



CITY of NOVI CITY COUNCIL

Agenda Item 4
February 17, 2009

SUBJECT: Approval to award a contract for design engineering services for the Northwest Quadrant Ring Road project to URS Corporation for a not-to-exceed fee of \$190,000.

SUBMITTING DEPARTMENT: Engineering *RH*

CITY MANAGER APPROVAL: *[Signature]*

EXPENDITURE REQUIRED	\$190,000
AMOUNT BUDGETED	\$300,000
APPROPRIATION REQUIRED	N/A
LINE ITEM NUMBER	204-204.00-805.260

BACKGROUND INFORMATION:

The project consists of the construction of a new all-weather road (an extension of Crescent Boulevard) located northwest of the Novi Road and Grand River Avenue intersection, along with a spur road to provide access to an industrial site located west of the proposed ring road. The project's preliminary engineering was completed in 2006 and resulted in a scoping study, preliminary plans, preliminary details, and a construction cost estimate. This phase of the project will require extensive engineering to complete the final design, which includes the final road alignment, bridge design, hydraulic modeling for the watercourse and floodplain impacts, wetland mitigation, stream realignment and traffic signal design.

All right-of-way for the project has been acquired. The project was funded for design only for FY 2008-09. The final design of the project is being completed now in anticipation of grant opportunities that may become available to fund the construction of the project. (A location map and a copy of the preliminary design are attached).

The attached Request for Proposals (RFP) was sent to the six engineering consulting firms that have been pre-qualified for roadway engineering work. Two proposals were received and each was evaluated using Qualifications Based Selection (QBS) procedures, with a greater weight assigned to the consultant's approach to the project. The results of staff review of the proposals are as follows:

Firm	Design Fee	Construction Engineering Fee %	Estimated Construction Cost	Estimated Construction Phase Engineering Fee	Total Engineering Fee	Staff Review Score	Rank
URS Corporation	\$190,000	6.0%	\$3,400,000	\$221,000	\$411,000	3758	1
Anderson Eckstein & Westrick	\$201,600	6.5%	\$3,400,000	\$204,000	\$405,600	2993	2

Of the two firms that submitted proposals, URS had the highest staff review score, lowest proposed fee, and met all requirements listed in the RFP (see attached URS proposal dated January 21, 2009 and Engineering staff's proposal scoring summary for reference). Both submitting firms were interviewed as part of the selection process. Engineering staff posed various questions to the

consultants to better understand their project approach, staff to be assigned, permitting strategy, and schedule. The interview score is included in the overall staff review score.

URS has completed engineering services on many recent roadway projects for the City including the 2007 and 2008 Neighborhood Road Programs, Beck Road Repaving project, and the Beck/Ten Mile Intersection project; as well as the I-96/Beck Road and I-96/Wixom Road interchanges for MDOT.

RECOMMENDED ACTION: Approval to award a contract for design engineering services for the Northwest Quadrant Ring Road project to URS Corporation for a not-to-exceed fee of \$190,000.

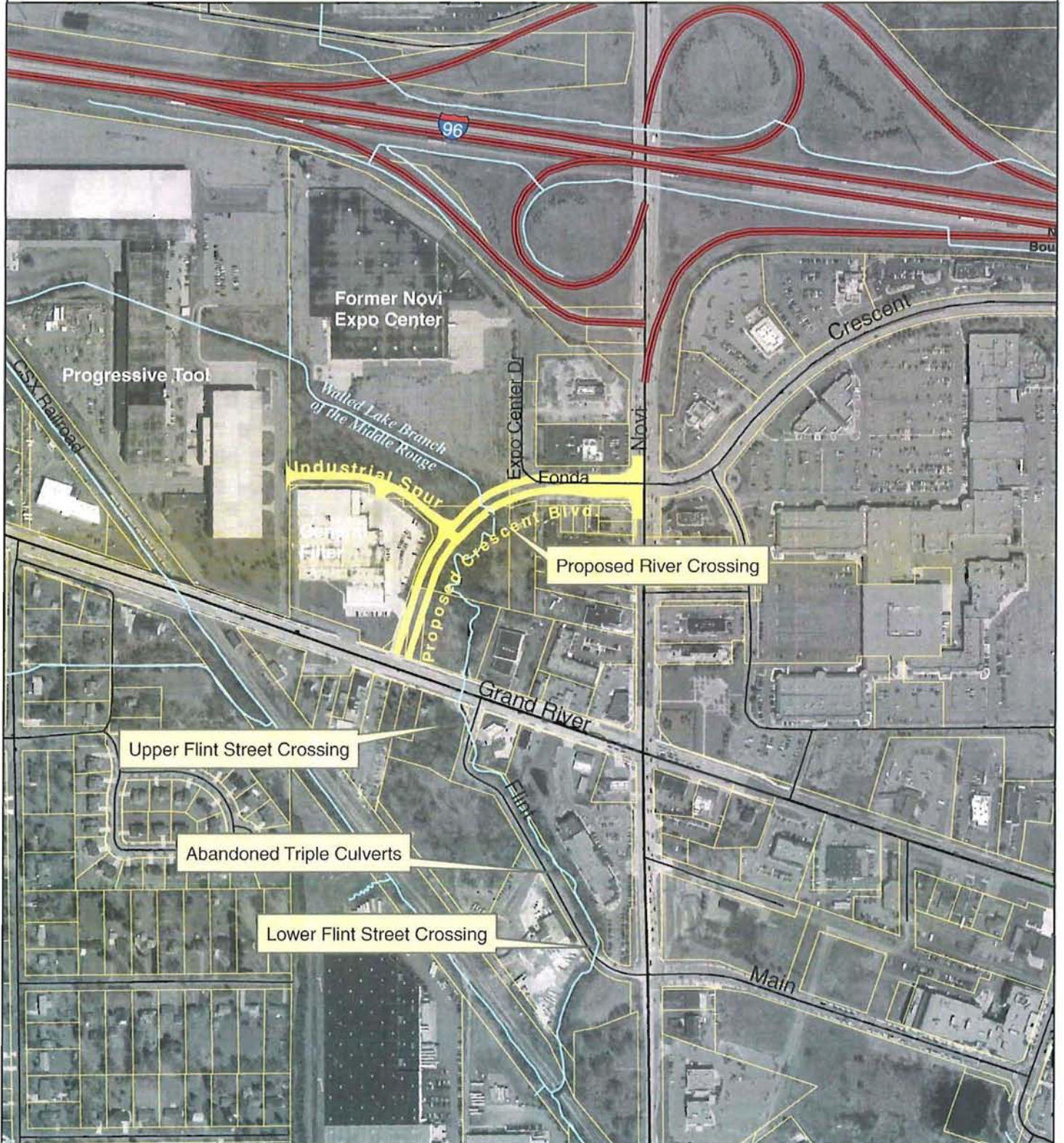
	1	2	Y	N
Mayor Landry				
Mayor Pro Tem Gatt				
Council Member Burke				
Council Member Crawford				

