57	568	154	5025	80	22	5281	90	47	50	65	252	11173
Apprch %	1.2	96.8	1.6	0.5		28	16.9	45.1	10		2.9	95.2	1.5	0.4		35.7	18.7	19.8	25.8		
Total %	0.5	43.9	0.7	0.2	45.4	1.4	0.9	2.3	0.5	5.1	1.4	45	0.7	0.2	47.3	0.8	0.4	0.4	0.6	2.3	
Unshifted	60	4908	80	24	5072	159	96	256	57	568	154	5025	80	22	5281	90	47	50	65	252	11173
% Unshifted	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: TJC
Weather: Clear
Location: Monroe/2nd

File Name : Monroe_Second
Site Code : 00000000
Start Date : 4/1/2014

	MONROE ST Southbound					2ND ST Westbound					MONROE ST Northbound					2ND ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	1	149	3	0	153	1	1	1	1	4	2	172	2	0	176	0	0	1	0	1	334
07:45 AM	0	123	1	0	124	0	1	5	0	6	8	167	3	1	179	1	1	1	0	3	312
08:00 AM	1	115	2	1	119	2	3	5	0	10	5	105	2	1	113	1	1	1	0	3	245
08:15 AM	1	117	2	0	120	1	2	6	0	9	4	117	2	0	123	1	0	0	1	2	254
Total Volume	3	504	8	1	516	4	7	17	1	29	19	561	9	2	591	3	2	3	1	9	1145
% App. Total	0.6	97.7	1.6	0.2		13.8	24.1	58.6	3.4		3.2	94.9	1.5	0.3		33.3	22.2	33.3	11.1		
PHF	.750	.846	.667	.250	.843	.500	.583	.708	.250	.725	.594	.815	.750	.500	.825	.750	.500	.750	.250	.750	.857
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	1	148	4	0	153	6	3	9	1	19	8	174	6	0	188	3	3	3	2	11	371
12:00 PM	3	180	3	1	187	8	4	10	4	26	9	160	1	2	172	3	1	0	1	5	390
12:15 PM	6	159	0	0	165	7	5	4	3	19	8	145	2	0	155	6	1	1	2	10	349
12:30 PM	0	142	1	0	143	6	2	4	1	13	12	180	2	1	195	3	4	0	1	8	359
Total Volume	10	629	8	1	648	27	14	27	9	77	37	659	11	3	710	15	9	4	6	34	1469
% App. Total	1.5	97.1	1.2	0.2		35.1	18.2	35.1	11.7		5.2	92.8	1.5	0.4		44.1	26.5	11.8	17.6		
PHF	.417	.874	.500	.250	.866	.844	.700	.675	.563	.740	.771	.915	.458	.375	.910	.625	.563	.333	.750	.773	.942
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	3	190	5	0	198	3	7	12	5	27	4	154	0	0	158	6	1	2	1	10	393
04:45 PM	2	204	3	1	210	7	4	12	0	23	6	191	3	1	201	6	4	3	4	17	451
05:00 PM	2	237	4	0	243	3	8	16	0	27	2	183	3	0	188	5	0	5	7	17	475
05:15 PM	0	184	6	0	190	1	1	9	0	11	1	189	1	0	191	3	2	2	0	7	399
Total Volume	7	815	18	1	841	14	20	49	5	88	13	717	7	1	738	20	7	12	12	51	1718
% App. Total	0.8	96.9	2.1	0.1		15.9	22.7	55.7	5.7		1.8	97.2	0.9	0.1		39.2	13.7	23.5	23.5		
PHF	.583	.860	.750	.250	.865	.500	.625	.766	.250	.815	.542	.938	.583	.250	.918	.833	.438	.600	.429	.750	.904

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: CWB
Weather: Clear
Location: Monroe/1st

File Name : Monroe_First
Site Code : 00000000
Start Date : 4/1/2014
Page No : 1

Groups Printed- Unshifted - Bank 1 - Bank 2

	MONROE ST Southbound					1ST ST Westbound					MONROE ST Northbound					1ST ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	48	5	0	53	0	0	0	0	0	11	72	0	0	83	6	19	10	0	35	171
07:15 AM	0	86	9	0	95	0	0	0	0	0	19	97	0	0	116	4	19	7	0	30	241
07:30 AM	0	140	12	0	152	0	0	0	0	0	23	148	0	1	172	15	19	33	0	67	391
07:45 AM	0	107	18	1	126	0	0	0	0	0	31	142	0	1	174	21	40	30	0	91	391
Total	0	381	44	1	426	0	0	0	0	0	84	459	0	2	545	46	97	80	0	223	1194
08:00 AM	0	114	14	1	129	0	0	0	0	0	12	92	0	5	109	10	30	21	1	62	300
08:15 AM	0	114	15	1	130	0	0	0	1	1	9	108	0	3	120	9	20	13	1	43	294
08:30 AM	0	101	16	1	118	0	0	0	1	1	16	103	0	1	120	10	23	8	1	42	281
08:45 AM	0	101	22	3	126	0	0	0	0	0	18	132	0	0	150	12	22	19	3	56	332
Total	0	430	67	6	503	0	0	0	2	2	55	435	0	9	499	41	95	61	6	203	1207
*** BREAK ***																					
11:00 AM	0	119	14	1	134	0	0	0	1	1	20	157	0	4	181	21	34	26	3	84	400
11:15 AM	0	121	14	3	138	0	0	0	3	3	24	138	0	3	165	12	19	22	3	56	362
11:30 AM	0	117	16	1	134	0	0	0	3	3	32	135	0	6	173	24	16	26	0	66	376
11:45 AM	0	148	11	1	160	0	0	0	7	7	19	166	0	4	189	13	18	22	3	56	412
Total	0	505	55	6	566	0	0	0	14	14	95	596	0	17	708	70	87	96	9	262	1550
12:00 PM	0	153	12	2	167	0	0	0	5	5	22	143	0	2	167	31	29	28	0	88	427
12:15 PM	0	136	14	2	152	0	0	0	1	1	24	128	0	2	154	25	30	31	0	86	393
12:30 PM	0	125	19	2	146	0	0	0	2	2	24	157	0	4	185	16	25	22	0	63	396
12:45 PM	0	140	28	5	173	0	0	0	3	3	24	148	0	9	181	10	30	24	7	71	428
Total	0	554	73	11	638	0	0	0	11	11	94	576	0	17	687	82	114	105	7	308	1644
*** BREAK ***																					
02:00 PM	0	137	19	2	158	0	0	0	0	0	26	156	0	3	185	20	24	28	0	72	415
02:15 PM	0	119	12	2	133	0	0	0	4	4	27	159	0	4	190	16	26	30	3	75	402
02:30 PM	0	161	22	0	183	0	0	0	2	2	18	148	0	4	170	25	29	35	3	92	447
02:45 PM	0	187	15	2	204	0	0	0	4	4	31	191	0	8	230	19	26	29	1	75	513
Total	0	604	68	6	678	0	0	0	10	10	102	654	0	19	775	80	105	122	7	314	1777
03:00 PM	0	150	12	0	162	0	0	0	0	0	27	157	0	3	187	16	21	33	2	72	421
03:15 PM	0	131	10	1	142	0	0	0	1	1	25	121	0	5	151	18	26	43	1	88	382
03:30 PM	0	179	14	2	195	0	0	0	0	0	22	131	0	6	159	23	24	24	1	72	426
03:45 PM	0	193	9	0	202	0	0	0	0	0	22	165	0	6	193	21	23	30	4	78	473
Total	0	653	45	3	701	0	0	0	1	1	96	574	0	20	690	78	94	130	8	310	1702

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: CWB
Weather: Clear
Location: Monroe/1st

File Name : Monroe_First
Site Code : 00000000
Start Date : 4/1/2014
Page No : 2

Groups Printed- Unshifted - Bank 1 - Bank 2

	MONROE ST Southbound					1ST ST Westbound					MONROE ST Northbound					1ST ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	195	12	2	209	0	0	0	1	1	18	142	0	6	166	24	30	28	2	84	460
04:15 PM	0	155	6	2	163	0	0	0	2	2	21	149	0	8	178	13	19	25	2	59	402
04:30 PM	0	206	9	4	219	0	0	0	1	1	11	159	0	1	171	24	25	43	1	93	484
04:45 PM	0	192	10	0	202	0	0	0	0	0	26	165	0	3	194	15	18	31	4	68	464
Total	0	748	37	8	793	0	0	0	4	4	76	615	0	18	709	76	92	127	9	304	1810
05:00 PM	0	203	7	1	211	0	0	0	1	1	19	167	0	4	190	30	24	39	1	94	496
05:15 PM	0	169	13	1	183	0	0	0	2	2	30	162	0	3	195	18	28	25	2	73	453
05:30 PM	0	144	6	0	150	0	0	0	1	1	18	160	0	1	179	12	24	26	3	65	395
05:45 PM	0	155	8	6	169	0	0	0	10	10	12	142	0	1	155	14	20	19	5	58	392
Total	0	671	34	8	713	0	0	0	14	14	79	631	0	9	719	74	96	109	11	290	1736
Grand Total	0	4546	423	49	5018	0	0	0	56	56	681	4540	0	111	5332	547	780	830	57	2214	12620
Apprch %	0	90.6	8.4	1		0	0	0	100		12.8	85.1	0	2.1		24.7	35.2	37.5	2.6		
Total %	0	36	3.4	0.4	39.8	0	0	0	0.4	0.4	5.4	36	0	0.9	42.3	4.3	6.2	6.6	0.5	17.5	
Unshifted	0	4546	423	49	5018	0	0	0	56	56	681	4540	0	111	5332	547	780	830	57	2214	12620
% Unshifted	0	100	100	100	100	0	0	0	100	100	100	100	0	100	100	100	100	100	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: CWB
Weather: Clear
Location: Monroe/1st

File Name : Monroe_First
Site Code : 00000000
Start Date : 4/1/2014
Page No : 3

	MONROE ST Southbound					1ST ST Westbound					MONROE ST Northbound					1ST ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	140	12	0	152	0	0	0	0	0	23	148	0	1	172	15	19	33	0	67	391
07:45 AM	0	107	18	1	126	0	0	0	0	0	31	142	0	1	174	21	40	30	0	91	391
08:00 AM	0	114	14	1	129	0	0	0	0	0	12	92	0	5	109	10	30	21	1	62	300
08:15 AM	0	114	15	1	130	0	0	0	1	1	9	108	0	3	120	9	20	13	1	43	294
Total Volume	0	475	59	3	537	0	0	0	1	1	75	490	0	10	575	55	109	97	2	263	1376
% App. Total	0	88.5	11	0.6		0	0	0	100		13	85.2	0	1.7		20.9	41.4	36.9	0.8		
PHF	.000	.848	.819	.750	.883	.000	.000	.000	.250	.250	.605	.828	.000	.500	.826	.655	.681	.735	.500	.723	.880
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	153	12	2	167	0	0	0	5	5	22	143	0	2	167	31	29	28	0	88	427
12:15 PM	0	136	14	2	152	0	0	0	1	1	24	128	0	2	154	25	30	31	0	86	393
12:30 PM	0	125	19	2	146	0	0	0	2	2	24	157	0	4	185	16	25	22	0	63	396
12:45 PM	0	140	28	5	173	0	0	0	3	3	24	148	0	9	181	10	30	24	7	71	428
Total Volume	0	554	73	11	638	0	0	0	11	11	94	576	0	17	687	82	114	105	7	308	1644
% App. Total	0	86.8	11.4	1.7		0	0	0	100		13.7	83.8	0	2.5		26.6	37	34.1	2.3		
PHF	.000	.905	.652	.550	.922	.000	.000	.000	.550	.550	.979	.917	.000	.472	.928	.661	.950	.847	.250	.875	.960
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	206	9	4	219	0	0	0	1	1	11	159	0	1	171	24	25	43	1	93	484
04:45 PM	0	192	10	0	202	0	0	0	0	0	26	165	0	3	194	15	18	31	4	68	464
05:00 PM	0	203	7	1	211	0	0	0	1	1	19	167	0	4	190	30	24	39	1	94	496
05:15 PM	0	169	13	1	183	0	0	0	2	2	30	162	0	3	195	18	28	25	2	73	453
Total Volume	0	770	39	6	815	0	0	0	4	4	86	653	0	11	750	87	95	138	8	328	1897
% App. Total	0	94.5	4.8	0.7		0	0	0	100		11.5	87.1	0	1.5		26.5	29	42.1	2.4		
PHF	.000	.934	.750	.375	.930	.000	.000	.000	.500	.500	.717	.978	.000	.688	.962	.725	.848	.802	.500	.872	.956

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: COB
Weather: Clear
Location: Monroe/Front

File Name : Monroe_Front
Site Code : 00000000
Start Date : 4/1/2014
Page No : 1

Groups Printed- Unshifted - Bank 1 - Bank 2

	MONROE ST Southbound					FRONT ST Westbound					MONROE ST Northbound					FRONT ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	17	44	0	0	61	3	28	8	0	39	0	75	7	0	82	0	0	0	0	0	182
07:15 AM	25	88	0	0	113	3	19	10	0	32	0	95	12	0	107	0	0	0	0	0	252
07:30 AM	59	144	0	5	208	7	38	7	0	52	0	154	24	0	178	0	0	0	1	1	439
07:45 AM	50	110	0	6	166	7	34	13	1	55	0	149	26	1	176	0	0	0	2	2	399
Total	151	386	0	11	548	20	119	38	1	178	0	473	69	1	543	0	0	0	3	3	1272
08:00 AM	25	120	0	1	146	10	19	11	0	40	0	100	17	0	117	0	0	0	0	0	303
08:15 AM	24	116	0	6	146	4	29	22	1	56	0	111	15	3	129	0	0	0	4	4	335
08:30 AM	30	103	0	2	135	8	34	13	1	56	0	93	13	1	107	0	0	0	1	1	299
08:45 AM	31	105	0	4	140	7	22	20	2	51	0	136	18	5	159	0	0	0	1	1	351
Total	110	444	0	13	567	29	104	66	4	203	0	440	63	9	512	0	0	0	6	6	1288
*** BREAK ***																					
11:00 AM	36	112	0	4	152	16	27	21	1	65	0	155	23	2	180	0	0	0	3	3	400
11:15 AM	33	117	0	1	151	17	42	17	3	79	0	138	25	3	166	0	0	0	3	3	399
11:30 AM	28	121	0	3	152	21	33	18	4	76	0	142	21	3	166	0	0	0	4	4	398
11:45 AM	32	135	0	3	170	21	36	23	5	85	0	165	25	0	190	0	0	0	2	2	447
Total	129	485	0	11	625	75	138	79	13	305	0	600	94	8	702	0	0	0	12	12	1644
12:00 PM	31	139	0	5	175	20	45	31	7	103	0	136	31	3	170	0	0	0	4	4	452
12:15 PM	40	124	0	4	168	13	41	30	1	85	0	125	32	2	159	0	0	0	4	4	416
12:30 PM	31	121	0	6	158	16	43	25	4	88	0	160	25	3	188	0	0	0	2	2	436
12:45 PM	40	144	0	7	191	14	26	20	8	68	0	146	37	5	188	0	0	0	3	3	450
Total	142	528	0	22	692	63	155	106	20	344	0	567	125	13	705	0	0	0	13	13	1754
*** BREAK ***																					
02:00 PM	49	138	0	2	189	22	39	22	1	84	0	158	34	0	192	0	0	0	0	0	465
02:15 PM	32	101	0	4	137	14	42	29	7	92	0	157	36	2	195	0	0	0	3	3	427
02:30 PM	38	157	0	1	196	30	48	26	4	108	0	154	22	1	177	0	0	0	0	0	481
02:45 PM	39	169	0	7	215	23	53	30	1	107	0	182	35	2	219	0	0	0	0	0	541
Total	158	565	0	14	737	89	182	107	13	391	0	651	127	5	783	0	0	0	3	3	1914
03:00 PM	27	132	0	3	162	18	50	28	2	98	0	169	25	2	196	0	0	0	5	5	461
03:15 PM	43	118	0	3	164	25	77	29	1	132	0	147	21	1	169	0	0	0	3	3	468
03:30 PM	36	166	0	2	204	19	65	25	7	116	0	135	24	4	163	0	0	0	1	1	484
03:45 PM	38	170	0	13	221	22	69	34	6	131	0	175	23	4	202	0	0	0	12	12	566
Total	144	586	0	21	751	84	261	116	16	477	0	626	93	11	730	0	0	0	21	21	1979

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: COB
Weather: Clear
Location: Monroe/Front

File Name : Monroe_Front
Site Code : 00000000
Start Date : 4/1/2014
Page No : 2

Groups Printed- Unshifted - Bank 1 - Bank 2

	MONROE ST Southbound					FRONT ST Westbound					MONROE ST Northbound					FRONT ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	28	169	0	3	200	29	67	40	0	136	0	158	19	4	181	0	0	0	3	3	520
04:15 PM	39	135	0	7	181	17	46	30	3	96	0	150	28	0	178	0	0	0	4	4	459
04:30 PM	55	167	0	7	229	24	81	50	3	158	0	172	28	0	200	0	0	0	4	4	591
04:45 PM	57	172	0	2	231	21	86	36	1	144	0	175	23	0	198	0	0	0	4	4	577
Total	179	643	0	19	841	91	280	156	7	534	0	655	98	4	757	0	0	0	15	15	2147
05:00 PM	46	177	0	13	236	25	49	33	6	113	0	183	34	3	220	0	0	0	2	2	571
05:15 PM	36	166	0	8	210	14	41	22	2	79	0	167	24	1	192	0	0	0	1	1	482
05:30 PM	33	139	0	4	176	15	47	15	1	78	0	176	14	1	191	0	0	0	1	1	446
05:45 PM	27	148	0	1	176	7	45	19	9	80	0	137	20	4	161	0	0	0	9	9	426
Total	142	630	0	26	798	61	182	89	18	350	0	663	92	9	764	0	0	0	13	13	1925
Grand Total	1155	4267	0	137	5559	512	1421	757	92	2782	0	4675	761	60	5496	0	0	0	86	86	13923
Apprch %	20.8	76.8	0	2.5		18.4	51.1	27.2	3.3		0	85.1	13.8	1.1		0	0	0	100		
Total %	8.3	30.6	0	1	39.9	3.7	10.2	5.4	0.7	20	0	33.6	5.5	0.4	39.5	0	0	0	0.6	0.6	
Unshifted	1130	4189	0	137	5456	505	1389	752	92	2738	0	4599	751	60	5410	0	0	0	86	86	13690
% Unshifted	97.8	98.2	0	100	98.1	98.6	97.7	99.3	100	98.4	0	98.4	98.7	100	98.4	0	0	0	100	100	98.3
Bank 1	25	78	0	0	103	7	32	5	0	44	0	76	10	0	86	0	0	0	0	0	233
% Bank 1	2.2	1.8	0	0	1.9	1.4	2.3	0.7	0	1.6	0	1.6	1.3	0	1.6	0	0	0	0	0	1.7
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: COB
Weather: Clear
Location: Monroe/Front

File Name : Monroe_Front
Site Code : 00000000
Start Date : 4/1/2014

	MONROE ST Southbound					FRONT ST Westbound					MONROE ST Northbound					FRONT ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	59	144	0	5	208	7	38	7	0	52	0	154	24	0	178	0	0	0	1	1	439
07:45 AM	50	110	0	6	166	7	34	13	1	55	0	149	26	1	176	0	0	0	2	2	399
08:00 AM	25	120	0	1	146	10	19	11	0	40	0	100	17	0	117	0	0	0	0	0	303
08:15 AM	24	116	0	6	146	4	29	22	1	56	0	111	15	3	129	0	0	0	4	4	335
Total Volume	158	490	0	18	666	28	120	53	2	203	0	514	82	4	600	0	0	0	7	7	1476
% App. Total	23.7	73.6	0	2.7		13.8	59.1	26.1	1		0	85.7	13.7	0.7		0	0	0	100		
PHF	.669	.851	.000	.750	.800	.700	.789	.602	.500	.906	.000	.834	.788	.333	.843	.000	.000	.000	.438	.438	.841
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	31	139	0	5	175	20	45	31	7	103	0	136	31	3	170	0	0	0	4	4	452
12:15 PM	40	124	0	4	168	13	41	30	1	85	0	125	32	2	159	0	0	0	4	4	416
12:30 PM	31	121	0	6	158	16	43	25	4	88	0	160	25	3	188	0	0	0	2	2	436
12:45 PM	40	144	0	7	191	14	26	20	8	68	0	146	37	5	188	0	0	0	3	3	450
Total Volume	142	528	0	22	692	63	155	106	20	344	0	567	125	13	705	0	0	0	13	13	1754
% App. Total	20.5	76.3	0	3.2		18.3	45.1	30.8	5.8		0	80.4	17.7	1.8		0	0	0	100		
PHF	.888	.917	.000	.786	.906	.788	.861	.855	.625	.835	.000	.886	.845	.650	.938	.000	.000	.000	.813	.813	.970
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	55	167	0	7	229	24	81	50	3	158	0	172	28	0	200	0	0	0	4	4	591
04:45 PM	57	172	0	2	231	21	86	36	1	144	0	175	23	0	198	0	0	0	4	4	577
05:00 PM	46	177	0	13	236	25	49	33	6	113	0	183	34	3	220	0	0	0	2	2	571
05:15 PM	36	166	0	8	210	14	41	22	2	79	0	167	24	1	192	0	0	0	1	1	482
Total Volume	194	682	0	30	906	84	257	141	12	494	0	697	109	4	810	0	0	0	11	11	2221
% App. Total	21.4	75.3	0	3.3		17	52	28.5	2.4		0	86	13.5	0.5		0	0	0	100		
PHF	.851	.963	.000	.577	.960	.840	.747	.705	.500	.782	.000	.952	.801	.333	.920	.000	.000	.000	.688	.688	.940

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: SMW
Weather: Clear
Location: Monroe/Elm

File Name : Monroe_Elm
Site Code : 00000000
Start Date : 4/1/2014
Page No : 1

Groups Printed- Unshifted - Bank 1 - Bank 2

	MONROE ST Southbound					ELM AVE Westbound					MONROE ST Northbound					ELM AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	15	39	3	0	57	8	44	15	0	67	27	50	7	0	84	6	54	7	0	67	275
07:15 AM	9	89	7	0	105	5	46	23	0	74	18	64	13	0	95	10	58	23	0	91	365
07:30 AM	18	139	12	1	170	10	61	42	1	114	28	88	20	3	139	22	55	29	0	106	529
07:45 AM	17	129	23	0	169	13	55	27	1	96	28	108	20	1	157	15	65	25	0	105	527
Total	59	396	45	1	501	36	206	107	2	351	101	310	60	4	475	53	232	84	0	369	1696
08:00 AM	9	82	12	1	104	8	52	44	1	105	35	61	26	1	123	14	44	19	0	77	409
08:15 AM	15	74	12	1	102	13	65	43	0	121	29	64	21	0	114	19	55	23	1	98	435
08:30 AM	9	75	8	3	95	10	51	38	0	99	20	62	12	0	94	21	47	24	0	92	380
08:45 AM	14	81	7	1	103	10	51	38	0	99	29	90	20	2	141	14	37	24	0	75	418
Total	47	312	39	6	404	41	219	163	1	424	113	277	79	3	472	68	183	90	1	342	1642
*** BREAK ***																					
11:00 AM	8	100	9	3	120	12	52	22	1	87	33	116	22	1	172	15	44	23	6	88	467
11:15 AM	15	100	16	1	132	18	53	35	0	106	27	96	24	2	149	20	44	12	7	83	470
11:30 AM	22	108	9	1	140	13	57	27	0	97	33	94	37	1	165	20	41	20	2	83	485
11:45 AM	13	126	12	0	151	17	43	42	2	104	39	103	31	2	175	17	60	16	0	93	523
Total	58	434	46	5	543	60	205	126	3	394	132	409	114	6	661	72	189	71	15	347	1945
12:00 PM	28	118	11	1	158	18	67	41	1	127	24	118	13	3	158	24	67	34	1	126	569
12:15 PM	19	113	18	2	152	10	67	36	0	113	30	92	31	0	153	17	70	19	2	108	526
12:30 PM	22	117	12	1	152	13	52	36	0	101	31	123	23	3	180	13	69	22	0	104	537
12:45 PM	10	133	13	2	158	20	59	38	2	119	19	101	41	1	162	34	60	24	4	122	561
Total	79	481	54	6	620	61	245	151	3	460	104	434	108	7	653	88	266	99	7	460	2193
*** BREAK ***																					
02:00 PM	19	126	15	2	162	18	56	40	3	117	23	131	24	3	181	13	64	37	2	116	576
02:15 PM	14	94	14	4	126	14	67	35	3	119	33	100	27	0	160	13	69	21	1	104	509
02:30 PM	19	140	23	1	183	18	67	41	3	129	36	139	27	0	202	17	69	37	2	125	639
02:45 PM	18	129	27	2	176	14	70	51	1	136	26	124	40	2	192	24	72	39	4	139	643
Total	70	489	79	9	647	64	260	167	10	501	118	494	118	5	735	67	274	134	9	484	2367
03:00 PM	17	109	14	1	141	17	73	38	1	129	23	109	35	3	170	8	85	35	3	131	571
03:15 PM	27	129	18	1	175	11	80	41	3	135	25	124	20	2	171	13	86	40	0	139	620
03:30 PM	29	157	13	5	204	7	73	36	5	121	27	95	23	0	145	28	70	34	1	133	603
03:45 PM	28	134	16	1	179	3	76	32	3	114	25	122	33	2	182	26	56	50	4	136	611
Total	101	529	61	8	699	38	302	147	12	499	100	450	111	7	668	75	297	159	8	539	2405

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: SMW
Weather: Clear
Location: Monroe/Elm

File Name : Monroe_Elm
Site Code : 00000000
Start Date : 4/1/2014

Groups Printed- Unshifted - Bank 1 - Bank 2

	MONROE ST Southbound					ELM AVE Westbound					MONROE ST Northbound					ELM AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	23	160	20	1	204	10	72	34	0	116	34	111	27	0	172	12	71	21	0	104	596
04:15 PM	24	140	17	0	181	12	74	40	5	131	50	110	4	3	167	16	66	29	5	116	595
04:30 PM	34	152	15	0	201	5	72	49	3	129	40	138	17	0	195	31	61	19	0	111	636
04:45 PM	31	172	13	4	220	10	71	31	3	115	41	110	35	5	191	30	56	25	1	112	638
Total	112	624	65	5	806	37	289	154	11	491	165	469	83	8	725	89	254	94	6	443	2465
05:00 PM	24	154	19	3	200	14	40	43	6	103	51	102	31	4	188	41	55	18	4	118	609
05:15 PM	26	138	15	2	181	19	78	43	4	144	34	101	41	3	179	30	72	28	0	130	634
05:30 PM	31	119	9	4	163	10	81	39	2	132	58	99	39	10	206	25	60	25	11	121	622
05:45 PM	22	127	15	3	167	7	77	41	8	133	30	90	23	1	144	18	75	32	1	126	570
Total	103	538	58	12	711	50	276	166	20	512	173	392	134	18	717	114	262	103	16	495	2435
Grand Total	629	3803	447	52	4931	387	2002	1181	62	3632	1006	3235	807	58	5106	626	1957	834	62	3479	17148
Apprch %	12.8	77.1	9.1	1.1		10.7	55.1	32.5	1.7		19.7	63.4	15.8	1.1		18	56.3	24	1.8		
Total %	3.7	22.2	2.6	0.3	28.8	2.3	11.7	6.9	0.4	21.2	5.9	18.9	4.7	0.3	29.8	3.7	11.4	4.9	0.4	20.3	
Unshifted	627	3775	442	52	4896	384	1987	1170	62	3603	1000	3206	796	58	5060	622	1933	829	62	3446	17005
% Unshifted	99.7	99.3	98.9	100	99.3	99.2	99.3	99.1	100	99.2	99.4	99.1	98.6	100	99.1	99.4	98.8	99.4	100	99.1	99.2
Bank 1	2	28	5	0	35	3	15	11	0	29	6	29	11	0	46	4	24	5	0	33	143
% Bank 1	0.3	0.7	1.1	0	0.7	0.8	0.7	0.9	0	0.8	0.6	0.9	1.4	0	0.9	0.6	1.2	0.6	0	0.9	0.8
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Hubbell, Roth & Clark, Inc.

