



CITY of NOVI CITY COUNCIL

Agenda Item C
March 12, 2018

SUBJECT: Approval to award civil engineering services to AECOM Great Lakes, Inc. for design engineering services associated with the 2019 Concrete Panel Replacement Program in the amount of \$41,973.00.

SUBMITTING DEPARTMENT: Department of Public Services, Engineering Division

CITY MANAGER APPROVAL: 

EXPENDITURE REQUIRED	\$ 41,973.00
AMOUNT BUDGETED	\$ 389,543.00
LINE ITEM NUMBER	203-203.00-985.003

BACKGROUND INFORMATION:

In an effort to streamline the design process with the Concrete Panel Replacement Program (CRP), the Engineering Division is expanding the program to a two-year design contract. A two-year contract lowers the overall cost of engineering design services and allows the selection and prioritization of projects over multiple years. The City anticipates removing and replacing the majority of panels in disrepair. To maximize allocated funding, the contractor will also use the concrete joint construction method. This method rehabilitates the joint on either side of the damaged concrete and adjoins the existing structurally sound concrete.

Candidates for concrete panel replacement have been categorized as Priority 1 to 3, with 1 being in significant need of repair and 3 being in fair condition. The goal for using these categories was to scale down the PASER 1-10 scale. The City's Engineering Consultant AECOM will focus on replacing panel groupings having a severity of **Priority 1**. While replacing panels identified as **Priority 1** if adjacent concrete panels denoted as **Priority 2** have further significant structural defects, staff will identify them for removal and replacement during the time of repair. The selection of streets for concrete panel repair will be determined as part of the design engineering services.

The attached *Design Engineering Services* proposal, as executed by AECOM, outlines the scope of services in more detail. The design fee rate per the Exhibit B Fee Curve Schedule (as part of the City's general Engineering Services Contract with AECOM) is typically 5.0%. However, staff worked with the consultant to reduce the fee to 4.75% by combining the project design over a two-year period. The Engineering Division has reviewed the scope of services proposal and recommends approval.

RECOMMENDED ACTION: Approval to award civil engineering services to AECOM Great Lakes, Inc. for design engineering services associated with the 2019 Concrete Panel Replacement Program in the amount of \$41,973.00.



February 20, 2018

Mr. George Melistas
Engineering Senior Manager and Traffic Engineer
City of Novi
Field Services Complex
26300 Lee Begole Drive
Novi, MI 48375

**Reference: Proposal for Engineering Services
2019 Neighborhood Road Program and 2019 Concrete Repair Program Projects**

Dear Mr. Melistas:

AECOM is pleased to submit this proposal for the above referenced projects.

The Neighborhood Roads Program is anticipated to include two contracts, one for concrete roadways and one for asphalt roadways, as has been done in previous years. The Neighborhood Roads Program includes both reconstruction of roadways, including the aggregate base, and rehabilitation work (typically milling and overlay of asphalt roadways). Each roadway is inspected to determine the appropriate repair work. The 2019 Neighborhood Roads will be designed and advertised with the 2018 NRP program, however, the 2019 roads will be constructed in 2019.

The Concrete Repair Program project will be a single construction contract separate from the Neighborhood Roads contracts. The Concrete Repair Program work includes concrete pavement repairs to concrete roadways in an effort to preserve the life of the existing roadways to the extent possible. The 2019 Concrete Repair Program will be designed and advertised with the 2018 program, however, the 2019 roads will be constructed in 2019.

The following tasks will be completed for the projects:

Initial Meeting and Scope Verification

The intent of this task is to meet with the City and verify the limits and scope of work for the project. Upon completion of this task, we will move forward with the surveying and preliminary design. AECOM has already solicited a priced proposal for required soil borings and pavement cores for the Neighborhood Roads Program project from TEC, the geotechnical firm selected by the City, and this will be discussed at the meeting. Soil borings and pavement cores are not anticipated to be needed for the Concrete Repair Program project.

Survey and Base Plans

The intent of this task is to provide topographic survey and base mapping as needed for the proposed design work. We anticipate that a full topographic survey will be required for areas planned for complete reconstruction. For areas where rehabilitation is planned (mill and overlay or pavement repair) base drawings will be created using a combination of survey data, aerial photos and a detailed field review of the site.

