CITY of NOVI CITY COUNCIL

Agenda Item 5
November 26, 2007

SUBJECT: Consideration of award of a contract for design engineering services for the Eleven Mile Road/Meadowbrook Road Signalization project to Stantec Consulting Michigan, Inc. for a not-to-exceed design fee of $18,500.

SUBMITTING DEPARTMENT: Engineering

CITY MANAGER APPROVAL:

EXPENDITURE REQUIRED	**$18,500**
AMOUNT BUDGETED	**$25,000**
LINE ITEM NUMBER	**204-204.00-863.015**

BACKGROUND INFORMATION:

At the August 27, 2007 meeting, City Council approved a request from Whitehall Real Estate, Minasian Development Corporation, The Hooberman Company, and Walsh College to participate in a cost sharing arrangement to complete design engineering for the signalization of the Meadowbrook Road/Eleven Mile Road intersection. In order to facilitate the start of design engineering work, the four businesses have paid $20,000 toward the design fee. City Council appropriated $5,000 toward the design fee.

This project includes the widening of the eastern leg of the intersection to add a dedicated left turn lane and the installation of a new traffic signal. The design of the new traffic signal will include autoscope cameras to incorporate the signal into the FAST-TRAC system. The selected design consultant will also review the cost of constructing the signal using mast-arms as opposed to the standard box span wire configuration. The costs for each alternative will be available prior to FY2008-09 budget discussions.

The attached Request for Proposals for engineering services was sent to the six firms that City Council pre-qualified for roadway-related projects. Five proposals were received and each was evaluated using *Qualifications Based Selection*, with a greater emphasis on the each firm's proposed approach because of the complex nature of the project scope. The following table summarizes the results of the proposal review process:

Firm	Design phase	Soil Borings	Total Design Phase Fee (not to exceed)	Staff Review Score	Proposal Rank
Stantec	**$ 15,700.00**	**$ 2,800.00**	**$ 18,500.00**	**1100**	**1**
Fishbeck Thompson Carr & Huber	$ 19,250.00	$ 1,300.00	$ 20,550.00	847.5	2
URS	$ 17,000.00	$ 3,300.00	$ 20,300.00	820	3
Spalding DeDecker	$ 21,500.00	$ 3,000.00	$ 24,500.00	512.5	4
Anderson Eckstein & Westrick	$ 17,800.00	$ 4,600.00	$ 22,400.00	470	5

Of the five firms that submitted proposals, Stantec had the lowest fee, met all requirements listed in the request for proposals and had the most comprehensive proposal (see attached Stantec's

proposal dated November 15, 2007 and the Engineering Department's scoring summary for reference).

Stantec is currently providing engineering services for the Hudson Sanitary Pump Station Upgrades and SCADA (Supervisory Control and Data Acquisition) Implementation and is being recommended for engineering award of the 2008 Pathway Construction engineering.

Because the funds for construction of the signal have not been appropriated for this fiscal year, only the design engineering is being awarded at this time. As part of the proposal, the Engineering Department requested that the consultants provide construction phase fees to facilitate award of the construction phase in the next fiscal year. If construction is funded, then Stantec's fee would be amended to accommodate construction engineering services.

RECOMMENDED ACTION: Approval to award a contract for design engineering services for the Eleven Mile Road/Meadowbrook Road Signalization project to Stantec Consulting Michigan, Inc. for a not-to-exceed design fee of $18,500.

	1	2	Y	N
Mayor Landry				
Mayor Pro Tem Capello				
Council Member Crawford				
Council Member Gatt				

	1	2	Y	N
Council Member Margolis				
Council Member Mutch				
Council Member Staudt				

Existing Intersection Layout

Meadowbrook Road and Eleven Mile Road

Map Publication Date: November 19, 2007

CITY OF NOVI
ENTER DEPT NAME HERE
ENTER DEPARTMENT INFO HERE
NOVI CITY HALL/CIVIC CENTER
45175 W. TEN MILE ROAD
NOVI, MI 48375-3024
(248) ENTER PHONE NUMBER
WWW.CITYOFNOVI.ORG
MAP AUTHOR: Brian Coburn, PE

N W E S

0 15 30 60 90

FEET

1 INCH EQUALS 50 FEET

MAP SOURCES OF INFORMATION

Describe your sources of map information here

MAP INTERPRETATION DISCLAIMER

This map is neither a legally recorded map nor a survey and is not intended to be used as one. This map is a compilation of records, information, and data located in various city, county, state, and federal offices and other sources regarding the area shown, and is to be used for reference purposes only. The City of Novi makes no warranty, express or implied, that the Geographic Information Systems (GIS) Data used to prepare this map are error free, and the City of Novi does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. Official records should be used as a primary information source for verification of the information provided on these pages.

8-1-07

To: Mayor and City Council Members

For future consideration to partner with property owners around 11/Meadowbrook to scope out and prepare for future traffic signal and intersection work which the businesses support.