555 Hulet Drive
Bloomfield Hills, Michigan, 48303
(248) 454-6300

Job Number: 20140132
Counted By: SMW
Weather: Clear
Location: Monroe/Elm

File Name : Monroe_Elm
Site Code : 00000000
Start Date : 4/1/2014
Page No : 3

	MONROE ST Southbound					ELM AVE Westbound					MONROE ST Northbound					ELM AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	18	139	12	1	170	10	61	42	1	114	28	88	20	3	139	22	55	29	0	106	529
07:45 AM	17	129	23	0	169	13	55	27	1	96	28	108	20	1	157	15	65	25	0	105	527
08:00 AM	9	82	12	1	104	8	52	44	1	105	35	61	26	1	123	14	44	19	0	77	409
08:15 AM	15	74	12	1	102	13	65	43	0	121	29	64	21	0	114	19	55	23	1	98	435
Total Volume	59	424	59	3	545	44	233	156	3	436	120	321	87	5	533	70	219	96	1	386	1900
% App. Total	10.8	77.8	10.8	0.6		10.1	53.4	35.8	0.7		22.5	60.2	16.3	0.9		18.1	56.7	24.9	0.3		
PHF	.819	.763	.641	.750	.801	.846	.896	.886	.750	.901	.857	.743	.837	.417	.849	.795	.842	.828	.250	.910	.898
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	28	118	11	1	158	18	67	41	1	127	24	118	13	3	158	24	67	34	1	126	569
12:15 PM	19	113	18	2	152	10	67	36	0	113	30	92	31	0	153	17	70	19	2	108	526
12:30 PM	22	117	12	1	152	13	52	36	0	101	31	123	23	3	180	13	69	22	0	104	537
12:45 PM	10	133	13	2	158	20	59	38	2	119	19	101	41	1	162	34	60	24	4	122	561
Total Volume	79	481	54	6	620	61	245	151	3	460	104	434	108	7	653	88	266	99	7	460	2193
% App. Total	12.7	77.6	8.7	1		13.3	53.3	32.8	0.7		15.9	66.5	16.5	1.1		19.1	57.8	21.5	1.5		
PHF	.705	.904	.750	.750	.981	.763	.914	.921	.375	.906	.839	.882	.659	.583	.907	.647	.950	.728	.438	.913	.964
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	34	152	15	0	201	5	72	49	3	129	40	138	17	0	195	31	61	19	0	111	636
04:45 PM	31	172	13	4	220	10	71	31	3	115	41	110	35	5	191	30	56	25	1	112	638
05:00 PM	24	154	19	3	200	14	40	43	6	103	51	102	31	4	188	41	55	18	4	118	609
05:15 PM	26	138	15	2	181	19	78	43	4	144	34	101	41	3	179	30	72	28	0	130	634
Total Volume	115	616	62	9	802	48	261	166	16	491	166	451	124	12	753	132	244	90	5	471	2517
% App. Total	14.3	76.8	7.7	1.1		9.8	53.2	33.8	3.3		22	59.9	16.5	1.6		28	51.8	19.1	1.1		
PHF	.846	.895	.816	.563	.911	.632	.837	.847	.667	.852	.814	.817	.756	.600	.965	.805	.847	.804	.313	.906	.986

Appendix B –
Synchro Reports for Existing Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	54	34	42	123	77	10	495	4	27	596	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.94		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1766	1744		1667	1401		1764	3269		1746	3391	
Flt Permitted	0.52	1.00		0.68	1.00		0.24	1.00		0.38	1.00	
Satd. Flow (perm)	962	1744		1201	1401		451	3269		694	3391	
Peak-hour factor, PHF	0.78	0.78	0.78	0.71	0.71	0.71	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	118	69	44	59	173	108	12	619	5	34	745	158
RTOR Reduction (vph)	0	28	0	0	28	0	0	1	0	0	22	0
Lane Group Flow (vph)	118	85	0	59	253	0	12	623	0	34	881	0
Confl. Peds. (#/hr)	2		2	2		2	5		3	3		5
Heavy Vehicles (%)	2%	2%	2%	8%	8%	8%	2%	2%	2%	3%	3%	3%
Parking (#/hr)					10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	29.0	29.0		29.0	29.0		39.6	39.6		39.6	39.6	
Effective Green, g (s)	29.0	29.0		29.0	29.0		39.6	39.6		39.6	39.6	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.50	0.50		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Grp Cap (vph)	349	632		435	508		223	1618		344	1679	
v/s Ratio Prot		0.05			c0.18			0.19			c0.26	
v/s Ratio Perm	0.12			0.05			0.03			0.05		
v/c Ratio	0.34	0.13		0.14	0.50		0.05	0.39		0.10	0.52	
Uniform Delay, d1	18.5	17.1		17.1	19.8		10.5	12.6		10.7	13.8	
Progression Factor	1.00	1.00		1.00	1.00		0.68	0.69		0.96	0.77	
Incremental Delay, d2	2.6	0.4		0.6	3.5		0.4	0.6		0.6	1.2	
Delay (s)	21.1	17.5		17.7	23.3		7.6	9.4		10.8	11.8	
Level of Service	C	B		B	C		A	A		B	B	
Approach Delay (s)		19.4			22.3			9.3			11.8	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	2	3	17	7	4	9	561	19	8	504	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1415			1395		1733	3192		1717	3434	
Flt Permitted		0.93			0.86		0.41	1.00		0.37	1.00	
Satd. Flow (perm)		1345			1232		756	3192		664	3434	
Peak-hour factor, PHF	0.75	0.75	0.75	0.73	0.73	0.73	0.83	0.83	0.83	0.84	0.84	0.84
Adj. Flow (vph)	4	3	4	23	10	5	11	676	23	10	600	4
RTOR Reduction (vph)	0	3	0	0	4	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	8	0	0	34	0	11	696	0	10	603	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	6%	6%	6%	10%	10%	10%	4%	4%	4%	5%	5%	5%
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)		19.0			19.0		49.5	49.5		49.5	49.5	
Effective Green, g (s)		19.0			19.0		49.5	49.5		49.5	49.5	
Actuated g/C Ratio		0.24			0.24		0.62	0.62		0.62	0.62	
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Grp Cap (vph)		319			293		468	1975		411	2125	
v/s Ratio Prot								c0.22			0.18	
v/s Ratio Perm		0.01			c0.03		0.01			0.02		
v/c Ratio		0.02			0.12		0.02	0.35		0.02	0.28	
Uniform Delay, d1		23.4			23.9		5.9	7.4		5.9	7.1	
Progression Factor		1.00			1.00		0.55	0.54		0.30	0.28	
Incremental Delay, d2		0.1			0.8		0.1	0.5		0.1	0.3	
Delay (s)		23.5			24.7		3.3	4.5		1.9	2.3	
Level of Service		C			C		A	A		A	A	
Approach Delay (s)		23.5			24.7			4.5			2.3	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	4.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	109	55	0	0	0	0	490	75	59	475	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0						5.2		5.2	5.2	
Lane Util. Factor		0.95						0.95		1.00	0.95	
Frpb, ped/bikes		0.99						1.00		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.97						0.98		1.00	1.00	
Flt Protected		0.98						1.00		0.95	1.00	
Satd. Flow (prot)		2979						3141		1719	3438	
Flt Permitted		0.98						1.00		0.33	1.00	
Satd. Flow (perm)		2979						3141		597	3438	
Peak-hour factor, PHF	0.72	0.72	0.72	0.25	0.25	0.25	0.83	0.83	0.83	0.84	0.84	0.84
Adj. Flow (vph)	135	151	76	0	0	0	0	590	90	70	565	0
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	332	0	0	0	0	0	680	0	70	565	0
Confl. Peds. (#/hr)	3		10	10		3	2		1	1		2
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	5%	5%	5%
Parking (#/hr)		20						10				
Turn Type	Perm									pm+pt		
Protected Phases		3						1		2	1 2	
Permitted Phases	3									1 2		
Actuated Green, G (s)		19.0						35.8		44.6	49.8	
Effective Green, g (s)		19.0						35.8		44.6	49.8	
Actuated g/C Ratio		0.24						0.45		0.56	0.62	
Clearance Time (s)		6.0						5.2		5.2		
Lane Grp Cap (vph)		708						1406		456	2140	
v/s Ratio Prot								c0.22		0.02	c0.16	
v/s Ratio Perm		0.11								0.07		
v/c Ratio		0.47						0.48		0.15	0.26	
Uniform Delay, d1		26.2						15.6		11.7	6.8	
Progression Factor		1.00						0.40		0.29	0.30	
Incremental Delay, d2		2.2						1.2		0.6	0.3	
Delay (s)		28.4						7.4		4.1	2.3	
Level of Service		C						A		A	A	
Approach Delay (s)		28.4			0.0			7.4			2.5	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	53	120	28	82	514	0	0	490	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.0		5.9	5.9			5.9	
Lane Util. Factor					0.95		1.00	0.95			0.95	
Frpb, ped/bikes					1.00		1.00	1.00			0.99	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.98		1.00	1.00			0.96	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					2944		1751	3242			3325	
Flt Permitted					0.99		0.26	1.00			1.00	
Satd. Flow (perm)					2944		482	3242			3325	
Peak-hour factor, PHF	0.44	0.44	0.44	0.91	0.91	0.91	0.84	0.84	0.84	0.80	0.80	0.80
Adj. Flow (vph)	0	0	0	58	132	31	98	612	0	0	612	198
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	0	0	39	0
Lane Group Flow (vph)	0	0	0	0	205	0	98	612	0	0	771	0
Confl. Peds. (#/hr)	18		4	4		18	7		2	2		7
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	3%	3%	3%	4%	4%	4%
Parking (#/hr)					20			10				
Turn Type				Perm			pm+pt					
Protected Phases					3		2	1 2			1	
Permitted Phases				3			1 2					
Actuated Green, G (s)					20.0		42.2	48.1			34.1	
Effective Green, g (s)					20.0		42.2	48.1			34.1	
Actuated g/C Ratio					0.25		0.53	0.60			0.43	
Clearance Time (s)					6.0		5.9				5.9	
Lane Grp Cap (vph)					736		383	1949			1417	
v/s Ratio Prot							0.03	c0.19			c0.23	
v/s Ratio Perm					0.07		0.11					
v/c Ratio					0.28		0.26	0.31			0.54	
Uniform Delay, d1					24.2		15.7	7.8			17.1	
Progression Factor					1.00		0.23	0.20			1.57	
Incremental Delay, d2					0.9		1.4	0.4			1.3	
Delay (s)					25.1		5.0	1.9			28.2	
Level of Service					C		A	A			C	
Approach Delay (s)		0.0			25.1			2.4			28.2	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	219	70	156	233	44	87	321	120	59	424	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.98		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1769	1787		1734	1779		1735	3054		1733	3398	
Flt Permitted	0.29	1.00		0.29	1.00		0.36	1.00		0.41	1.00	
Satd. Flow (perm)	532	1787		520	1779		648	3054		753	3398	
Peak-hour factor, PHF	0.91	0.91	0.91	0.90	0.90	0.90	0.85	0.85	0.85	0.80	0.80	0.80
Adj. Flow (vph)	105	241	77	173	259	49	102	378	141	74	530	74
RTOR Reduction (vph)	0	14	0	0	8	0	0	48	0	0	14	0
Lane Group Flow (vph)	105	304	0	173	300	0	102	471	0	74	590	0
Confl. Peds. (#/hr)	3		5	5		3	1		3	3		1
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)								10				
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	18.8	14.0		23.6	16.4		35.2	30.2		35.2	30.2	
Effective Green, g (s)	18.8	14.0		23.6	16.4		35.2	30.2		35.2	30.2	
Actuated g/C Ratio	0.24	0.18		0.30	0.20		0.44	0.38		0.44	0.38	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	0.2		4.0	0.2	
Lane Grp Cap (vph)	199	313		263	365		353	1153		393	1283	
v/s Ratio Prot	0.03	c0.17		c0.06	0.17		c0.02	0.15		0.01	c0.17	
v/s Ratio Perm	0.09			0.13			0.11			0.07		
v/c Ratio	0.53	0.97		0.66	0.82		0.29	0.41		0.19	0.46	
Uniform Delay, d1	32.2	32.8		29.8	30.4		17.8	18.3		15.7	18.8	
Progression Factor	1.00	1.00		1.00	1.00		0.48	0.33		1.07	1.07	
Incremental Delay, d2	3.3	43.0		6.4	14.4		0.6	1.0		0.3	1.1	
Delay (s)	35.4	75.8		36.2	44.8		9.2	7.1		17.1	21.2	
Level of Service	D	E		D	D		A	A		B	C	
Approach Delay (s)		65.8			41.8			7.4			20.8	
Approach LOS		E			D			A			C	

Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	62	30	49	107	80	16	589	14	25	656	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.95		1.00	0.94		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1768	1764		1715	1431		1742	3227		1751	3455	
Flt Permitted	0.61	1.00		0.69	1.00		0.33	1.00		0.39	1.00	
Satd. Flow (perm)	1137	1764		1241	1431		598	3227		719	3455	
Peak-hour factor, PHF	0.85	0.85	0.85	0.94	0.94	0.94	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	134	73	35	52	114	85	17	640	15	26	691	99
RTOR Reduction (vph)	0	25	0	0	39	0	0	2	0	0	16	0
Lane Group Flow (vph)	134	83	0	52	160	0	17	653	0	26	774	0
Confl. Peds. (#/hr)	1		2	2		1	7		9	9		7
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	3%	3%	3%	2%	2%	2%
Parking (#/hr)					10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	17.0	17.0		17.0	17.0		41.6	41.6		41.6	41.6	
Effective Green, g (s)	17.0	17.0		17.0	17.0		41.6	41.6		41.6	41.6	
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.59	0.59		0.59	0.59	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Grp Cap (vph)	276	428		301	348		355	1918		427	2053	
v/s Ratio Prot		0.05			0.11			0.20			c0.22	
v/s Ratio Perm	c0.12			0.04			0.03			0.04		
v/c Ratio	0.49	0.19		0.17	0.46		0.05	0.34		0.06	0.38	
Uniform Delay, d1	22.7	21.1		20.9	22.6		5.9	7.2		6.0	7.4	
Progression Factor	1.00	1.00		1.00	1.00		0.31	0.31		0.84	0.57	
Incremental Delay, d2	6.0	1.0		1.2	4.3		0.2	0.4		0.3	0.5	
Delay (s)	28.7	22.1		22.2	26.9		2.1	2.7		5.3	4.8	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		25.8			26.0			2.7			4.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	9	15	27	14	27	11	659	37	8	629	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	
Frt		0.93			0.95		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1394			1405		1759	3239		1737	3495	
Flt Permitted		0.97			0.88		0.35	1.00		0.33	1.00	
Satd. Flow (perm)		1357			1264		641	3239		606	3495	
Peak-hour factor, PHF	0.77	0.77	0.77	0.74	0.74	0.74	0.91	0.91	0.91	0.87	0.87	0.87
Adj. Flow (vph)	5	12	19	36	19	36	12	724	41	9	723	11
RTOR Reduction (vph)	0	14	0	0	26	0	0	6	0	0	1	0
Lane Group Flow (vph)	0	22	0	0	65	0	12	759	0	9	733	0
Confl. Peds. (#/hr)	1		3	3		1	6		9	9		6
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	3%	3%	3%
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)		19.0			19.0		39.5	39.5		39.5	39.5	
Effective Green, g (s)		19.0			19.0		39.5	39.5		39.5	39.5	
Actuated g/C Ratio		0.27			0.27		0.56	0.56		0.56	0.56	
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Grp Cap (vph)		368			343		362	1828		342	1972	
v/s Ratio Prot								c0.23			0.21	
v/s Ratio Perm		0.02			c0.05		0.02			0.01		
v/c Ratio		0.06			0.19		0.03	0.42		0.03	0.37	
Uniform Delay, d1		18.9			19.6		6.8	8.7		6.7	8.4	
Progression Factor		1.00			1.00		0.41	0.40		0.28	0.25	
Incremental Delay, d2		0.3			1.2		0.2	0.7		0.1	0.5	
Delay (s)		19.2			20.8		2.9	4.1		2.0	2.6	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		19.2			20.8			4.1			2.6	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	4.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	114	82	0	0	0	0	576	94	73	554	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0						5.2		5.2	5.2	
Lane Util. Factor		0.95						0.95		1.00	0.95	
Frpb, ped/bikes		0.99						0.99		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.96						0.98		1.00	1.00	
Flt Protected		0.98						1.00		0.95	1.00	
Satd. Flow (prot)		2988						3127		1750	3505	
Flt Permitted		0.98						1.00		0.28	1.00	
Satd. Flow (perm)		2988						3127		518	3505	
Peak-hour factor, PHF	0.88	0.88	0.88	0.55	0.55	0.55	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	119	130	93	0	0	0	0	619	101	79	602	0
RTOR Reduction (vph)	0	55	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	287	0	0	0	0	0	720	0	79	602	0
Confl. Peds. (#/hr)	11		17	17		11	7		11	11		7
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	4%	4%	4%	3%	3%	3%
Parking (#/hr)		10						10				
Turn Type	Perm									pm+pt		
Protected Phases		3						1		2	1 2	
Permitted Phases	3									1 2		
Actuated Green, G (s)		19.0						25.8		34.6	39.8	
Effective Green, g (s)		19.0						25.8		34.6	39.8	
Actuated g/C Ratio		0.27						0.37		0.49	0.57	
Clearance Time (s)		6.0						5.2		5.2		
Lane Grp Cap (vph)		811						1153		411	1993	
v/s Ratio Prot								c0.23		0.02	c0.17	
v/s Ratio Perm		0.10								0.07		
v/c Ratio		0.35						0.62		0.19	0.30	
Uniform Delay, d1		20.6						18.1		14.2	7.9	
Progression Factor		1.00						0.36		0.34	0.36	
Incremental Delay, d2		1.2						2.4		0.8	0.3	
Delay (s)		21.8						9.0		5.7	3.1	
Level of Service		C						A		A	A	
Approach Delay (s)		21.8			0.0			9.0			3.4	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	106	155	63	125	567	0	0	528	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.0		5.9	5.9			5.9	
Lane Util. Factor					0.95		1.00	0.95			0.95	
Frpb, ped/bikes					0.99		1.00	1.00			0.99	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.97		1.00	1.00			0.97	
Flt Protected					0.98		0.95	1.00			1.00	
Satd. Flow (prot)					3032		1750	3242			3371	
Flt Permitted					0.98		0.27	1.00			1.00	
Satd. Flow (perm)					3032		495	3242			3371	
Peak-hour factor, PHF	0.81	0.81	0.81	0.84	0.84	0.84	0.94	0.94	0.94	0.91	0.91	0.91
Adj. Flow (vph)	0	0	0	126	185	75	133	603	0	0	580	156
RTOR Reduction (vph)	0	0	0	0	30	0	0	0	0	0	35	0
Lane Group Flow (vph)	0	0	0	0	356	0	133	603	0	0	701	0
Confl. Peds. (#/hr)	22		13	13		22	13		20	20		13
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Parking (#/hr)					10			10				
Turn Type				Perm			pm+pt					
Protected Phases					3		2	1 2			1	
Permitted Phases				3			1 2					
Actuated Green, G (s)					20.0		32.2	38.1			24.1	
Effective Green, g (s)					20.0		32.2	38.1			24.1	
Actuated g/C Ratio					0.29		0.46	0.54			0.34	
Clearance Time (s)					6.0		5.9				5.9	
Lane Grp Cap (vph)					866		373	1765			1161	
v/s Ratio Prot							0.04	c0.19			c0.21	
v/s Ratio Perm					0.12		0.12					
v/c Ratio					0.41		0.36	0.34			0.60	
Uniform Delay, d1					20.2		17.5	8.9			19.0	
Progression Factor					1.00		0.31	0.22			1.36	
Incremental Delay, d2					1.4		2.2	0.4			1.9	
Delay (s)					21.7		7.6	2.4			27.7	
Level of Service					C		A	A			C	
Approach Delay (s)		0.0			21.7			3.3			27.7	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	266	88	151	245	61	108	434	104	54	481	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1785	1802		1718	1749		1748	3130		1785	3478	
Flt Permitted	0.31	1.00		0.24	1.00		0.33	1.00		0.33	1.00	
Satd. Flow (perm)	577	1802		441	1749		615	3130		623	3478	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95
Adj. Flow (vph)	109	292	97	166	269	67	119	477	114	57	506	83
RTOR Reduction (vph)	0	17	0	0	12	0	0	29	0	0	19	0
Lane Group Flow (vph)	109	372	0	166	324	0	119	562	0	57	570	0
Confl. Peds. (#/hr)	6		7	7		6	7		3	3		7
Heavy Vehicles (%)	1%	1%	1%	5%	5%	5%	3%	3%	3%	1%	1%	1%
Parking (#/hr)								10				
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	18.8	14.0		23.6	16.4		27.6	21.5		22.8	19.1	
Effective Green, g (s)	18.8	14.0		23.6	16.4		27.6	21.5		22.8	19.1	
Actuated g/C Ratio	0.27	0.20		0.34	0.23		0.39	0.31		0.33	0.27	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	0.2		4.0	0.2	
Lane Grp Cap (vph)	238	360		280	410		341	961		264	949	
v/s Ratio Prot	0.03	c0.21		c0.06	0.19		c0.03	c0.18		0.01	0.16	
v/s Ratio Perm	0.09			0.14			0.11			0.06		
v/c Ratio	0.46	1.03		0.59	0.79		0.35	0.58		0.22	0.60	
Uniform Delay, d1	26.4	28.0		25.4	25.2		18.7	20.5		20.4	22.1	
Progression Factor	1.00	1.00		1.00	1.00		0.40	0.37		0.84	0.75	
Incremental Delay, d2	1.9	56.5		3.9	10.3		0.8	2.5		0.5	2.7	
Delay (s)	28.3	84.5		29.3	35.5		8.2	10.1		17.7	19.3	
Level of Service	C	F		C	D		A	B		B	B	
Approach Delay (s)		72.2			33.4			9.8			19.1	
Approach LOS		E			C			A			B	