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

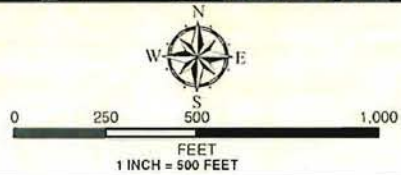
Project Location Map

Northwest Quadrant Ring Road & Industrial Spur

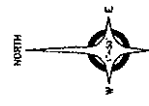
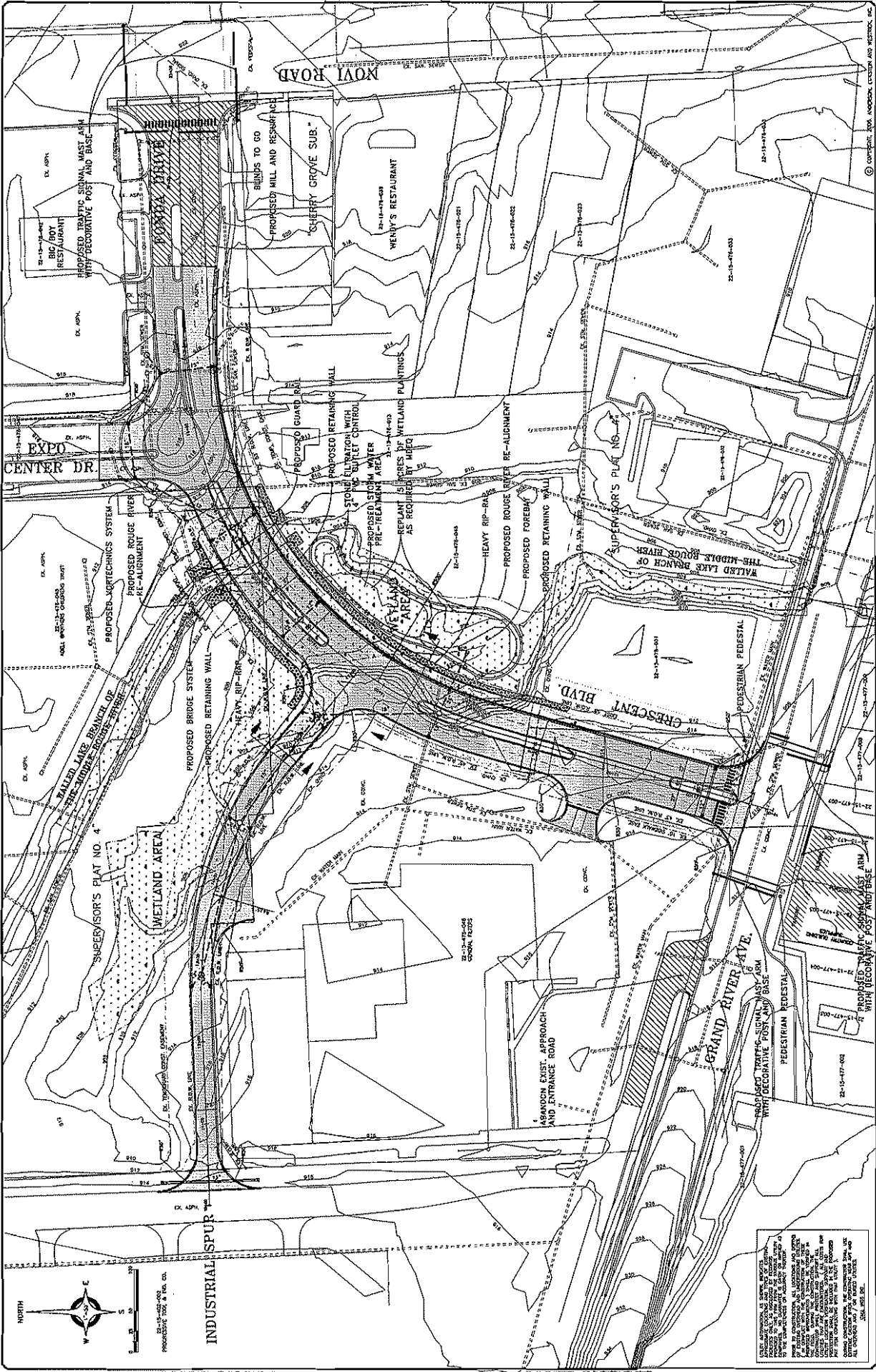
Map Publication Date: 6/25/07