MEMORANDUM

To: Clay Pearson, City Manager
Pam Antil, Assistant City Manager

From: Rob Hayes, City Engineer

Re: Eleven Mile/Meadowbrook Intersection Signalization

Date: August 1, 2007

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The improvement of the Eleven Mile Road/Meadowbrook Road intersection is identified in the Capital Improvements Program (CIP) as a project to potentially be completed in FY 2008/2009. The scope of the project includes signalizing the intersection and widening the east leg to add a dedicated left turn lane for the southbound Meadowbrook turning movement. The total estimated cost of the project is approximately $493,000, including possible right-of-way acquisition (see attached cost estimate and map abstracted from the FY07/08 CIP).

Recently the City has been approached by various Eleven/Meadowbrook area businesses that have expressed a desire for the City to make the intersection improvements early in FY 08/09 so that access management issues affecting their businesses may be mitigated as soon as possible (Gary Jonna's July 17th e-mail message, attached). Collectively they are willing to commit $20,000 of the estimated $25,000 needed for design so that the project can be designed this year and constructed in 2008 (instead of the 2008 through 2009 design/construction schedule proposed in the CIP).

City Council may wish to accept this offer and either:

1. Appropriate the additional $5,000 needed to complete the project design in 2007, and subsequently approve funding in the FY 08/09 budget for project construction in 2008.
2. Appropriate the additional $5,000 needed to complete the project design in 2007, dedicate 2008 Tri-Party funding towards this project, subsequently approve funding in the FY 08/09 budget for project construction in 2008, and reimburse the $20,000 design contribution from Tri-Party funds.

Approving either of these options would provide us with a completely scoped and designed project. Also, completing the design in advance of FY08/09 would determine whether additional right-of-way will have to be acquired to accommodate the new left turn lane.

Please let me know if you have any questions or comments on this matter.

cc: Kathy Smith-Roy, Finance Director
Ara Topouzian, Business Development Director
Brian Coburn, Civil Engineer

SCORING SUMMARY FOR RFP REVIEW

Project Description: Eleven Mile/Meadowbrook Signal

RANK 1= LOW, x= BEST (x = number of firms responding)

TOTAL OF STAFF REVIEW SCORES

Item weight:	*25*	*10*	*5*	*5*	*5*	*50*	
SCORES	**1**	**2**	**3**	**4**	**5**	Totals	*Rank*
Anderson Eckstein & Westrick	6	12.5	14.5	13.5	11	**470**	5
Fishbeck Thompson Carr & Huber	15	20	22.5	21.5	10.5	**847.5**	2
Orchard Hiltz & McCliment	DID NOT SUBMIT A PROPOSAL						
Stantec	25	15	22	23	20	**1100**	1
Spalding DeDecker	9	12.5	11	12	9.5	**512.5**	4
URS Corporation	20	15	5	5	24	**820**	3
TOTALS	75	75	75	75	75		

SCORING CRITERIA

1. Engineering Fee
2. Evaluation of Schedule
3. Evaluation of Approach, Statement of Understanding of Project, and proposed staff
4. Analysis of subjective statements applicable to the project as required on the RFP (Value added items)
5. Evaluation of past performance on City projects

Proposal of Professional Services for:

New Traffic Signal and Intersection Widening for Meadowbrook Road and Eleven Mile Road

Prepared for: **City of Novi, Michigan**

Prepared by:
Stantec Consulting Michigan, Inc.
3959 Research Park Drive
Ann Arbor, MI 48108
Ph: 734-761-1010
Fax: 734-761-1200
www.stantec.com

November, 2007

Stantec

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Stantec

November 15, 2007

Carol J. Kalinovik
Purchasing Director
City of Novi
45175 W. Ten Mile Rd.
Novi, MI 48375-3024

Dear Ms. Kalinovik:

Reference: New Traffic Signal and Intersection Widening for Meadowbrook Road and Eleven Mile Road RFP

Thank you for the opportunity to provide our proposal for the new Traffic Signal and Intersection Widening for Meadowbrook Road and Eleven Mile Road project. Based upon your RFP dated November 1, 2007, Stantec Consulting Michigan, Inc. (Stantec) is pleased to submit this proposal for Engineering Services.

We believe that we are uniquely positioned to provide the needed services for the following reasons:

- We have outlined a detailed approach to this work through preliminary analysis of field conditions associated with each discipline of the work proposed.
- We possess highly qualified civil engineers and construction technicians, experienced in road design and construction. Our construction technicians are fully capable of material testing responsibilities and soil erosion inspection in addition to their daily construction inspection duties.
- The experienced project team dedicated to this project is available to meet the detailed schedule proposed in our proposal.
- We maintain a field office in Northville Township to accommodate projects within that immediate geographical area. This allows us to react to any issue that may arise during construction and manage all of our field operations from our Northville Township office.

