



CITY of NOVI CITY COUNCIL

**Agenda Item 12
June 17, 2019**

SUBJECT: Approval to award design engineering services to OHM Advisors associated with the Crescent Boulevard/ Lee BeGole Drive Extension and 11 Mile Road/ Lee BeGole Drive Roundabout project, in the amount of \$225,978.

SUBMITTING DEPARTMENT: Department of Public Works, Engineering Division

CITY MANAGER APPROVAL: *PR*

EXPENDITURE REQUIRED	\$ 175,953.00 Major Road Fund \$ 34,500.00 <u>Drain Fund</u> \$ 225,978.00 Total
AMOUNT BUDGETED	\$ 1,068,910 Major Road Fund (FY 2019-20 Budget) \$ 155,343 Drain Fund (FY 2019-20 Budget)
APPROPRIATION REQUIRED	\$ 0
LINE ITEM NUMBER	202-202.00-865.183 Major Road Fund 210-211.00-865.149 Drain Fund

BACKGROUND INFORMATION:

Lee BeGole Drive between 11 Mile Road and the soon-to-be-completed Gun Range approach is currently a dead-end, asphalt roadway in poor condition (PASER 2). The road segment also includes a failing culvert headwall, which serves the Bassett Drain. As part of the proposed road reconstruction project, the existing culvert beneath Lee BeGole Drive and south of the existing DPW Facility approach would be removed and replaced with a properly-sized, concrete box culvert.

The proposed project includes a 36'-wide, three-lane asphalt road with curb and gutter and a roundabout at 11 Mile Road and Lee BeGole Drive, providing a direct route for east bound traffic from Novi Road to Meadowbrook Road and eventually Grand River Avenue. The proposed single-lane roundabout will be skewed to the east in order to make this intersection safer for motorists, improve traffic flow, and maximize vehicular throughput along the 11 Mile Road Corridor and the Lee BeGole Drive Corridor. A future 8' pathway on the west side as well as a future 6' wide sidewalk on the east side is proposed along Lee BeGole Drive to accommodate pedestrians and bicyclists from the Novi Road, Grand River Avenue, and Meadowbrook Road corridors.

Other goals include the creation of a secondary access point to and from the City's DPW Facility. Currently, there is only one point of access to and from the DPW Facility and that is off of 11 Mile Road. The ongoing improvements to the DPW include two other proposed drive approaches; however, the dead end configuration on Lee BeGole Drive has been an issue in the past. In 2017, a DTE utility pole was severed due to extreme high winds and fell across Lee BeGole Drive, essentially trapping DPW employees and equipment, which as a result severely hampered critical services to residents. The additional approaches/driveways and proposed connection to Crescent Boulevard will provide multiple means of access in the event of a similar emergency.

Staff successfully obtained a \$104,471 Local Road Improvement Program (LRIP) funding grant from the Oakland County Board of Commissioners to offset some of the design and construction costs. The Cost Participation Agreement between the City and Oakland County for the LRIP funding is up for approval elsewhere on this agenda. These same funds were also utilized on the Southwest Ring Road (Bond/Flint Street) as these types of projects fit within the parameters for the funding. Construction will likely be phased over a few years to accommodate adjacent site access and adjust the budgeted funds.

This project not only will create economic development for the vacant parcels on 11 Mile Road and along the west side of Lee BeGole Drive but will also create new jobs as a result of the future businesses that will be attracted to this corridor.