CITY OF NOVI
 ENGINEERING DEPARTMENT
 NOVI CITY HALL
 45175 W. TEN MILE ROAD
 NOVI, MI 48375-3024
 (248) 347-0454
 WWW.CITYOFNOVI.ORG
 MAP AUTHOR: BRIAN T. COBURN, P.E.



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3. VISITORS AND BEFORE YOU DIG CALL MISS DIG 1-800-482-7171		CITY OF NOVI	SCOPING STUDY NORTHWEST QUADRANT RING ROAD GRAND RIVER AVENUE AND NOVI ROAD	PROJECT NO. 22-11-001	SHEET NO. 1
DATE:	DRAWN BY:			CHECKED BY:	DATE:
ANDERSON, EASTMAN AND WESTRICK, INC. 25000 Grand River Avenue, Suite 100, Novi, MI 48240 Phone: 248-462-4600 Fax: 248-462-4601		CONSULT: BOB ANDERSON, LICENSED PROFESSIONAL ENGINEER, MICHIGAN			

SCORING SUMMARY

Project Description: NW Ring Road - Grand River and Novi Road

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

	<i>Item weight:</i>	25	30	30	15	50		
PROPOSAL REVIEW SCORE	1	2	3	4	5	Totals	Rank	
Anderson Eckstein & Westrick	7.5	10	6	5	45	2992.5	2	
URS Corporation	7.5	5	9	10	60	3757.5	1	
TOTALS		15	15	15	15	105		

SCORING CRITERIA

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

REQUEST FOR PROPOSALS CITY OF NOVI

ENGINEERING SERVICES FOR NORTHWEST QUADRANT RING ROAD NOVI ROAD AND GRAND RIVER AVENUE

January 6, 2009

This Request for Proposals (RFP) for **Northwest Quadrant Ring Road—Novi Road and Grand River Avenue** is being sent to the firms selected in the Roadway Qualification Process completed on March 19, 2007.

Project Description

The project consists of the construction of a new all-weather road located northwest of the Novi Road and Grand River Avenue intersection, along with a spur road to provide access to an industrial site located west of the proposed ring road.

The preliminary engineering was completed in 2006 and resulted in a scoping study, preliminary plans, preliminary details and a construction cost estimate. The *Scoping Study for Northwest Quadrant Novi Road and Grand River Avenue Ring Road* is enclosed on CD for your reference. All right-of-way for the project has been acquired. The City desires to proceed with the completion of the final design and specifications to make the project ready for bidding in anticipation of grant funding opportunities that may become available. The city is also soliciting a fee proposal for construction phase services, although it is not likely to be awarded at this time.

A budget has not been established for this phase of the project. It is anticipated that the project would be awarded at the February 2 City Council meeting.

SCOPE OF SERVICES

The selected consultant shall conduct the following activities:

- 1.) Upon authorization by the City Council and the City Engineer, the Consultant shall:
 - Attend a kick-off meeting with city staff.
 - The consultant shall provide a complete topographic survey of the project area including all features that are relevant to the design of the project. The survey shall also include a tree survey to identify the species, diameter and condition of all trees in the project area. AutoCAD files for the preliminary design will be provided to the selected consultant.
 - Provide updated wetland flagging. The consultant shall include the wetland boundaries in the topographic survey.
 - Prepare a complete design and construction cost estimate for the following project components:
 - Four lane boulevard extending from the current terminus of Fonda Drive to Grand River Ave (see Exhibit B) using cross-section included in the scoping study.
 - Mill and resurface the existing Fonda Drive