As mentioned above, because there is an extensive amount of detail and coordination necessary to successfully implement the work associated with this proposal, we have provided a detailed project approach that outlines a sound and effective design process while maintaining

an acceptable timeline. We present our ideas and concepts as a reflection of how we approach a project. We approach a project with the following focuses:

- We carefully evaluate the project issues, concerns, and problems
- We thoroughly investigate numerous options with consideration to short and long term solutions
- We analyze the financial implications of our decisions

We understand the importance of this project to the City, have the staff allocated to execute the work and are dedicated to the success of your project. Please do not hesitate to contact us with any questions. Thank you.

Sincerely,

STANTEC CONSULTING MICHIGAN, INC.

George A. Tsakoff, Associate
Civil Group Manager
Tel: 734-214-1887
Fax: 734-761-1200
george.tsakoff@stantec.com

Attachment: Proposal

TABLE OF CONTENTS

Stantec

Proposal for:
New Traffic Signal and Intersection Widening
for Meadowbrook Road and Eleven Mile Road

Prepared for:
City of Novi, Michigan

Submitted by:
Stantec Consulting Michigan, Inc.
3959 Research Park Drive
Ann Arbor, Michigan 48108-2216
(734) 761-1010
FAX (734) 761-1200
www.stantec.com

November, 2007

SECTION I

Project Background / Understanding

Stantec

PROJECT BACKGROUND

As the city of Novi experiences continued growth in both the residential and commercial sectors along Meadowbrook Road, traffic volumes continue to increase. This increase gives rise to the problem of insufficient left turning opportunities in all directions at the Eleven Mile Road and Meadowbrook Road intersection, which is the focus of this proposal.

The City plans to address these traffic constraints at the intersection by signalizing the intersection to permit left turning phases on all four approaches, as well as pedestrian signals and crosswalks. The City of Novi is currently contracted with the Road Commission for Oakland County (RCOC) for operation of the City's traffic signals. Therefore, RCOC coordination will be required as part of this project.

PROJECT UNDERSTANDING

As with all new projects in Novi, we understand that the City of Novi desires innovative, experienced, responsive and cost effective services to prepare contract documents for the design and construction of the necessary intersection improvements. Although this project is currently funded for design only, the proposed services in this proposal include design, bid assistance, construction administration, and construction observation of the proposed work. The City intends to propose construction funding to City Council for the 2008-09 fiscal year to complete the construction of the project which would go into effect July 1, 2008.

A description of the necessary improvements as provided in the RFP is as follows:

- Construction of a "box-span" style traffic signal with left turn phasing for all four approaches to the intersection.
- Installation of pedestrian signals at all four corners of the intersection.
- Inclusion of the SCATS automated cameras and SCATS compatible traffic controller.
- Widening of Eleven Mile Road on the westbound approach to provide a new left turn lane, with approximately 300 square yards of new pavement and extending back approximately 300 feet east of the intersection.
- Installation of new pedestrian signals and cross walks at the intersection.

We understand these items to be the basic needs of the project and have included a detailed description of our project approach utilizing value added concepts for this project in the following section.

SECTION II

Project Approach

The process involved with the design and contract administration for the widening of Eleven Mile Road presented in the RFP will result in several challenges and demand a thorough and innovative design approach. When identifying concepts that bring added value to a project of this nature, we concentrate on the effectiveness of the consultant to implement a design that is practical, efficient and complete. The implementation of a new traffic signal and road widening at this intersection will involve a great deal of coordination and planning, primarily due to the likelihood of obtaining easements, County coordination, and possibly an MDEQ permit. This requires that much of the thought and analysis placed on the process and implementation of the design be completed as early as possible in the design phase to allow for the longer lead times associated with these challenges. Please note that the concepts and ideas in this section are offered as suggestions to initiate discussion or feedback from the City Engineering and DPW personnel. We understand that the City may not desire to implement each concept or idea. In the paragraphs to follow, it is our intent to provide a project approach that will utilize our past experience with these types of projects and share the concepts that have been successful in providing a sound design and construction engineering process. This process will assist in maintaining a high quality of work, meeting schedule deadlines and maintaining positive public opinion during the course of the project.

SIGNAL DESIGN

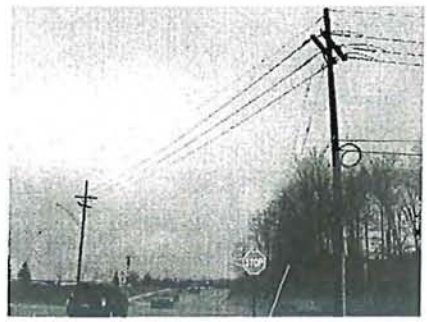
The limitations experienced by motorists through the Eleven Mile Road and Meadowbrook Road intersection has been ongoing for several years, resulting from growth in the residential and business sectors in that area. Anyone attempting to turn left in any direction at this intersection can attest to the difficulties due to the increased traffic in both the northbound and southbound directions. The installation of a new traffic signal at this location is likely a very welcome improvement for any motorist who travels Eleven Mile Road in this area with any regularity.