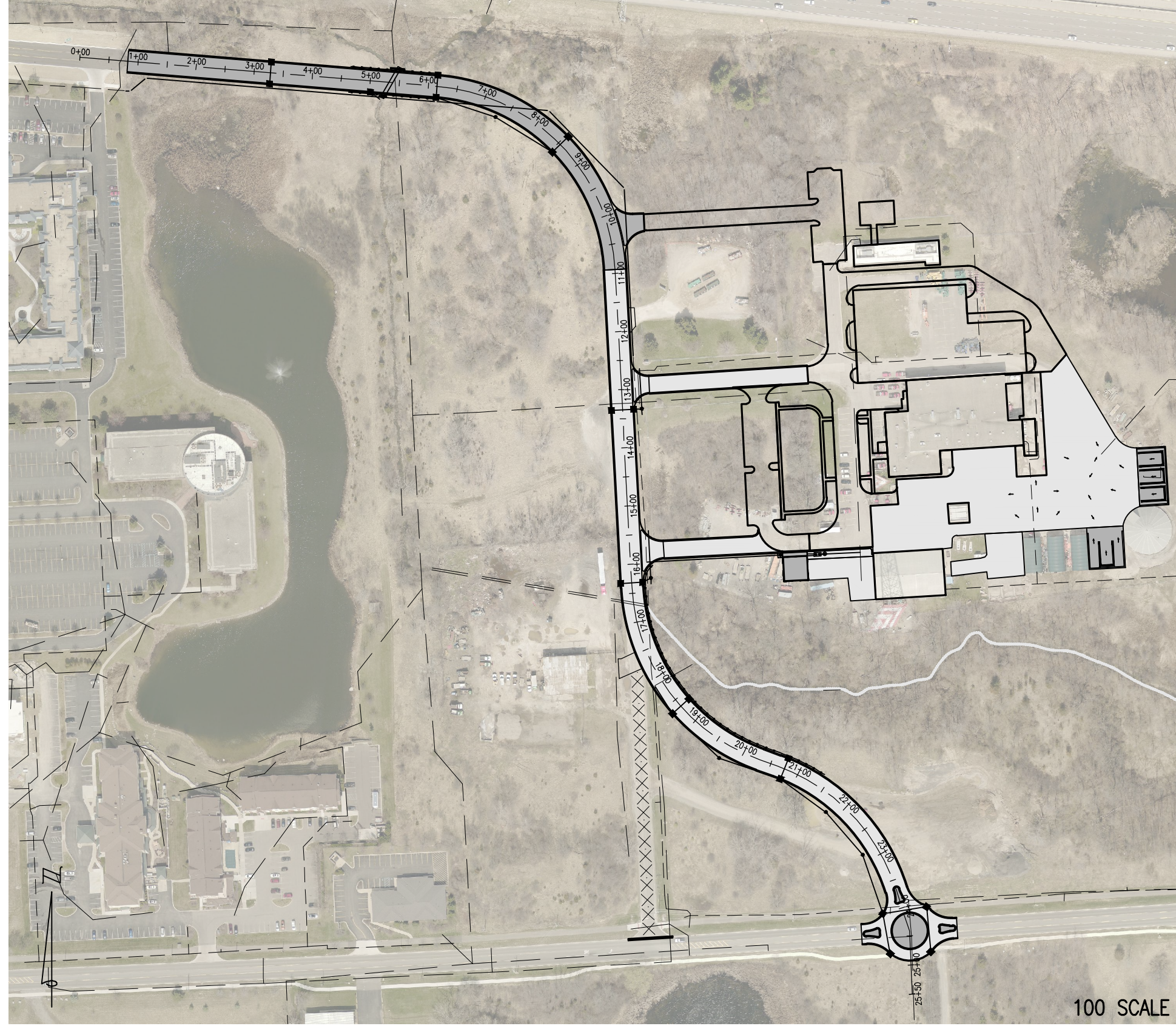
The attached *Design Engineering Services* proposal, as executed by OHM Advisors, outlines the scope of services in more detail. OHM Advisors' proposed total lump sum fee to perform this work is \$225,978. Their lump sum fee derivation is based upon the following breakdown:

- **Road Reconstruction Design** - Per the 2017-2022 Engineering Fee Table \$175,953.
- **Traffic Modeling/Alignment Study** – 135 hours at standard contract rate of \$115/hour - \$15,525.
- **Hydraulics/Wetland Permitting** – 300 hours at standard contract rate of \$115/hour - \$34,500.

The Engineering Division has reviewed the scope of services proposal and recommends approval. Design work will start after the fiscal year begins.

RECOMMENDED ACTION: Approval to award design engineering services to OHM Advisors associated with the Crescent Boulevard/ Lee BeGole Drive Extension and 11 Mile Road/ Lee BeGole Drive Roundabout project, in the amount of \$225,978.