- Reconstruction of the existing Fonda Drive and Novi Road traffic signal and construction of a new signal at Grand River and the ring road. Each installation shall include a decorative mast arm style signal with lighted street names, street lights on each corner, autoscope camera, pedestrian push buttons, decorative bases and all other RCOC standard for traffic signals.
 - Industrial spur road extending to the west from the ring road to Progressive Tool.
 - Precast bridge structure where the proposed roadway crosses the Walled Lake Branch of the Middle Rouge—complete with decorative options to be selected by the city.
 - A retaining wall along the north side of the spur road and portions of the ring road.
 - A review of off-site mitigation at the North Novi mitigation site (city-owned) shall be included and quantified.
 - Downstream improvements of the lower road crossing at Flint Street and the Walled Lake Branch of the Middle Rouge River (lower Flint Street crossing).
 - Elimination of the triple culvers on the Walled Lake Branch of the Middle Rouge River (behind City Center plaza).
 - A round about at the intersection of the ring road and Expo Center (aka Adell) Drive.
- Update the hydraulic modeling, including topographical survey of the stream, extending from just downstream of the lower Flint Street crossing of the Walled Lake Branch of the Middle Rouge to upstream of the proposed bridge. The model should include floodplain and floodway impacts based on removal of the triple culverts and should include final sizing recommendations for the Lower Flint Street culvert and the ring road crossing. The model should also incorporate the 200 feet of proposed stream relocation.
 - Contact and coordinate with all utility companies with facilities within the project boundary.
 - Prepare construction plans specifications and cost estimates for the project (as described above). In addition to the design as presented in the scoping study, the City expects to include the roundabout option (described in Section 6.7 of the scoping study) as part of the final design.
 - The completed plans must comply with City of Novi standards and regulations unless otherwise approved by the City Engineer. A revised construction cost estimate will be required prior to bidding.
 - Coordinate all work with state and local agencies to acquire any permits required. The consultant shall include all permit application fees as part of their design phase fees.
 - The project requires the design of traffic signals within the RCOC right-of-way and therefore the consultant or their sub-consultant must be qualified to complete work for RCOC signals.
- 2.) The Consultant shall complete a soil erosion and sedimentation control plan for the project in compliance with Part 91 of P.A. 451 of 1994, Chapter 29 of the Novi Code of Ordinances and the City of Novi SESC Program Manual. The consultant shall also

provide a completed SESC application, SESC Checklist and three (3) sets of plans at such time as the SESC plan has been approved by Engineering.

- 3.) The consultant shall provide a Progress Status Report to the Engineering Department every other Friday (beginning on 2/6/09) using the form provided by the Engineering Department.
- 4.) In addition to the submittals stated elsewhere in this scope, the Consultant shall provide the following submittals:
 - The Consultant shall submit **four (4) sets** of plans and one (1) copy of cost estimates for review to the City Engineer at 30% complete.
 - The Consultant shall submit **four (4) sets** of plans and **one (1) set** of specifications and a construction cost estimate at 90% complete for review and comment.
 - The Consultant shall distribute **four (4) sets** of as-bid drawings and specifications to the City at the time of construction bidding (clearly marked as "BID SET") along with all subsequent addenda at the same time they are sent to planholders. The submittals shall be made to the following departments directly as shown in the schedule below:

Department	Bid Sets (Paper) AND All Addenda	Addenda Only	Electronic Version of Bid Set
City Clerk's Office 45175 W Ten Mile, Novi, MI 48375	1 set		
Lisa DeMeo, Engineering 45175 W Ten Mile, Novi, MI 48375	2 sets		1 set
Sue Morianti, Purchasing 45175 W Ten Mile, Novi, MI 48375		1 set	
Benny McCusker, DPW 26300 Delwal, Novi, MI 48375	1 set		

- The consultant shall also submit the as-bid drawings and specifications in pdf format to the City Engineer at the time of bidding as well as a CD of the digital file converted to AutoCAD format.
 - The Consultant shall also provide all plan sets required for permit application submittal to any agencies as required.
 - At the end of the project, the consult shall submit to City Engineering all project reports and documents, and written recommendation regarding final acceptance of the project. The Consultant, shall also prepare record drawings and transmit one (1) digital copy of as-built plan in .tif format (400 dpi minimum), two (2) plan copies, and a CD containing the digital file of the record drawings in the City standard format (AutoCAD), and provide such information to the Engineering Division within three (3) months following substantial completion of the project.
- 5.) As a part of the Design Phase, the Consultant shall prepare bid documents and provide assistance to the City Engineering and Purchasing Departments with the bidding of the project, including coordinating and facilitating the pre-bid meeting, preparation of contract addenda, plan revisions, responding to bidder inquiries, review of bids, and recommendation of award to City Engineering. All bidding activities shall be coordinated through the Engineering Division and Purchasing Department. Following the bid opening,

the consultant shall provide to Sue Morianti, Purchasing Manager (via email smorianti@cityofnovi.org) the planholders list for the project and documentation that all addenda, if any, were sent to all planholders. The consultant shall copy the Project Manager in Engineering on this email. The consultant shall also provide bid tabulation and award recommendation letter to Engineering (with a copy sent to the Purchasing Manager).

- 6.) Contract administration services shall include, but not be limited to: reviewing shop drawings furnished by the contractor at the pre-construction meeting, coordinating and running the pre-construction meeting, ensuring compliance with contract documents, regular consultation with City Engineering, interpretation of plans and specifications, preparation and certification of pay estimates, staking, full-time construction inspection during active construction, and materials testing along with final testing and project review. The Consultant must also promptly attend to resident concerns and complaints as they become known.
- 7.) During the construction phase the Consultant shall be responsible for administering and enforcing the soil erosion and sedimentation control plan as an agent for the City under the Authorized Public Agency (APA) program in compliance with the City of Novi *Authorized Public Agency Soil Erosion and Sedimentation Control Program Manual*. The Consultant shall also be responsible for soil erosion and sedimentation control inspections of the project for compliance with the approved soil erosion and sedimentation control plan. The inspections must be completed by an individual who has current certification through the Michigan Department of Environmental Quality under Part 91. The inspections must occur at regular intervals and soil erosion and sedimentation control inspection logs must be maintained and provided to City staff as required. The Consultant shall also be responsible for instituting corrective measures in the field to prevent soil erosion and sedimentation as required, and for overseeing the Contractor's Storm Water Operator.