The City of Novi currently has an agreement with the RCOC for the operation of traffic signals in the City. As a requirement of this contract, all new signal installations must be designed with a SCATS (Sydney Coordinated Adaptive Traffic System) compatible traffic signal controller, which is used to adjust signal timing minute-by-minute to move traffic through the intersection more efficiently. The proposed signal design will utilize the Autoscope cameras on all four approaches for vehicle detection. As this intersection is proposed with a limited number of turning phases, a pole mounted traffic controller should be suitable.

The proposed signal design will utilize the box span configuration, as adopted by the RCOC and MDOT. Typically a representative from the RCOC will locate the poles in the field, which need to be coordinated with the design plans. Stantec will work closely with the RCOC to coordinate the geometric design and placement of the poles, pedestrian signal pedestals, and handholes, as well as permitting and implementation. The recently installed traffic signal at the Cherry Hill Road and Meadowbrook Road intersection is a good representation of the proposed signal at the Eleven Mile Road and Meadowbrook Road intersection. Consistency in signal design helps to develop driver expectation along an arterial such as Meadowbrook Road.

The box span signal configuration may the best design for this intersection. There are several power lines crossing the diagonal between the existing DTE poles located on the northeast and southwest corners of the intersection. Utilizing the previous RCOC standard for the diagonal span wire, there would have been

conflicts in either signal span direction. Stantec will still investigate the possibility of making use of these DTE poles for the span wires, since the RCOC typically uses 40 feet high steel strain poles. Usually DTE Energy will not permit the steel poles in close proximity to the power lines due to the potential for electrical arcing. Either the steel poles need to be placed at a safe distance from the DTE wires, or the DTE wires need to be elevated. This would require a new, taller pole installation.



Box span signals may help to avoid conflicts with diagonal DTE Energy overhead wires.

In addition to the design challenges presented with the pole configuration, the layout of the geometrics will identify use of the existing poles as an option. If so, the appropriate guy wires may need to be included in the design. With the configuration of the box span wire design, guy wire directions are nearly parallel to the right-of-way, thus reducing or eliminating the need for additional easements. Stantec will investigate the different alternatives to arrive at the most feasible design.

GEOMETRIC DESIGN

We understand that the City of Novi desires a widening of Eleven Mile Road to the north for the proposed left turn lane. As with any design, Stantec will meet with the City to discuss alternatives and design considerations of the geometric widening. We have established 3 main alternatives for the geometric redesign of the intersection for widening to the north, widening on the section line and delaying the intersection widening to a later date.

Existing intersection looking east shows deficiencies in geometrics and lane continuity.

Widening to the North

It is our understanding that the preferred method of widening due to availability of right-of-way would be to widen the intersection to the north. Some discussion points to consider regarding a design for a widening to the north would be as follows:

Right-of-Way or Easements

We understand that the property owner to the north is contributing to the project costs and will likely grant the necessary right-of-way or easements to construct the improvements. For a City improvement project such as this, it is particularly helpful to secure the proper right-of-ways / easements without time consuming negotiations or condemnation procedures. The interest and cooperation of the property owner is an attractive reason for widening solely to the north.

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Curb and Gutter

With the proposed widening there will be a need to replace the existing curb and gutter on the north side. By inspection, the primary functions of the curb and gutter is to retain road runoff within the right-of-way and to provide the proper grading for the new adjacent sidewalk. We will design the widening with new curbs in place to achieve the same condition. Currently, there is no curbing along the northeast corner radius. We recommend that this location have a new curb and gutter installed, to help keep vehicles on the road and away from pedestrians.

Northeast corner requires curb and gutter to help provide safer zone for pedestrians.

Sidewalk Disruption

The existing concrete sidewalk on the north side of Meadowbrook Road is relatively new, and has been installed to service pedestrians coming from Meadowbrook Road and the southeast corner of the intersection. The sidewalk will need to be reinstalled beyond the curb and gutter to match existing walk configurations on each end. We suggest that the sidewalk be extended to the recommended curb and gutter around the northeast corner radius to provide an ADA compatible sidewalk ramp and receiving area for pedestrians. Stantec will design the recommended sidewalk such that pedestrian signal push buttons are easily accessible.

Widening of the road will result in relocation of narrow greenbelt and adjacent sidewalk.

Slope Regrading

The existing berm and slope to the private ditch bottom on the northeast quadrant of the intersection will necessitate regrading. At first observation, the slope is likely at or slightly greater than a 1:3 slope. Therefore, to move the berm back would create a much steeper slope, which would be difficult to maintain. Elimination of the berm may help to improve the slope issue, but further discussion with the City and property owner will be initiated to determine the most feasible option.

Looking east, road widening will cause slope challenges behind sidewalk.

Retaining Wall
Should it be necessary to preserve the existing ditch without disruption, there may be a need to consider a retaining wall feature. This is due to the excessive slopes that would be created by the widening to the north.

Ditch Reconfiguration
Depending on the outcome of the site survey, Stantec will review the options available for adjusting the depth and/or slope of the existing ditch in order to lessen the degree of the side slopes. However based on our initial site investigation mentioned above, it appears that the ditch side slope is close to the maximum allowed by the City. The options for realigning either vertically or horizontally are very limited.

