

## AGENDA REPORT

TO: Mayor Pat Humphrey and the Clare City Commission  
FROM: Ken Hibl, City Manager  
DATE: February 11, 2016  
RE: Traffic Study Proposal

For the Agenda of February 15, 2016

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**Background.** The City applied for and has been earmarked as a recipient for a \$375K Small Urban grant to defray a portion of the costs of a possible round-about north of Clare that may be required as a traffic control measure for increased vehicular traffic associated with development of the 200-acre parcel north of Clare along Colonville Road. We have to use those funds in 2017 or lose them.

Our primary motivation to seek this funding was an MDOT traffic model conducted approximately eight years ago that indicated increased development in the north sector of Clare would cause traffic congestion on US-127 created by significantly increased exiting vehicles.

We required WalMart to conduct a traffic study to evaluate the impact of its proposed development in our northern sector. Their study did not reveal any major concerns or issues and indicated that the current road network within this area will accommodate their development without adverse affect. However, that study addressed only the WalMart development. We have no study related to development of this entire sector – and in particular its impact on US-127 and adjacent City and Clare County roads (Clare Avenue, McEwan, Surrey Road, Eberhart Road, etc.).

To address this void and to determine the need for the MDOT-proposed round-about, we have held two major meetings with all primary parties (MDOT, CCRC, CNG, Gourdie-Fraser, the City) involved with the north development. We left those meetings with these primary conclusions:

- Other than the MDOT preliminary modeling that was completed, we have no data or supporting evidence to justify the need for a very expensive (est. \$2M) round-about – there may be other far-less expensive, common-sense we can do to accommodate future development.
- Even though MDOT has recommended the construction of the round-about and is the primary beneficiary (it would relieve exiting traffic issues they may encounter on US-127 as a result of future development) of its construction, they have no funds to contribute to the project. And barring their fiscal partnership with us on the project, it is simply unaffordable for us to accomplish – even with the use of the \$375K grant.
- There is an essential need to complete a professional assessment to determine whether we will have significant, critical traffic issues resulting from future development. And that assessment needs to address the impact on the road systems

of all the primary entities (Clare County, MDOT, and the City) and needs to be accomplished quickly to allow us time to react to the conclusions of the study and to use the earmarked grant funds before we lose the funding if there is a need to do so.

We asked MDOT whether they could accomplish the needed study; they indicated that the cost of doing so would likely be in the range of \$100K - \$150K; that the MDOT “system” is not responsive enough to complete the study in the time-frame we need to have it completed; and they didn’t have the funds available to complete the needed study. Consequently, we asked Gourdie-Fraser to provide us a proposal to complete the study. We also asked the CCRC and MDOT whether they would be willing to share in the costs of completing the needed study.

Gourdie-Fraser has a standing professional relationship with and uses the services of Progressive Engineering to fulfill of any their traffic assessment requirements. They have provided us a proposal (*copy att’d*) for our needed traffic assessment. We ask that that the City Commission approve the proposal and provide us the authority to initiate and complete the needed traffic assessment.

**Issues & Questions Specified.** Should the City Commission approve the proposal for the traffic study and provide the authority to initiate and complete the needed traffic assessment?

**Alternatives.**

1. Approve the proposal and authorize the commencement and completion of the study.
2. Direct the solicitation of additional bids/proposals.
3. Do not authorize the study.
4. Set aside the decision regarding this matter to a later date.

**Financial Impact:** As reflected in the attached proposal, the cost of the study is \$17,750. Small Urban grant funds cannot be used for traffic studies, thus we will have to bear the costs of the traffic assessment. The CCRC has authorized the contribution of \$4,000 to complete the study. The Mt. Pleasant TSC has requested the authority and funding to contribute to the study, but they will not know whether their request will be approved until May, thereby requiring us to “front” the balance of \$13,750 with the possibility that MDOT will reimburse us for a portion of those costs – or not. Our Street Funds have sufficient fund balance to accommodate the \$13,700 fiscal burden, but the Commission will be required to approve a budget amendment to cover those costs.

**Recommendation.** I recommend that the City Commission approve the traffic study proposal; authorize the commencement of the study; and approved the needed budget amendment by adoption of Resolution 2016-018(*copy att’d*).