DOCUMENT AND FILE FORMAT

All documents shall be submitted to the City of Novi in an electronic format as specified by the Engineering Division.

CONSULTANT QUALIFICATIONS

The Consultant has been pre-qualified to provide engineering consulting services for roadway projects.

CONSULTANT SELECTION

As a pre-qualified consultant, the selection for this project will be based on the fee proposal, which is labeled as Exhibit A, in addition to the consultant's project understanding, approach, schedule, staffing plan, and past performance on City engineering projects.

<u>Criteria</u>	<u>Weight</u>
Engineering Fee	25%
Evaluation of Approach and Understanding of Project, Evaluation of Schedule, and Proposed Staff	30%
Analysis of subjective statements applicable to the project as required on the RFP (Value added items)	30%
Evaluation of past performance on City projects	15%

The selected consultant will enter into an agreement with the City of Novi to perform the services listed in this Request for Proposals. The City's standard Consulting Engineering Agreement is included as Exhibit C.

PROPOSAL SUBMITTALS

To be considered, sealed fee proposals (an one UNBOUND original and five bound copies) must arrive at the Purchasing Department, 45175 W. Ten Mile Road, Novi, Michigan 48375 on or before **10:00 AM** Local Prevailing Time, **January 22, 2009** addressed to City Clerk's office, and clearly labeled **Northwest Quadrant Ring Road—Novi Road and Grand River Avenue**. There will be no exceptions to this requirement and the City of Novi shall not be held responsible for late, lost, or misdirected proposals. Submitted proposals shall include:

- The completed fee proposal (Exhibit A).
- A proposed schedule for the project.
- A rate sheet or fee schedule depicting the Consultant's hourly rates that could be applied to additional work as may be necessary, for each category of staff that would work on the project.
- A detailed discussion of the proposed approach to the project, in detail (including any value-added concepts and related costs/savings that would improve the overall project (i.e., cost savings, time savings, innovation, etc.)).

USE OF CITY LOGO IN YOUR PROPOSAL IS PROHIBITED.

In the hiring of employees for the performance of work under this contract, neither the contractor, subcontractor, nor any person acting in their behalf shall by reason of race, creed, color, age, height, weight, sex, sexual preference or handicap discriminate against any person qualified to perform the work required in the execution of the contract.

All proposals must remain valid for one hundred twenty (120) days from due date and cannot be withdrawn during this period.

Questions regarding this Request for Proposals may be directed to:

Civil Engineer, Brian Coburn, P.E. (248) 735-5632

The City of Novi reserves the right to accept any or all alternative proposals and to award the project to other than the firm with the lowest fee proposal, waive any irregularities or informalities, or both, to reject any or all proposals, and in general, to make award in any manner deemed by the City, in its sole discretion, to be in the best interests of the City of Novi.

Exhibits

- A - Fee Proposal
- B- Background Information
- C - Engineering Consultant Agreement

**EXHIBIT A
FEE PROPOSAL
CITY OF NOVI**

**ENGINEERING SERVICES FOR
NORTHWEST QUADRANT RING ROAD—NOVI ROAD AND GRAND RIVER AVENUE**

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 January 6, 2009, 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
Northwest Quadrant Ring Road—Novi Road and Grand River Avenue	Design Phase (no soil borings)	\$
	Construction Cost Estimate: \$	
	Construction Phase: _____% of Construction Cost	\$
	TOTAL ESTIMATED FEE*	\$

*Total Estimated Fee consists of a not-to-exceed design phase fee 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.

PLEASE TYPE:

Company Name: _____

Address: _____

Agent's Name: _____

Agent's Title: _____

Agent's Signature: _____

Telephone Number: _____ Fax Number: _____

E-mail Address: _____ Date: _____



January 21, 2009

City of Novi
Office of the City Clerk
Attention: Sue Morianti
45175 W. Ten Mile Road
Novi, MI 48375-3024

**RE: Request for Proposals
Engineering Services for Northwest Quadrant Ring Road
Novi Road and Grand River Avenue**

Dear Ms. Morianti:

On behalf of the URS team, I am pleased to submit one original and five copies of our proposal for the above referenced project. This proposal includes detailed information on the scope of services, staffing, schedule, and costs for the project to be designed and constructed. We believe that our team will provide you with the highest quality of services in a timely and cost effective manner.

URS has extensive experience designing and inspecting large scale, complex municipal projects. We have also provided quality services on hundreds of projects of all types and sizes to Cities, Villages and Counties throughout the State of Michigan.

Recently, URS has had the opportunity to work with Novi staff and to become familiar with City of Novi expectations, procedures and requirements with our design, construction engineering, layout, and inspection services for the 2007 and 2008 Neighborhood Road Program Projects, and for the design and construction engineering services for the Beck Road Improvement Projects (including Beck/Ten Mile Intersection).