Storm Sewer Options
There would also be an option of filling the ditch in lieu of the retaining wall alternative. However, this would involve the addition of about 150 feet of storm sewer and a few catch basins. There is an added benefit to this idea in that the landscape maintenance is much easier without the steeper slopes. Also, it is common that paved ditches become undermined, less attractive, and a maintenance problem over time, particularly from larger storm events. We feel the property owner and City would see an advantage in this design but there would obviously be budget constraints associated with this option that may not make it feasible.

Draining west, existing paved ditch adds to steep slope issues upon road widening.

Widening on the Section Line

If it becomes feasible to obtain right-of-way on the south side of Eleven Mile Road, the scenario of widening the intersection along the section line becomes more attractive. It is more common to follow precedence and redesign the intersection geometrics with the new left turn lane centered on the section line. This was observed with the design of the west approach to the intersection that was recently built with the new left turn lane. Some advantages of this conventional geometric alignment would be the increased motorist safety by the reduction of opposing left turn lane conflicts and less opportunity for eastbound vehicle curb hits as they pass through the intersection. Under this scenario, the following discussion points should be considered:

Right-of-Way or Easements
Stantec understands that the obtaining right-of-way or easements to the south of Eleven Mile Road may be more challenging than obtaining easements to the north. Stantec would recommend that the City pursue right-of-way acquisition with the southeast property owner, such that the centered design alternative could be implemented along with associated grading.

Curb and Gutter
As with the north side of Eleven Mile Road, the existing curb and gutter would need to be replaced on the new taper from the curb return to the east limit of the project. We would recommend that the slope be regraded to allow at least a three foot wide clear zone for snow clearing. The existing curb and gutter radius at the southeast corner would need to be replaced back to a new curb return along Meadowbrook Road. There is the possibility of a hydrant relocation to ensure that it is not situated in a potential target zone for errant vehicles.

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Sidewalk Considerations

The south side of Eleven Mile Road does not have an existing sidewalk from the intersection to the east limit of the proposed widening. Depending on the development of the project scope and budget evaluation, this may be an opportune time to at least provide the necessary grading for future walks, or include them into the overall design. Certainly, this would depend on the extent of allowable grading or the implementation of a retaining wall extension from the existing wall along Meadowbrook Road. In addition, the property owner to the south may see this as a good opportunity to "dress up" the corner of their site and make a contribution for the installation of the sidewalk.

Slope Regrading

It appears that the existing slope on the south side of Eleven Mile is at least a 1:2 slope, perhaps even a 1:1. Clearly it is the existing vegetation that is holding the slope together. It is likely that if the left turn lane were to be centered, then a substantial amount of grading would be necessary, especially towards the east of the proposed improvement. Most of the existing slope vegetation and trees would be removed, and an aggressive grade of erosion control blankets or sodding would be necessary to stabilize the new slope. It is possible that after detailed topographic survey is obtained, it may not be possible to grade the slope and a retaining would have to extend from the southeast corner of Meadowbrook and Eleven Mile Roads. Again, the south side property owner may be interested in making a contribution to "dress up" the corner of their site and incorporate some other architectural features.

Significant vegetation removal would be required with centerline road widening.

Complete Widening Design but Delay Construction

Although it is the City's desire to implement a road widening to accommodate a left turn lane, there would be an option of implementation of the traffic signal now and completing the road widening improvements at a later date. This may become necessary if the final design results in a construction cost that is outside of the City's available budget to construct all the improvements.

Misaligned lane configurations may require guideline striping through intersection.

Under this scenario, the existing westbound approach would continue to serve as a left/thru/right turn lane. Assuming that the AADT of Eleven Mile Road east of Meadowbrook Road is very low, it is possible that limited queuing would occur. This would especially be the case if a left turn advanced green phase were to be set up in the signal timing. If this configuration were to be considered, the offset alignment issue would need to be addressed and pavement could be striped across Meadowbrook Road to channel westbound thru motorists towards the thru lane on the west side of Meadowbrook Road. Of course, this option would only be investigated at the direction of the City to alleviate possible budget constraints.

VERTICAL ALIGNMENT ANALYSIS

While walking the site, one will notice that the existing crest vertical curve of Eleven Mile Road toward the east end of the widening may require a review for sight distance. Although the proposed design speed will not change for this segment of Eleven Mile Road, we must be cognizant of the fact that a traffic signal with a green phase will possibly encourage greater than existing westbound speeds over the vertical crest. Currently, drivers expect to stop at the intersection, but stacked vehicles at the red phase may be compromised if a driver cannot see with enough sight distance beyond the crest. Stantec proposes to perform this quick analysis as part of the proposed design.

A site distance analysis may reveal crest vertical curve concerns on a green signal phase.