**Attachments.**

1. GFA Correspondence & Proposal.
2. Resolution 2016-018.



Engineering  
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123 West Front Street  
Traverse City, Michigan 49684  
231.946.5874 ☎  
231.946.3703 ☎

February 8, 2016

Mr. Ken Hibl, City Manager  
City of Clare  
202 West Fifth Street  
Clare, Michigan 48617

RE: Proposal for Transportation Engineering Services  
Clare Avenue Subarea Traffic Analysis, Clare, MI

Dear Mr. Hibl:

Thank you for the opportunity to submit this proposal for Civil Engineering services for the referenced project. In accordance with our continuing contract for professional services we submit this letter proposal for your review and approval. Should you have any questions regarding the information contained herein please do not hesitate to contact me. We will coordinate with Progressive AE as a sub-consultant to perform the services as described below.

### **Understanding of the Project**

With substantial new development occurring on the northeast side of the US-127/10 and Clare Avenue interchange, there are concerns regarding the adjacent surface street system's ability to accommodate existing and potential future traffic in a safe and efficient manner. Of particular interest is the existing northbound US-127 off-ramp to Colonville Road and related connectivity to Clare Avenue.

The Focus of this subarea traffic analysis will therefore be to define existing and projected future peak-hour traffic conditions and provide alternative roadway configurations, along with other improvements, that will allow this roadway subarea to function well into the future.

### **Scope of Services**

Based upon the information provided to date our consultation will provide the services outlined below:

#### **Task 1 - Data Collection**

##### *Traffic Counts*

We will collect peak-hour turning movement's counts on the weekday afternoon and during other peak periods. Intersections include:

- Clare Avenue at US-127 NB on-ramp
- Clare Avenue at Colonville Road (east)
- Clare Avenue at US-127 SB ramps



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-Clare Avenue at Colonville Road (west)

*Roadway System Exploration*, our consultant will complete an on-site review of the current study area roadway system to confirm pertinent information including the intersection lane configurations, Intersection control devices and related information along with the speed limits in place.

*Site/Other Data*, we will also utilize any recent traffic data and or reports that have been completed in this study area. We will also obtain and confirm the applicable background growth rate with the Michigan Department of Transportation (MDOT) and /or the Clare County Road Commission staff, in addition the seasonal traffic factors will be used for the base models.

### **Task 2 - Existing Conditions Analysis**

Utilizing the information collected above our sub consultant will develop a base traffic model and completed capacity calculations and require simulations at the intersections to define how well they are operating under current peak-hour conditions. These results will provide clarification on where, if any capacity deficiencies the use of SYNCHRO software will be used for this capacity analyses.

Assuming the study starts within the next few weeks, the analyses will be completed using modified “existing” traffic counts. A seasonal factor provided by MDOT will be applied to the existing counts to reflect generally higher traffic volumes that can occur during the summer months in this area.

### **Task 3 - Future 2025 Conditions Analyses**

Future conditions analyses will be based upon historical traffic growth data obtained through discussions with the roadway agencies and assignment of trips for other approved or under construction developments in the immediate area. It will also take into account other planned development that is expected to occur within the next 9-10 years.

*Trip Generation and Trip Distribution*, we will recognize the number of trips that are expected to be generated by the currently incomplete developments and those expected to be developed within the next 10 years with the use of the most current ITE Trip Generation Manual. The expected project –generated peak-hour trips will be distributed onto the adjacent roadway system based upon expected market area information and existing traffic patterns.

*Capacity Analyses and Model Simulations*. A future capacity analysis will be completed at the study areas intersection to identify specific problem areas. This analyses will be completed for the two peak periods as noted. Subsequent simulation will be run to further confirm the calculation findings and potential queuing issues.



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A subsequent set of capacity analyses will be completed at the study area intersection that test and identify appropriate roadway system improvement measures that will allow the about locations to accommodate the expected traffic in an acceptable manner during peak hours. This assessment will define what type of improvement (s) may be needed; additional /new turn lanes, revised/new traffic control devices, etc. As noted earlier, of particular focus will be the connectivity between the US-127 northbound off-ramp and Clare Avenue, with two or three direct connection alternatives a likely outcome of this analyses, Simple graphics will be developed to help define such improvements and to use as a basis for discussion and for subsequent use by others to develop more design oriented drawings.

#### **Task 4 - Summary Report**

The data collection efforts, analyses findings, and resulting recommendations as discussed above will be summarized in text and graphic form. The graphics will include the standard traffic study illustrations including existing and projected future traffic volumes, traffic distributions, and level of service for each intersection movement, in addition to the aforementioned improvement sketches.

A draft report will be submitted to the agencies/communities involved for review and comments. Upon receipt of comments, electronic copies of the final report will be submitted. CDs/DVDs that have all the Synchro model simulations will also be provided for MDOT/agency review.

#### **Task 5 - Meetings**

This budget assumes that GFA and our sub consultant will attend two corridor/advisory team meetings in Clare or another applicable location. Additional meetings will be paid for hourly.