If you have any questions, please feel free to contact me at (248) 204-4950 or Project Manager Sean Kelsch at (616) 574-8497. We appreciate your consideration of our submittal and look forward to working with you again.

Sincerely,

URS Corporation Great Lakes

for Khaled Soubra, PhD, PE
Vice President / Operations Manager

URS Corporation
27777 Franklin Road, Suite 2000
Southfield, MI 48034
Tel: 248.204.5900
Fax: 248.204.5901

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UNDERSTANDING OF PROJECT

INTRODUCTION

The URS team includes experienced staff that has successfully completed many roadway design projects for various local agency clients, including the City of Novi. Our office in Southfield is close to Novi and allows quick access to the project sites and to City Staff at the Novi City Hall. Our team is available to focus on this important project and will complete the design and construction phases quickly and efficiently.

We have reviewed the Request for Proposals (RFP) for the NW Quadrant Ring Road Project, including the scoping study found in the RFP, and have visited the site. We understand what is required to perform the needed services for this project. URS provided study, design, and construction engineering services for the City of Novi for the 2007 and 2008 Neighborhood Road Program projects in addition to other projects. Our team is very familiar with the City of Novi expectations, requirements, and standards. As a result, we can complete the required tasks quickly and efficiently. The project schedule for the design phase will be challenging given the extensive permitting required. Completing these tasks efficiently will be one of the principal keys for the success of the project.

It is worth noting that URS recently successfully completed design and construction assistance for the I-96/Wixom Road Interchange Project. This project had many of the same challenges facing the Ring Road Project. These include significant impacts to existing drainage courses, wetland impacts, environmental permitting, coordination with RCOC, retaining wall construction and large culvert/consolidation construction.

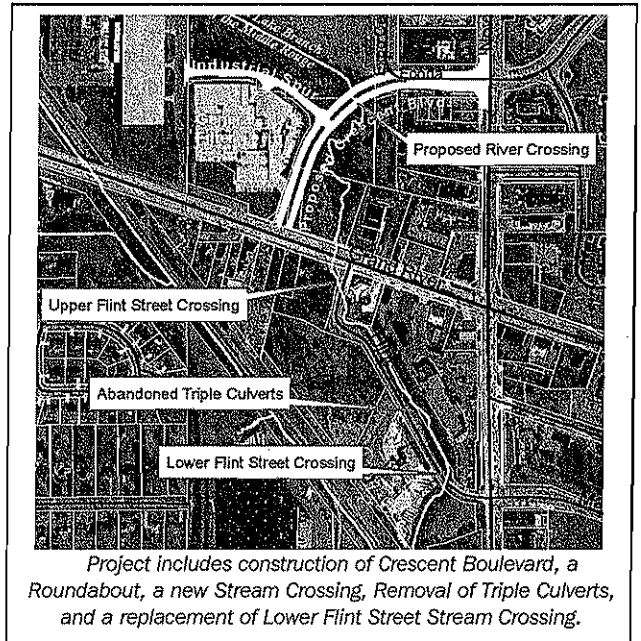
As shown in the organization chart, the URS team includes:

URS Corporation (URS)

- Project Management
- Quality Assurance and Quality Control
- Design
- Surveys
- Construction Inspection and Contract Administration

Schleede Hampton Associates

- Materials Testing



UNDERSTANDING OF PROJECT

PROJECT APPROACH

Completing work efficiently and at the lowest possible cost is important to the City, and thus is important to us. A deliberate and structured approach to this project will be provided to ensure that this goal is met.

At URS, a Quality Assurance / Quality Control Plan is developed for all projects, regardless of size. A Senior Engineer is assigned to this project with the responsibility to ensure that the established process is followed and that independent checks are made of all work products. We firmly believe that our process results in lower overall costs and a reduction in claims during construction.

Our overall approach to this project is as follows:

Kickoff Meeting

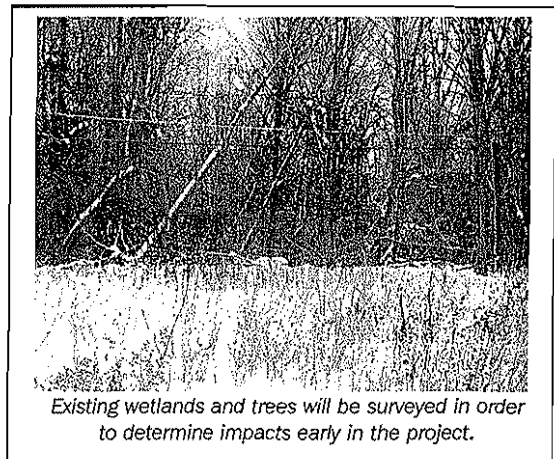
After selection and prior to beginning work, we would schedule a "Scope Verification" meeting with the City. Staff that will be working on the project will attend this meeting. The purpose of this meeting will be to:

- Obtain information from City records needed to complete the project
- Review and confirm the project requirements, work limits, and the scope of work outlined in the plan included in the RFP.
- Discuss in detail our management approach and any special project concerns.
- Establish a communication network to keep the essential decision-makers involved.
- Review the project schedule, design budget, construction budget, deliverables, and project milestones.