SIDEWALK UPGRADES

It should be noted that because the City is requiring the installation of pedestrian signals, all four quadrants of the intersection must be ADA compliant. On the southwest corner, the existing curb and gutter will need to be modified with curb drops and sidewalk ramps would be installed per ADA guidelines. On the northwest corner, no upgrades to the existing ramp would be necessary as long as the ramp is upgraded as part of the 2008 pathway gap design and construction. At the southeast and northeast corners, the City should construct/upgrade sidewalk ramps to be ADA compliant. Stantec will include the necessary details in the scope of the proposed design.

Sidewalk installation on southwest corner will provide a safe receiving/waiting area for pedestrians.

DETAILED TOPOGRAPHIC SURVEY

For any road-oriented project, the topographic survey and base drawing become critical to a successful design. Although all firms associated with the City can perform this duty, the detail and quality control of the base plan are key factors that set one plan apart from the other. All information that is obtained in the field with survey grade information is back checked by the field crew after a base plan is created. In addition the project manager will perform a detailed quality control review to ensure that every aspect of the existing condition is accurate prior to the proposed pathway being added to the plan. This is critical because all existing surface features (utility poles, landscape areas and natural feature limits) not accurately represented would affect the execution of the work by the Contractor and increase the risk if construction delays and change orders to the work.

PERMITTING COORDINATION

As discussed earlier, since the traffic signal will be operated by Oakland County, it will be necessary to coordinate with that agency for the horizontal location of the signal poles and pedestal signals. The challenges presented above in our proposal at the intersection require coordination early and often with the County to resolve any conflicts that may develop on this project. Stantec is very familiar with the Road Commission of Oakland County through our extensive coordination with the agency in administering private development and capital improvement projects throughout the City over the past several years. We propose the following actions to provide a successful communication process with the County during this project:

- Contact the County immediately upon authorization of the work to discuss the challenges described in this proposal to provide a sound and effective signal design.
- At the time of initial contact, set up a site meeting between the County, Stantec and City representative to look at these concerns and discuss alternatives already proposed in this write up.
- Upon discussion between all parties involved, prepare and submit 30% plans to the County to obtain approval of preliminary signal design along with any other design attributes agreeable to all parties involved in the project.
- Continue coordination with the County by addressing plan comments and a final plan submittal for the signal design.

It is anticipated that Oakland County is the only outside public agency that will need to be contacted for coordination purposes. It is possible that the MDEQ may need to be involved if it is determined during the course of the design that wetland disturbance is necessary. The City of Novi administers the Soil Erosion and Sedimentation Control process and has jurisdiction on Eleven Mile Road and Meadowbrook Road. Stantec is very familiar with this process of coordination, review, inspection and reporting from our work with the City over the past 4 years on both private development and capital improvement projects.

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SECTION III

Work Plan / Scope of Services

I. Design Phase

A. Meet with City staff to confirm the scope of work and discuss any design alternatives
B. Visit the site to confirm site conditions
C. Analyze design alternatives for the widening and confirm final widening location
D. Complete four (4) soil borings at the location of each of the proposed traffic signal poles and associated report
E. Review available background information including record drawings and City GIS data for the project area
F. Perform complete topographic survey of the project area including the identification of type, size and condition of all trees measuring 6-inch d.b.h. and larger. The survey would also include the wetland and water course boundaries as delineated by Stantec's wetland consultant.
G. Contact and coordinate with utility companies relevant to the project
H. Prepare signal design utilizing RCOC standards
I. Coordinate with the RCOC for review of the signal design
J. Prepare soil erosion and sedimentation control plan
K. Prepare easement sketch and descriptions as necessary
L. Prepare widening design and specifications (30%, 90%) for City review
M. Prepare project cost estimates (30%, 90%) for City review
N. Finalize 100% bid package

II. Bid Assistance

A. Coordinate with the City Engineering and Purchasing Divisions on all bidding arrangements for the project
B. Prepare and distribute contract documents to prospective bidders
C. Coordinate and facilitate a mandatory pre-bid meeting
D. Field questions, prepare and distribute addenda
E. Review bids and recommend award

III. Construction Administration

A. Prepare executed contracts for Contractor and review Agreement, Bonds & Insurance for conformance and final contract execution by the City
B. Coordinate and facilitate a preconstruction meeting with the Contractor and City.
C. Review shop drawings associated with the project
D. Interpret the contract for implementation on the project
E. Provide construction staking for the widening and signal pole placement
F. Coordinate with City Engineering and Field Engineering staff during the project.
G. Process pay applications

H. Ensure compliance with the contract documents
I. Prepare record set drawings in hard copy and electronic format

IV. Construction Observation

A. Perform full time inspection of widening improvements during ongoing work by the Contractor
B. Perform material testing for the widening to a level that will establish compliance with contract documents
C. Perform inspection to enforce soil erosion and sedimentation control plan and City Ordinance under the APA program.
D. Attend to businesses/residents concerns and complaints
E. Prepare punch list and recommendation of acceptance of project when applicable
F. Prepare and submit all daily inspection reports with digital photos

* It is assumed that detailed inspection of the signal poles and controls would be performed by Oakland County and this inspection effort would be funded through the construction contract.