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	166	79	35	36	128	68	16	589	14	25	656	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.95		1.00	0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1775	1785		1725	1461		1761	3258		1745	3465	
Flt Permitted	0.55	1.00		0.67	1.00		0.30	1.00		0.39	1.00	
Satd. Flow (perm)	1035	1785		1225	1461		553	3258		709	3465	
Peak-hour factor, PHF	0.89	0.89	0.89	0.84	0.84	0.84	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	187	89	39	43	152	81	17	620	15	28	729	91
RTOR Reduction (vph)	0	20	0	0	24	0	0	2	0	0	12	0
Lane Group Flow (vph)	187	108	0	43	209	0	17	633	0	28	808	0
Confl. Peds. (#/hr)	7		5	5		7	6		11	11		6
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	2%	2%	2%	2%	2%	2%
Parking (#/hr)					10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		44.6	44.6		44.6	44.6	
Effective Green, g (s)	24.0	24.0		24.0	24.0		44.6	44.6		44.6	44.6	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.56	0.56		0.56	0.56	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Grp Cap (vph)	311	536		368	438		308	1816		395	1932	
v/s Ratio Prot		0.06			0.14			0.19			c0.23	
v/s Ratio Perm	c0.18			0.04			0.03			0.04		
v/c Ratio	0.60	0.20		0.12	0.48		0.06	0.35		0.07	0.42	
Uniform Delay, d1	23.9	20.9		20.3	22.9		8.1	9.7		8.2	10.2	
Progression Factor	1.00	1.00		1.00	1.00		0.59	0.76		0.44	0.38	
Incremental Delay, d2	8.3	0.8		0.6	3.7		0.3	0.5		0.3	0.6	
Delay (s)	32.3	21.7		21.0	26.6		5.0	7.8		3.9	4.5	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		28.0			25.7			7.8			4.5	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	7	20	49	20	14	7	717	13	18	815	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	
Frt		0.93			0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1398			1513		1754	3263		1778	3568	
Flt Permitted		0.90			0.80		0.27	1.00		0.33	1.00	
Satd. Flow (perm)		1285			1241		490	3263		609	3568	
Peak-hour factor, PHF	0.75	0.75	0.75	0.82	0.82	0.82	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	16	9	27	60	24	17	8	779	14	21	937	8
RTOR Reduction (vph)	0	21	0	0	9	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	31	0	0	92	0	8	791	0	21	944	0
Confl. Peds. (#/hr)	1		1	1		1	12		5	5		12
Heavy Vehicles (%)	5%	5%	5%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)		19.0			19.0		49.5	49.5		49.5	49.5	
Effective Green, g (s)		19.0			19.0		49.5	49.5		49.5	49.5	
Actuated g/C Ratio		0.24			0.24		0.62	0.62		0.62	0.62	
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Grp Cap (vph)		305			295		303	2019		377	2208	
v/s Ratio Prot								0.24			c0.26	
v/s Ratio Perm		0.02			c0.07		0.02			0.03		
v/c Ratio		0.10			0.31		0.03	0.39		0.06	0.43	
Uniform Delay, d1		23.8			25.1		5.9	7.7		6.0	7.9	
Progression Factor		1.00			1.00		0.86	0.96		0.28	0.24	
Incremental Delay, d2		0.7			2.7		0.1	0.5		0.3	0.6	
Delay (s)		24.5			27.8		5.2	7.9		1.9	2.5	
Level of Service		C			C		A	A		A	A	
Approach Delay (s)		24.5			27.8			7.9			2.4	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	6.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	95	87	0	0	0	0	653	86	39	770	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0						5.2		5.2	5.2	
Lane Util. Factor		0.95						0.95		1.00	0.95	
Frpb, ped/bikes		0.99						1.00		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.96						0.98		1.00	1.00	
Flt Protected		0.98						1.00		0.95	1.00	
Satd. Flow (prot)		3012						3177		1769	3539	
Flt Permitted		0.98						1.00		0.28	1.00	
Satd. Flow (perm)		3012						3177		520	3539	
Peak-hour factor, PHF	0.87	0.87	0.87	0.50	0.50	0.50	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	159	109	100	0	0	0	0	687	91	42	828	0
RTOR Reduction (vph)	0	48	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	320	0	0	0	0	0	778	0	42	828	0
Confl. Peds. (#/hr)	6		11	11		6	8		4	4		8
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Parking (#/hr)		10						10				
Turn Type	Perm									pm+pt		
Protected Phases		3						1		2	1 2	
Permitted Phases	3									1 2		
Actuated Green, G (s)		19.0						35.8		44.6	49.8	
Effective Green, g (s)		19.0						35.8		44.6	49.8	
Actuated g/C Ratio		0.24						0.45		0.56	0.62	
Clearance Time (s)		6.0						5.2		5.2		
Lane Grp Cap (vph)		715						1422		427	2203	
v/s Ratio Prot								c0.24		0.01	c0.23	
v/s Ratio Perm		0.11								0.04		
v/c Ratio		0.45						0.55		0.10	0.38	
Uniform Delay, d1		26.0						16.2		12.5	7.4	
Progression Factor		1.00						0.28		0.52	0.57	
Incremental Delay, d2		2.0						1.4		0.3	0.4	
Delay (s)		28.0						6.0		6.8	4.6	
Level of Service		C						A		A	A	
Approach Delay (s)		28.0			0.0			6.0			4.7	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	141	257	84	109	697	0	0	682	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.0		5.9	5.9			5.9	
Lane Util. Factor					0.95		1.00	0.95			0.95	
Frpb, ped/bikes					0.99		1.00	1.00			0.99	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.97		1.00	1.00			0.97	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					3110		1769	3274			3399	
Flt Permitted					0.99		0.21	1.00			1.00	
Satd. Flow (perm)					3110		390	3274			3399	
Peak-hour factor, PHF	0.69	0.69	0.69	0.81	0.81	0.81	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	174	317	104	118	758	0	0	718	204
RTOR Reduction (vph)	0	0	0	0	23	0	0	0	0	0	33	0
Lane Group Flow (vph)	0	0	0	0	573	0	118	758	0	0	889	0
Confl. Peds. (#/hr)	30		4	4		30	11		12	12		11
Parking (#/hr)					10			10				
Turn Type				Perm			pm+pt					
Protected Phases					3		2	1 2			1	
Permitted Phases				3			1 2					
Actuated Green, G (s)					20.0		42.2	48.1			34.1	
Effective Green, g (s)					20.0		42.2	48.1			34.1	
Actuated g/C Ratio					0.25		0.53	0.60			0.43	
Clearance Time (s)					6.0		5.9				5.9	
Lane Grp Cap (vph)					778		345	1968			1449	
v/s Ratio Prot							0.03	c0.23			c0.26	
v/s Ratio Perm					0.18		0.15					
v/c Ratio					0.74		0.34	0.39			0.61	
Uniform Delay, d1					27.6		18.7	8.3			17.8	
Progression Factor					1.00		0.30	0.23			1.00	
Incremental Delay, d2					6.1		2.3	0.5			2.0	
Delay (s)					33.7		8.0	2.4			19.8	
Level of Service					C		A	A			B	
Approach Delay (s)		0.0			33.7			3.1			19.8	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	244	132	166	261	48	124	451	166	62	616	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.95		1.00	0.98		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1768	1747		1751	1795		1752	3042		1760	3434	
Flt Permitted	0.24	1.00		0.21	1.00		0.24	1.00		0.32	1.00	
Satd. Flow (perm)	438	1747		380	1795		442	3042		601	3434	
Peak-hour factor, PHF	0.91	0.91	0.91	0.85	0.85	0.85	0.95	0.95	0.95	0.91	0.91	0.91
Adj. Flow (vph)	99	268	145	195	307	56	131	475	175	68	677	126
RTOR Reduction (vph)	0	22	0	0	7	0	0	42	0	0	17	0
Lane Group Flow (vph)	99	391	0	195	356	0	131	608	0	68	786	0
Confl. Peds. (#/hr)	9		12	12		9	5		16	16		5
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Parking (#/hr)								10				
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	21.8	17.0		26.6	19.4		44.7	36.5		39.7	34.0	
Effective Green, g (s)	21.8	17.0		26.6	19.4		44.7	36.5		39.7	34.0	
Actuated g/C Ratio	0.24	0.19		0.30	0.22		0.50	0.41		0.44	0.38	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	0.2		4.0	0.2	
Lane Grp Cap (vph)	177	330		222	387		339	1234		339	1297	
v/s Ratio Prot	0.03	c0.22		c0.07	0.20		c0.04	0.20		0.01	c0.23	
v/s Ratio Perm	0.11			0.19			0.16			0.08		
v/c Ratio	0.56	1.19		0.88	0.92		0.39	0.49		0.20	0.61	
Uniform Delay, d1	37.9	36.5		37.7	34.5		22.4	19.9		19.9	22.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.98	0.74	
Incremental Delay, d2	4.7	109.8		30.7	26.8		1.0	1.4		0.3	1.8	
Delay (s)	42.6	146.3		68.4	61.3		23.4	21.3		19.8	18.6	
Level of Service	D	F		E	E		C	C		B	B	
Approach Delay (s)		126.3			63.8			21.6			18.7	
Approach LOS		F			E			C			B	

Intersection Summary			
HCM Average Control Delay	49.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Appendix C – Synchro Reports for Alternatives

HCM Signalized Intersection Capacity Analysis
1003: 3rd Street & M-125 (Monroe St)

5/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	54	34	42	123	77	10	495	4	27	596	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.94		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1767	1744		1667	1401		1764	3269		1747	3391	
Flt Permitted	0.47	1.00		0.67	1.00		0.26	1.00		0.34	1.00	
Satd. Flow (perm)	878	1744		1178	1401		477	3269		617	3391	
Peak-hour factor, PHF	0.66	0.66	0.66	0.63	0.63	0.63	0.71	0.71	0.71	0.83	0.83	0.83
Adj. Flow (vph)	139	82	52	67	195	122	14	697	6	33	718	152
RTOR Reduction (vph)	0	29	0	0	28	0	0	1	0	0	22	0
Lane Group Flow (vph)	139	105	0	67	289	0	14	702	0	33	848	0
Confl. Peds. (#/hr)	2		2	2		2	5		3	3		5
Heavy Vehicles (%)	2%	2%	2%	8%	8%	8%	2%	2%	2%	3%	3%	3%
Parking (#/hr)					10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	29.0	29.0		29.0	29.0		39.6	39.6		39.6	39.6	
Effective Green, g (s)	29.0	29.0		29.0	29.0		39.6	39.6		39.6	39.6	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.50	0.50		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Grp Cap (vph)	318	632		427	508		236	1618		305	1679	
v/s Ratio Prot		0.06			c0.21			0.21			c0.25	
v/s Ratio Perm	0.16			0.06			0.03			0.05		
v/c Ratio	0.44	0.17		0.16	0.57		0.06	0.43		0.11	0.50	
Uniform Delay, d1	19.3	17.3		17.2	20.5		10.5	13.0		10.8	13.6	
Progression Factor	1.00	1.00		1.00	1.00		0.73	0.72		0.83	0.69	
Incremental Delay, d2	4.3	0.6		0.8	4.6		0.4	0.8		0.7	1.0	
Delay (s)	23.6	17.9		18.0	25.0		8.1	10.2		9.6	10.4	
Level of Service	C	B		B	C		A	B		A	B	
Approach Delay (s)		20.8			23.8			10.1			10.4	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	2	3	17	7	4	9	561	19	8	504	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1409			1392		1734	1544		1719	1807	
Flt Permitted		0.93			0.86		0.35	1.00		0.23	1.00	
Satd. Flow (perm)		1340			1229		645	1544		413	1807	
Peak-hour factor, PHF	0.75	0.75	0.75	0.73	0.73	0.73	0.73	0.73	0.73	0.85	0.85	0.85
Adj. Flow (vph)	4	3	4	23	10	5	12	768	26	9	593	4
RTOR Reduction (vph)	0	3	0	0	4	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	8	0	0	34	0	12	792	0	9	597	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	6%	6%	6%	10%	10%	10%	4%	4%	4%	5%	5%	5%
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)		19.0			19.0		49.5	49.5		49.5	49.5	
Effective Green, g (s)		19.0			19.0		49.5	49.5		49.5	49.5	
Actuated g/C Ratio		0.24			0.24		0.62	0.62		0.62	0.62	
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Grp Cap (vph)		318			292		399	955		256	1118	
v/s Ratio Prot								c0.51			0.33	
v/s Ratio Perm		0.01			c0.03		0.02			0.02		
v/c Ratio		0.03			0.12		0.03	0.83		0.04	0.53	
Uniform Delay, d1		23.4			23.9		5.9	11.9		5.9	8.7	
Progression Factor		1.00			1.00		0.54	0.57		0.59	0.63	
Incremental Delay, d2		0.1			0.8		0.1	7.6		0.2	1.7	
Delay (s)		23.5			24.7		3.3	14.4		3.7	7.2	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		23.5			24.7			14.2			7.1	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	109	55	0	0	0	0	490	75	59	475	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0						5.2		5.2	5.2	
Lane Util. Factor		0.95						1.00		1.00	1.00	
Frpb, ped/bikes		0.99						1.00		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.97						0.98		1.00	1.00	
Flt Protected		0.98						1.00		0.95	1.00	
Satd. Flow (prot)		2965						1522		1719	1810	
Flt Permitted		0.98						1.00		0.23	1.00	
Satd. Flow (perm)		2965						1522		412	1810	
Peak-hour factor, PHF	0.79	0.79	0.79	0.92	0.92	0.92	0.71	0.71	0.71	0.95	0.95	0.95
Adj. Flow (vph)	123	138	70	0	0	0	0	690	106	62	500	0
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	301	0	0	0	0	0	796	0	62	500	0
Confl. Peds. (#/hr)	3		10	10		3	2		1	1		2
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	5%	5%	5%
Parking (#/hr)		20						10				
Turn Type	Perm									Perm		
Protected Phases		3						1			1	
Permitted Phases	3									1		
Actuated Green, G (s)		19.0						49.8		49.8	49.8	
Effective Green, g (s)		19.0						49.8		49.8	49.8	
Actuated g/C Ratio		0.24						0.62		0.62	0.62	
Clearance Time (s)		6.0						5.2		5.2	5.2	
Lane Grp Cap (vph)		704						947		256	1127	
v/s Ratio Prot								c0.52			0.28	
v/s Ratio Perm		0.10								0.15		
v/c Ratio		0.43						0.84		0.24	0.44	
Uniform Delay, d1		25.9						12.0		6.7	7.9	
Progression Factor		1.00						0.50		0.35	0.32	
Incremental Delay, d2		1.9						5.5		2.0	1.1	
Delay (s)		27.8						11.5		4.3	3.7	
Level of Service		C						B		A	A	
Approach Delay (s)		27.8			0.0			11.5			3.7	
Approach LOS		C			A			B			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	53	120	28	82	514	0	0	490	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.0		5.9	5.9			5.9	5.9
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					1.00		1.00	1.00			1.00	0.98
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.98		1.00	1.00			1.00	0.85
Flt Protected					0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)					2945		1745	1568			1827	1516
Flt Permitted					0.99		0.39	1.00			1.00	1.00
Satd. Flow (perm)					2945		708	1568			1827	1516
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.73	0.73	0.73	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	63	143	33	112	704	0	0	544	176
RTOR Reduction (vph)	0	0	0	0	16	0	0	0	0	0	0	70
Lane Group Flow (vph)	0	0	0	0	223	0	112	704	0	0	544	106
Confl. Peds. (#/hr)	18		4	4		18	7		2	2		7
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	3%	3%	3%	4%	4%	4%
Parking (#/hr)					20			10				
Turn Type				Perm			Perm					Perm
Protected Phases					3			1			1	
Permitted Phases				3			1					1
Actuated Green, G (s)					20.0		48.1	48.1			48.1	48.1
Effective Green, g (s)					20.0		48.1	48.1			48.1	48.1
Actuated g/C Ratio					0.25		0.60	0.60			0.60	0.60
Clearance Time (s)					6.0		5.9	5.9			5.9	5.9
Lane Grp Cap (vph)					736		426	943			1098	911
v/s Ratio Prot								c0.45			0.30	
v/s Ratio Perm					0.08		0.16					0.07
v/c Ratio					0.30		0.26	0.75			0.50	0.12
Uniform Delay, d1					24.3		7.6	11.5			9.1	6.8
Progression Factor					1.00		0.82	0.60			1.52	4.72
Incremental Delay, d2					1.1		0.9	3.3			1.4	0.2
Delay (s)					25.4		7.1	10.2			15.1	32.5
Level of Service					C		A	B			B	C
Approach Delay (s)		0.0			25.4			9.8			19.4	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	219	70	156	233	44	87	321	120	59	424	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.98		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1768	1787		1734	1779		1735	3054		1734	3398	
Flt Permitted	0.37	1.00		0.38	1.00		0.33	1.00		0.33	1.00	
Satd. Flow (perm)	680	1787		701	1779		610	3054		601	3398	
Peak-hour factor, PHF	0.92	0.92	0.92	0.87	0.87	0.87	0.74	0.74	0.74	0.82	0.82	0.82
Adj. Flow (vph)	104	238	76	179	268	51	118	434	162	72	517	72
RTOR Reduction (vph)	0	16	0	0	9	0	0	44	0	0	12	0
Lane Group Flow (vph)	104	298	0	179	310	0	118	552	0	72	577	0
Confl. Peds. (#/hr)	3		5	5		3	1		3	3		1
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)								10				
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	23.4	18.6		29.0	21.4		30.2	25.2		30.2	25.2	
Effective Green, g (s)	23.4	18.6		29.0	21.4		30.2	25.2		30.2	25.2	
Actuated g/C Ratio	0.29	0.23		0.36	0.27		0.38	0.31		0.38	0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	0.2		4.0	0.2	
Lane Grp Cap (vph)	264	415		352	476		301	962		298	1070	
v/s Ratio Prot	0.02	0.17		c0.05	c0.17		c0.02	c0.18		0.02	0.17	
v/s Ratio Perm	0.09			0.14			0.12			0.08		
v/c Ratio	0.39	0.72		0.51	0.65		0.39	0.57		0.24	0.54	
Uniform Delay, d1	27.7	28.3		25.4	26.0		22.6	22.9		21.3	22.6	
Progression Factor	1.00	1.00		1.00	1.00		0.43	0.79		1.08	0.86	
Incremental Delay, d2	1.3	6.2		1.6	3.5		0.8	1.7		0.6	1.9	
Delay (s)	29.0	34.5		27.0	29.5		10.5	19.7		23.5	21.3	
Level of Service	C	C		C	C		B	B		C	C	
Approach Delay (s)		33.2			28.6			18.2			21.5	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	23.6
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1003: 3rd Street & M-125 (Monroe St)

