

ANDERSON, ECKSTEIN AND WESTRICK, INC.

51301 Schoenherr Road, Shelby Township, Michigan 48315

Civil Engineers • Surveyors • Architects 586-726-1234

December 18, 2013

Mr. William Bohlen
City of Rochester
400 Sixth Street
Rochester, Michigan 48307

Reference: **Proposal for Professional Services**
Bloomer Road Paving – Windridge Ct. to Bloomer Ridge

Dear Mr. Bohlen:

We appreciate the opportunity to assist both the cities of Rochester and Rochester Hills in the Design and Construction Engineering (DE/CE) for the referenced project. This project is a road project with sidewalk along the north side. Anderson, Eckstein and Westrick, Inc. (AEW) fully understands the requirements and the essential elements necessary to successfully design, permit, administer, and construct this project.

The existing gravel road will be replaced with 9-inches of asphalt pavement, 22-foot wide travel lane, with a 2-foot curb on the Rochester side and a 3-foot paved shoulder on the Rochester Hills side, totaling 27-feet. This pavement section will be over a minimum of 4-inches of aggregate base. Edge drain will be placed along the entire length. During construction the road will be closed to through traffic and temporary access will be provided to the residents within the work area.

Geotechnical investigations have been previously performed by TEC, during the preliminary phase. The cross section proposed, is based on this soil evaluation and is consistent with the section previously constructed for the South Street paving project. Dependent upon the direction of the Owners we can either continue to use TEC for construction geotechnical services or obtain pricing from three qualified geotechnical engineers. Additionally, the road improvements will require additional right of way acquisition. This work will be provided on an hourly basis, a budget has been provided below for preparation of the right of way documents. Cost for the required title work has not been included in the fee.

Based upon the discussions, we propose to furnish the following services.

- Topographical Survey (DE) Fee
- Design and Bidding assistance (DE) Fee
- Right of Way Document preparation (DE) Hourly Basis
- Construction Staking (CE) Fee
- Contract Administration (CE) Fee
- Construction Observation (CE) Hourly Basis
- Record Plan information (CE) Fee



The following fees proposed are on a lump sum basis for the Design Engineering (DE) Phase:

| | | |
|---------------------------|-------------|---------------------|
| Topographical Survey | (DE) | \$ 7,000.00 |
| <u>Design Engineering</u> | <u>(DE)</u> | <u>\$ 19,250.00</u> |
| Total DE Phase | | \$ 26,250.00 |

As you are aware some project costs such as topographical survey are fixed and should be split 50 – 50 while others are community specific and differ, due to the requirements of each City, hence the resulting costs to each community vary. The differences include the pavement widths, curb vs. shoulders, storm sewer and sidewalk. That being said we have attached an estimate which essentially calculates that the cost sharing for non – fixed Design Engineering at 60 – 40 Rochester, Rochester Hills, respectively.

Community Cost Sharing for Design Engineering (DE) Phase:

| <u>Phase</u> | <u>Split</u> | <u>Rochester</u> | <u>Rochester Hills</u> |
|---------------------------|----------------|---------------------|------------------------|
| Topographical Survey | 50 – 50 | \$ 3,500.00 | \$ 3,500.00 |
| <u>Design Engineering</u> | <u>60 - 40</u> | <u>\$ 11,550.00</u> | <u>\$ 7,700.00</u> |
| Total Community Cost – DE | | \$ 15,050.00 | \$ 11,200.00 |

Similar to the Design Engineering Phase the Construction Engineering Phase has fixed costs such as Geotechnical Field Services, which should be split equally, right – of – way costs which are entirely Rochester, and varied costs which should be split on the 60 – 40 basis, as described above. Additionally, due to the uncertainty associated with the time and effort necessary to prepare and obtain the required right-of-way documents we propose to perform this service on an hourly basis. Similarly, the time associated with Construction Observation is contractor driven and in our experience is best managed by bidding on a Crew Day basis. Crew Days require that the contractor to take an in depth look at the level of effort necessary to construct the project and to bid the necessary construction observation accordingly. That being said we propose to provide the necessary Construction Observation on an hourly basis at \$75/hour (Crew Day = \$600). Preliminarily, based on the attached estimates, we estimate the Construction Engineering Phase to be as follows:

Preliminary Community Cost Sharing for Construction Engineering (CE) Phase:

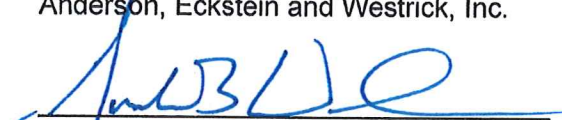
| <u>Phase</u> | <u>Split</u> | <u>Rochester</u> | <u>Rochester Hills</u> |
|--|--------------|--------------------|------------------------|
| Geotechnical Services | 50 – 50 | \$ 2,500.00 | \$ 2,500.00 |
| Right-of-Way Acquisition | (Budget) | \$ 4,000.00 | N/A |
| Construction Engineering | 60 - 40 | \$ 8,310.00 | \$ 5,540.00 |
| <u>Construction Observation (Budget 60-40)</u> | | <u>\$ 8,310.00</u> | <u>\$ 5,540.00</u> |
| Total Community Cost – CE | | \$ 23,120.00 | \$ 13,580.00 |



We trust the above Fee/Hourly proposal meets your approval and are looking forward to beginning work on the design and construction of this project. Thank you once again for the opportunity to work with you on this project.

Sincerely,

Anderson, Eckstein and Westrick, Inc.



Gordon B. Wilson, PE
Executive Vice President

Cc: Allan E. Schneck, PE
Jaymes Vettraino

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 Fax No: 586-726-8780

**PRELIMINARY ESTIMATE
 CITY OF ROCHESTER & ROCHESTER HILLS
 SHARE OF COST
 AEW PROJECT NO. 0270-0045**

PROJECT: Bloomer Road Paving Project
 (Starting 100ft south of Bloomer Ridge Dr to
 existing HMA Pavt near Windridge Ct)
OWNER: City of Rochester and
 City of Rochester Hills

PREPARED BY: Michael D. Smith, PE
DATE: December 18, 2013
CHECKED BY: Gordon B. Wilson, PE
DATE: December 18, 2013

| WORK ITEM | QUANTITY | UNIT | UNIT PRICE | AMOUNT |
|--|----------|------|-------------|-------------------|
| CITY OF ROCHESTER SHARE | | | | |
| Mobilization, Max. 5% | 1 | LS | \$ 7,860.00 | \$ 7,860.00 |
| Audio Visual Record of Construction Area | 1 | LS | \$ 1,250.00 | \$ 1,250.00 |
| Tree, Rem, 19 inch to 36 inch | 3 | Ea | \$ 600.00 | \$ 1,800.00 |
| Tree, Rem, 6 inch to 18 inch | 2 | Ea | \$ 350.00 | \$ 700.00 |
| Dr Structure, Rem | 2 | Ea | \$ 250.00 | \$ 500.00 |
| Sewer, Rem, Less than 24 inch | 50 | Ft | \$ 20.00 | \$ 1,000.00 |
| Curb and Gutter, Rem | 20 | Ft | \$ 8.00 | \$ 160.00 |
| Pavt, Rem | 140 | Syd | \$ 6.00 | \$ 840.00 |
| Subgrade Undercutting, Type II | 125 | Cyd | \$ 25.00 | \$ 3,125.00 |
| Station Grading | 4 | Sta | \$ 3,500.00 | \$ 14,000.00 |
| Erosion Control, Silt Fence | 50 | Ft | \$ 1.50 | \$ 75.00 |
| Erosion Control, Inlet Filter | 2 | Ea | \$ 200.00 | \$ 400.00 |
| Aggregate Base, 4 inch | 1250 | Syd | \$ 5.50 | \$ 6,875.00 |
| Maintenance Gravel | 100 | Ton | \$ 12.00 | \$ 1,200.00 |
| Geotextile, Separator | 1250 | Syd | \$ 2.00 | \$ 2,500.00 |
| Sanitary Sewer Lead, 6 inch, Tr Det B | 150 | Ft | \$ 50.00 | \$ 7,500.00 |
| Sewer, CI IV, 12 inch, Tr Det B | 200 | Ft | \$ 55.00 | \$ 11,000.00 |
| Sewer, CI IV, 15 inch, Tr Det B | 100 | Ft | \$ 65.00 | \$ 6,500.00 |
| Dr Structure, 48 inch dia | 3 | Ea | \$ 1,800.00 | \$ 5,400.00 |
| Dr Structure, Adj, Add Depth | 5 | Ft | \$ 250.00 | \$ 1,250.00 |
| Dr Structure Cover, Adj, Case 2 | 2 | Ea | \$ 350.00 | \$ 700.00 |
| Dr Structure Cover, Modified | 2250 | Lb | \$ 1.50 | \$ 3,375.00 |
| External Structure Wrap, 18 inch | 3 | Ea | \$ 350.00 | \$ 1,050.00 |
| Underdrain, Subgrade, Open-Graded, 6 inch | 800 | Ft | \$ 10.00 | \$ 8,000.00 |
| HMA, 2C | 270 | Ton | \$ 65.00 | \$ 17,550.00 |
| HMA, 3C | 150 | Ton | \$ 75.00 | \$ 11,250.00 |
| HMA, 13A | 120 | Ton | \$ 85.00 | \$ 10,200.00 |
| HMA Approach | 40 | Ton | \$ 165.00 | \$ 6,600.00 |
| Curb and Gutter, Conc, Det F4 | 800 | Ft | \$ 15.00 | \$ 12,000.00 |
| Detectable Warning Surface, Modified | 10 | Ft | \$ 100.00 | \$ 1,000.00 |
| Sidewalk Ramp, Conc, 6 inch | 120 | Sft | \$ 6.50 | \$ 780.00 |
| Sidewalk, Conc, 4 inch | 3000 | Sft | \$ 3.25 | \$ 9,750.00 |
| Sidewalk, Conc, 6 inch | 300 | Sft | \$ 4.00 | \$ 1,200.00 |
| Road Signage | 1 | LS | \$ 500.00 | \$ 500.00 |
| Pavement Striping | 1 | LS | \$ 1,250.00 | \$ 1,250.00 |
| Traffic Control and Maintenance | 1 | LS | \$ 2,500.00 | \$ 2,500.00 |
| Surface Restoration, Seeding | 1 | LS | \$ 2,500.00 | \$ 2,500.00 |
| Surface Restoration, Sodding | 1 | LS | \$ 1,000.00 | \$ 1,000.00 |
| ESTIMATED CONSTRUCTION COST (ROCHESTER ONLY): | | | \$ | 165,140.00 |