AECOM will prepare base plans (30%-40% complete) to identify the major design features. These plans will also be used to further the utility investigation and resolution of potential conflicts. Base plans will include the results of the survey information, utility information received in response to our solicitations for information, and a preliminary estimate.



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AECOM will obtain existing utility data with a design ticket through the MISS DIG system. In addition, AECOM will distribute the base plan design set to the utility companies that have indicated that they have facilities in the project area. We will incorporate the additional information that utility companies provide to AECOM into the plan set.

Preliminary Plans

Incorporating the information obtained from the above tasks, we will prepare the preliminary plan sets (90%) in accordance with City requirements. Soil boring/pavement core information will be included in the plans. This submittal will include items such as the typical cross sections, materials/quantities and details. A Project Manual and preliminary updated cost estimate will also be prepared and submitted for each contract.

Final Plans and Proposal

Incorporating comments from the City, AECOM will develop the final plans submittal, including the plan sets, Project Manuals, and cost estimates.

Advertising and Award

We will respond to any final comments received from the City and submit the Advertisements for Bids to the City for publication. Contract Documents will be made available to bidders by AECOM for each contract. AECOM will respond to bidder inquiries during the advertising period and prepare addenda as required. Following the bid opening AECOM will submit the Bid Tabulation and a letter with recommendations regarding contract award for each contract.

Construction

AECOM will provide full time inspection, contract administration, and staking as required for the projects. Materials Testing during construction will be performed by a geotechnical engineering firm hired directly by the City under the direction of AECOM.

Schedule

We anticipate that the following schedules can be maintained. In the event of an early winter, or any unexpected scheduling delays, a spring completion date should be anticipated:

2019 Neighborhood Roads Program (Applies to both the Asphalt and Concrete Contracts)

Notice To Proceed with Design	March 13, 2018
Preliminary Plans Submittal	March 30, 2018
Public Information Meeting (PIM)	April 11, 2018
Final Plans Submittal	April 20, 2018
Advertise for Bids	May 1, 2018
Bid Opening	May 24, 2018
Contract Award	June 04, 2018
Begin Construction	May 1, 2019
End Construction	October 15, 2019



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2019 Concrete Repair Program Project

Notice To Proceed with Design	March 13, 2018
Preliminary Plans Submittal	March 30, 2018
Public Information Meeting (PIM)	April 11, 2018
Final Plans Submittal	April 20, 2018
Advertise for Bids	May 1, 2018
Bid Opening	May 24, 2018
Contract Award	June 04, 2018
Begin Construction	May 1, 2019
End Construction	September 7, 2019

Estimated Cost of Construction and Design Fees

AECOM has agreed to provide Design Engineering services at a reduced rate of 4.75% of the Construction Contract costs because the 2019 roadways will be combined and advertised with the 2018 roadways. Contract Administration services will be 3.75% of the Construction Contract cost.

We understand that the estimated out-the-door cost for the 2019 Neighborhood Roads Program project is \$2,700,000 and that the estimated out-the-door cost for the Concrete Repair Program project is \$1,000,000. The scope of work will be tailored to meet the proposed budgets for each contract. See attachment A for a full breakdown of estimated costs.

2019 Neighborhood Roads Program Design Fee: \$2,389,041 (Construction Cost) x 4.75% = **\$113,479.**

2019 Concrete Repair Program Design Fee: \$883,636 (Construction Cost) x 4.75% = **\$41,973.**

We understand that fees for construction phase services will be determined after a construction contract is awarded and that the City will pay the geotechnical firm for soil boring/corings and materials testing during construction directly.

Please contact me if you have any questions or wish to discuss this submittal.

Sincerely,

AECOM Great Lakes, Inc.

Sean Kelsch, PE
Vice-President

Attachment A

Neighborhood Roads Program

Construction	2,389,041
Estimated Geotechnical Investigation	
Design (4.75%)	113,479
Estimated CA (3.25%)	89,589
Estimated Crew Days (120 x \$700)	84,000
Estimated Geotechnical Testing	23,890
Out the Door Total	2,700,000

Concrete Repair Program

Construction	883,636
Estimated Geotechnical Investigation	0
Design (4.75%)	41,973
Estimated CA (3.75%)	33,136
Estimated Crew Days (40 x \$700)	28,000
Geotechnical Testing	13,255
Out the Door Total	1,000,000