5/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	62	30	49	107	80	16	589	14	25	656	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.95		1.00	0.94		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1768	1764		1715	1431		1739	3225		1748	3442	
Flt Permitted	0.61	1.00		0.69	1.00		0.37	1.00		0.44	1.00	
Satd. Flow (perm)	1137	1764		1241	1431		686	3225		811	3442	
Peak-hour factor, PHF	0.85	0.85	0.85	0.94	0.94	0.94	0.92	0.92	0.92	0.95	0.95	0.95
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	85%	100%	100%	85%	100%
Adj. Flow (vph)	134	73	35	52	114	85	17	544	15	26	587	99
RTOR Reduction (vph)	0	25	0	0	39	0	0	3	0	0	19	0
Lane Group Flow (vph)	134	83	0	52	160	0	17	556	0	26	667	0
Confl. Peds. (#/hr)	1		2	2		1	7		9	9		7
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	3%	3%	3%	2%	2%	2%
Parking (#/hr)					10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	17.0	17.0		17.0	17.0		41.6	41.6		41.6	41.6	
Effective Green, g (s)	17.0	17.0		17.0	17.0		41.6	41.6		41.6	41.6	
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.59	0.59		0.59	0.59	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Grp Cap (vph)	276	428		301	348		408	1917		482	2046	
v/s Ratio Prot		0.05			0.11			0.17			c0.19	
v/s Ratio Perm	c0.12			0.04			0.02			0.03		
v/c Ratio	0.49	0.19		0.17	0.46		0.04	0.29		0.05	0.33	
Uniform Delay, d1	22.7	21.1		20.9	22.6		5.9	7.0		6.0	7.1	
Progression Factor	1.00	1.00		1.00	1.00		0.33	0.30		0.82	0.59	
Incremental Delay, d2	6.0	1.0		1.2	4.3		0.2	0.4		0.2	0.4	
Delay (s)	28.7	22.1		22.2	26.9		2.1	2.4		5.1	4.6	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		25.8			26.0			2.4			4.6	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	9	15	27	14	27	11	659	37	8	629	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.95		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1386			1399		1770	1564		1752	1839	
Flt Permitted		0.97			0.88		0.31	1.00		0.29	1.00	
Satd. Flow (perm)		1349			1258		579	1564		533	1839	
Peak-hour factor, PHF	0.77	0.77	0.77	0.74	0.74	0.74	0.91	0.91	0.91	0.87	0.87	0.87
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	85%	100%	100%	85%	100%
Adj. Flow (vph)	5	12	19	36	19	36	12	616	41	9	615	11
RTOR Reduction (vph)	0	14	0	0	26	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	22	0	0	65	0	12	654	0	9	625	0
Confl. Peds. (#/hr)	1		3	3		1	6		9	9		6
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	3%	3%	3%
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)		19.0			19.0		39.5	39.5		39.5	39.5	
Effective Green, g (s)		19.0			19.0		39.5	39.5		39.5	39.5	
Actuated g/C Ratio		0.27			0.27		0.56	0.56		0.56	0.56	
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Grp Cap (vph)		366			341		327	883		301	1038	
v/s Ratio Prot								c0.42			0.34	
v/s Ratio Perm		0.02			c0.05		0.02			0.02		
v/c Ratio		0.06			0.19		0.04	0.74		0.03	0.60	
Uniform Delay, d1		18.9			19.6		6.8	11.4		6.8	10.1	
Progression Factor		1.00			1.00		0.46	0.65		0.67	0.49	
Incremental Delay, d2		0.3			1.2		0.2	5.3		0.2	2.4	
Delay (s)		19.2			20.8		3.3	12.7		4.7	7.3	
Level of Service		B			C		A	B		A	A	
Approach Delay (s)		19.2			20.8			12.5			7.3	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	114	82	0	0	0	0	576	94	73	554	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0						5.2		5.2	5.2	
Lane Util. Factor		0.95						1.00		1.00	1.00	
Frpb, ped/bikes		0.99						0.99		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.96						0.98		1.00	1.00	
Flt Protected		0.98						1.00		0.95	1.00	
Satd. Flow (prot)		2971						1510		1752	1845	
Flt Permitted		0.98						1.00		0.31	1.00	
Satd. Flow (perm)		2971						1510		571	1845	
Peak-hour factor, PHF	0.88	0.88	0.88	0.55	0.55	0.55	0.93	0.93	0.93	0.92	0.92	0.92
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	85%	100%	100%	85%	100%
Adj. Flow (vph)	119	130	93	0	0	0	0	526	101	79	512	0
RTOR Reduction (vph)	0	55	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	287	0	0	0	0	0	627	0	79	512	0
Confl. Peds. (#/hr)	11		17	17		11	7		11	11		7
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	4%	4%	4%	3%	3%	3%
Parking (#/hr)		10						10				
Turn Type	Perm									Perm		
Protected Phases		3						1			1	
Permitted Phases	3									1		
Actuated Green, G (s)		19.0						39.8		39.8	39.8	
Effective Green, g (s)		19.0						39.8		39.8	39.8	
Actuated g/C Ratio		0.27						0.57		0.57	0.57	
Clearance Time (s)		6.0						5.2		5.2	5.2	
Lane Grp Cap (vph)		806						859		325	1049	
v/s Ratio Prot								c0.42			0.28	
v/s Ratio Perm		0.10								0.14		
v/c Ratio		0.36						0.73		0.24	0.49	
Uniform Delay, d1		20.6						11.1		7.6	9.0	
Progression Factor		1.00						0.20		0.41	0.41	
Incremental Delay, d2		1.2						4.0		1.6	1.5	
Delay (s)		21.8						6.2		4.6	5.1	
Level of Service		C						A		A	A	
Approach Delay (s)		21.8			0.0			6.2			5.1	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	106	155	63	125	567	0	0	528	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.0		5.9	5.9			5.9	5.9
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					0.99		1.00	1.00			1.00	0.97
Flpb, ped/bikes					1.00		0.99	1.00			1.00	1.00
Frt					0.97		1.00	1.00			1.00	0.85
Flt Protected					0.98		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3032		1739	1568			1845	1519
Flt Permitted					0.98		0.41	1.00			1.00	1.00
Satd. Flow (perm)					3032		742	1568			1845	1519
Peak-hour factor, PHF	0.81	0.81	0.81	0.84	0.84	0.84	0.94	0.94	0.94	0.91	0.91	0.91
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	85%	100%	100%	85%	100%
Adj. Flow (vph)	0	0	0	126	185	75	133	513	0	0	493	156
RTOR Reduction (vph)	0	0	0	0	30	0	0	0	0	0	0	71
Lane Group Flow (vph)	0	0	0	0	356	0	133	513	0	0	493	85
Confl. Peds. (#/hr)	22		13	13		22	13		20	20		13
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Parking (#/hr)					10			10				
Turn Type				Perm			Perm					Perm
Protected Phases					3			1			1	
Permitted Phases				3			1					1
Actuated Green, G (s)					20.0		38.1	38.1			38.1	38.1
Effective Green, g (s)					20.0		38.1	38.1			38.1	38.1
Actuated g/C Ratio					0.29		0.54	0.54			0.54	0.54
Clearance Time (s)					6.0		5.9	5.9			5.9	5.9
Lane Grp Cap (vph)					866		404	853			1004	827
v/s Ratio Prot								c0.33			0.27	
v/s Ratio Perm					0.12		0.18					0.06
v/c Ratio					0.41		0.33	0.60			0.49	0.10
Uniform Delay, d1					20.2		8.9	10.8			9.9	7.7
Progression Factor					1.00		0.67	0.58			1.75	5.00
Incremental Delay, d2					1.4		1.6	2.3			1.5	0.2
Delay (s)					21.7		7.5	8.5			18.9	38.7
Level of Service					C		A	A			B	D
Approach Delay (s)		0.0			21.7			8.3			23.6	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	266	88	151	245	61	108	434	104	54	481	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1785	1802		1717	1749		1747	3115		1785	3464	
Flt Permitted	0.39	1.00		0.31	1.00		0.36	1.00		0.35	1.00	
Satd. Flow (perm)	732	1802		561	1749		658	3115		654	3464	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	85%	100%	100%	85%	100%
Adj. Flow (vph)	109	292	97	166	269	67	119	405	114	57	430	83
RTOR Reduction (vph)	0	18	0	0	13	0	0	35	0	0	23	0
Lane Group Flow (vph)	109	371	0	166	323	0	119	484	0	57	490	0
Confl. Peds. (#/hr)	6		7	7		6	7		3	3		7
Heavy Vehicles (%)	1%	1%	1%	5%	5%	5%	3%	3%	3%	1%	1%	1%
Parking (#/hr)								10				
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	23.7	18.2		27.1	19.9		23.4	17.3		18.6	14.9	
Effective Green, g (s)	23.7	18.2		27.1	19.9		23.4	17.3		18.6	14.9	
Actuated g/C Ratio	0.34	0.26		0.39	0.28		0.33	0.25		0.27	0.21	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	0.2		4.0	0.2	
Lane Grp Cap (vph)	331	469		336	497		315	770		234	737	
v/s Ratio Prot	0.03	c0.21		c0.05	0.18		c0.03	c0.16		0.01	0.14	
v/s Ratio Perm	0.09			0.14			0.09			0.05		
v/c Ratio	0.33	0.79		0.49	0.65		0.38	0.63		0.24	0.67	
Uniform Delay, d1	21.4	24.1		22.6	22.0		21.2	23.5		23.2	25.3	
Progression Factor	1.00	1.00		1.00	1.00		0.66	0.87		0.73	0.77	
Incremental Delay, d2	0.8	9.4		1.6	3.4		0.9	3.4		0.7	4.5	
Delay (s)	22.2	33.5		24.2	25.4		15.0	23.7		17.5	24.0	
Level of Service	C	C		C	C		B	C		B	C	
Approach Delay (s)		31.0			25.0			22.1			23.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	166	79	35	36	128	68	16	589	14	25	656	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.95		1.00	0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1775	1785		1725	1461		1761	3258		1745	3465	
Flt Permitted	0.55	1.00		0.67	1.00		0.30	1.00		0.39	1.00	
Satd. Flow (perm)	1035	1785		1225	1461		553	3258		709	3465	
Peak-hour factor, PHF	0.89	0.89	0.89	0.84	0.84	0.84	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	187	89	39	43	152	81	17	620	15	28	729	91
RTOR Reduction (vph)	0	20	0	0	24	0	0	2	0	0	12	0
Lane Group Flow (vph)	187	108	0	43	209	0	17	633	0	28	808	0
Confl. Peds. (#/hr)	7		5	5		7	6		11	11		6
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	2%	2%	2%	2%	2%	2%
Parking (#/hr)					10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		44.6	44.6		44.6	44.6	
Effective Green, g (s)	24.0	24.0		24.0	24.0		44.6	44.6		44.6	44.6	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.56	0.56		0.56	0.56	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Grp Cap (vph)	311	536		368	438		308	1816		395	1932	
v/s Ratio Prot		0.06			0.14			0.19			c0.23	
v/s Ratio Perm	c0.18			0.04			0.03			0.04		
v/c Ratio	0.60	0.20		0.12	0.48		0.06	0.35		0.07	0.42	
Uniform Delay, d1	23.9	20.9		20.3	22.9		8.1	9.7		8.2	10.2	
Progression Factor	1.00	1.00		1.00	1.00		0.59	0.76		1.01	0.78	
Incremental Delay, d2	8.3	0.8		0.6	3.7		0.3	0.5		0.2	0.4	
Delay (s)	32.3	21.7		21.0	26.6		5.0	7.8		8.4	8.3	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		28.0			25.7			7.8			8.3	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	7	20	49	20	14	7	717	13	18	815	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1392			1510		1770	1578		1787	1878	
Flt Permitted		0.90			0.80		0.14	1.00		0.23	1.00	
Satd. Flow (perm)		1278			1238		254	1578		431	1878	
Peak-hour factor, PHF	0.75	0.75	0.75	0.82	0.82	0.82	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	16	9	27	60	24	17	8	779	14	21	937	8
RTOR Reduction (vph)	0	21	0	0	9	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	31	0	0	92	0	8	792	0	21	945	0
Confl. Peds. (#/hr)	1		1	1		1	12		5	5		12
Heavy Vehicles (%)	5%	5%	5%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)		19.0			19.0		49.5	49.5		49.5	49.5	
Effective Green, g (s)		19.0			19.0		49.5	49.5		49.5	49.5	
Actuated g/C Ratio		0.24			0.24		0.62	0.62		0.62	0.62	
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Grp Cap (vph)		304			294		157	976		267	1162	
v/s Ratio Prot								0.50			c0.50	
v/s Ratio Perm		0.02			c0.07		0.03			0.05		
v/c Ratio		0.10			0.31		0.05	0.81		0.08	0.81	
Uniform Delay, d1		23.8			25.1		6.0	11.7		6.1	11.7	
Progression Factor		1.00			1.00		0.84	1.29		0.52	0.36	
Incremental Delay, d2		0.7			2.8		0.6	6.8		0.4	4.9	
Delay (s)		24.5			27.9		5.6	21.9		3.7	9.1	
Level of Service		C			C		A	C		A	A	
Approach Delay (s)		24.5			27.9			21.7			9.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	95	87	0	0	0	0	653	86	39	770	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0						5.2		5.2	5.2	
Lane Util. Factor		0.95						1.00		1.00	1.00	
Frpb, ped/bikes		0.99						1.00		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.96						0.98		1.00	1.00	
Flt Protected		0.98						1.00		0.95	1.00	
Satd. Flow (prot)		2997						1539		1770	1863	
Flt Permitted		0.98						1.00		0.24	1.00	
Satd. Flow (perm)		2997						1539		444	1863	
Peak-hour factor, PHF	0.87	0.87	0.87	0.50	0.50	0.50	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	159	109	100	0	0	0	0	687	91	42	828	0
RTOR Reduction (vph)	0	48	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	320	0	0	0	0	0	778	0	42	828	0
Confl. Peds. (#/hr)	6		11	11		6	8		4	4		8
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Parking (#/hr)		10						10				
Turn Type	Perm									Perm		
Protected Phases		3						1			1	
Permitted Phases	3									1		
Actuated Green, G (s)		19.0						49.8		49.8	49.8	
Effective Green, g (s)		19.0						49.8		49.8	49.8	
Actuated g/C Ratio		0.24						0.62		0.62	0.62	
Clearance Time (s)		6.0						5.2		5.2	5.2	
Lane Grp Cap (vph)		712						958		276	1160	
v/s Ratio Prot								c0.51			0.44	
v/s Ratio Perm		0.11								0.09		
v/c Ratio		0.45						0.81		0.15	0.71	
Uniform Delay, d1		26.0						11.5		6.3	10.3	
Progression Factor		1.00						0.24		0.48	0.62	
Incremental Delay, d2		2.0						4.5		0.9	2.8	
Delay (s)		28.1						7.3		3.9	9.2	
Level of Service		C						A		A	A	
Approach Delay (s)		28.1			0.0			7.3			8.9	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	141	257	84	109	697	0	0	682	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.0		5.9	5.9			5.9	5.9
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					0.99		1.00	1.00			1.00	0.97
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.97		1.00	1.00			1.00	0.85
Flt Protected					0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3110		1770	1583			1863	1535
Flt Permitted					0.99		0.27	1.00			1.00	1.00
Satd. Flow (perm)					3110		499	1583			1863	1535
Peak-hour factor, PHF	0.69	0.69	0.69	0.81	0.81	0.81	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	174	317	104	118	758	0	0	718	204
RTOR Reduction (vph)	0	0	0	0	23	0	0	0	0	0	0	60
Lane Group Flow (vph)	0	0	0	0	573	0	118	758	0	0	718	144
Confl. Peds. (#/hr)	30		4	4		30	11		12	12		11
Parking (#/hr)					10			10				
Turn Type				Perm			Perm					Perm
Protected Phases					3			1			1	
Permitted Phases				3			1					1
Actuated Green, G (s)					20.0		48.1	48.1			48.1	48.1
Effective Green, g (s)					20.0		48.1	48.1			48.1	48.1
Actuated g/C Ratio					0.25		0.60	0.60			0.60	0.60
Clearance Time (s)					6.0		5.9	5.9			5.9	5.9
Lane Grp Cap (vph)					778		300	952			1120	923
v/s Ratio Prot								c0.48			0.39	
v/s Ratio Perm					0.18		0.24					0.09
v/c Ratio					0.74		0.39	0.80			0.64	0.16
Uniform Delay, d1					27.6		8.3	12.2			10.3	7.0
Progression Factor					1.00		0.99	0.83			1.00	1.00
Incremental Delay, d2					6.1		2.6	4.7			2.8	0.4
Delay (s)					33.7		10.8	14.9			13.2	7.4
Level of Service					C		B	B			B	A
Approach Delay (s)		0.0			33.7			14.3			11.9	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	244	132	166	261	48	124	451	166	62	616	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.98		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1767	1747		1750	1795		1752	3042		1763	3434	
Flt Permitted	0.31	1.00		0.24	1.00		0.17	1.00		0.26	1.00	
Satd. Flow (perm)	581	1747		448	1795		317	3042		489	3434	
Peak-hour factor, PHF	0.91	0.91	0.91	0.85	0.85	0.85	0.95	0.95	0.95	0.91	0.91	0.91
Adj. Flow (vph)	99	268	145	195	307	56	131	475	175	68	677	126
RTOR Reduction (vph)	0	23	0	0	7	0	0	39	0	0	17	0
Lane Group Flow (vph)	99	390	0	195	356	0	131	611	0	68	786	0
Confl. Peds. (#/hr)	9		12	12		9	5		16	16		5
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Parking (#/hr)								10				
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	32.2	24.1		35.2	25.6		35.1	27.7		30.3	25.3	
Effective Green, g (s)	32.2	24.1		35.2	25.6		35.1	27.7		30.3	25.3	
Actuated g/C Ratio	0.36	0.27		0.39	0.28		0.39	0.31		0.34	0.28	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	0.2		4.0	0.2	
Lane Grp Cap (vph)	315	468		314	511		242	936		235	965	
v/s Ratio Prot	0.03	c0.22		c0.07	0.20		c0.04	0.20		0.02	c0.23	
v/s Ratio Perm	0.08			0.18			0.17			0.08		
v/c Ratio	0.31	0.83		0.62	0.70		0.54	0.65		0.29	0.81	
Uniform Delay, d1	28.5	31.1		31.0	28.7		31.8	27.0		28.7	30.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.77	0.67	
Incremental Delay, d2	0.8	12.6		4.3	4.4		3.1	3.5		0.8	6.7	
Delay (s)	29.3	43.7		35.2	33.2		34.9	30.5		23.0	26.7	
Level of Service	C	D		D	C		C	C		C	C	
Approach Delay (s)		40.9			33.9			31.2			26.4	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	32.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	54	34	42	123	77	10	495	4	27	596	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.94		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1766	1744		1667	1401		1764	3269		1746	3391	
Flt Permitted	0.52	1.00		0.68	1.00		0.24	1.00		0.38	1.00	
Satd. Flow (perm)	962	1744		1201	1401		451	3269		694	3391	
Peak-hour factor, PHF	0.78	0.78	0.78	0.71	0.71	0.71	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	118	69	44	59	173	108	12	619	5	34	745	158
RTOR Reduction (vph)	0	28	0	0	28	0	0	1	0	0	22	0
Lane Group Flow (vph)	118	85	0	59	253	0	12	623	0	34	881	0
Confl. Peds. (#/hr)	2		2	2		2	5		3	3		5
Heavy Vehicles (%)	2%	2%	2%	8%	8%	8%	2%	2%	2%	3%	3%	3%
Parking (#/hr)					10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	29.0	29.0		29.0	29.0		39.6	39.6		39.6	39.6	
Effective Green, g (s)	29.0	29.0		29.0	29.0		39.6	39.6		39.6	39.6	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.50	0.50		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Grp Cap (vph)	349	632		435	508		223	1618		344	1679	
v/s Ratio Prot		0.05			c0.18			0.19			c0.26	
v/s Ratio Perm	0.12			0.05			0.03			0.05		
v/c Ratio	0.34	0.13		0.14	0.50		0.05	0.39		0.10	0.52	
Uniform Delay, d1	18.5	17.1		17.1	19.8		10.5	12.6		10.7	13.8	
Progression Factor	1.00	1.00		1.00	1.00		0.68	0.69		0.96	0.77	
Incremental Delay, d2	2.6	0.4		0.6	3.5		0.4	0.6		0.6	1.2	
Delay (s)	21.1	17.5		17.7	23.3		7.6	9.4		10.8	11.8	
Level of Service	C	B		B	C		A	A		B	B	
Approach Delay (s)		19.4			22.3			9.3			11.7	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	2	3	17	7	4	9	561	19	8	504	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			5.5			5.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.98			1.00			1.00	
Flt Protected		0.98			0.97			1.00			1.00	
Satd. Flow (prot)		1415			1395			3190			3431	
Flt Permitted		0.93			0.86			0.94			0.94	
Satd. Flow (perm)		1345			1232			3016			3239	
Peak-hour factor, PHF	0.75	0.75	0.75	0.73	0.73	0.73	0.83	0.83	0.83	0.84	0.84	0.84
Adj. Flow (vph)	4	3	4	23	10	5	11	676	23	10	600	4
RTOR Reduction (vph)	0	3	0	0	4	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	8	0	0	34	0	0	707	0	0	614	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	6%	6%	6%	10%	10%	10%	4%	4%	4%	5%	5%	5%
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)		19.0			19.0			49.5			49.5	
Effective Green, g (s)		19.0			19.0			49.5			49.5	
Actuated g/C Ratio		0.24			0.24			0.62			0.62	
Clearance Time (s)		6.0			6.0			5.5			5.5	
Lane Grp Cap (vph)		319			293			1866			2004	
v/s Ratio Prot												
v/s Ratio Perm		0.01			c0.03			c0.23			0.19	
v/c Ratio		0.02			0.12			0.38			0.31	
Uniform Delay, d1		23.4			23.9			7.6			7.2	
Progression Factor		1.00			1.00			0.53			0.26	
Incremental Delay, d2		0.1			0.8			0.5			0.4	
Delay (s)		23.5			24.7			4.6			2.2	
Level of Service		C			C			A			A	
Approach Delay (s)		23.5			24.7			4.6			2.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	4.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	109	55	0	0	0	0	490	75	59	475	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0						5.2			5.2	
Lane Util. Factor		0.95						0.95			0.95	
Frpb, ped/bikes		0.99						1.00			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.97						0.98			1.00	
Flt Protected		0.98						1.00			0.99	
Satd. Flow (prot)		2979						3141			3419	
Flt Permitted		0.98						1.00			0.82	
Satd. Flow (perm)		2979						3141			2821	
Peak-hour factor, PHF	0.72	0.72	0.72	0.25	0.25	0.25	0.83	0.83	0.83	0.84	0.84	0.84
Adj. Flow (vph)	135	151	76	0	0	0	0	590	90	70	565	0
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	332	0	0	0	0	0	680	0	0	635	0
Confl. Peds. (#/hr)	3		10	10		3	2		1	1		2
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	5%	5%	5%
Parking (#/hr)		20						10				
Turn Type	Perm									pm+pt		
Protected Phases		3						1		2	1 2	
Permitted Phases	3									1 2		
Actuated Green, G (s)		19.0						35.8			44.6	
Effective Green, g (s)		19.0						35.8			44.6	
Actuated g/C Ratio		0.24						0.45			0.56	
Clearance Time (s)		6.0						5.2				
Lane Grp Cap (vph)		708						1406			1638	
v/s Ratio Prot								c0.22			c0.04	
v/s Ratio Perm		0.11									0.17	
v/c Ratio		0.47						0.48			0.39	
Uniform Delay, d1		26.2						15.6			10.0	
Progression Factor		1.00						0.40			0.28	
Incremental Delay, d2		2.2						1.2			0.6	
Delay (s)		28.4						7.4			3.4	
Level of Service		C						A			A	
Approach Delay (s)		28.4			0.0			7.4			3.4	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	53	120	28	82	514	0	0	490	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.0			5.9			5.9	
Lane Util. Factor					0.95			0.95			0.95	
Frpb, ped/bikes					1.00			1.00			0.99	
Flpb, ped/bikes					1.00			1.00			1.00	
Frt					0.98			1.00			0.96	
Flt Protected					0.99			0.99			1.00	
Satd. Flow (prot)					2944			3219			3325	
Flt Permitted					0.99			0.69			1.00	
Satd. Flow (perm)					2944			2237			3325	
Peak-hour factor, PHF	0.44	0.44	0.44	0.91	0.91	0.91	0.84	0.84	0.84	0.80	0.80	0.80
Adj. Flow (vph)	0	0	0	58	132	31	98	612	0	0	612	198
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	0	0	39	0
Lane Group Flow (vph)	0	0	0	0	205	0	0	710	0	0	771	0
Confl. Peds. (#/hr)	18		4	4		18	7		2	2		7
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	3%	3%	3%	4%	4%	4%
Parking (#/hr)					20			10				
Turn Type				Perm			pm+pt					
Protected Phases					3		2	1 2			1	
Permitted Phases				3			1 2					
Actuated Green, G (s)					20.0			42.2			34.1	
Effective Green, g (s)					20.0			42.2			34.1	
Actuated g/C Ratio					0.25			0.53			0.43	
Clearance Time (s)					6.0						5.9	
Lane Grp Cap (vph)					736			1279			1417	
v/s Ratio Prot								c0.06			0.23	
v/s Ratio Perm					0.07			c0.24				
v/c Ratio					0.28			0.56			0.54	
Uniform Delay, d1					24.2			12.6			17.1	
Progression Factor					1.00			0.27			1.57	
Incremental Delay, d2					0.9			1.5			1.3	
Delay (s)					25.1			4.9			28.2	
Level of Service					C			A			C	
Approach Delay (s)		0.0			25.1			4.9			28.2	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	17.8
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1007: Elm Ave (Push Buttons) & M-125 (Monroe St)

5/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	219	70	156	233	44	87	321	120	59	424	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.98		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1769	1787		1734	1779		1735	3054		1733	3398	
Flt Permitted	0.29	1.00		0.29	1.00		0.36	1.00		0.41	1.00	
Satd. Flow (perm)	532	1787		520	1779		648	3054		753	3398	
Peak-hour factor, PHF	0.91	0.91	0.91	0.90	0.90	0.90	0.85	0.85	0.85	0.80	0.80	0.80
Adj. Flow (vph)	105	241	77	173	259	49	102	378	141	74	530	74
RTOR Reduction (vph)	0	14	0	0	8	0	0	48	0	0	14	0
Lane Group Flow (vph)	105	304	0	173	300	0	102	471	0	74	590	0
Confl. Peds. (#/hr)	3		5	5		3	1		3	3		1
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)								10				
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	18.8	14.0		23.6	16.4		35.2	30.2		35.2	30.2	
Effective Green, g (s)	18.8	14.0		23.6	16.4		35.2	30.2		35.2	30.2	
Actuated g/C Ratio	0.24	0.18		0.30	0.20		0.44	0.38		0.44	0.38	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	0.2		4.0	0.2	
Lane Grp Cap (vph)	199	313		263	365		353	1153		393	1283	
v/s Ratio Prot	0.03	c0.17		c0.06	0.17		c0.02	0.15		0.01	c0.17	
v/s Ratio Perm	0.09			0.13			0.11			0.07		
v/c Ratio	0.53	0.97		0.66	0.82		0.29	0.41		0.19	0.46	
Uniform Delay, d1	32.2	32.8		29.8	30.4		17.8	18.3		15.7	18.8	
Progression Factor	1.00	1.00		1.00	1.00		0.44	0.32		1.07	1.07	
Incremental Delay, d2	3.3	43.0		6.4	14.4		0.6	1.0		0.3	1.1	
Delay (s)	35.4	75.8		36.2	44.8		8.4	6.9		17.1	21.2	
Level of Service	D	E		D	D		A	A		B	C	
Approach Delay (s)		65.8			41.8			7.1			20.8	
Approach LOS		E			D			A			C	