DESIGN PHASE SERVICES

30% Plans Submittal

URS will complete wetland delineation and the topographic surveys required for the project immediately after the Initial Meeting. A detailed work plan will be developed and reviewed with the City at the Initial Meeting. URS crews have completed numerous surveys in Novi and will follow the requirements outlined in the RFP (i.e. State Plane Coordinates).



UNDERSTANDING OF PROJECT

A preliminary design concept will be developed based upon our initial meeting and a field visit by the design team. This preliminary concept will be used to establish the layout of the roadway (including roundabout alternative) and traffic signals equipment and the placement of traffic signal support structures.

Existing utilities will be identified and located as part of the topographic surveys. URS will coordinate with the various utility companies to obtain and verify this information. Close coordination with the utility companies regarding conflicts with the proposed project and relocation of utilities will be maintained.

After the topographic surveys and other needed information is obtained, a preliminary design will be completed. In addition, base plans will be sent to utility companies for coordination.

Upon completion of 30% Design Plans, the plans and preliminary estimate will be prepared and submitted for review by the City.

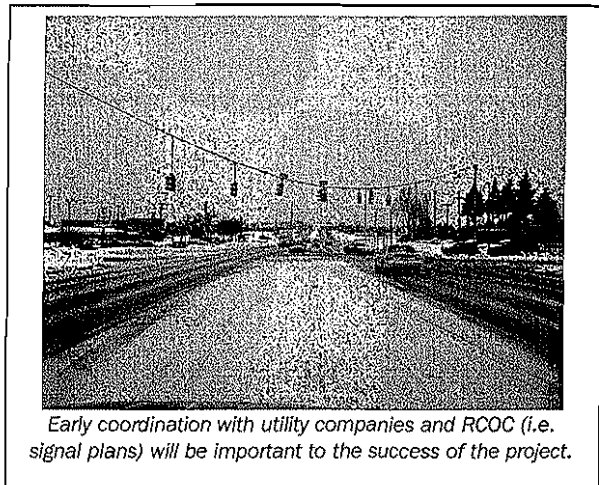
We anticipate that different options for constructing the roadway within the existing right of way may merit consideration. The preliminary design package submitted will include all of the information required for the City to make the basic decisions required for the project. In addition to plans, this may include alternative cost estimates and/or schedules.

90% Plans Submittal

Following the 30% Design Review, URS will prepare the 90% Design Review Submittal Package. The resolution of issues raised at the 30% Design stage will be incorporated into the plans and specifications. The project estimate will be updated and additional details added to the plans. A complete Specifications Booklet, including bidding proposal, bonds, insurance requirements, and technical specifications for the work will be provided. The General Conditions and Supplemental Conditions used by the City will be incorporated in the Specifications package.

A review meeting with the City will be attended to receive comments on the 90% Design Submittal package.

The 90% Review package will contain a final design of the project, with only minor details not yet included. If there are outstanding issues that require a decision by the City to resolve, these will be explicitly outlined in the meeting agenda. Alternate drawings/exhibits and cost estimates will be presented as needed to help resolve outstanding issues.



UNDERSTANDING OF PROJECT

In addition, the City of Novi **Soil Erosion and Sedimentation Control Checklist** will be completed and submitted at this time.

The 90% review package will also include the needed temporary grading easement for the work on Albert Drive.

The SESC application, checklist, and plan will also be submitted for review at this stage.

100% Plans Submittal

Following receipt of comments on the 90% Design submittal, URS will make any needed revisions to the package. The construction cost estimate will be updated and additional details added to the plans.

A final submittal of contract documents ready for advertising will be sent to the City. The bid package will include an Advertisement for Bids and a final construction cost estimate for the work.

CONSTRUCTION PHASE SERVICES

Advertising

During the advertising phase, URS will respond to questions from bidders regarding the contract document. If needed, URS will prepare addenda to address any needed clarifications or revisions to the contract documents.

We will attend and assist City staff in conducting the bid opening. All submitted bids will be evaluated and a formal recommendation letter will be prepared concerning contract award.

Inspection and Administration

Services provided during construction include Construction Inspection and Contract Administration. URS personnel will provide these services utilizing our experienced staff from our Southfield office.

Full-time inspection will be provided while construction operations are in progress to ensure that all work is done in full compliance with the contract documents. Inspection services will also include verification that soil erosion control measures are in full compliance with MDEQ and City of Novi requirements. URS inspectors are certified for Soil Erosion and Sedimentation Control (per Act 91).

Contract Administration includes the determination of completed quantities and submittal of pay estimates for completed work. Coordination with utility companies during construction will also be done.

UNDERSTANDING OF PROJECT

The URS Inspector will be the point of contact between the Contractor, the City, and local residents for issues that arise during construction. We anticipate that one full-time inspector will be required whenever construction operations are actively in progress. Keeping the City informed of project progress and issues and also coordinating the staking and materials testing operations will be the responsibility of the Inspector. Also, a senior inspector along with the project manager will communicate with the City Engineering staff relative to any site specific issues requiring immediate resolution.

Construction Staking

Staking during construction will be done by URS as required to construct the project. The control points set for the design surveys will be used for this work. The exact locations / offsets / and information needed on the stakes will be discussed with the Contractor prior to starting work.