SECTION IV

Staffing Plan

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We have assembled a highly experienced team to provide the best possible design and construction services for this project. Our team is intimately familiar with all aspects of road projects providing both design and contract administration services. The following is a brief summary of the team that has been specifically assembled for this project.

George A. Tsakoff will serve as Project Manager and provide overall project coordination between the City and Stantec staff. This coordination will take place between the Project Surveyor and Project Engineer during the design phase of work and with our Construction Group during the construction phase of work. George has extensive project and client management experience with several of Stantec's established municipal clients including the City of Novi. Over the past four years, George has worked with the City of Novi's Engineering, Building and Finance Departments on a mix of private development consultation and public project administration efforts. George is also familiar with City processes, procedures and most importantly the expectations for a high quality project, on-time and within budget.

Lawrence J. McCarthy, PE, will serve as Project Engineer. Larry is very familiar with the City of Novi and has extensive experience and expertise in the design, management and construction of over 23 road and signalized intersection improvement projects within the City of Novi including those constructed at Eleven Mile Road and Beck Road, Nine Mile Road and Beck Road, and Ten Mile Road and Taft Road. With over 18 years of professional experience in both Michigan and Ontario, Canada, Larry has served as Project Engineer and Assistant Project Supervisor on various projects, ranging from $15 million interchange construction to small commercial and residential site plans. Larry brings a diversity of skills to Stantec, including design and management of municipal improvement projects, MDOT TEA-21 Enhancement projects, design of subdivision and condominium developments, and site plan review for municipal projects. Larry will serve as the lead engineer on this project and the design contact with the City and County.

Tiffany T. Neubig will serve as Project Designer. With over 8 years of experience in both the private and public sectors of Civil Engineering, Tiffany is well versed in the design of all aspects of road and pathway design. She has provided design efforts on an array of residential, commercial and public works project in coordination with Stantec's project engineers and project managers. Her experience ranges from large development such as the street design on the New Model Colony infrastructure improvement project in Ontario, California to assisting with design efforts for street and pathway designs with several of Stantec's municipal clients. Tiffany will be responsible for the design, CAD administration and plan preparation aspects of the project in coordination with the Project Engineer and Project Manager.

Bradly D. Fish, PS will serve as Lead Surveyor for this project. Brad has a Bachelor's of Surveying Engineering Degree from Ferris State University and over 14 years of experience in surveying. As the Lead Surveyor with Stantec, Brad manages survey projects from inception to completion. His experience includes remonumentation, ALTA/ACSM title surveys, boundary surveys, construction layout, topographic surveys, and site surveys for both municipal based clients and private sector clients. Brad will be responsible for the topographic survey of the project area to provide a complete and detailed background drawing to the project designer.

Dean Trella will be responsible for the day to day oversight of the field operations on this project and coordination with the public during field operations by the Contractor. Dean has over 15 years of construction

experience in the fields of construction administration, construction observation, material testing and soil erosion and sedimentation control (Part 91 Certified). Dean also has extensive construction phase and client field management experience with several of Stantec's established municipal clients including the City of Novi. Dean is currently working with the City of Novi's Engineering Department, Building Department and Public Works Department on a mix of project administration and inspection efforts. Dean is familiar with City processes and procedures and the need for continuous coordination between the City, Contractor and Stantec staff during the course of construction on this project.

R. Brian Simons, PE will serve as QAQC Engineer. With nearly 20 years of professional experience, Brian has prepared site and road plans for local, state and federal projects including numerous projects for The University of Michigan Campus Division, Canton Center Road Improvements (Ford Road to Warren Road), the Sheldon Road/CSX Railroad Grade Separation and Pavement Reconstruction project, and Metro West Industrial Park No. 5 in Plymouth, Michigan. In addition, Brian has worked on several water and sewer projects to supplement his experience with road and site design. These include Pinckney M 36 Water and Sewer SAD, Irvine Ranch Water District, several water main improvement projects for communities and site plans for Washtenaw County Parks, U-Haul and several private developers. Brian has been a registered Professional Engineer in the State of Michigan since 1991.

Philip J. Maly will be responsible for technical oversight of Field Staff in both the construction and survey areas of work. Phil has over 30 years of experience involving construction engineering, surveying, and management. Phil is Stantec's Field Services Manager in charge of the Construction and Survey Groups. He has also acted as Manager of Field Operations for Pittsfield Charter Township since 1997 and served as the Interim Utilities Director for Pittsfield Charter Township for two years. Phil has survey, construction observation, design and construction management experience for the Cities of Flint and Ann Arbor and the Townships of Pittsfield, Northville, Saline, Scio and Lodi.

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SECTION V

Project Schedule

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We have prepared the project schedule with the following items in mind:

- Our recent experience with similar projects and how that experience relates to the project design timeline
- The ideal design timeline such that the project is ready for bidding as soon as construction funding is secured
- Construction operations to be completed during the standard 2008 paving season to limit complications due to weather

Please refer to the attached project schedule for additional details.

