

Supplemental Letter Agreement

In accordance with the Master Agreement for Professional Services between Town of Munster ("Client"), and SEH of Indiana, LLC ("Consultant"), effective September 10, 2014, this Supplemental Letter Agreement dated October 8, 2024 authorizes and describes the scope, schedule, and payment conditions for Consultant's work on the Project described as: Calumet Avenue Intersection Signal Retiming.

Client's Authorized Representative: Patricia Abbott
Address: 1005 Ridge Road
Munster, IN 46321
Telephone: 219.836.6946 **email:** Pabbott@munster.org

Project Manager: Satya Tallamraju, PE
Address: 931 Ridge Road, Suite E
Munster, IN 46321
Telephone: 630.697.9451 **email:** Stallamraju@sehinc.com

Scope: The Basic Services to be provided by Consultant:

The Town of Munster is interested in evaluating the existing traffic operations at all signalized intersections on Calumet Avenue between Main Street and River Drive and developing optimized signal timing plans that are more responsive to the traffic demand and provide for a better level of service at the intersections and facilitate efficient traffic flow on Calumet Avenue between Main Street and River Drive.

The first phase of this work involved performing 8-hour turning movement counts. These counts were performed at the following fourteen (14) signalized intersections along Calumet Avenue in September 2024. These intersections will be evaluated for existing level of service and the signal timing will be optimized and will be provided with new signal timing plans for different times of the day. These intersections are located at:

1. Calumet Avenue & River Drive
2. Calumet Avenue & Burger King/Franciscan Clinic Entrance
3. Calumet Avenue & Broadmoor Avenue
4. Calumet Avenue & Ridge Road
5. Calumet Avenue & Lions Club Dr
6. Calumet Avenue & Church/Baseball Park Entrance
7. Calumet Avenue & Fisher Street
8. Calumet Avenue & Fran-lin Parkway
9. 45th St & Calumet Ave
10. Calumet Avenue & Superior Avenue/North Centennial Drive
11. Calumet Avenue & South Centennial Drive/Columbia Avenue
12. Calumet Avenue & Main St
13. Calumet Avenue & Maple Leaf Crossing
14. Calumet Avenue & Treadway Rd

To evaluate the existing levels of service and develop new signal timing plans for the aforementioned signalized intersections, SEH will perform the following tasks:

Task 1. Data Collection:

- i. Field measure intersection geometrics including lane widths, crosswalks, left and right turn lane storage lengths, and stop bars. Account for speed limits, bus stops/signs of pedestrians, and any No Turn on Red signs.
- ii. Obtain existing signal timing data from the Town of Munster and/or its vendor who has access to the existing timing data. This data will include existing cycle lengths, phase sequences and times, minimum and maximum green times, yellow and red clearance times, Walk and Flashing Don't Walk times for each intersection.
- iii. Perform travel time runs between Main Street and River Drive to note the time it takes to travel between intersections under existing signal timing conditions
- iv. Perform travel time runs between Main Street and River Drive to note the time it takes to travel between intersections under proposed signal timing conditions
- v. Perform a field review of traffic operations during the morning and evening peak hours at each intersection

Task 2. Existing Conditions Analysis

- i. SEH will use the traffic analysis software Synchro to evaluate existing traffic conditions and to develop optimized signal timing plans.
- ii. The existing timing data and traffic count data will be used to prepare Synchro files and SIMTRAFFIC model for existing conditions for morning and evening peak hours.
- iii. We will compare Synchro and SIMTRAFFIC model results to field observations and calibrate the model as necessary to accurately represent existing conditions.
- iv. Once the model is calibrated to represent existing conditions, we will evaluate the Level of Service (LOS) and other Measures of Effectiveness (average speed, delay per movement, number of stops) at each intersection and along the Calumet Avenue corridor for morning and evening peak hour traffic conditions.

Task 3. Develop Optimized Signal Timing Plans

- i. SEH will develop optimized Synchro and SIMTRAFFIC timing plans for the lowest overall delay for at least five (5) or more time periods including; AM peak hour, AM off-peak period, Mid-day period, PM peak hour, and PM off-peak period.
- ii. The optimized signal timing plans will use the recommended INDOT standards for:
 - Minimum green times
 - Yellow and All Red times
 - Walk and Flashing Don't Walk times
- iii. SEH will analyze the Levels of Service and other measures of effectiveness under the optimized signal timings and compare these results to existing conditions.

Task 4. Timing Plan Implementation

- i. SEH will work with the Town of Munster's traffic signal maintenance contractor to implement the new optimized timing plans in the field.

- ii. We will review traffic operations in the field after downloading into the traffic controllers to verify that the timing plans are working correctly and to make any timing adjustments as necessary.
- iii. We will update the Synchro files with the timing changes made in the field and submit them to the Town.

Task 5. Project Benefits Report

- i. Prepare a report documenting the results of the project.
- ii. Document the measures of effectiveness results of the final timing plans and compare to existing conditions.
- iii. Include before and after vehicle delay for each movement at each intersection
- iv. Include before and after mainline corridor travel times, number of stops, and average speeds.
- v. Identify potential geometric and phasing changes for improved operations.
- vi. Develop draft report and submit it to the Town staff for review
- vii. Modify draft report based on the Town’s comments and submit final report.

Schedule: SEH will submit the final report within 3 months of getting the notice to proceed.

Payment:

The lump sum fee is **\$75,200** including expenses and equipment. The payment method, basis, frequency, and other special conditions are set forth in attached Exhibit A-2 (Lump Sum Basis Option)

Other Terms and Conditions: Other or additional terms contrary to the Master Agreement for Professional Services that apply solely to this project as specifically agreed to by signature of the Parties and set forth herein: None.

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SEH of Indiana, LLC

By: T.s.Srinivas
Satya Tallamraju
Title: Client Services Manager

Town of Munster

By: _____
Patricia Abbott
Title: Interim Town Manager

Exhibit A-2
to Supplemental Letter Agreement
Between Town of Munster (Client)
and
SEH of Indiana, LLC (Consultant)
Dated October 11, 2024

Payments to Consultant for Services and Expenses
Using the Lump Sum Basis Option

The Agreement for Professional Services is amended and supplemented to include the following agreement of the parties:

A. Lump Sum Basis Option

The Client and Consultant select the Lump Sum Basis for Payment for services provided by Consultant. During the course of providing its services, Consultant shall be paid monthly based on Consultant's estimate of the percentage of the work completed. Necessary expenses and equipment are provided as a part of Consultant's services and are included in the initial Lump Sum amount for the agreed upon Scope of Work. Total payments to Consultant for work covered by the Lump Sum Agreement shall not exceed the Lump Sum amount without written authorization from the Client.

The Lump Sum amount includes compensation for Consultant's services and the services of Consultant's Consultants, if any for the agreed upon Scope of Work. Appropriate amounts have been incorporated in the initial Lump Sum to account for labor, overhead, profit, expenses and equipment charges. The Client agrees to pay for other additional services, equipment, and expenses that may become necessary by amendment to complete Consultant's services at their normal charge out rates as published by Consultant or as available commercially.

B. Expenses Not Included in the Lump Sum

The following items involve expenditures made by Consultant employees or professional consultants on behalf of the Client and shall be paid for as described in this Agreement.

1. Expense of overtime work requiring higher than regular rates, if authorized in advance by the Client.
2. Other special expenses required in connection with the Project.
3. The cost of special consultants or technical services as required. The cost of subconsultant services shall include actual expenditure plus 10% markup for the cost of administration and insurance.

The Client shall pay Consultant monthly for expenses not included in the Lump Sum amount.

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