Intersection Summary			
HCM Average Control Delay	30.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	62	30	49	107	80	16	589	14	25	656	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.95		1.00	0.94		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1768	1764		1715	1431		1742	3227		1751	3455	
Flt Permitted	0.61	1.00		0.69	1.00		0.33	1.00		0.39	1.00	
Satd. Flow (perm)	1137	1764		1241	1431		598	3227		719	3455	
Peak-hour factor, PHF	0.85	0.85	0.85	0.94	0.94	0.94	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	134	73	35	52	114	85	17	640	15	26	691	99
RTOR Reduction (vph)	0	25	0	0	39	0	0	2	0	0	16	0
Lane Group Flow (vph)	134	83	0	52	160	0	17	653	0	26	774	0
Confl. Peds. (#/hr)	1		2	2		1	7		9	9		7
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	3%	3%	3%	2%	2%	2%
Parking (#/hr)					10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	17.0	17.0		17.0	17.0		41.6	41.6		41.6	41.6	
Effective Green, g (s)	17.0	17.0		17.0	17.0		41.6	41.6		41.6	41.6	
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.59	0.59		0.59	0.59	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Grp Cap (vph)	276	428		301	348		355	1918		427	2053	
v/s Ratio Prot		0.05			0.11			0.20			c0.22	
v/s Ratio Perm	c0.12			0.04			0.03			0.04		
v/c Ratio	0.49	0.19		0.17	0.46		0.05	0.34		0.06	0.38	
Uniform Delay, d1	22.7	21.1		20.9	22.6		5.9	7.2		6.0	7.4	
Progression Factor	1.00	1.00		1.00	1.00		0.31	0.31		0.79	0.54	
Incremental Delay, d2	6.0	1.0		1.2	4.3		0.2	0.4		0.3	0.5	
Delay (s)	28.7	22.1		22.2	26.9		2.1	2.7		5.0	4.5	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		25.8			26.0			2.7			4.5	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	9	15	27	14	27	11	659	37	8	629	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			5.5			5.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.93			0.95			0.99			1.00	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1394			1405			3237			3493	
Flt Permitted		0.97			0.88			0.94			0.95	
Satd. Flow (perm)		1357			1264			3051			3304	
Peak-hour factor, PHF	0.77	0.77	0.77	0.74	0.74	0.74	0.91	0.91	0.91	0.87	0.87	0.87
Adj. Flow (vph)	5	12	19	36	19	36	12	724	41	9	723	11
RTOR Reduction (vph)	0	14	0	0	26	0	0	6	0	0	1	0
Lane Group Flow (vph)	0	22	0	0	65	0	0	771	0	0	742	0
Confl. Peds. (#/hr)	1		3	3		1	6		9	9		6
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	3%	3%	3%
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)		19.0			19.0			39.5			39.5	
Effective Green, g (s)		19.0			19.0			39.5			39.5	
Actuated g/C Ratio		0.27			0.27			0.56			0.56	
Clearance Time (s)		6.0			6.0			5.5			5.5	
Lane Grp Cap (vph)		368			343			1722			1864	
v/s Ratio Prot												
v/s Ratio Perm		0.02			c0.05			c0.25			0.22	
v/c Ratio		0.06			0.19			0.45			0.40	
Uniform Delay, d1		18.9			19.6			8.9			8.6	
Progression Factor		1.00			1.00			0.39			0.27	
Incremental Delay, d2		0.3			1.2			0.8			0.6	
Delay (s)		19.2			20.8			4.3			2.9	
Level of Service		B			C			A			A	
Approach Delay (s)		19.2			20.8			4.3			2.9	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	4.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	114	82	0	0	0	0	576	94	73	554	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0						5.2			5.2	
Lane Util. Factor		0.95						0.95			0.95	
Frpb, ped/bikes		0.99						0.99			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.96						0.98			1.00	
Flt Protected		0.98						1.00			0.99	
Satd. Flow (prot)		2988						3127			3483	
Flt Permitted		0.98						1.00			0.79	
Satd. Flow (perm)		2988						3127			2766	
Peak-hour factor, PHF	0.88	0.88	0.88	0.55	0.55	0.55	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	119	130	93	0	0	0	0	619	101	79	602	0
RTOR Reduction (vph)	0	55	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	287	0	0	0	0	0	720	0	0	681	0
Confl. Peds. (#/hr)	11		17	17		11	7		11	11		7
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	4%	4%	4%	3%	3%	3%
Parking (#/hr)		10						10				
Turn Type	Perm									pm+pt		
Protected Phases		3						1		2	1 2	
Permitted Phases	3									1 2		
Actuated Green, G (s)		19.0						25.8			34.6	
Effective Green, g (s)		19.0						25.8			34.6	
Actuated g/C Ratio		0.27						0.37			0.49	
Clearance Time (s)		6.0						5.2				
Lane Grp Cap (vph)		811						1153			1457	
v/s Ratio Prot								c0.23			c0.06	
v/s Ratio Perm		0.10									0.17	
v/c Ratio		0.35						0.62			0.47	
Uniform Delay, d1		20.6						18.1			11.6	
Progression Factor		1.00						0.36			0.34	
Incremental Delay, d2		1.2						2.4			0.9	
Delay (s)		21.8						8.9			4.8	
Level of Service		C						A			A	
Approach Delay (s)		21.8			0.0			8.9			4.8	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	106	155	63	125	567	0	0	528	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.0			5.9			5.9	
Lane Util. Factor					0.95			0.95			0.95	
Frpb, ped/bikes					0.99			1.00			0.99	
Flpb, ped/bikes					1.00			1.00			1.00	
Frt					0.97			1.00			0.97	
Flt Protected					0.98			0.99			1.00	
Satd. Flow (prot)					3032			3211			3371	
Flt Permitted					0.98			0.62			1.00	
Satd. Flow (perm)					3032			1998			3371	
Peak-hour factor, PHF	0.81	0.81	0.81	0.84	0.84	0.84	0.94	0.94	0.94	0.91	0.91	0.91
Adj. Flow (vph)	0	0	0	126	185	75	133	603	0	0	580	156
RTOR Reduction (vph)	0	0	0	0	30	0	0	0	0	0	35	0
Lane Group Flow (vph)	0	0	0	0	356	0	0	736	0	0	701	0
Confl. Peds. (#/hr)	22		13	13		22	13		20	20		13
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Parking (#/hr)					10			10				
Turn Type				Perm			pm+pt					
Protected Phases					3		2	1 2			1	
Permitted Phases				3			1 2					
Actuated Green, G (s)					20.0			32.2			24.1	
Effective Green, g (s)					20.0			32.2			24.1	
Actuated g/C Ratio					0.29			0.46			0.34	
Clearance Time (s)					6.0						5.9	
Lane Grp Cap (vph)					866			1059			1161	
v/s Ratio Prot								c0.08			0.21	
v/s Ratio Perm					0.12			c0.24				
v/c Ratio					0.41			0.69			0.60	
Uniform Delay, d1					20.2			15.0			19.0	
Progression Factor					1.00			0.37			1.36	
Incremental Delay, d2					1.4			3.1			1.9	
Delay (s)					21.7			8.6			27.7	
Level of Service					C			A			C	
Approach Delay (s)		0.0			21.7			8.6			27.7	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	17.8
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	266	88	151	245	61	108	434	104	54	481	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1785	1802		1718	1749		1748	3130		1785	3478	
Flt Permitted	0.31	1.00		0.24	1.00		0.33	1.00		0.33	1.00	
Satd. Flow (perm)	577	1802		441	1749		615	3130		623	3478	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95
Adj. Flow (vph)	109	292	97	166	269	67	119	477	114	57	506	83
RTOR Reduction (vph)	0	17	0	0	12	0	0	29	0	0	19	0
Lane Group Flow (vph)	109	372	0	166	324	0	119	562	0	57	570	0
Confl. Peds. (#/hr)	6		7	7		6	7		3	3		7
Heavy Vehicles (%)	1%	1%	1%	5%	5%	5%	3%	3%	3%	1%	1%	1%
Parking (#/hr)								10				
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	18.8	14.0		23.6	16.4		27.6	21.5		22.8	19.1	
Effective Green, g (s)	18.8	14.0		23.6	16.4		27.6	21.5		22.8	19.1	
Actuated g/C Ratio	0.27	0.20		0.34	0.23		0.39	0.31		0.33	0.27	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	0.2		4.0	0.2	
Lane Grp Cap (vph)	238	360		280	410		341	961		264	949	
v/s Ratio Prot	0.03	c0.21		c0.06	0.19		c0.03	c0.18		0.01	0.16	
v/s Ratio Perm	0.09			0.14			0.11			0.06		
v/c Ratio	0.46	1.03		0.59	0.79		0.35	0.58		0.22	0.60	
Uniform Delay, d1	26.4	28.0		25.4	25.2		18.7	20.5		20.4	22.1	
Progression Factor	1.00	1.00		1.00	1.00		0.33	0.68		0.84	0.75	
Incremental Delay, d2	1.9	56.5		3.9	10.3		0.7	2.0		0.5	2.7	
Delay (s)	28.3	84.5		29.3	35.5		6.8	15.9		17.7	19.3	
Level of Service	C	F		C	D		A	B		B	B	
Approach Delay (s)		72.2			33.4			14.4			19.1	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	166	79	35	36	128	68	16	589	14	25	656	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.95		1.00	0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1775	1785		1725	1461		1761	3258		1745	3465	
Flt Permitted	0.55	1.00		0.67	1.00		0.30	1.00		0.39	1.00	
Satd. Flow (perm)	1035	1785		1225	1461		553	3258		709	3465	
Peak-hour factor, PHF	0.89	0.89	0.89	0.84	0.84	0.84	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	187	89	39	43	152	81	17	620	15	28	729	91
RTOR Reduction (vph)	0	20	0	0	24	0	0	2	0	0	12	0
Lane Group Flow (vph)	187	108	0	43	209	0	17	633	0	28	808	0
Confl. Peds. (#/hr)	7		5	5		7	6		11	11		6
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	2%	2%	2%	2%	2%	2%
Parking (#/hr)					10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		44.6	44.6		44.6	44.6	
Effective Green, g (s)	24.0	24.0		24.0	24.0		44.6	44.6		44.6	44.6	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.56	0.56		0.56	0.56	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.4	5.4		5.4	5.4	
Lane Grp Cap (vph)	311	536		368	438		308	1816		395	1932	
v/s Ratio Prot		0.06			0.14			0.19			c0.23	
v/s Ratio Perm	c0.18			0.04			0.03			0.04		
v/c Ratio	0.60	0.20		0.12	0.48		0.06	0.35		0.07	0.42	
Uniform Delay, d1	23.9	20.9		20.3	22.9		8.1	9.7		8.2	10.2	
Progression Factor	1.00	1.00		1.00	1.00		0.59	0.76		0.46	0.38	
Incremental Delay, d2	8.3	0.8		0.6	3.7		0.3	0.5		0.3	0.6	
Delay (s)	32.3	21.7		21.0	26.6		5.0	7.8		4.1	4.5	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		28.0			25.7			7.8			4.5	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	7	20	49	20	14	7	717	13	18	815	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			5.5			5.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.93			0.98			1.00			1.00	
Flt Protected		0.98			0.97			1.00			1.00	
Satd. Flow (prot)		1398			1513			3261			3564	
Flt Permitted		0.90			0.80			0.95			0.93	
Satd. Flow (perm)		1285			1241			3084			3314	
Peak-hour factor, PHF	0.75	0.75	0.75	0.82	0.82	0.82	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	16	9	27	60	24	17	8	779	14	21	937	8
RTOR Reduction (vph)	0	21	0	0	9	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	31	0	0	92	0	0	799	0	0	965	0
Confl. Peds. (#/hr)	1		1	1		1	12		5	5		12
Heavy Vehicles (%)	5%	5%	5%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)		19.0			19.0			49.5			49.5	
Effective Green, g (s)		19.0			19.0			49.5			49.5	
Actuated g/C Ratio		0.24			0.24			0.62			0.62	
Clearance Time (s)		6.0			6.0			5.5			5.5	
Lane Grp Cap (vph)		305			295			1908			2051	
v/s Ratio Prot												
v/s Ratio Perm		0.02			c0.07			0.26			c0.29	
v/c Ratio		0.10			0.31			0.42			0.47	
Uniform Delay, d1		23.8			25.1			7.8			8.2	
Progression Factor		1.00			1.00			1.00			0.23	
Incremental Delay, d2		0.7			2.7			0.6			0.7	
Delay (s)		24.5			27.8			8.4			2.6	
Level of Service		C			C			A			A	
Approach Delay (s)		24.5			27.8			8.4			2.6	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	7.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	95	87	0	0	0	0	653	86	39	770	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0						5.2			5.2	
Lane Util. Factor		0.95						0.95			0.95	
Frpb, ped/bikes		0.99						1.00			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.96						0.98			1.00	
Flt Protected		0.98						1.00			1.00	
Satd. Flow (prot)		3012						3177			3530	
Flt Permitted		0.98						1.00			0.89	
Satd. Flow (perm)		3012						3177			3165	
Peak-hour factor, PHF	0.87	0.87	0.87	0.50	0.50	0.50	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	159	109	100	0	0	0	0	687	91	42	828	0
RTOR Reduction (vph)	0	48	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	320	0	0	0	0	0	778	0	0	870	0
Confl. Peds. (#/hr)	6		11	11		6	8		4	4		8
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Parking (#/hr)		10						10				
Turn Type	Perm									pm+pt		
Protected Phases		3						1		2	1 2	
Permitted Phases	3									1 2		
Actuated Green, G (s)		19.0						35.8			44.6	
Effective Green, g (s)		19.0						35.8			44.6	
Actuated g/C Ratio		0.24						0.45			0.56	
Clearance Time (s)		6.0						5.2				
Lane Grp Cap (vph)		715						1422			1805	
v/s Ratio Prot								c0.24			c0.05	
v/s Ratio Perm		0.11									0.22	
v/c Ratio		0.45						0.55			0.48	
Uniform Delay, d1		26.0						16.2			10.7	
Progression Factor		1.00						0.28			0.62	
Incremental Delay, d2		2.0						1.4			0.7	
Delay (s)		28.0						6.0			7.4	
Level of Service		C						A			A	
Approach Delay (s)		28.0			0.0			6.0			7.4	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	141	257	84	109	697	0	0	682	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.0			5.9			5.9	
Lane Util. Factor					0.95			0.95			0.95	
Frpb, ped/bikes					0.99			1.00			0.99	
Flpb, ped/bikes					1.00			1.00			1.00	
Frt					0.97			1.00			0.97	
Flt Protected					0.99			0.99			1.00	
Satd. Flow (prot)					3110			3251			3399	
Flt Permitted					0.99			0.62			1.00	
Satd. Flow (perm)					3110			2022			3399	
Peak-hour factor, PHF	0.69	0.69	0.69	0.81	0.81	0.81	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	174	317	104	118	758	0	0	718	204
RTOR Reduction (vph)	0	0	0	0	23	0	0	0	0	0	33	0
Lane Group Flow (vph)	0	0	0	0	573	0	0	876	0	0	889	0
Confl. Peds. (#/hr)	30		4	4		30	11		12	12		11
Parking (#/hr)					10			10				
Turn Type				Perm			pm+pt					
Protected Phases					3		2	1 2			1	
Permitted Phases				3			1 2					
Actuated Green, G (s)					20.0			42.2			34.1	
Effective Green, g (s)					20.0			42.2			34.1	
Actuated g/C Ratio					0.25			0.53			0.43	
Clearance Time (s)					6.0						5.9	
Lane Grp Cap (vph)					778			1191			1449	
v/s Ratio Prot								c0.07			0.26	
v/s Ratio Perm					0.18			c0.31				
v/c Ratio					0.74			0.74			0.61	
Uniform Delay, d1					27.6			14.6			17.8	
Progression Factor					1.00			0.51			1.00	
Incremental Delay, d2					6.1			3.5			2.0	
Delay (s)					33.7			11.0			19.8	
Level of Service					C			B			B	
Approach Delay (s)		0.0			33.7			11.0			19.8	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	17.8
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	244	132	166	261	48	124	451	166	62	616	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.95		1.00	0.98		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1768	1747		1751	1795		1752	3042		1760	3434	
Flt Permitted	0.24	1.00		0.21	1.00		0.24	1.00		0.32	1.00	
Satd. Flow (perm)	438	1747		380	1795		442	3042		601	3434	
Peak-hour factor, PHF	0.91	0.91	0.91	0.85	0.85	0.85	0.95	0.95	0.95	0.91	0.91	0.91
Adj. Flow (vph)	99	268	145	195	307	56	131	475	175	68	677	126
RTOR Reduction (vph)	0	22	0	0	7	0	0	42	0	0	17	0
Lane Group Flow (vph)	99	391	0	195	356	0	131	608	0	68	786	0
Confl. Peds. (#/hr)	9		12	12		9	5		16	16		5
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Parking (#/hr)								10				
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	21.8	17.0		26.6	19.4		44.7	36.5		39.7	34.0	
Effective Green, g (s)	21.8	17.0		26.6	19.4		44.7	36.5		39.7	34.0	
Actuated g/C Ratio	0.24	0.19		0.30	0.22		0.50	0.41		0.44	0.38	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	0.2		4.0	0.2	
Lane Grp Cap (vph)	177	330		222	387		339	1234		339	1297	
v/s Ratio Prot	0.03	c0.22		c0.07	0.20		c0.04	0.20		0.01	c0.23	
v/s Ratio Perm	0.11			0.19			0.16			0.08		
v/c Ratio	0.56	1.19		0.88	0.92		0.39	0.49		0.20	0.61	
Uniform Delay, d1	37.9	36.5		37.7	34.5		22.4	19.9		19.9	22.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.98	0.74	
Incremental Delay, d2	4.7	109.8		30.7	26.8		1.0	1.4		0.3	1.8	
Delay (s)	42.6	146.3		68.4	61.3		23.4	21.3		19.8	18.6	
Level of Service	D	F		E	E		C	C		B	B	
Approach Delay (s)		126.3			63.8			21.6			18.7	
Approach LOS		F			E			C			B	