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| WORK ITEM | QUANTITY | UNIT | UNIT PRICE | AMOUNT |
|--|-----------------|-------------|-------------------|-------------------|
| CITY OF ROCHESTER HILLS SHARE | | | | |
| Mobilization, Max. 5% | 1 | LS | \$ 5,340.00 | \$ 5,340.00 |
| Audio Visual Record of Construction Area | 1 | LS | \$ 1,250.00 | \$ 1,250.00 |
| Dr Structure, Rem | 2 | Ea | \$ 250.00 | \$ 500.00 |
| Sewer, Rem, Less than 24 inch | 25 | Ft | \$ 20.00 | \$ 500.00 |
| Curb and Gutter, Rem | 5 | Ft | \$ 8.00 | \$ 40.00 |
| Pavt, Rem | 10 | Syd | \$ 6.00 | \$ 60.00 |
| Subgrade Undercutting, Type II | 125 | Cyd | \$ 25.00 | \$ 3,125.00 |
| Station Grading | 3.5 | Sta | \$ 3,500.00 | \$ 12,250.00 |
| Erosion Control, Silt Fence | 50 | Ft | \$ 1.50 | \$ 75.00 |
| Erosion Control, Sediment Trap | 2 | Ea | \$ 200.00 | \$ 400.00 |
| Aggregate Base, 4 inch | 1600 | Syd | \$ 5.50 | \$ 8,800.00 |
| Maintenance Gravel | 100 | Ton | \$ 12.00 | \$ 1,200.00 |
| Geotextile, Separator | 1600 | Syd | \$ 2.00 | \$ 3,200.00 |
| Dr Structure, 48 inch dia | 2 | Ea | \$ 1,800.00 | \$ 3,600.00 |
| Dr Structure, Adj, Add Depth | 5 | Ft | \$ 250.00 | \$ 1,250.00 |
| Dr Structure Cover, Adj, Case 2 | 2 | Ea | \$ 350.00 | \$ 700.00 |
| Dr Structure Cover, Modified | 875 | Lb | \$ 1.50 | \$ 1,312.50 |
| External Structure Wrap, 18 inch | 4 | Ea | \$ 350.00 | \$ 1,400.00 |
| HMA, 2C | 370 | Ton | \$ 65.00 | \$ 24,050.00 |
| HMA, 3C | 185 | Ton | \$ 75.00 | \$ 13,875.00 |
| HMA, 13A | 160 | Ton | \$ 85.00 | \$ 13,600.00 |
| HMA Approach | 40 | Ton | \$ 165.00 | \$ 6,600.00 |
| Curb and Gutter, Conc, Det F4 | 85 | Ft | \$ 15.00 | \$ 1,275.00 |
| Road Signage | 1 | LS | \$ 500.00 | \$ 500.00 |
| Pavement Striping | 1 | LS | \$ 1,250.00 | \$ 1,250.00 |
| Traffic Control and Maintenance | 1 | LS | \$ 2,500.00 | \$ 2,500.00 |
| Surface Restoration, Seeding | 1 | LS | \$ 2,500.00 | \$ 2,500.00 |
| Surface Restoration, Sodding | 1 | LS | \$ 1,000.00 | \$ 1,000.00 |
| ESTIMATED CONSTRUCTION COST (ROCHESTER HILLS ONLY): | | | \$ | 112,152.50 |
| ESTIMATED CONSTRUCTION COST (COMBINED): | | | \$ | 277,292.50 |