#### **Clarifications**

It is possible that the findings of this analysis will include the projected peak-hour need for signalization at one or more intersections I the future. In the interest of keeping study costs down, we have not included 24 hour approach counts or signal warrant analyses efforts in this proposal. We would be happy to add these services it they become necessary on the approved additional services basis and billed in accordance with the attached schedule of invoice rates.

#### **Schedule**

Data collection activities (assuming no significant winter weather delays) through submittal of the draft traffic study report can be completed within five to six weeks of signed authorizations to proceed. The final report and all related Synchro files will be submitted within a week after received the draft report reviewer's comments.



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**Fee**

GFA and their sub-consultant will perform the services on a lump sum basis with budgets not to be exceeded without prior authorization for a total of \$17,750.00.

**Contract Terms and Conditions**

The Terms and Conditions of the Basic Service Agreement for Professional Services shall apply.

**Acceptance**

If this proposal is acceptable to you, your signature will serve as our authorization to proceed. Thank you for giving us the opportunity to be of service. We look forward to working with you on this project.

**Gourdie-Fraser, Inc.**  
CONSULTANT

**City of Clare**  
CLIENT/OWNER

  
\_\_\_\_\_  
Heather Jamison P.E.

(Signature)  
(Name)

\_\_\_\_\_  
Ken Hibl

\_\_\_\_\_  
Project Manager

(Title)

\_\_\_\_\_  
City Manager

(Date)

  
\_\_\_\_\_  
Craig Goodrich

(Signature)

(Name)

\_\_\_\_\_  
Engineering Manager

(Title)

(Date)



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Attachments:            Exhibit 1 – 2016 Billing Rates

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## 2016 BILLING RATES

Classification	Hourly Rate	Classification	Hourly Rate
Principal in Charge	\$150	Director of Surveying	\$145
Engineering Office Manager	\$120	Director of Hydrographic Surveying	\$135
Senior Project Manager	\$120	Professional Surveyor II	\$115
Project Manager	\$115	Project Surveyor	\$85
Structural Engineer	\$120	Survey Crew Chief	\$72
Project Engineer	\$95	Survey Crew Person	\$56
Design Engineer	\$90	Senior Testing & Inspection Technician	\$70
Design CAD Leader	\$85	Testing & Inspection Technician II	\$63
Design CAD Technician III	\$80	Testing & Inspection Technician I	\$54
Design CAD Technician II	\$75	Operations & Maint. Proj. Manager	\$95
Design CAD Technician I	\$70	Operations & Maintenance Technician II	\$70
Construction Layout Technician	\$56	Operations & Maintenance Technician I	\$55
Marketing Coordinator	\$70	Administrative Assistant	\$55

### REIMBURSABLE CHARGES

Reimbursables such as off-site printing, postage, permits, sub consultants, rentals, etc. will be invoiced at cost plus 15%.  
Expert Witness Testimony & Preparation will be invoiced at 1.5 x billing rate

Prints, Plots & Copies	B & W	Color	Survey Equipment Rental Cost	
8½ x 11	\$0.10	\$0.20	C10 Scanner	\$1,500.00 Day
8½ x 14	\$0.15	\$0.30	C10 Scanner	\$1,000.00 4 Hours
11 x 17	\$0.20	\$0.40	C10 Scanner	\$400.00 Hour
24 X 36	\$3.00	\$6.00	Digital Level	\$30.00 Day
Other Sizes	\$.50 SF	\$1.00 SF	Static GPS Rental (per Receiver)	\$150.00 Day
Binding	\$3.00	\$3.00	Robotic Total Station	\$30.00 Hour
				\$200.00 Day
				\$30.00 Hour
<b>Travel</b>			Real Time GPS	\$200.00 Day
Mileage	\$0.575 Mile		ATV or Snowmobile	\$350.00 Day
Per Deim (Day)	\$107.00 Day		Hydrographic Sounder (single beam)	\$350.00 Day
			Surveyor Boat I - 14'	\$130.00 Day
<b>Misc.</b>			Surveyor Boat II - 16'	\$175.00 Day
Postage/Shipping Costs	Cost Plus 15%		Surveyor Boat III - 22'	\$300.00 Day
Permit Fees	Cost Plus 15%		Lath	\$0.37 Each
Computer	\$14.00 Day		Curb Stakes and/or Slope Stakes	\$0.49 Each
Rentals	Cost Plus 15%		Station Stakes	\$0.98 Each
Generator	\$25.00 Hour			
<b>Materials Testing Equipment</b>				
Beam Breaker	\$50.00 Day			
Concrete Beams	\$25.00 Each			
Coring Machine	\$75.00 Day			
12" Core Bit Extractor	\$100.00 Day			
Concrete Cylinder	\$20.00 Each			
Nuclear Density Gauge	\$54.00 Day			
<b>O &amp; M Equipment</b>	<b>Daily Rate</b>	<b>Weekly Rate</b>	<b>Monthly Rate</b>	
Portable Sampler	\$40	\$200	\$450	
Portable Flow Meter	\$50	\$275	\$600	
Fresh Air Blower	\$20	\$100	\$165	
Gas Meter	\$15	\$75	\$165	
Tripod with Harness	\$15	\$75	\$165	
Rain Gauge with Data logger	NA	\$50	\$110	