City of Novi, Michigan
Traffic Signal and Intersection Widening Design

Proposed Project Schedule
November 14, 2007

Project: Novi Traf. Sig. & Inters. Wide.
Date: Wed 11/14/07

Task | Split | Progress | Milestone | Summary

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SECTION VI

Fee and Rate Information

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FEE PROPOSAL

The completed fee proposal from Exhibit A in the RFP is attached.

Our rate schedule as requested in the RFP follows. We understand that the rate schedule may be used for additional work as may be necessary.

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EXHIBIT A
FEE PROPOSAL
CITY OF NOVI

ENGINEERING SERVICES FOR
NEW TRAFFIC SIGNAL AND INTERSECTION WIDENING
MEADOWBROOK ROAD AND ELEVEN MILE ROAD

We the undersigned propose to furnish to the City of Novi services consistent with the Request for Qualifications dated January 11, 2007 and Request for Proposals dated November 1, 2007, respectively. Design fees will be paid on an hourly basis for actual work performed to a maximum as proposed. A separate fee schedule is being provided should the City request additional work on an hourly basis.

Project	Phase	Total Fee
New Traffic Signal Eleven Mile Road at Meadowbrook Road	Design Phase	$ 15,700
	Soil Borings	$ 2,800
	DESIGN PHASE FEE*	$ 18,500
	Construction Cost Estimate: $ 265,000	
	Construction Phase: 6 % of Construction Cost	$ 15,900
	ESTIMATED CONSTRUCTION PHASE FEE*	$ 15,900

*Total Estimated Fee consists of a not-to-exceed design phase fee (which includes geotechnical costs if applicable) and a fixed percentage construction phase fee which is used to estimate an approximate fee amount based on the cost estimate above. The actual construction phase fee will be established when the project is awarded to a contractor by multiplying the fixed percentage provided and the bid price of the successful bidder.

ONLY THE DESIGN PHASE OF THE PROJECT IS FUNDED FOR FY2007-08.

Company Name: Stantec Consulting Michigan, Inc.

Address: 3959 Research Park Drive, Ann Arbor, MI 48108

Agent's Name: George A. Tsakoff

Agent's Title: Associate

Agent's Signature: George A. Tsakoff

Telephone Number: 734-761-1010 Fax Number: 734-761-1200

E-Mail Address: george.tsakoff@stantec.com Date: November 15, 2007

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2007 Fee Schedule

Title	Hourly Rate	Description
Technician	$41 - $47	• Entry-level position • Works under the supervision of a senior professional • Recent graduate from an appropriate post-secondary program or equivalent • Generally, less than four years experience
Engineering Assistant Construction Technician Environmental Technician	$53 - $65	• Junior-level position • Independently carries out assignments of limited scope using standard procedures, methods and techniques • Assists senior staff in carrying out more advanced procedures • Completed work is reviewed for feasibility and soundness of judgment • Graduate from an appropriate post-secondary program or equivalent • Generally, four years work experience
Senior CADD Technician Project Engineer Designer Senior Engineering Designer	$71 - $84	• Fully qualified professional position • Carries out assignments requiring general familiarity within a broad field of the respective profession • Makes decisions by using a combination of standard methods and techniques • Actively participates in planning to ensure the achievement of objectives • Works independently to interpret information and resolve difficulties • Graduate from an appropriate post-secondary program, with credentials or equivalent • Generally, six years experience
Senior Designer Senior Project Engineer Project Manager	$91 - $109	• First level supervisor of first complete level of specialization ◦ Provides applied professional knowledge and initiative in planning and coordinating work programs • Adapts established guidelines as necessary to address unusual issues • Decisions accepted as technically accurate, however may on occasion be reviewed for soundness of judgment • Graduate from an appropriate post-secondary program, with credentials or equivalent • Generally, nine years experience
Senior Project Manager Associate Registered Surveyor	$119 - $140	• Highly-specialized technical professional or supervisor of groups of professionals • Provides multidiscipline knowledge to deliver innovative solutions in related field of expertise • Participates in short and long range planning to ensure the achievement of objectives • Makes responsible decisions on all matters, including policy recommendations, work methods, and financial controls associated with large expenditures • Reviews and evaluates technical work • Graduate from an appropriate post-secondary program, with credentials or equivalent • Generally, ten years experience with extensive, broad experience
Principal	$149 - $174	• Senior level consultant or management function • Recognized as an authority in a specific field with qualifications of significant value • Provides multidiscipline knowledge to deliver innovative solutions in related field of expertise • Independently conceives programs and problems for investigation • Participates in discussions to ensure the achievement of program and/or project objectives • Makes responsible decisions on expenditures, including large sums or implementation of major programs and/or projects • Graduate from an appropriate post-secondary program, with credentials or equivalent • Generally, fifteen years experience with extensive professional and management experience
Survey Crew	$147	