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|-----------|----------|------|------------|--------|
|-----------|----------|------|------------|--------|

COST SHARE BREAKDOWN

PROJECT COST (DE)

| | | |
|--|-----------|------------------|
| Design Engineering (60/40 Cost Share): | \$ | 19,250.00 |
| Topographical Survey (50/50 Cost Share): | \$ | 7,000.00 |
| Total Project Cost (DE): | \$ | 26,250.00 |

COMMUNITY SHARE (DE)

| | | |
|--|----|-----------|
| City of Rochester DE Cost Share: | \$ | 15,050.00 |
| City of Rochester Hills DE Cost Share: | \$ | 11,200.00 |

PROJECT COST (CE)

| | | |
|--|-----------|------------------|
| Construction Engineering (60/40 Cost Share): | \$ | 13,850.00 |
| Right-of-Way Documents/Acquisition (100% Rochester): | \$ | 4,000.00 |
| Construction Geotechnical Field Testing Services (50/50 Cost Share): | \$ | 5,000.00 |
| Construction Observation (60/40 Cost Share): | \$ | 13,850.00 |
| Total Cost (CE): | \$ | 36,700.00 |

COMMUNITY SHARE (CE)

| | | |
|---|----|-----------|
| City of Rochester CE Cost Share: | \$ | 23,120.00 |
| City of Rochester Hills CE Cost Share: | \$ | 13,580.00 |
| Contingencies (10% of Total Construction Cost): | \$ | 27,730.00 |

ESTIMATED TOTAL COST: \$ 367,972.50

| | | |
|--------------------------------|----|------------|
| City of Rochester Share: | \$ | 219,948.00 |
| City of Rochester Hills Share: | \$ | 148,024.50 |



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|-----------|----------|------|------------|--------|

Scope of project includes: 27ft wide roadway with 2 - 11ft wide HMA lanes and 1 - 2ft wide curb and gutter along the north side and 1 - 3ft wide paved shoulder along the south side. 6 inch diameter underdrain along all curb and gutter on the north side, 4 inch 21AA limestone aggregate base, 9 inch HMA pavement section and new storm sewer and drainage structures as necessary.

During construction, the road shall be closed to local traffic only. Local residents will only be allowed to enter and exit the construction work area. The Contractor would be required to provide local traffic, temporary access to their homes.

The duration of construction is estimated at 90 days. Failure to complete the project in the estimated number of days would result in liquidated damages of \$900 per day for a project this size. The assessment of liquidated damages is based on the MDOT Standard Specifications for Construction.

Storm water discharge outlets have been assumed for this estimate. The actual storm sewer outlets will be determined during engineering design.

The pay items and quantities provided on this estimate are based on aerial maps and field observations. Actual pay items and quantities will be determined during engineering design.

The preliminary estimate does not include a connection between Berry Nook Ln and Bloomer Rd.