02/09/2016

## RESOLUTION 2016-018

### **A RESOLUTION OF THE CLARE CITY COMMISSION APPROVING THE PROPOSAL OF GOURDIE-FRASER TO CONDUCT A TRAFFIC STUDY FOR THE DEVELOPMENT DISTRICT IN THE NORTHERN SECTOR OF CLARE.**

**WHEREAS**, the City of Clare applied for and receive a Small Urban grant for \$375,000 to assist in funding the construction of a new round-about in the City's northern sector based on a recommendation of the Mt. Pleasant Transportation Service Center (TSC) in Mt. Pleasant, Michigan; and

**WHEREAS**, said grant funds must be obligated in 2017; failure to do so will result in the loss of said funds; and

**WHEREAS**, the Mt. Pleasant TSC estimates that the cost of said round-about construction project to be approximately \$2M; and

**WHEREAS**, although MDOT shall be the primary beneficiary of said round-about due to the resultant elimination of currently predicted and anticipated traffic gridlock of exiting traffic from US-127 once the round-about is completed, said entity is not able to contribute financially to said project due to lack of funds; and

**WHEREAS**, the City does not have the fiscal means to fund said \$2M round-about project and concurrently believes that there are alternative means to control and manage anticipated increased vehicular traffic but has no supporting data or documentary evidence to indicate the magnitude of future anticipated traffic and what actions need to be taken to accommodate any future vehicular traffic increases; and

**WHEREAS**, the City Staff has recommended to the City Commission that a professional traffic study be completed as soon as possible to formally evaluate what, if any actions need to be taken and has solicited and received a proposal from the City's engineer of record, Gourdie-Fraser, to expeditiously conduct said study; and

**WHEREAS**, the stipulated cost of the professional traffic study outlined in said proposal is \$17,750; and

**WHEREAS**, the City has the available funds to defray the costs of said study, but a budget amendment approved by the City Commission shall be required to proceed; and

**WHEREAS**, the Clare County Road Commission has committed to contributing \$4,000 to the cost of said recommended study, and MDOT has agreed in principle that it will similarly contribute to defray a portion of the costs of said study but is currently unable to commit to an amount; and

**WHEREAS**, the City Commission has considered the recommendation of its City Staff and concurs that the study should be conducted immediately prior to proceeding with any other actions related to this matter.

**NOW THEREFORE BE IT RESOLVED THAT**, the Clare City Commission hereby approves the proposal of Gourdie-Fraser to conduct a formal traffic study of the existing street and road system in the City's northern sector for a cost of \$17,750, said study to include an evaluation

of whether the contiguous and related road and street system of MDOT, Clare County, and the City of Clare, to assess whether said systems are capable of safely and efficiently accommodating future new development and resultant vehicle traffic associated with said development and to make recommendations for alternative roadway configurations, if needed, for a cost of \$17,750.

**BE IT FURTHER RESOLVED THAT** the City Commission hereby authorizes the immediate commencement of said study.

**BE IT FURTHER RESOLVED THAT** the City Commission hereby approves the needed budget amendment associated with said proposal and directs its City Treasure and Finance Director to take any and all necessary actions to facilitate said budget amendment.

**ALL RESOLUTIONS AND PARTS OF RESOLUTIONS INsofar AS THEY CONFLICT WITH THE PROVISIONS OF THIS RESOLUTION BE AND THE SAME ARE HEREBY RESCINDED.**

The Resolution was introduced by Commissioner \_\_\_\_\_ and supported by Commissioner \_\_\_\_\_. The Resolution declared adopted by the following roll call vote:

**YEAS:**

**NAYS:**

**ABSENT:**

Resolution approved for adoption on this 15<sup>th</sup> day of February 2016.

\_\_\_\_\_  
Diane Lyon, City Clerk