Intersection Summary			
HCM Average Control Delay	49.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	54	34	42	123	77	10	495	4	27	596	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.4	5.4	5.4	5.4	5.4	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.94		1.00	0.94		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1765	1744		1667	1396		1764	1583	1536	1752	3391	
Flt Permitted	0.47	1.00		0.67	1.00		0.26	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	877	1744		1178	1396		477	1583	1536	363	3391	
Peak-hour factor, PHF	0.66	0.66	0.66	0.63	0.63	0.63	0.71	0.71	0.71	0.83	0.83	0.83
Adj. Flow (vph)	139	82	52	67	195	122	14	697	6	33	718	152
RTOR Reduction (vph)	0	29	0	0	28	0	0	0	3	0	22	0
Lane Group Flow (vph)	139	105	0	67	289	0	14	697	3	33	848	0
Confl. Peds. (#/hr)	2		2	2		2	5		3	3		5
Heavy Vehicles (%)	2%	2%	2%	8%	8%	8%	2%	2%	2%	3%	3%	3%
Parking (#/hr)					10			10				
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1		1	1		
Actuated Green, G (s)	29.0	29.0		29.0	29.0		39.6	39.6	39.6	39.6	39.6	
Effective Green, g (s)	29.0	29.0		29.0	29.0		39.6	39.6	39.6	39.6	39.6	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.50	0.50	0.50	0.50	0.50	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.4	5.4	5.4	5.4	5.4	
Lane Grp Cap (vph)	318	632		427	506		236	784	760	180	1679	
v/s Ratio Prot		0.06			c0.21			c0.44			0.25	
v/s Ratio Perm	0.16			0.06			0.03		0.00	0.09		
v/c Ratio	0.44	0.17		0.16	0.57		0.06	0.89	0.00	0.18	0.50	
Uniform Delay, d1	19.3	17.3		17.2	20.5		10.5	18.2	10.2	11.2	13.6	
Progression Factor	1.00	1.00		1.00	1.00		0.73	0.78	0.63	0.81	0.69	
Incremental Delay, d2	4.3	0.6		0.8	4.6		0.4	13.4	0.0	2.1	1.0	
Delay (s)	23.6	17.9		18.0	25.1		8.1	27.7	6.5	11.2	10.4	
Level of Service	C	B		B	C		A	C	A	B	B	
Approach Delay (s)		20.8			23.9			27.1			10.5	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	2	3	17	7	4	9	561	19	8	504	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1409			1392		1734	1544		1719	1807	
Flt Permitted		0.93			0.86		0.35	1.00		0.23	1.00	
Satd. Flow (perm)		1340			1229		645	1544		413	1807	
Peak-hour factor, PHF	0.75	0.75	0.75	0.73	0.73	0.73	0.73	0.73	0.73	0.85	0.85	0.85
Adj. Flow (vph)	4	3	4	23	10	5	12	768	26	9	593	4
RTOR Reduction (vph)	0	3	0	0	4	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	8	0	0	34	0	12	792	0	9	597	0
Confl. Peds. (#/hr)	1		2	2		1	1		1	1		1
Heavy Vehicles (%)	6%	6%	6%	10%	10%	10%	4%	4%	4%	5%	5%	5%
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)		19.0			19.0		49.5	49.5		49.5	49.5	
Effective Green, g (s)		19.0			19.0		49.5	49.5		49.5	49.5	
Actuated g/C Ratio		0.24			0.24		0.62	0.62		0.62	0.62	
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Grp Cap (vph)		318			292		399	955		256	1118	
v/s Ratio Prot								c0.51			0.33	
v/s Ratio Perm		0.01			c0.03		0.02			0.02		
v/c Ratio		0.03			0.12		0.03	0.83		0.04	0.53	
Uniform Delay, d1		23.4			23.9		5.9	11.9		5.9	8.7	
Progression Factor		1.00			1.00		0.79	0.53		0.59	0.63	
Incremental Delay, d2		0.1			0.8		0.1	5.1		0.2	1.7	
Delay (s)		23.5			24.7		4.8	11.4		3.7	7.2	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		23.5			24.7			11.3			7.1	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	109	55	0	0	0	0	490	75	59	475	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0						5.2		5.2	5.2	
Lane Util. Factor		0.95						1.00		1.00	1.00	
Frpb, ped/bikes		0.99						1.00		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.97						0.98		1.00	1.00	
Flt Protected		0.98						1.00		0.95	1.00	
Satd. Flow (prot)		2965						1522		1719	1810	
Flt Permitted		0.98						1.00		0.23	1.00	
Satd. Flow (perm)		2965						1522		412	1810	
Peak-hour factor, PHF	0.79	0.79	0.79	0.92	0.92	0.92	0.71	0.71	0.71	0.95	0.95	0.95
Adj. Flow (vph)	123	138	70	0	0	0	0	690	106	62	500	0
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	301	0	0	0	0	0	796	0	62	500	0
Confl. Peds. (#/hr)	3		10	10		3	2		1	1		2
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	5%	5%	5%
Parking (#/hr)		20						10				
Turn Type	Perm									Perm		
Protected Phases		3						1			1	
Permitted Phases	3									1		
Actuated Green, G (s)		19.0						49.8		49.8	49.8	
Effective Green, g (s)		19.0						49.8		49.8	49.8	
Actuated g/C Ratio		0.24						0.62		0.62	0.62	
Clearance Time (s)		6.0						5.2		5.2	5.2	
Lane Grp Cap (vph)		704						947		256	1127	
v/s Ratio Prot								c0.52			0.28	
v/s Ratio Perm		0.10								0.15		
v/c Ratio		0.43						0.84		0.24	0.44	
Uniform Delay, d1		25.9						12.0		6.7	7.9	
Progression Factor		1.00						0.45		0.35	0.32	
Incremental Delay, d2		1.9						5.5		2.0	1.1	
Delay (s)		27.8						10.9		4.3	3.7	
Level of Service		C						B		A	A	
Approach Delay (s)		27.8			0.0			10.9			3.7	
Approach LOS		C			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	53	120	28	82	514	0	0	490	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.0		5.9	5.9			5.9	5.9
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					0.99		1.00	1.00			1.00	0.98
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.98		1.00	1.00			1.00	0.85
Flt Protected					0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)					2935		1745	1568			1827	1516
Flt Permitted					0.99		0.39	1.00			1.00	1.00
Satd. Flow (perm)					2935		708	1568			1827	1516
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.73	0.73	0.73	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	63	143	33	112	704	0	0	544	176
RTOR Reduction (vph)	0	0	0	0	16	0	0	0	0	0	0	70
Lane Group Flow (vph)	0	0	0	0	223	0	112	704	0	0	544	106
Confl. Peds. (#/hr)	18		4	4		18	7		2	2		7
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	3%	3%	3%	4%	4%	4%
Parking (#/hr)					20			10				
Turn Type				Perm			Perm					Perm
Protected Phases					3			1			1	
Permitted Phases				3			1					1
Actuated Green, G (s)					20.0		48.1	48.1			48.1	48.1
Effective Green, g (s)					20.0		48.1	48.1			48.1	48.1
Actuated g/C Ratio					0.25		0.60	0.60			0.60	0.60
Clearance Time (s)					6.0		5.9	5.9			5.9	5.9
Lane Grp Cap (vph)					734		426	943			1098	911
v/s Ratio Prot								c0.45			0.30	
v/s Ratio Perm					0.08		0.16					0.07
v/c Ratio					0.30		0.26	0.75			0.50	0.12
Uniform Delay, d1					24.4		7.6	11.5			9.1	6.8
Progression Factor					1.00		0.82	0.60			1.53	4.77
Incremental Delay, d2					1.1		0.9	3.3			1.4	0.2
Delay (s)					25.4		7.1	10.2			15.2	32.9
Level of Service					C		A	B			B	C
Approach Delay (s)		0.0			25.4			9.8			19.5	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	219	70	156	233	44	87	321	120	59	424	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.98		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1768	1787		1734	1779		1735	3054		1734	3398	
Flt Permitted	0.37	1.00		0.38	1.00		0.33	1.00		0.33	1.00	
Satd. Flow (perm)	680	1787		701	1779		610	3054		601	3398	
Peak-hour factor, PHF	0.92	0.92	0.92	0.87	0.87	0.87	0.74	0.74	0.74	0.82	0.82	0.82
Adj. Flow (vph)	104	238	76	179	268	51	118	434	162	72	517	72
RTOR Reduction (vph)	0	16	0	0	9	0	0	44	0	0	12	0
Lane Group Flow (vph)	104	298	0	179	310	0	118	552	0	72	577	0
Confl. Peds. (#/hr)	3		5	5		3	1		3	3		1
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)								10				
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	23.4	18.6		29.0	21.4		30.2	25.2		30.2	25.2	
Effective Green, g (s)	23.4	18.6		29.0	21.4		30.2	25.2		30.2	25.2	
Actuated g/C Ratio	0.29	0.23		0.36	0.27		0.38	0.31		0.38	0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	0.2		4.0	0.2	
Lane Grp Cap (vph)	264	415		352	476		301	962		298	1070	
v/s Ratio Prot	0.02	0.17		c0.05	c0.17		c0.02	c0.18		0.02	0.17	
v/s Ratio Perm	0.09			0.14			0.12			0.08		
v/c Ratio	0.39	0.72		0.51	0.65		0.39	0.57		0.24	0.54	
Uniform Delay, d1	27.7	28.3		25.4	26.0		22.6	22.9		21.3	22.6	
Progression Factor	1.00	1.00		1.00	1.00		0.44	0.79		1.08	0.86	
Incremental Delay, d2	1.3	6.2		1.6	3.5		0.8	1.7		0.6	1.9	
Delay (s)	29.0	34.5		27.0	29.5		10.6	19.8		23.5	21.3	
Level of Service	C	C		C	C		B	B		C	C	
Approach Delay (s)		33.2			28.6			18.3			21.5	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	23.6
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	62	30	49	107	80	16	589	14	25	656	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.4	5.4	5.4	5.4	5.4	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.95	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00	1.00	0.99	1.00	
Frt	1.00	0.95		1.00	0.94		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1767	1764		1715	1426		1739	1568	1495	1754	3442	
Flt Permitted	0.61	1.00		0.69	1.00		0.37	1.00	1.00	0.38	1.00	
Satd. Flow (perm)	1136	1764		1241	1426		686	1568	1495	710	3442	
Peak-hour factor, PHF	0.85	0.85	0.85	0.94	0.94	0.94	0.92	0.92	0.92	0.95	0.95	0.95
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	85%	100%	100%	85%	100%
Adj. Flow (vph)	134	73	35	52	114	85	17	544	15	26	587	99
RTOR Reduction (vph)	0	25	0	0	39	0	0	0	6	0	19	0
Lane Group Flow (vph)	134	83	0	52	160	0	17	544	9	26	667	0
Confl. Peds. (#/hr)	1		2	2		1	7		9	9		7
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	3%	3%	3%	2%	2%	2%
Parking (#/hr)					10			10				
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1		1	1		
Actuated Green, G (s)	17.0	17.0		17.0	17.0		41.6	41.6	41.6	41.6	41.6	
Effective Green, g (s)	17.0	17.0		17.0	17.0		41.6	41.6	41.6	41.6	41.6	
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.59	0.59	0.59	0.59	0.59	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.4	5.4	5.4	5.4	5.4	
Lane Grp Cap (vph)	276	428		301	346		408	932	888	422	2046	
v/s Ratio Prot		0.05			0.11			c0.35			0.19	
v/s Ratio Perm	c0.12			0.04			0.02		0.01	0.04		
v/c Ratio	0.49	0.19		0.17	0.46		0.04	0.58	0.01	0.06	0.33	
Uniform Delay, d1	22.7	21.1		20.9	22.6		5.9	8.8	5.8	6.0	7.1	
Progression Factor	1.00	1.00		1.00	1.00		0.33	0.68	0.11	0.82	0.59	
Incremental Delay, d2	6.0	1.0		1.2	4.4		0.2	2.5	0.0	0.2	0.4	
Delay (s)	28.7	22.1		22.2	27.0		2.1	8.5	0.6	5.1	4.6	
Level of Service	C	C		C	C		A	A	A	A	A	
Approach Delay (s)		25.8			26.0			8.1			4.6	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	9	15	27	14	27	11	659	37	8	629	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.95		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1386			1399		1770	1564		1752	1839	
Flt Permitted		0.97			0.88		0.31	1.00		0.29	1.00	
Satd. Flow (perm)		1349			1258		579	1564		533	1839	
Peak-hour factor, PHF	0.77	0.77	0.77	0.74	0.74	0.74	0.91	0.91	0.91	0.87	0.87	0.87
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	85%	100%	100%	85%	100%
Adj. Flow (vph)	5	12	19	36	19	36	12	616	41	9	615	11
RTOR Reduction (vph)	0	14	0	0	26	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	22	0	0	65	0	12	654	0	9	625	0
Confl. Peds. (#/hr)	1		3	3		1	6		9	9		6
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	3%	3%	3%
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)		19.0			19.0		39.5	39.5		39.5	39.5	
Effective Green, g (s)		19.0			19.0		39.5	39.5		39.5	39.5	
Actuated g/C Ratio		0.27			0.27		0.56	0.56		0.56	0.56	
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Grp Cap (vph)		366			341		327	883		301	1038	
v/s Ratio Prot								c0.42			0.34	
v/s Ratio Perm		0.02			c0.05		0.02			0.02		
v/c Ratio		0.06			0.19		0.04	0.74		0.03	0.60	
Uniform Delay, d1		18.9			19.6		6.8	11.4		6.8	10.1	
Progression Factor		1.00			1.00		0.49	0.44		0.67	0.49	
Incremental Delay, d2		0.3			1.2		0.2	4.7		0.2	2.4	
Delay (s)		19.2			20.8		3.5	9.7		4.7	7.3	
Level of Service		B			C		A	A		A	A	
Approach Delay (s)		19.2			20.8			9.6			7.3	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	114	82	0	0	0	0	576	94	73	554	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0						5.2		5.2	5.2	
Lane Util. Factor		0.95						1.00		1.00	1.00	
Frpb, ped/bikes		0.99						0.99		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.96						0.98		1.00	1.00	
Flt Protected		0.98						1.00		0.95	1.00	
Satd. Flow (prot)		2971						1510		1752	1845	
Flt Permitted		0.98						1.00		0.31	1.00	
Satd. Flow (perm)		2971						1510		571	1845	
Peak-hour factor, PHF	0.88	0.88	0.88	0.55	0.55	0.55	0.93	0.93	0.93	0.92	0.92	0.92
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	85%	100%	100%	85%	100%
Adj. Flow (vph)	119	130	93	0	0	0	0	526	101	79	512	0
RTOR Reduction (vph)	0	55	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	287	0	0	0	0	0	627	0	79	512	0
Confl. Peds. (#/hr)	11		17	17		11	7		11	11		7
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	4%	4%	4%	3%	3%	3%
Parking (#/hr)		10						10				
Turn Type	Perm									Perm		
Protected Phases		3						1			1	
Permitted Phases	3									1		
Actuated Green, G (s)		19.0						39.8		39.8	39.8	
Effective Green, g (s)		19.0						39.8		39.8	39.8	
Actuated g/C Ratio		0.27						0.57		0.57	0.57	
Clearance Time (s)		6.0						5.2		5.2	5.2	
Lane Grp Cap (vph)		806						859		325	1049	
v/s Ratio Prot								c0.42			0.28	
v/s Ratio Perm		0.10								0.14		
v/c Ratio		0.36						0.73		0.24	0.49	
Uniform Delay, d1		20.6						11.1		7.6	9.0	
Progression Factor		1.00						0.20		0.40	0.41	
Incremental Delay, d2		1.2						4.0		1.6	1.5	
Delay (s)		21.8						6.2		4.6	5.1	
Level of Service		C						A		A	A	
Approach Delay (s)		21.8			0.0			6.2			5.1	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	106	155	63	125	567	0	0	528	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.0		5.9	5.9			5.9	5.9
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					0.99		1.00	1.00			1.00	0.97
Flpb, ped/bikes					1.00		0.99	1.00			1.00	1.00
Frt					0.97		1.00	1.00			1.00	0.85
Flt Protected					0.98		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3017		1739	1568			1845	1519
Flt Permitted					0.98		0.41	1.00			1.00	1.00
Satd. Flow (perm)					3017		742	1568			1845	1519
Peak-hour factor, PHF	0.81	0.81	0.81	0.84	0.84	0.84	0.94	0.94	0.94	0.91	0.91	0.91
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	85%	100%	100%	85%	100%
Adj. Flow (vph)	0	0	0	126	185	75	133	513	0	0	493	156
RTOR Reduction (vph)	0	0	0	0	30	0	0	0	0	0	0	71
Lane Group Flow (vph)	0	0	0	0	356	0	133	513	0	0	493	85
Confl. Peds. (#/hr)	22		13	13		22	13		20	20		13
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	3%	3%	3%	3%	3%	3%
Parking (#/hr)					10			10				
Turn Type				Perm			Perm					Perm
Protected Phases					3			1			1	
Permitted Phases				3			1					1
Actuated Green, G (s)					20.0		38.1	38.1			38.1	38.1
Effective Green, g (s)					20.0		38.1	38.1			38.1	38.1
Actuated g/C Ratio					0.29		0.54	0.54			0.54	0.54
Clearance Time (s)					6.0		5.9	5.9			5.9	5.9
Lane Grp Cap (vph)					862		404	853			1004	827
v/s Ratio Prot								c0.33			0.27	
v/s Ratio Perm					0.12		0.18					0.06
v/c Ratio					0.41		0.33	0.60			0.49	0.10
Uniform Delay, d1					20.2		8.9	10.8			9.9	7.7
Progression Factor					1.00		0.66	0.57			1.75	5.00
Incremental Delay, d2					1.5		1.6	2.3			1.5	0.2
Delay (s)					21.7		7.5	8.5			18.9	38.7
Level of Service					C		A	A			B	D
Approach Delay (s)		0.0			21.7			8.3			23.6	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	266	88	151	245	61	108	434	104	54	481	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1785	1802		1717	1749		1747	3115		1785	3464	
Flt Permitted	0.39	1.00		0.31	1.00		0.36	1.00		0.35	1.00	
Satd. Flow (perm)	732	1802		561	1749		658	3115		654	3464	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	85%	100%	100%	85%	100%
Adj. Flow (vph)	109	292	97	166	269	67	119	405	114	57	430	83
RTOR Reduction (vph)	0	18	0	0	13	0	0	35	0	0	23	0
Lane Group Flow (vph)	109	371	0	166	323	0	119	484	0	57	490	0
Confl. Peds. (#/hr)	6		7	7		6	7		3	3		7
Heavy Vehicles (%)	1%	1%	1%	5%	5%	5%	3%	3%	3%	1%	1%	1%
Parking (#/hr)								10				
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	23.7	18.2		27.1	19.9		23.4	17.3		18.6	14.9	
Effective Green, g (s)	23.7	18.2		27.1	19.9		23.4	17.3		18.6	14.9	
Actuated g/C Ratio	0.34	0.26		0.39	0.28		0.33	0.25		0.27	0.21	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	0.2		4.0	0.2	
Lane Grp Cap (vph)	331	469		336	497		315	770		234	737	
v/s Ratio Prot	0.03	c0.21		c0.05	0.18		c0.03	c0.16		0.01	0.14	
v/s Ratio Perm	0.09			0.14			0.09			0.05		
v/c Ratio	0.33	0.79		0.49	0.65		0.38	0.63		0.24	0.67	
Uniform Delay, d1	21.4	24.1		22.6	22.0		21.2	23.5		23.2	25.3	
Progression Factor	1.00	1.00		1.00	1.00		0.66	0.87		0.73	0.77	
Incremental Delay, d2	0.8	9.4		1.6	3.4		0.9	3.4		0.7	4.5	
Delay (s)	22.2	33.5		24.2	25.4		14.9	23.8		17.5	24.0	
Level of Service	C	C		C	C		B	C		B	C	
Approach Delay (s)		31.0			25.0			22.1			23.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	166	79	35	36	128	68	16	589	14	25	656	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.4	5.4	5.4	5.4	5.4	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.94	1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.95		1.00	0.95		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1766	1785		1725	1453		1761	1583	1493	1770	3465	
Flt Permitted	0.55	1.00		0.67	1.00		0.30	1.00	1.00	0.30	1.00	
Satd. Flow (perm)	1030	1785		1225	1453		553	1583	1493	564	3465	
Peak-hour factor, PHF	0.89	0.89	0.89	0.84	0.84	0.84	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	187	89	39	43	152	81	17	620	15	28	729	91
RTOR Reduction (vph)	0	20	0	0	24	0	0	0	7	0	12	0
Lane Group Flow (vph)	187	108	0	43	209	0	17	620	8	28	808	0
Confl. Peds. (#/hr)	7		5	5		7	6		11	11		6
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	2%	2%	2%	2%	2%	2%
Parking (#/hr)					10			10				
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1		1	1		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		44.6	44.6	44.6	44.6	44.6	
Effective Green, g (s)	24.0	24.0		24.0	24.0		44.6	44.6	44.6	44.6	44.6	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.56	0.56	0.56	0.56	0.56	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.4	5.4	5.4	5.4	5.4	
Lane Grp Cap (vph)	309	536		368	436		308	883	832	314	1932	
v/s Ratio Prot		0.06			0.14			c0.39			0.23	
v/s Ratio Perm	c0.18			0.04			0.03		0.01	0.05		
v/c Ratio	0.61	0.20		0.12	0.48		0.06	0.70	0.01	0.09	0.42	
Uniform Delay, d1	23.9	20.9		20.3	22.9		8.1	12.9	7.9	8.2	10.2	
Progression Factor	1.00	1.00		1.00	1.00		0.59	0.96	0.43	1.00	0.78	
Incremental Delay, d2	8.5	0.8		0.6	3.7		0.3	4.2	0.0	0.3	0.4	
Delay (s)	32.5	21.7		21.0	26.6		5.0	16.6	3.4	8.6	8.3	
Level of Service	C	C		C	C		A	B	A	A	A	
Approach Delay (s)		28.1			25.8			16.0			8.3	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.4
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	7	20	49	20	14	7	717	13	18	815	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1392			1510		1770	1578		1787	1878	
Flt Permitted		0.90			0.80		0.14	1.00		0.23	1.00	
Satd. Flow (perm)		1278			1238		254	1578		431	1878	
Peak-hour factor, PHF	0.75	0.75	0.75	0.82	0.82	0.82	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	16	9	27	60	24	17	8	779	14	21	937	8
RTOR Reduction (vph)	0	21	0	0	9	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	31	0	0	92	0	8	792	0	21	945	0
Confl. Peds. (#/hr)	1		1	1		1	12		5	5		12
Heavy Vehicles (%)	5%	5%	5%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Parking (#/hr)		10			10			10				
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Actuated Green, G (s)		19.0			19.0		49.5	49.5		49.5	49.5	
Effective Green, g (s)		19.0			19.0		49.5	49.5		49.5	49.5	
Actuated g/C Ratio		0.24			0.24		0.62	0.62		0.62	0.62	
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Grp Cap (vph)		304			294		157	976		267	1162	
v/s Ratio Prot								0.50			c0.50	
v/s Ratio Perm		0.02			c0.07		0.03			0.05		
v/c Ratio		0.10			0.31		0.05	0.81		0.08	0.81	
Uniform Delay, d1		23.8			25.1		6.0	11.7		6.1	11.7	
Progression Factor		1.00			1.00		0.84	0.97		0.52	0.36	
Incremental Delay, d2		0.7			2.8		0.5	5.5		0.4	4.9	
Delay (s)		24.5			27.9		5.5	16.9		3.7	9.1	
Level of Service		C			C		A	B		A	A	
Approach Delay (s)		24.5			27.9			16.8			9.0	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	95	87	0	0	0	0	653	86	39	770	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0						5.2		5.2	5.2	
Lane Util. Factor		0.95						1.00		1.00	1.00	
Frpb, ped/bikes		0.99						1.00		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.96						0.98		1.00	1.00	
Flt Protected		0.98						1.00		0.95	1.00	
Satd. Flow (prot)		2997						1539		1770	1863	
Flt Permitted		0.98						1.00		0.24	1.00	
Satd. Flow (perm)		2997						1539		444	1863	
Peak-hour factor, PHF	0.87	0.87	0.87	0.50	0.50	0.50	0.95	0.95	0.95	0.93	0.93	0.93
Adj. Flow (vph)	159	109	100	0	0	0	0	687	91	42	828	0
RTOR Reduction (vph)	0	48	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	320	0	0	0	0	0	778	0	42	828	0
Confl. Peds. (#/hr)	6		11	11		6	8		4	4		8
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Parking (#/hr)		10						10				
Turn Type	Perm									Perm		
Protected Phases		3						1			1	
Permitted Phases	3									1		
Actuated Green, G (s)		19.0						49.8		49.8	49.8	
Effective Green, g (s)		19.0						49.8		49.8	49.8	
Actuated g/C Ratio		0.24						0.62		0.62	0.62	
Clearance Time (s)		6.0						5.2		5.2	5.2	
Lane Grp Cap (vph)		712						958		276	1160	
v/s Ratio Prot								c0.51			0.44	
v/s Ratio Perm		0.11								0.09		
v/c Ratio		0.45						0.81		0.15	0.71	
Uniform Delay, d1		26.0						11.5		6.3	10.3	
Progression Factor		1.00						0.24		0.48	0.62	
Incremental Delay, d2		2.0						4.5		0.9	2.8	
Delay (s)		28.1						7.3		3.9	9.2	
Level of Service		C						A		A	A	
Approach Delay (s)		28.1			0.0			7.3			8.9	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.2
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	141	257	84	109	697	0	0	682	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.0		5.9	5.9			5.9	5.9
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frpb, ped/bikes					0.99		1.00	1.00			1.00	0.97
Flpb, ped/bikes					1.00		1.00	1.00			1.00	1.00
Frt					0.97		1.00	1.00			1.00	0.85
Flt Protected					0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3092		1770	1583			1863	1535
Flt Permitted					0.99		0.27	1.00			1.00	1.00
Satd. Flow (perm)					3092		499	1583			1863	1535
Peak-hour factor, PHF	0.69	0.69	0.69	0.81	0.81	0.81	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	174	317	104	118	758	0	0	718	204
RTOR Reduction (vph)	0	0	0	0	23	0	0	0	0	0	0	60
Lane Group Flow (vph)	0	0	0	0	573	0	118	758	0	0	718	144
Confl. Peds. (#/hr)	30		4	4		30	11		12	12		11
Parking (#/hr)					10			10				
Turn Type				Perm			Perm					Perm
Protected Phases					3			1			1	
Permitted Phases				3			1					1
Actuated Green, G (s)					20.0		48.1	48.1			48.1	48.1
Effective Green, g (s)					20.0		48.1	48.1			48.1	48.1
Actuated g/C Ratio					0.25		0.60	0.60			0.60	0.60
Clearance Time (s)					6.0		5.9	5.9			5.9	5.9
Lane Grp Cap (vph)					773		300	952			1120	923
v/s Ratio Prot								c0.48			0.39	
v/s Ratio Perm					0.19		0.24					0.09
v/c Ratio					0.74		0.39	0.80			0.64	0.16
Uniform Delay, d1					27.6		8.3	12.2			10.3	7.0
Progression Factor					1.00		0.99	0.83			1.00	1.00
Incremental Delay, d2					6.3		2.6	4.7			2.8	0.4
Delay (s)					33.9		10.8	14.9			13.2	7.4
Level of Service					C		B	B			B	A
Approach Delay (s)		0.0			33.9			14.3			11.9	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	244	132	166	261	48	124	451	166	62	616	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.98		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1767	1747		1750	1795		1752	3042		1763	3434	
Flt Permitted	0.31	1.00		0.24	1.00		0.17	1.00		0.26	1.00	
Satd. Flow (perm)	581	1747		448	1795		317	3042		489	3434	
Peak-hour factor, PHF	0.91	0.91	0.91	0.85	0.85	0.85	0.95	0.95	0.95	0.91	0.91	0.91
Adj. Flow (vph)	99	268	145	195	307	56	131	475	175	68	677	126
RTOR Reduction (vph)	0	23	0	0	7	0	0	39	0	0	17	0
Lane Group Flow (vph)	99	390	0	195	356	0	131	611	0	68	786	0
Confl. Peds. (#/hr)	9		12	12		9	5		16	16		5
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	2%	2%	2%
Parking (#/hr)								10				
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	32.2	24.1		35.2	25.6		35.1	27.7		30.3	25.3	
Effective Green, g (s)	32.2	24.1		35.2	25.6		35.1	27.7		30.3	25.3	
Actuated g/C Ratio	0.36	0.27		0.39	0.28		0.39	0.31		0.34	0.28	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.8	5.8		5.8	5.8	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	0.2		4.0	0.2	
Lane Grp Cap (vph)	315	468		314	511		242	936		235	965	
v/s Ratio Prot	0.03	c0.22		c0.07	0.20		c0.04	0.20		0.02	c0.23	
v/s Ratio Perm	0.08			0.18			0.17			0.08		
v/c Ratio	0.31	0.83		0.62	0.70		0.54	0.65		0.29	0.81	
Uniform Delay, d1	28.5	31.1		31.0	28.7		31.8	27.0		28.7	30.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.77	0.67	
Incremental Delay, d2	0.8	12.6		4.3	4.4		3.1	3.5		0.8	6.7	
Delay (s)	29.3	43.7		35.2	33.2		34.9	30.5		23.0	26.7	
Level of Service	C	D		D	C		C	C		C	C	
Approach Delay (s)		40.9			33.9			31.2			26.4	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	32.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Appendix D –
UD-10 Reports for Injury Type A Crashes

Authority: 1949 PA 300, Sec. 257.622
Compliance: Required MSP UD-10
Penalty: $100 and/or 90 days (Rev. 1/04)

Do Not Use

Crash ID 6353656

Page CH.E of CH.E

STATE OF MICHIGAN TRAFFIC CRASH REPORT

File Class 93001

ORI: MI-585900 | Department Name: MONROE POLICE DEPT.

Incident Disposition: ○ Open ● Closed | Reviewer: DL

LOCATION

Crash Date: 05/27/2006 | Crash Time: 0410 | No. of Units: 01

Crash Type: ○ Single Motor Vehicle ○ Head On ○ Head On-Left Turn ○ Angle ○ Rear End ○ Rear End-Left Turn ○ Rear End-Right Turn ○ Sideswipe-Same ○ Sideswipe-Opposite ● Other/Unknown

Special Circumstances: ○ None ○ Hit and Run ○ School Bus ○ Local ○ State

Special Study: ○ Deer ○ Fleeing Police ○ Severe Wind ○ Snow/Blowing Snow ○ Sleet/Hail ○ Other/Unknown

Weather (Mark Only One): ● Clear ○ Cloudy ○ Fog/Smoke ○ Rain

Light (Mark Only One): ○ Daylight ○ Dawn ○ Dusk ● Dark-Lighted ○ Dark-Unlighted ○ Other/Unknown

Road Condition (Mark Only One): ● Dry ○ Wet ○ Icy ○ Snowy ○ Muddy ○ Slushy ○ Debris ○ Other/Unknown

Special Checks: ○ Fatal (Report All) ○ Corrected Copy ○ Replace (Entire Report) ○ Delete (Entire Report) ○ Non-Traffic Area ○ ORV/Snowmobile

County: 58 | City/Twp: 66 | Traffic Control: ● None of These ○ Signal ○ Stop Sign ○ Yield Sign

Relation to Roadway (Location of First Impact): ○ On Road ○ Median ○ Shoulder ● Outside of Shoulder/Curb ○ Gore ○ Other/Unknown

Area: 10 | Total Lanes: 4

Construction Zone (If applicable) (Mark Only One If Both Exist): Type: ○ Const./Maint. ○ Utility | Lane Closed: ○ Yes ○ No | Activity: ○ On Road ○ Off Road ○ None

Speed Limit: 30 | Posted: ● Yes ○ No

Prefix: N | Road Name: MONROE M-125 | Divided Roadway (N)(S)(E)(W) | Road Type: ST | Suffix:

Distance: 30 ● FT ○ MI | ● North ○ South ○ East ○ West | ○ Beginning of Ramp ○ End of Ramp | Trafficway (1)(2)(3)(4) | Access Control ●(2)(3)

Prefix: E | Intersecting Road: SECOND | Divided Roadway (N)(S)(E)(W) | Road Type: ST | Suffix:

UNIT/DRIVER

Unit Number: 1 | State: | Date of Birth: 02/14/1991

Unit Type: ● MV ○ B ○ P ○ E (Explain)

City: MONROE | State: MI | Zip: 48162

License Type: ○ O ○ CY ○ C ○ F ○ M ○ R | Sex: ● M ○ F | Total Occup: 02 | Hazard Action: 16

Injury: ○ K ● A ○ B ○ C ○ O | Position: 01 | Restraint: 04 | Hospital: MERCY MONROE

Ejected: ○ Yes | Trapped: ○ Yes | Ambulance: MONROE FIRE/RESCUE

Airbag Deployed: ○ Yes ● Not Equipped ○ No

Citation Issued: Hazardous ○ Other ○ SEE MPD CMPD B697-04 FOR CARELESS/IN DR.

Driver Condition: ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ●

Interlock: ○ Yes ● No ○ Refused ○ Not offered

Alcohol: ○ Yes ● No | Test Type: ○ Field ○ PBT ○ Breath ○ Blood ○ Urine | Test Results:

Drugs: ○ Yes ● No | Test Type: ○ Blood ○ Urine | Test Results:

Vehicle Description: Make: PONTIAC | Model: 2DOOR | Color: WHITE | Year: 1991

Location of Greatest Damage: ① ● ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

First Impact: 01 | Extent of Damage: 7 | Drivable: ○ Yes ● No

Vehicle Type: ● PA ○ CY ○ OR ○ VA ○ MO ○ Other ○ PU ○ GC ○ Truck/Bus ○ ST ○ SM

Vehicle Direction: ● North ○ South ○ East ○ West

Special Vehicles: ① ② ③ ④ ⑤ ⑥

Private Trailer Type: ① ② ③ ④ ⑤ ⑥ ⑦

Vehicle Defect: ① ② ③ ④ ⑤ ⑥

Vehicle Use: ● ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

PASSENGERS

Date of Birth: 02/08/1989 | Sex: ○ M ● F | Position: 03 | Restraint: 04 | Hospital: MERCY MONROE

Ambulance: MONROE FIRE/RESCUE | Ejected: ○ Yes | Trapped: ○ Yes

Injury: ○ K ● A ○ B ○ C ○ O | Airbag Deployed: ○ Yes ○ No ● Not Equipped

Date of Birth: | Sex: ○ M ○ F | Position: | Restraint: | Hospital:

Ambulance: | Ejected: ○ Yes | Trapped: ○ Yes

Injury: ○ K ○ A ○ B ○ C ○ O | Airbag Deployed: ○ Yes ○ No ○ Not Equipped

Age | Pos. | Rest.

Age | Pos. | Rest.

Damaged Property: MONROE WATER DEPT FIRE HYDRANT | Public: ● Y ○ N

BACK

Unit Number | State

NCS

Unit Type: ◯ MV ◯ B ◯ P ◯ E

City | State | Zip

Date of Birth | License Type ◯ O ◯ CY ◯ C ◯ F ◯ M ◯ R | Sex ◯ M ◯ F | Total Occup | Hazard Action

Injury ◯ K ◯ A ◯ B ◯ C ◯ O | Position | Restraint | Hospital | Ambulance

Driver Condition ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

Interlock ◯ Yes ◯ No ◯ Refused ◯ Not offered

Alcohol ◯ Yes ◯ No Test Type ◯ Field ◯ PBT ◯ Breath ◯ Blood ◯ Urine Test Results

Drugs ◯ Yes ◯ No Test Type ◯ Blood ◯ Urine Test Results

Ejected ◯ Yes Trapped ◯ Yes

Airbag Deployed ◯ Yes ◯ No ◯ Not Equipped

Citation Issued: Hazardous ◯ Other ◯

Vehicle Description: Make | Model | Color | Year

Location of Greatest Damage ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

First Impact | Extent of Damage | Driveable ◯ Yes ◯ No

Vehicle Type ◯ PA ◯ VA ◯ PU ◯ ST ◯ CY ◯ MO ◯ GC ◯ SM ◯ OR ◯ Other ◯ Truck/Bus

Vehicle Direction ◯ North ◯ South ◯ East ◯ West

Special Vehicles ① ② ③ ④ ⑤ ⑥

Private Trailer Type ① ② ③ ④ ⑤ ⑥ ⑦

Vehicle Defect ① ② ③ ④ ⑤ ⑥

Vehicle Use ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

PASSENGERS

Date of Birth | Sex ◯ M ◯ F | Position | Restraint | Hospital | Ambulance | Ejected ◯ Yes | Trapped ◯ Yes

Injury ◯ K ◯ A ◯ B ◯ C ◯ O | Airbag Deployed ◯ Yes ◯ No ◯ Not Equipped

Date of Birth | Sex ◯ M ◯ F | Position | Restraint | Hospital | Ambulance | Ejected ◯ Yes | Trapped ◯ Yes

Injury ◯ K ◯ A ◯ B ◯ C ◯ O | Airbag Deployed ◯ Yes ◯ No ◯ Not Equipped

Age | Pos. | Rest.