CRESCENT BLVD



100 SCALE

11 MILE

I-96

REVISIONS:	#####
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DATE	PROJ NUMBER	ENG	PROJ MGR	CARD #	COUNTY	CITY/TWP/TOWNSHIP	SCALE	HORIZ DATUM	VERT DATUM
###	#####	###	###	###	###	#####	H: 1"=50' V: N/A	###	###
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May 17, 2019

Mr. Jeffrey Herczeg
Director of Public Works
City of Novi - Department of Public Works
26300 Lee BeGole Drive
Novi, MI 48375

**RE: Scope of Design Services
Lee BeGole Dr/Crescent Blvd Extension**

Dear Mr. Herczeg:

Per your request, the following outlines our proposed scope of services and fee to perform design engineering, cost estimate and prepare bidding documents for the above referenced project. This summary includes our project understanding, proposed scope of work, assumptions, schedule, and fee.

PROJECT UNDERSTANDING

The City of Novi had planned roadway improvements along Lee BeGole Drive due to the need to repair the roadway due to deteriorated pavement. The failing culvert headwall where Bishop Creek flows beneath the roadway was also to be replaced as part of the project. Given the proposed work, the City desired to implement a connection from Crescent Boulevard in order to improve traffic flow and access in the area. This connection would provide a link between Novi Road and 11 Mile Road and provide a second access route for the City DPW Facility. The City also sought to realign the roadway approach to 11 Mile Road in order to provide optimal alignment for a future southern extension to Grand River Avenue. This realignment also makes additional property along the new roadway available for future development. A new roundabout is proposed for the relocated intersection with 11 Mile Road.

The new roadway will include three (3) lanes of asphalt pavement to be consistent with the existing Crescent Boulevard. A center turn lane will provide for safe ingress/egress from existing and future developments along the route. Concrete sidewalks are planned along the project as well for pedestrian accommodations. A new 12-inch water main will also be installed along the new roadway to connect from the existing Crescent Boulevard to Lee BeGole at the DPW main driveway.

The proposed roadway connection between Crescent Boulevard and Lee BeGole Drive will include a new crossing of Bishop Creek as well as crossing an existing wetland. It is anticipated that a box culvert structure will be installed for the creek crossing. The existing creek channel and drainage ditch along I-96 will also need to be reconfigured for proper flow through this new culvert. In addition, the existing culvert beneath Lee BeGole Drive will need to be extended and a new headwall constructed for the proposed road alignment. A detailed hydraulic analysis will be performed for all of these activities in order to coordinate with and obtain a permit from the Michigan Department of Environment, Great Lakes, & Energy (EGLE). A study of wetland impacts will also be required for permitting of the project through EGLE. Any significant wetland impact will require mitigation.

A traffic and geometric analysis will be required to correctly plan for the alignment and geometric configuration of the new roadway. It is anticipated that the proposed roadway connection will have an impact on traffic operations in the area. A traffic analysis will be conducted as part of the project in order to forecast new development areas as

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well as potential re-routing of traffic. This information will be utilized to develop the preferred roadway alignment and geometry of the proposed roundabout at 11 Mile Road. It is anticipated that the roundabout will be single-lane, with potential auxiliary turn lanes if necessary.

SCOPE OF SERVICES

The following outlines our work plan to accomplish the scope of services for this project as noted above:

- Organize and attend a kickoff meeting with City staff to review project objectives, prepare design criteria, and establish a specific delivery schedule.
- Review existing utility information and record drawings for the project area.
- Perform a site review to identify elements that are sensitive to project which includes driveway locations, access issues, geometric deficiencies, drainage features, wetlands, and utility facilities within the project area.
- Perform topographic survey of the project area and prepare existing conditions plans.
- Collect traffic data at intersections of Novi/Crescent, Town Center/11 Mile, & Lee BeGole/11 Mile for use in analysis.
- Schedule and attend a pre-application meeting with EGLE and City to discuss proposed creek crossing, culvert extension/headwall, channel realignment, and wetland impacts.
- Perform traffic forecasting and modeling for anticipated traffic growth and re-routing. Analyze peak hour design volumes determine capacity needs for the proposed roundabout.
- Complete stream hydraulic analysis, backwater calculations, and determine sizing for new culvert crossing, creek channel work, and culvert extension/headwall.
- Develop horizontal and vertical alignments of the roadway and prepare typical roadway cross-sections for the project.
- Attend one meeting with the City to review the existing conditions of the site to finalize proposed improvements.
- Prepare preliminary design plans and specifications with necessary details.
- Coordinate with the Geotechnical Engineer to develop typical pavement sections for the project.
- Prepare technical specifications and method of payment entailing materials, equipment, and labor necessary to perform the work.
- Compute preliminary quantities and prepare a preliminary Engineer's Opinion of Probable Construction Cost.
- Prepare and submit permit plan packages to EGLE for Inland Lakes and Streams/Floodplain and Wetland permits.
- Attend one meeting with the City to review the plans and specifications and address any requested revisions.
- Prepare technical specifications and method of payment entailing materials, equipment, and labor necessary to perform the work.
- Prepare and submit permit plan package to EGLE for water main extension permit.
- Prepare a bid sheet entailing items of work and associated quantities.
- Prepare a Maintenance of Traffic (MOT) plan. We anticipate the MOT plan will be developed in coordination with City staff and input from project stakeholders.
- Develop pavement marking and signing plans within the affected influence of the project in accordance with MMUTCD requirements.
- Draft legal descriptions/exhibits necessary for right-of-way acquisition for the new roadway. It is anticipated that documents will be required for five (5) parcels.
- Assist the City with coordination of utilities found in the area that may have impacts during construction.



- Prepare proposed preliminary schedule for work including the construction start, substantial completion, and final completion dates.
- Prepare final design plans, specifications and bidding documents with details.
- If required, assist the City with advertising and soliciting bids, printing and distributing bidding documents to interested bidders, tabulate and review the bids, check contractor references and provide a recommendation of the award of the project construction to a qualified contractor.
- Prepare plans and documents required to obtain SESC Permit from the City.

ASSUMPTIONS

The following summarizes our assumptions associated with this proposal:

- The City will acquire all property/right-of-way required for the project and no additional property/easements will need to be acquired. A 100-foot right-of-way is anticipated for the new corridor. OHM will prepare legal descriptions/exhibits for the proposed right-of-way to be acquired.
- Utility poles along the east side of Lee BeGole Drive are expected to be relocated as part of the project. The specifics on the relocations will be identified during the design, and the City will coordinate with DTE on necessary relocations.
- Geotechnical services are anticipated to be required for design and construction of this project but are not included in our scope of work. These services will be provided by the City's Geotechnical Consultant under a separate contract.
- The City will be responsible for all permit application fees and permit fees.
- Street lighting design is not included. Lighting will be required for the roundabout and may be desired for the entire roadway. It is anticipated that new lighting will be implemented with DTE and the City through the community lighting program.
- We do not anticipate remediation or removal of contaminated or hazardous soils or materials.
- Development of plans for landscaping or ornamental features are not included.

SCHEDULE

The following outlines our anticipated schedule milestones of main tasks related to this work:

- 50% plans – July 15, 2019
- 100% plans – September 15, 2019
- Prepare Bid Recommendation for Council Award – October 2019
- Begin Construction – Late 2019/Early 2020

FEE

Based on the above outlined scope of services and assumptions, our proposed lump sum fee to perform this work is two hundred twenty-five thousand nine hundred seventy-eight dollars (\$225,978.00). Our fee derivation is based on the following breakdown:

- Road Reconstruction design per the 2017-2022 Engineering Fee Table - \$175,953.00.
- Hydraulics/Wetland Permitting – 300 hours at standard contract rate of \$115/hour - \$34,500.00.
- Traffic Modeling/Alignment Study – 135 hours at standard contract rate of \$115/hour - \$15,525.00.



Thank you for the opportunity to be of service. If you have any questions or require additional information, please contact us. We look forward to working with you on this project.

Sincerely,
OHM Advisors

Authorization to Proceed

Timothy J. Juidici, P.E.
Principal-in-Charge

Signature

Date

Printed Name

Title

Encl: Project Cost Estimates

cc: George Melistas, Engineering Senior Manager
Alex Parent, OHM
File