Age | Pos. | Rest.

Forward Original To: Michigan State Police, Traffic Crash Reporting Section, 7150 Harris Drive, Lansing, MI 48913

Unit Reported on Front

Action Prior	First	Second	Third	Fourth
01	24	43	41	
Most Harmful				

Unit Reported Above

Action Prior	First	Second	Third	Fourth
Most Harmful				

TRUCK/BUS INFORMATION

Unit Number

City | State

Zip | GVWR

Carrier Source ◯ Papers ◯ Vehicle ◯ Log Book ◯ Driver

Driver's CDL Type ◯ A ◯ C ◯ B ◯ None ◯ H ◯ P ◯ T ◯ N ◯ S ◯ X

◯ Interstate ◯ Intra (MI Only)

CDL Restrictions ◯ 28 ◯ 29 ◯ 30

CDL Exempt ◯ Farm ◯ Other

Vehicle Type ◯ AA ◯ AH ◯ AN ◯ AP ◯ AS ◯ AT ◯ AX ◯ AY ◯ AZ ◯ AL ◯ BB ◯ BH ◯ BN ◯ BP ◯ BS ◯ BX ◯ CH ◯ CP ◯ CS ◯ CX ◯ Other

Type & Axles Per Unit: First | Second | Third | Fourth

Medical Card ◯ Y ◯ N

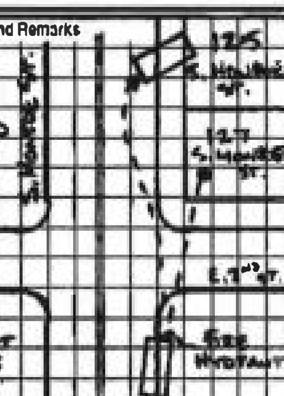
Cargo Body Type ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

Hazardous Material ◯ Placard ◯ Cargo Spill

ID # | Class #

Investigated at Scene ◯ Y ◯ N

Crash Diagram and Remarks



INVESTIGATION REVEALED THAT VEH #1 WAS TRAVEL'G N/B ON S. MONROE ST LOST CONTROL AND VEERED TO THE RIGHT, JUMPED OVER THE CURB, STRIKING THE FIRE HYDRANT. THE FIRE HYDRANT PROJECTED ACROSS 2nd ST INTO 127 S. MONROE. THE VEH. CONTINUED N/B, STILL OUT OF CONTROL, AND STRUCK THE STORE FRONT OF 125 S. MONROE ST.

DRIVER #1, UNLICENSED 14 YEAR OLD, IS BEING CHARGED W/ CARELESS DRIVING. NO DPS.

DAVID'S JEWELRY (DAVID MAXWELL) TEL [illegible]
127 S. MONROE ST MONROE MI 48161

THOMPSON COMPUTER ([illegible] THOMPSON) TEL [illegible]
125 S. MONROE ST. MONROE MI 48161

Authority: 1949 PA 300, Sec. 257.622
Compliance: Required MSP UD-10
Penalty: $100 and/or 90 days (Rev. 1/04)

Do Not Use

Crash ID 7813374

Page ___ of ___

File Class 93001

STATE OF MICHIGAN TRAFFIC CRASH REPORT

ORI: MI-585900O

Department Name: Monroe PD

Incident Disposition: ○ Open ● Closed

Reviewed: GL

Crash Data: Month 11 Day 23 Year 2010

Crash Time (Military): 0954

No. of Units: 02

Crash Type: ● Single Motor Vehicle ○ Head On ○ Head On-Left Turn ○ Angle ○ Rear End ○ Rear End-Left Turn ○ Rear End-Right Turn ○ Sideswipe-Same ○ Sideswipe-Opposite ○ Other/Unknown

Special Circumstances: ● None ○ School Bus ○ Hit and Run ○ Deer ○ Fleeing Police

Special Study: ● Local ○ State

Weather (Mark Only One): ● Clear ○ Cloudy ○ Fog/Smoke ○ Rain ○ Severe Wind ○ Snow/Blowing Snow ○ Sleet/Hail ○ Other/Unknown

Light (Mark Only One): ● Daylight ○ Dawn ○ Dusk ○ Dark-Lighted ○ Dark-Unlighted ○ Other/Unknown

Road Condition (Mark Only One): ● Dry ○ Wet ○ Icy ○ Snowy ○ Muddy ○ Slushy ○ Debris ○ Other/Unknown

Special Checks: ○ Fatal (Report All) ○ Corrected Copy ○ Replace (Entire Report) ○ Delete (Entire Report) ○ Non-Traffic Area ○ ORV/Snowmobile

Area: 10 **Total Lanes:** 4

Speed Limit: 35 **Posted:** ● Yes ○ No

County: 58 City/Twp: 66

Traffic Control: ○ None of These ● Signal ○ Stop Sign ○ Yield Sign

Relation to Roadway (Location of First Impact): ● On Road ○ Median ○ Shoulder ○ Outside of Shoulder/Curb ○ Gore ○ Other/Unknown

Construction Zone (if applicable): Type: ○ Const./Maint. ○ Utility; Lane Closed: ○ Yes ○ No; Activity: ○ On Road ○ Off Road ○ None

LOCATION

Prefix: S Road Name: MONROE Divided Roadway (N)(S)(E)(W): Road Type: ST Suffix:

Distance: 25 ● Ft ○ Mi ○ North ● South ○ East ○ West ○ Beginning of Ramp ○ End of Ramp Trafficway: ●(2)(3)(4) Access Control: ●(2)(3)

Prefix: E Intersecting Road: FRONT Divided Roadway (N)(S)(E)(W): Road Type: ST Suffix:

UNIT/DRIVER

Unit Number: 1 State: MI Date of Birth: 08/21/1932

License Type: ● O ○ C ○ M ○ CY ○ F ○ R Sex: ○ M ● F Total Occup: 01 Hazard Action: 03

Unit Type: ● MV ○ B ○ P ○ E (train)

City: Monroe State: MI Zip: 48161

Injury: ○ K ○ A ○ B ○ C ● O Position: 01 Restraint: 04 Hospital: Ambulance:

Ejected: ○ Yes Trapped: ○ Yes

Airbag Deployed: ○ Yes ● No ○ Not Equipped

Citation Issued: Hazardous ○ Other ○

Driver Condition: ● (1) (2) (3) (4) (5) (6) (7) (8) (9) (99)

Interlock: ○ Yes ● No ○ Refused ○ Not offered

Alcohol: ○ Yes ● No Test Type: ○ Field ○ PBT ○ Breath ○ Blood ○ Urine Test Results:

Drugs: ○ Yes ● No Test Type: ○ Blood ○ Urine Test Results:

Vehicle Description: Make: LINCOLN Model: MKX Color: WHITE Year: 2008

Location of Greatest Damage: (1) ● (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)

First Impact: 01 Extent of Damage: 1 Drivable: ● Yes ○ No

Vehicle Type: ● PA ○ PU ○ BT ○ CY ○ MO ○ GC ○ SM ○ OR ○ Other ○ Truck/Bus

Vehicle Direction: ○ North ● South ○ East ○ West

Special Vehicles: (1) (2) (3) (4) (5) (6)

Private Trailer Type: (1) (2) (3) (4) (5) (6) (7)

Vehicle Defect: (1) (2) (3) (4) (5) (6)

Vehicle Use: ● (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11)

PASSENGERS

Date of Birth | Sex: ○ M ○ F | Position | Restraint | Hospital | Ambulance | Ejected: ○ Yes | Trapped: ○ Yes

Injury: ○ K ○ A ○ B ○ C ○ O Airbag Deployed: ○ Yes ○ No ○ Not Equipped

Date of Birth | Sex: ○ M ○ F | Position | Restraint | Hospital | Ambulance | Ejected: ○ Yes | Trapped: ○ Yes

Injury: ○ K ○ A ○ B ○ C ○ O Airbag Deployed: ○ Yes ○ No ○ Not Equipped

Age | Pos. | Rest.

Age | Pos. | Rest.

Damaged Property | Public: ○ Y ○ N

BACK

Forward Original To: Michigan State Police, Traffic Crash Reporting Section, 7150 Harris Drive, Lansing, MI 48913

UNIT/DRIVER

Unit Number: 2 | State:

NCS

Unit Type: ○ MV ○ B ● P ○ E (train)

Date of Birth: 08/03/1957

License Type: ○ D ○ CY ○ C ○ F ○ M ○ R

Sex: ● M ○ F

Total Occup: 01

Hazard Action: 00

Injury: ○ K ● A ○ B ○ C ○ O

Position: P

Restraint:

Hospital: 580030

Ambulance: 581029

Ejected: ○ Yes

Trapped: ○ Yes

Airbag Deployed: ○ Yes ○ Not Equipped ○ No

Citation Issued: Hazardous ○ Other ○

Driver Condition: ● (1) (2) (3) (4) (5) (6) (7) (8) (9) (99)

Interlock: ○ Yes ● No ○ Refused ○ Not offered

Alcohol: ○ Yes ● No Test Type: ○ Field ○ PBT ○ Breath ○ Blood ○ Urine Test Results

Drugs: ○ Yes ● No Test Type: ○ Blood ○ Urine Test Results

Vehicle Description: Make | Model | Color | Year

Location of Greatest Damage: (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)

First Impact | Extent of Damage | Drivable: ○ Yes ○ No

Vehicle Type: ○ PA ○ CY ○ OR ○ VA ○ MO ○ Other ○ PU ○ GC ○ Truck/Bus ○ ST ○ SM

Vehicle Direction: ○ North ○ South ○ East ● West

Special Vehicles: (1) (2) (3) (4) (5) (6)

Private Trailer Type: (1) (2) (3) (4) (5) (6) (7)

Vehicle Defect: (1) (2) (3) (4) (5) (6)

Vehicle Use: (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11)

PASSENGERS

Date of Birth | Sex: ○ M ○ F | Position | Restraint | Hospital | Ambulance | Ejected: ○ Yes | Trapped: ○ Yes

Injury: ○ K ○ A ○ B ○ C ○ O | Airbag Deployed: ○ Yes ○ No ○ Not Equipped

Date of Birth | Sex: ○ M ○ F | Position | Restraint | Hospital | Ambulance | Ejected: ○ Yes | Trapped: ○ Yes

Injury: ○ K ○ A ○ B ○ C ○ O | Airbag Deployed: ○ Yes ○ No ○ Not Equipped

Age | Phone | Res.

911-3805

◀ Unit Reported on Front

Action Prior	Sequence of Events: First	Second	Third	Fourth
02	15			
Most Harmful	●	(12)	(13)	(14)

▲ Unit Reported Above

Action Prior	Sequence of Events: First	Second	Third	Fourth
24	17			
Most Harmful	●	(12)	(13)	(14)

TRUCK/BUS INFORMATION

Unit Number

City | State | Carrier Source: ○ Papers ○ Vehicle ○ Log Book ○ Driver

Zip | GVWR/GCWR

Driver's CDL Type: ○ A ○ B ○ C ○ None ○ H ○ N ○ P ○ S ○ T ○ X

○ Interstate ○ Intra (MI Only)

CDL Restrictions: ○ 28 ○ 29 ○ 30

CDL Exempt: ○ Farm ○ Other

Vehicle Type: ○ AA ○ AH ○ AN ○ AP ○ AS ○ AT ○ AX ○ AY ○ AZ ○ AL ○ BB ○ BH ○ BN ○ BP ○ BS ○ BX ○ CH ○ CP ○ CS ○ CX ○ Other

Type & Axles Per Unit: First | Second | Third | Fourth

Cargo Body Type: (1) (2) (3) (4) (5) (6) (7) (8)

Medical Card: ○ Y ○ N

Hazardous Material: ○ Placard ○ Cargo Spill

ID # | Class #

Investigated at Scene: ● (N)

Crash Diagram and Remarks

VH1 WAS MAKING A SB TURN ONTO S. MORLEY FROM E FARMS ST. VIEW VH1 STRUCK PW2. WITNESS PW1 OF ACCIDENT. PW2 WAS AT THE CROSSWALK. VIEW. WITNESS CAROLINE ADVISED PW2 WAS OUTSIDE THE CROSSWALK BY A FEW FEET. VH1 WAS CITED FOR FAIL TO DISTRACTED.

CITY COUNCIL
AGENDA FACT SHEET

RELATING TO: Document Imaging Software Upgrade

DISCUSSION: The City of Monroe currently uses Laserfiche software for document imaging purposes. The software is used primarily for storing documents electronically versus in paper form. Some departments have had microfilm converted to images that can be viewed in Laserfiche and the software is integrated with our geographic information system (GIS). The software was initially purchased around 2001 by the Police Department and then subsequently upgraded and made available to all City departments via a capital improvement program budget approval around 2006.

The next step in the City's use of the document imaging software is to begin to use it in the day to day business processes. The goal of this would be to use less paper, provide for electronic storage of documents that are currently filed in archive areas, and make the business processes more efficient, accountable, and trackable. In order for City departments to use Laserfiche in this way, we would need to upgrade the software to add a feature called workflow. I've attached a document that explains Laserfiche workflow and some of its benefits. One example of how workflow would be used at the City of Monroe is the accounts payable process. The process would be made paperless and would be integrated with our Equalizer Accounts Payable software. Invoices that are now filed in cabinets and in archives that are now difficult to retrieve if needed would become electronic and would be available from an employee's desktop computer. The ability to route invoices electronically to the Finance Department would save some department's time in travelling to City Hall and the expected ability to import data from Laserfiche into the accounts payable software would make data entry more efficient for the Finance Department. There are other small processes in the Finance Department that would help to make processes more efficient. I have also met with other City department directors and have discussed how the upgraded software could be used in their departments and I am certain that if we implement this correctly, efficiencies can be found in many City departments. There are many other features and advantages to the software. I've attached the full proposal for your review.

The proposal that is attached is from General Code. General Code is our support agent for the Laserfiche software. They also happen to maintain our ordinance code books and provide for on line access to our ordinances. Laserfiche sells its software through third party support vendors like General Code. We changed our support vendor to General Code in the fall of 2013 and have been happy with their service and support to date. The price of the software would not change regardless of vendors and for that reason it made no sense to request other proposals or bids.

The advantage of acting now to purchase this software is that Laserfiche is offering a 50% discount on the software purchase price and a trade-in credit on the previous software purchased. The 50% discount is limited to the first 200 orders received. If we did not qualify for this discount, I would postpone the purchase until a later date. In addition to the pricing discounts that are available, we are also in need of adding licenses to our current Laserfiche software. We only have eleven (11) concurrent licenses at this point to the software. This means that eleven (11) people can use the software at the same time. There are many times currently that some employees that want to use the software can't get into it because all of the licenses are checked out. The cost of adding additional licenses to what we currently have would be $915.00 per license plus $300.00 for installation.

The funding for this software upgrade would initially be from the Information Systems Fund. The Information Systems Fund is an internal service fund that charges 100% of its costs back to other City departments and funds. Over a five year period, the cost of this proposal would be charged back to City departments and funds on a per license basis.

The proposal cost is $65,865.94. This includes first year support on the products of $13,215. This will be a recurring cost which we already budget for in the IT Fund operating budget. Depending on when we implement the new software, we will get a credit for what we have already paid in support fees for this year on our current software installation. The credit can't be determined at this time.

In addition to the proposal from General Code, there will be some cost to continue the integration with our GIS with the software upgrade. While a solid estimate has not yet been received on this part of the project, it is estimated based on the initial GIS project proposal that this should cost $5,000 or less.

It is recommended that the Mayor and City Council approve entering into the agreement with General Code for the Laserfiche software upgrade, installation, and training in the amount of $65,865.94 and that a total of $71,000 be encumbered to allow for contingencies and GIS integration work, that the City Manager be authorized to sign any

necessary agreements to execute the proposal and that the agreements not be executed until after the City Attorney has reviewed and approved them.

CITY MANAGER RECOMMENDATION:

- [x] For
- [ ] For, with revisions or conditions
- [ ] Against
- [ ] No Action Taken/Recommended

APPROVAL DEADLINE: 6/2/14

REASON FOR DEADLINE: Laserfiche discount offer

STAFF RECOMMENDATION: ☒ For ☐ Against

REASON AGAINST: N/A

INITIATED BY: Edward Sell, Finance Director

PROGRAMS, DEPARTMENTS, OR GROUPS AFFECTED: All City Departments

FINANCES

COST AND REVENUE PROJECTIONS:

Cost of Total Project	$ 71,000
Cost of This Project Approval	$ 71,000
Related Annual Operating Cost	$ 13,215
Increased Revenue Expected/Year	$ N/A

SOURCE OF FUNDS:

City	Account Number	Amount
Info. Systems Fund	636-30.915-956.000	$ 13,215.00
Information System Fund	New Capital Project	$ 57,785.00
		$ N/A
		$ N/A
		$ N/A
Other Funds		$ N/A
		$ N/A
		$ N/A
		$ N/A

Budget Approval:

FACT SHEET PREPARED BY: Edward Sell, Finance Director **DATE:** 5/29/14

REVIEWED BY: **DATE:** 5/29/14

COUNCIL MEETING DATE: June 2, 2014

Laserfiche Workflow

Go Back

An organization's success is closely related to the efficiency of its everyday business processes. Yet too many organizations continue to rely on outdated, manual processes that hamper productivity and interfere with effective decision making. In today's increasingly-complex global environment, it's more important than ever for organizations to streamline operations and to help staff focus more of their time on revenue-generating activities.

Laserfiche Workflow™ is a flexible, easy-to-use tool for automating and optimizing business processes organization-wide. A central component of the Laserfiche product suite, Workflow enables you to map, model and manage your business processes to efficiently achieve your goals.

With its ability to integrate with a wide variety of enterprise applications, Workflow can be used to execute repeatable processes in a consistent manner across the organization, optimizing resource efficiency, cost and service delivery.

Highlights:

- Simplify Complex Tasks.
- Design Workflow Rules with Ease.
- Minimize IT Support.

"I literally went to one Workflow session at the Conference, came back and started designing workflows. Within six months, we had 22 workflows. We did all the training in-house without a consultant, so we were able to implement our contract management system without any outside services or additional costs."

Lance Dutcher, Systems Engineer
Corporate Commission of the Mille Lacs Band of Ojibwe Indians

Simple Workflow: Requesting Vacation Time

1. Employee submits a request using the Laserfiche Client.

2. Manager is notified for initial review via an automatic e-mail notification.

3. Human Resources gets an automatic

DENIED

APPROVED

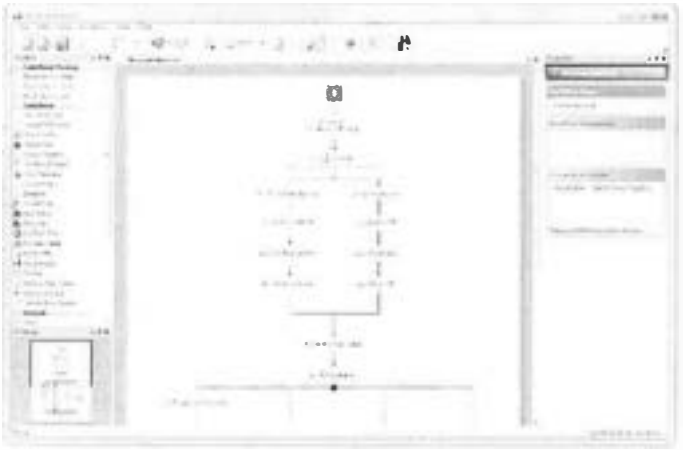
e-mail notification. The request is given final approval if the employee has vacation time available.

4. Employee is automatically notified if the request was approved or denied.

Design Workflow Rules with Ease

The Workflow Designer is an easy-to-use, graphical interface in which you build a workflow and define the conditions that must be met in order for a document to move from one step to the next. The Designer's streamlined layout and intelligent design help you work quickly, while its intuitive "top-down" structure makes it easy to identify each step in the workflow. To minimize time spent troubleshooting build-related issues, the Designer automatically alerts you when a workflow is not configured correctly. Once you're satisfied with a workflow, you can activate it with the click of a button.

- A simple, intuitive and customizable interface lets you drag and drop activities onto a workflow and configure how they should perform.
- Trigger workflows on a schedule or when specified events take place in your Laserfiche repository.
- Define exactly which events, documents, and users will start a workflow using flexible conditions.
- Route documents based on conditions you define or different actions to be taken before or after a deadline.
- Perform two or more activities in parallel, based on specified conditions.
- Configure a workflow to wait to proceed until a specified condition becomes true.
- Extract data and customize its format with regular expressions.
- Create and run custom Laserfiche Workflow activities with VB.NET or C# scripts.
- Export workflows (with their starting rules and attachments) and import them into other Laserfiche Workflow 8.3 installations.



Sample Tasks

Workflows perform specified actions at appropriate times. For example, using Laserfiche Workflow, you can automatically:

Route a document to a specific user.

Populate a field.

Add a tag.

Send an e-mail.

Exchange information with other applications.

Realize a Rapid Return on Investment

"After digitizing and automating our credentialing process with Laserfiche, we decreased processing time by 18 days and reduced costs by $72 per file."

Ryan Boe / Corporate Credentialing Manager / Molina Healthcare

Minimize IT Support

Workflow is just as easy to deploy and maintain as it is to use. Workflow's flexible architecture helps you automate your business processes in a way that both fits your existing IT infrastructure and helps you optimize system performance.

To promote greater visibility, Laserfiche Workflow includes detailed reporting functionality so that you can quickly determine which workflows are running and where a particular item is located in a workflow. New reporting provides detailed information about your workflows, including the average time it took them to run—in a table or a chart.

No matter how complex your business processes may be, you can manage them from a single location—the Workflow Administration Console. The Workflow Administration Console enables you to monitor and interact with your workflows and provides advanced performance options to ensure that Workflow takes full advantage of your system's resources.

In this way, Workflow not only helps you automate business processes, but also makes them more transparent, providing you with a singular location from which to monitor and refine your organization's operations.

Also, a separate Windows service, known as the Workflow Subscriber, monitors your Laserfiche repositories and notifies the Workflow Server when specified events occur. To make the best use of your current hardware, you have the option of installing the Workflow Server and Workflow Subscriber on either the same or different machines. A new Configuration Manager enables you to configure the Workflow Server, Subscriber, Monitored Repositories, E-mail Servers and Trustee directories, all from one convenient location.

"Post-implementation surveys show that, with Laserfiche, Gaston County is saving over 28,500 man-hours—the equivalent of 14 full-time employees—a year."

Brandon Jackson / CIO / Gaston County, North Carolina

Workflow in Action

Gaston County, NC, is the second largest county, by population, in the Charlotte Metropolitan Area.

Laserfiche Workflow facilitates case management within the social services department.

Functionality

Designing and Implementing Workflows

- Create workflows with an intuitive, graphical design tool that provides a top-down process map, a toolbox of built-in activities and wizard-driven configuration.
- More than 60 built-in activities simplify third-party integration, offer easy customization and enhance administrative control.
- Route documents based on conditions you define or different actions to be taken before or after a deadline.
- Perform two or more activities in parallel based on specified conditions.
- Configure a workflow to wait to proceed until a specified condition becomes true.

- Create and run custom Laserfiche Workflow activities with VB.NET or C# scripts.

Activities Overview

- Routing activities and Laserfiche action activities enable easy interaction with Laserfiche documents and folders—including populating fields, changing metadata, routing, e-mail notification and more.
- Enterprise integration activities enable you to update and insert information in—and query data from—third-party databases.
- Data replication activities simplify information sharing by automatically transferring documents from one repository to another.
- PDF activities allow you to retrieve values from a PDF form and store those values as tokens, assign values to a PDF form's fields and verify PDF signatures.
- Digital Signature activities enable you to easily apply trustworthy digital signatures to a document, as well as delete and retrieve information about them.
- Use activities written for Windows Workflow Foundation to extend Workflow functionality to all line-of-business applications.

Workflow Operations

- Import and export workflows from one location to another.
- View detailed information about the performance of workflows, such as current status, errors or warnings, names of documents they interacted with and when completed.
- Manually terminate workflows as they run.

User and Group Properties and Security

- Assign users custom properties for Laserfiche Workflow routing and decision-making.
- Define security that controls the actions a user can perform in the Workflow Designer, such as the ability to view a specific workflow but not modify it.

Workflow Architecture

Components

- Laserfiche Workflow Server: Executes workflow rules. When a starting rule is satisfied, the Workflow Server runs the activities you configured in the corresponding workflow.
- Workflow Administration Console: Used to configure Workflow, monitor Workflow activity and set up security.
- Laserfiche Workflow Subscriber: Receives notification from a Laserfiche Server when a change is made to a Laserfiche entry and evaluates the event to determine if a starting rule is satisfied. If so, it notifies the Workflow Server.
- Laserfiche Workflow Designer: Used to design and publish workflows and starting rules.

Environment

Operating Systems

- Windows XP Professional (Service Pack 3), Windows 2003 (Service Pack 2), Windows Vista (Service Pack 1), Windows 2008 Server, Windows 2008 Server R2, Windows 7. 32-bit and 64-bit versions supported for all Workflow components.

DBMS

- SQL Server 2005 (Service Pack 1 or higher), SQL Server Express 2005, SQL Server 2008, SQL Server 2008 R2, SQL Server 2008 Express, Oracle 10g (10.2.0.4+), Oracle 11g (11.1.0.7+), Oracle 11g R2 (11.2.0.1+).

Required Windows Components

- Windows Message Queuing component.
- Microsoft .NET Framework 4.0.

Protocols

- Built on Microsoft Windows Workflow Foundation.

Go Back

Additional Resources

Data Sheets

Laserfiche Workflow 9

Automate and optimize business processes enterprise-wide

Case Studies

RMS Manufacturing

RMS puts Laserfiche into action on the machine shop floor

Physicians Professional Services

Laserfiche Workflow helps Physicians Professional Services increase productivity by 20%

D.L. Evans

D.L. Evans celebrates ten years of savings and streamlined processes with Laserfiche

Run Smarter®

GENERAL CODE PROPOSAL *for*

Enterprise Content Management Services

For

City of Monroe

Monroe County
Michigan

Laserfiche Q2 Promo 2014

With current LSAP, Laserfiche is offering a promotion to receive 100% credit toward upgrades AND 50% off software cost after trade-in credit.

This Laserfiche offer is limited to the first 200 orders, so time is of the essence.

Please note that while promotional pricing is set forth in this proposal, said pricing will only apply if a proposal is executed by the City and an order is placed with and approved by Laserfiche, at their sole discretion pursuant to the Laserfiche Q2 Promo 2014 defined parameters, by 12/15/14.

PRESENTED BY

GENERAL CODE

Information made civil.

April 23, 2014; *Revised May 28, 2014*
Valid through 12/15/14

Solutions Account Executive: Michael Leidlein
616-540-4135
MLeidlein@generalcode.com

50th ANNIVERSARY

CONTENTS

ABOUT GENERAL CODE

General Code provides a variety of information management solutions to more than 2,700 local governments, educational and commercial organizations throughout the United States. We set the standard for improving document management processes and are on the cutting-edge of technology, providing new and reliable tools to our customers to better serve their clients. We pride ourselves in our level of experience, our technical knowledge in the industry and our focus on the customer.

General Code is one of the leading Laserfiche value added resellers in the United States, offering more than twelve years of experience, coupled with an industry-leading service, integration, training and help desk team.

With Laserfiche at the center of your Enterprise Content Management Solution, you get what nearly 30,000 other public and private organizations are already getting – the most powerful combination of electronic capture, storage and business process automation tools available today. We selected Laserfiche as our technology platform because of its open architecture, integration ability and the capacity to scale up as your demand for information sharing and access grows.

A system designed and implemented by General Code will fit your specific needs and requirements. Customization of your Enterprise Content Management Solution reduces the time and additional resources required to "adjust" or "optimize" a one-dimensional system.

As a values-based company we adhere to the principles outlined in our General Code. These guides for conduct are integral to building a comprehensive content management solution – one that leverages our 50+ years of service to public organizations and governments of all sizes. Our code:

Digital information must be designed and implemented in ways that support the success of the entire organization.

Our content management solutions must run on a platform that we believe in.

The quality of our service and support determines the ultimate value of the solution we develop.

Our content management solutions are based on the practical—if there is a better way to do something we will design and implement it.

RECOMMENDED SOLUTION – LASERFICHE RIO

Laserfiche Rio combines comprehensive Enterprise Content Management (ECM) functionality with powerful business process management (BPM), security and auditing tools. Laserfiche Rio provides a solid ECM infrastructure that:

- Manages your content.
- Grants the IT Department central control over standards, security and auditing.
- Gives individual departments flexibility to customize their filing structures, views and workflows

Laserfiche Rio integrates with your existing IT portfolio supporting intelligent decision making enterprise-wide.

With a fundamental design structure engineered to meet the needs of the IT Department, Laserfiche Rio is designed to be easy to purchase, easy to deploy, easy to support and easy to extend.

The Laserfiche Rio system includes:

- A **licensing server** to produce system licenses as you determine system topology based on your specific needs.
- Unlimited **Laserfiche content servers** that provide document imaging, document management and records management functionality as part of the core architecture – not through separate modules that are stacked together.
- A fully functional, **true thin-client interface** that does not require any software to be installed, maintained or updated at the workstation level.
- The **Laserfiche Workflow system,** capable of automating business processes in high volume transactional environments, as well as customizing the way the system reacts to user input.
- A built-in **auditing solution** for security and compliance.
- An optional DoD 5015.2-certified **Laserfiche Records Management Edition**, with integrated records management, security, auditing and reporting capabilities.
- **Production-level document capture and processing,** including a variety of image enhancements, data extraction and processing tools to automate document identification, indexing, classification and filing.
- Fully customizable, optional read-only **Web portals.**
- An available **SDK** (integrator's toolkit) that includes COM, .NET and Java libraries, as well as an ADO.NET provider

Laserfiche Rio was developed specifically to meet the needs of organizations that view ECM technology as a foundational component of their technical infrastructure, as illustrated in the following diagram:

With bundled functionality, unlimited content servers and its own licensing server, Laserfiche Rio provides with unmatched deployment flexibility:

- **Scale easily to full enterprise deployment.** Named user licenses with volume discounts simplify the procurement process, eliminating long requisitions and making budgeting for an enterprise deployment must easier.
- **Integrate with your existing IT portfolio.** As an open platform, Laserfiche Rio facilitates and encourages integration with line-of-business and legacy applications to solve transactional document problems and provide a rapid ROI.
- **Extend local flexibility.** No ECM system will offer centralized control over content if it isn't used. Laserfiche Rio is designed to provide centralization and standardization without compromising the flexibility and customization of information delivery required for defined business applications.
- **Configure, don't customize.** Configuration of Laserfiche Rio's standardized solutions leverage existing administration platforms–including Microsoft skill sets–and offer a lower total cost of ownership.
- **Maintain control over your ECM environment.** Support for virtualization, mirroring, test, development and other environments without the need to purchase additional software licenses puts you in complete control of system topology, high availability and recovery.
- **Grow with your organization.** Because needs change, Laserfiche Rio maintains flexibility to change system attributes even after release to production. Changes are made with the same intuitive tools used for initial configuration.

PRELIMINARY DOCUMENT MANAGEMENT PROJECT PLAN

Upon completion of contract signing, the Project Manager will call you to review the Project Plan and discuss the following:

- Designate a main contact for the project
- Discuss the proposed schedule and set dates
- Determine any necessary hardware purchase, installation or configuration that must take place prior to the system installation and schedule completion of that work
- Confirm availability of required personnel, equipment and facilities
- Address any outstanding questions, concerns or issues

The Initial Design and System Implementation Phase will include the following:

- Installation and configuration of the main server components
- Installation and configuration of the named user licenses, including Laserfiche client software, Snapshot Plug-In and the E-mail functionality, and also includes scanner configuration and testing.
- Complete system testing of all installed components
- A file structure review and creation of a hierarchical tree structure designed to maximize efficient use of the document management system
- Discussion of file-naming conventions to be used in the document management system
- Establishment of an initial set of Templates (electronic index cards)
- Configuration of users, groups, and user rights
- Training for users
- Administrator training for up to two (2) people who will be responsible for administration of the system

INVESTMENT DETAIL & OPTIONS

Hardware or any applicable taxes are not included in price.

Line Item Description	Model #	Quantity	Unit Price	Total
Base Software				
Rio Named Full Users (50 Tier)	ENFPL50	50	$833.00	$41,650.00
			Base Software Subtotal	**$41,650.00**
Add-Ons/Plug-Ins				
Rio Integrator's Toolkit	TK	1	$2,500.00	$2,500.00
Rio Plus for Publishing	PLUS2	1	$3,800.00	$3,800.00
Rio Import Agent	IA	1	$1,500.00	$1,500.00
Rio Quick Fields - Core Pkg	QC1	1	$5,000.00	$5,000.00
			Add-Ons/Plug-Ins Subtotal	**$12,800.00**
Support				
LSAP Rio Named Full User (50 Tier)	ENFPL50B	50	$184.00	$9,200.00
LSAP Rio Toolkit	TKB	1	$825.00	$825.00
LSAP Rio Plus Plug-in	PLUS2B	1	$1,760.00	$1,760.00
LSAP Rio Import Agent	IAB	1	$330.00	$330.00
LSAP Rio Quick Fields - Core Pkg	QC1B	1	$1,100.00	$1,100.00
			Support Subtotal	**$13,215.00**
Services				
Remote Services / Data Migration	RS03	1	$300.00	$300.00
On-Site Days *(Installation / Server and Clients)*	ON-B	5	$1,650.00	$8,250.00
On-Site Days *(Training)*	ON-B	6	$1,650.00	$9,900.00
On-Site Consulting Days *(Best Practices)*	C-ON-B	3	$1,650.00	$4,950.00
Project Management	PM	5	$100.00	$500.00
			Services Subtotal	**$23,900.00**
Adjustments				
Laserfiche Software Upgrade Credit *(Estimated)*		1	($5,487.50)	($5,487.50)
			Adjustments Subtotal	**($5,487.50)**
			Subtotal	**$86,077.50**
			Estimated Laserfiche Q2 Promo 2014 Discount *(if applied)**	**$(20,211.56)**
			Estimated Grand Total *(if Promo Discount applied)**	**$ 65,865.94**

Your Laserfiche LSAP anniversary date will be re-aligned to reflect the date of ordering of the Laserfiche software for your new Rio system. Any remaining LSAP from your Laserfiche "Classic" system will be reflected as a credit on the project invoice.

Anticipated annual LSAP fees after the included 1st year for the above configuration would be $13,215.00. This estimate is subject ta change based upon the then-current support prices for that year.

**** Please note that while promotional pricing is set forth in this proposal, said pricing will only apply if a proposal is executed by the City and an order is placed with and approved by Laserfiche, at their sole discretion pursuant to the Laserfiche Q2 Promo 2014 defined parameters, by 12/15/14.***

Note:

- ***Automated Workflow Module (software) is included with Laserfiche RIO. If/when the City wishes to implement Automated Workflow, there will be additional development and configuration time required. We will be happy to assess any Workflow implementation desires with you and provide any relevant fees at your request. (Fees will be based on the number and complexity of the desired workflows to be implemented.) These additional service fees would not apply until you are ready to implement this component.***

- ***Any existing integration of the City's Laserfiche system with Ritter GIS will be the responsibility of Ritter to update after the Laserfiche server is upgraded to RIO.***

Installation is expected to be completed in 120 days from authorization.

1. **Adjustments to Performance Schedule; Delays.**

   Adjustments to Schedule. Upon the mutual consent of the Municipality and General Code, the "Performance Schedule" may be changed or extended as outlined below.

   Delays. Client must notify General Code, in writing, immediately upon learning or otherwise becoming aware, of any difficulties that may delay the delivery of services or deliverables. Such notification must identify the reason for the delay, as well as the anticipated period of delay. General Code may require a payment of fifty percent (50%) of the balance due under the contract for any delay on Client's part.

2. **Cancellation Policy.**

   A fee of ten percent (10%) of the total Software Implementation Services amount will be charged to the City for any scheduled Laserfiche installation cancelled or rescheduled by the City six (6) or more, but fewer than ten (10) business days from the scheduled installation start date.

   A fee of twenty percent (20%) of the Software Implementation Services amount will be charged to the City for any scheduled Laserfiche installation cancelled or rescheduled by the City fewer than six 6) business days from the scheduled installation start date.

AUTHORIZATION & AGREEMENT

The **City of Monroe, Michigan** hereby agrees to the procedures outlined above and General Code's Document Management Solution Terms & Conditions which are available at: www.generalcode.com/TCdocs and are incorporated herein by reference, and authorizes General Code to proceed with the project.

Electronic Document Management Solution	**$86,077.50**
Estimated Laserfiche Q2 Promo 2014 Discount *(if applied)*	**($20,211.56)**
Estimated Grand Total *(if Promo Discount applied)*	**$65,865.94**

Estimated Annual support fee second year forward (LSAP): $13,215.00
subject to change based upon the then-current support prices for that year

(*Client please fill out*) Invoice for this Proposal to be sent to:

Department: _____ **Contact Name:** _____

CITY OF MONROE, MONROE COUNTY, MICHIGAN

By: _____ In the Presence of: _____

Title: _____ Title: _____

Date: _____ Date: _____

GENERAL CODE, LLC

By: _____ In the Presence of: _____

Title: _____ Title: _____

Date: _____ Date: _____

In order to authorize the project:

1. ***Sign the Proposal***
2. ***Fax or email the Authorization & Agreement Section only to: Sales@generalcode.com • fax (585) 328-8189***
3. ***Mail the signed Proposal to General Code at: 781 Elmgrove Road • Rochester, NY 14624***

General Code will then sign and mail a copy of this agreement back to the City for its records.

APPENDIX A - PC AND SERVER SPECIFICATIONS

Please refer to the file **LF RIO Hardware and Planning Specifications PDF** that was sent under separate cover for PC and Server Specifications detail.

*Please note: Laserfiche Rio requires a Microsoft Server Operating System (2008 and above), as well as Microsoft SQL Server (2008 and above). Refer to the above mentioned document for more granular specifications.

APPENDIX B - DESCRIPTION OF RECOMMENDED COMPONENTS

Laserfiche Rio	Laserfiche Rio is functionality and simplicity combined into an enterprise document/content management solution. Rio includes document management, business process management and Web publishing for your entire enterprise, all in one bundle. Rio's named-user licensing makes budgeting and purchasing easy—all you need to do is count the number of users. And with its tiered pricing structure, Rio becomes more affordable with increased number of users. As your organization grows, Rio scales easily to accommodate new departments and an expanding workforce. In addition to volume discounts on user licenses, Rio includes an unlimited number of servers, so you can create failover clusters, redundant servers, departmental servers, or whichever structure best fits the way your organization runs. **Included:** **Laserfiche Automated Workflow Module**: The Laserfiche Automated Workflow Module is a robust component that facilitates the flow of documents. By automating the flow of documents and/or folders between users, work can be distributed to different users in an orderly and predetermined manner. The Laserfiche Automated Workflow Module also can help enforce timelines by sending e-mail notifications when routed items are inactive beyond a designated time or when documents arrive in certain folders. Laserfiche Workflow activities can be triggered by any activity within your Laserfiche database. **Web Access** is a browser-based thin client offering virtually all of the document management capabilities of the thick client interface. Authorized users organization-wide can simultaneously access documents, whether they are accessing Laserfiche from their desks or a remote location. IT can add new users without installing software on individual workstations. Users access Laserfiche through a Web browser. Authorized users scan, index and otherwise manage documents with Web Access. Staff can also search, retrieve, create, move, rename and annotate documents from the Web. Web Access has real time access to the Laserfiche repository, which means that information input into Laserfiche is instantly available to all users, whether connected directly to your server, or using Web Access.

	Advanced Audit Trail provides you with the ability to track activity within your Laserfiche database (e.g., who accessed which document when, who input a document, who added pages, or moved a document, etc.). Advanced Audit Trail also tracks failed attempts to access or change content and allows custom auditing per trustee. It also tracks changes of rights to documents (who changed which rights), tracks search events, allows supplemental reasons for exporting, printing and e-mail, and supports of tracking of printed documents via watermark. A built-in Report Wizard guides you through creating auditing reports and enables you to save frequently viewed reports. If you wish to create more advanced reports, you can also use 3rd party reporting software, such as Crystal Reports, with Audit Trail. Audit Trail is an excellent tool for an added level of security and/or for monitoring staff productivity **Laserfiche Digital Signatures** allows you to automatically sign and validate your documents as they are created, reviewed and archived without leaving the Laserfiche environment. Digital signatures are a form of electronic signature that acts like a "digital notary" to your electronic assets, allowing you to verify the condition of your documents for the duration of their lifecycle. Laserfiche Digital Signatures: • Establish User Credentials • Perform Trusted Validation Checks • Validate Document Contents • Optimize Business Processes For more information on Laserfiche Digital Signatures (including various compliance standards), go to: http://www.laserfiche.com/en-us/products/Digital-Signatures
Named Users	Named users have the ability to utilize all of the features of the software, including scanning, importing, file and volume management, search and retrieval, annotations, e-mail routing and workflow participation, as applicable and as security rights permit. Additional named user licensees can be added at any time. **Included:** **SnapShot Functionality:** The SnapShot functionality allows designated users the capability to print existing electronic files into the Laserfiche system directly rather than having to print them out and then scan them into the system. **E-Mail Functionality:** The E-Mail Plug-in allows users to send Laserfiche documents as e-mail attachments to anyone using a MAPI-compatible E-mail system.

Laserfiche Import Agent	Laserfiche Import Agent provides you with the ability to use multi-function devices (copier/scanners) or other "non-connected" scanners to bring documents automatically into Laserfiche using devices that are not directly-supported scanners. Import Agent is rules-based and can automatically bring documents into Laserfiche into pre-determined folders in Laserfiche based on their location on your network or other "rules." Import Agent is often used to "kick off" workflows to further automate your processes.
Laserfiche Quick Fields Core	**Included with QuickFields Core:** **Basic Quick Fields** enhances and cleans up images, provides a location zoom to facilitate entering index data information, and streamlines document previewing. Basic QuickFields is the required foundation module for all advanced QuickFields components. **Quick Fields Zone OCR** allows you to automatically extract index information from an image (rubberbanding capability to select a given area with the mouse). Zone OCR can capture machine-readable text from the designated zone to automatically populate key index fields, name documents and file in Laserfiche. Zone OCR is ideal for uniform documents, where the same spot on each contains relevant index information. **Quick Fields Pattern Matching** identifies patterns or formats that recur (such as dates, initial letters, etc.) and allows extraction of certain data within that pattern. Pattern Matching also enhances the capture capability of Zone OCR. For example, Pattern Matching enables you to file documents in an alphabetic folder (e.g., "A", "B") based on the initial letter of a last name, or in a "year" field based on the last digits of a date. **Quick Fields Bar-Code** helps in the scanning process by automatically breaking up large groups of documents and automating population of index fields. Bar-coding saves valuable time while maximizing the number of documents that can be processed daily. **Quick Fields Real-Time Lookup** enables you to extract data from 3rd party databases to automatically populate Laserfiche template fields.

Software Development Kit (SDK)	The SDK (Software Development Kit) allows your organization to more effectively put content to use by integrating Laserfiche with third party applications. Custom solutions can be created using any language with COM support, which means Web sites, scripts, Windows applications, or anything else compatible with COM libraries, including all .NET languages, can easily communicate with the Laserfiche Server. The SDK comes with detailed documentation that includes tutorials and sample source code in C# and Visual Basic .NET. To promote fast distribution, the SDK also includes pre-built merge modules, which can be used to create installation packages that contain both your custom code and the relevant SDK components. The Laserfiche Code Library offers software developers a chance to collaborate online by sharing their SDK scripts and applications. New SDK users can view the available source code in the library to familiarize themselves with the API, or even to extend another developer's work.
Laserfiche Plus Publishing	Plus Publishing gives you the ability to publish self-executable CD's or DVD's containing any documents included in your Laserfiche database, along with the Laserfiche viewing software. The CD's or DVD's created will contain the same easy-to-use folder structure and search capabilities as in your networked Laserfiche system. These CD's/DVD's can be accessed from a Windows PC having a CD/DVD drive - Laserfiche does not have to be installed on the PC used for viewing. This component provides an excellent method to archive inactive documents. In addition, having your documents and the programming on viewer CD's would provide continuity of operations in the event of a disaster or significant downtime of your server. Laserfiche Plus is also an excellent way to distribute documents to others. Laserfiche Plus Publishing is licensed per single seat.

APPENDIX C - INSTALLATION, TRAINING AND SUPPORT

Pre-Installation Teleconference and Technical Review

Prior to the on-site installation and training, one of General Code's technicians will work with your technical staff or consultant to review the hardware and other technical requirements and ensure that all hardware is ready for the installation. We will also work with your designated contact person to establish the agenda for the on-site days.

Customized, Hands-On Training

General Code provides practical hands-on training sessions to ensure that your users keep pace with "best practices" and that your Laserfiche system continues to provide your organization with the maximum efficiencies possible. Our training experts will come on-site to your facility and provide thorough training for your staff with manuals customized to your specific system and needs. Whether you are a new Laserfiche user or an existing user seeking refresher training, we pride ourselves on maintaining a team of trainers who can relate to users at any level of expertise.

Our standard Laserfiche user training covers the basic functions of the program and provides you with the necessary skills to put the system into immediate use. Based on the file organization and file naming structures that were determined by your organization, the training covers input, search and manipulation features using your documents to address file-organization and file-naming structures

Administrator Training covers the system administrative functions and typically takes place throughout the on-site sessions, as appropriate.

Support and Maintenance

With the purchase of a Laserfiche System, the County will also have the Laserfiche Software Assurance Plan ("LSAP") – support and maintenance agreement. LSAP is renewable on an annual basis and was created to deliver critical program updates and provide ongoing technical support for your Laserfiche ECM. With LSAP, you will always be confident that you are receiving the very best performance and quality possible.

Technical Support

"Technical Support" covers all questions that might arise with your Laserfiche system should a technical issue arise. Technical Support covers the installation of software patches and minor upgrades, as appropriate.

The first line of technical support is via telephone, using our toll-free number (800-836-8834) or via e-mail at lfsupport@generalcode.com. Many clients who call or e-mail General Code's Laserfiche support desk are connected immediately with a technician who is able to discuss your issue with you at that time. However, should all helpdesk technicians be engaged with other clients at that time, they will return your call/e-mail as soon as they are available. With Basic LSAP service, technical support requests not immediately addressed are guaranteed to be acknowledged within 8 business hours. However, we find that the majority of call-back times are within two hours.

When you contact us with a technical issue, General Code's support technician will discuss the situation with you. If there are more detailed diagnostics needed, the technician will log into your system remotely, using

the Internet. In this way, the technician can see what the user is seeing, do diagnostics, and generally remedy the situation remotely during this initial contact. In situations that require additional research or work by the technician, we will let you know what still needs to be done, along with a timeframe for getting back to you. You will also receive a Case number for future reference.

All technical support issues (along with their resolution or current status) are logged into General Code's support database, and the current status of any open work order is available to you at any time during normal business hours by calling General Code's helpdesk and providing your Case number. This log also enables all of our support technicians to know the history of your system, providing consistency and efficiency in our services to you.

By providing remote diagnostics and remediation to our clients, we can provide you with quick resolution of your issues to keep you up and running. General Code's helpdesk receives accolades from our clients constantly for the quality and timeliness of their assistance, as well as for their "user friendly" personalities.

Software Patches and Upgrades:

In addition to receiving technical support, customers with a current LSAP contract will receive **critical program updates within the current version of Laserfiche.** This is extremely important because Laserfiche document-imaging systems are continuously improved to be even more powerful and efficient. You will receive routine system updates released by the manufacturer after a period of additional General Code in-house testing, as applicable. These patches and software upgrades are available for download at our FTP site. Customers are given the option of applying the patches themselves or having one of our Laserfiche technicians apply the patch remotely.

There is no additional cost for the installation of minor software updates or patches (typically called 'point releases'). Major software updates (typically called 'version releases') may have associated service charges to install, upgrade, or to migrate your Laserfiche software to the new major release level. Related training on new functionality of the upgraded software may also have associated service charges. Any additional charges will be outlined and quoted to you in advance.

CITY COUNCIL
AGENDA FACT SHEET

RELATING TO: Appointments

DISCUSSION: The attached Resolution recommends appointment to various City Boards and Commissions whose terms have expired and/or where there is a vacancy.

Therefore, it is recommenced, that City Council approve the proposed Resolution making appointments to various City Boards and Commissions.

CITY MANAGER RECOMMENDATION:

- [x] For
- [ ] For, with revisions or conditions
- [ ] Against
- [ ] No Action Taken/Recommended

APPROVAL DEADLINE: N/A

REASON FOR DEADLINE: N/A

STAFF RECOMMENDATION: ☒ For ☐ Against

REASON AGAINST: N/A

INITIATED BY:

PROGRAMS, DEPARTMENTS, OR GROUPS AFFECTED: City Operations

FINANCES

COST AND REVENUE PROJECTIONS:		
	Cost of Total Project	$ N/A
	Cost of This Project Approval	$ N/A
	Related Annual Operating Cost	$ N/A
	Increased Revenue Expected/Year	$ N/A

SOURCE OF FUNDS:		Account Number	Amount
	City		$ N/A
			$ N/A
			$ N/A
			$ N/A
			$ N/A
	Other Funds		$ N/A
			$ N/A
			$ N/A
			$ N/A

Budget Approval: _____

FACT SHEET PREPARED BY: Mayor's Office **DATE:** 5/28/14

REVIEWED BY: Robert E. Clark, Mayor Robert E Clark **DATE:** 5-28-14

COUNCIL MEETING DATE: 6/2/14

RESOLUTION

WHEREAS, there are terms on various Boards, Commissions, and Committees which have vacancies; and

WHEREAS, a diligent effort has been made to fill these appointments;

THEREFORE BE IT RESOLVED that the following person is hereby appointed to the office and the term hereinafter indicated, June 2, 2014

CITIZEN PLANNING COMMISSION

Gloria Rafko, Council Liaison

RECREATION ADVISORY COMMISSION

John Iacoangeli, Council Liaison

ZONING BOARD OF APPEALS

Kelvin McGhee	3 year term to January 9, 2017

SOUTHEASTERN MUNICIPAL COUNCIL OF GOVERNMENTS

Dan Swallow, Alternate	fill an unexpired term to January 11, 2016