Materials Testing

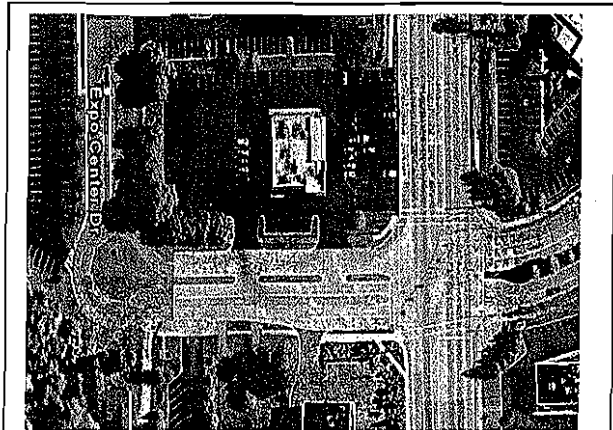
During construction, Schleede Hampton Associates and the URS Inspector will perform the materials testing needed to ensure compliance with the project specifications.

CRITICAL ISSUES

Roundabout/Intersection

Layout

Fonda Drive currently terminates at the entrance to the now-vacated Novi Expo Center. The Expo Center driveway at Fonda Drive currently operates as a pseudo roundabout / cul-de-sac. The city proposes to extend Fonda Drive to the west and south to Grand River Avenue, renaming it Crescent Center Boulevard. Access to the old Expo Center will be maintained along Crescent Center Boulevard. The scoping study completed in 2007 reviewed a modern



One significant challenge related to the boulevard design is how to direct traffic from the Big Boy Restaurant easterly towards Novi Road (since left turns from the Big Boy driveway are prohibited). This could potentially be achieved through a roundabout or signal gapping.

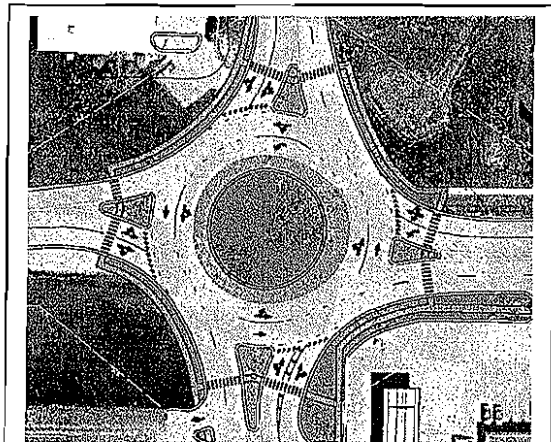
roundabout connection in lieu of a more conventional "T" intersection. Various roundabout alignments and geometries were briefly reviewed which impacted various parcels.

UNDERSTANDING OF PROJECT

URS will assist the City in determining whether to pursue the roundabout design or the more conventional "T" intersection. URS will review traffic operations at the Novi Road/Fonda Drive intersection to see whether traffic would back up into the roundabout. The analysis would include the increase in traffic that would be expected along Crescent Center Boulevard, given its attractive connection to Grand River Avenue. The analysis would also consider any events that may still occur at the Expo Center, or at a minimum, would consider the volumes that may be generated should the Expo Center property be redeveloped. Should the analysis show traffic backing up into the roundabout area, it may be advisable to consider a conventional "T" intersection at the Expo Center driveway, perhaps with underground facilities for future signalization should the Expo Center property ever be redeveloped. URS will work with the City and provide answers to technical questions so that the City can make informed decisions.

If the City concludes that a roundabout is the preferred intersection treatment at the Expo Center driveway, then URS will develop conceptual geometry for review and approval by the City. URS is fully conversant with RODEL software--the preferred software for analyzing roundabouts, including development of key geometric features such as roundabout diameter, flares, and splitter islands. The roundabout concepts in the scoping document do not appear to have used RODEL to develop the geometry and analyze roundabout capacity. As part of the conceptual effort, URS will prepare a design that minimizes right-of-way impacts while maintaining operational integrity of the roundabout. Once a preferred alignment is approved by the City, URS will proceed into formal plan development. One item that will need to be considered is the existing driveway on the south side of Fonda Drive just east of the Expo Center driveway, as this driveway will likely be extremely close to the roundabout--perhaps even intersecting it.

URS is experienced in preparing plans for modern roundabouts, including multi-lane roundabouts. The URS-designed 68th Avenue/Randall Street multilane roundabout in the City of Coopersville opened in 2007 and has since operated at an excellent Level of Service with few crashes. Should the Expo Center driveway be designed as a modern roundabout, URS recommends preparing a traffic simulation using VISSIM software which will show how traffic navigates the roundabout--a very useful tool for any public information efforts that may take place during design.



URS has worked on several multi-lane roundabouts throughout the state (including this one in the City of Coopersville).

UNDERSTANDING OF PROJECT

URS will prepare signing and pavement marking plans for the proposed Crescent Center Boulevard, including the unique signing associated with roundabouts, should a roundabout be designed at the Expo Center driveway. The design will include the latest pavement marking and signing trends (based on the latest research of driver behavior) that best meets the needs of the motoring public. "Oversigning" a roundabout is never a good idea, as that can actually reduce operational quality by confusing drivers.

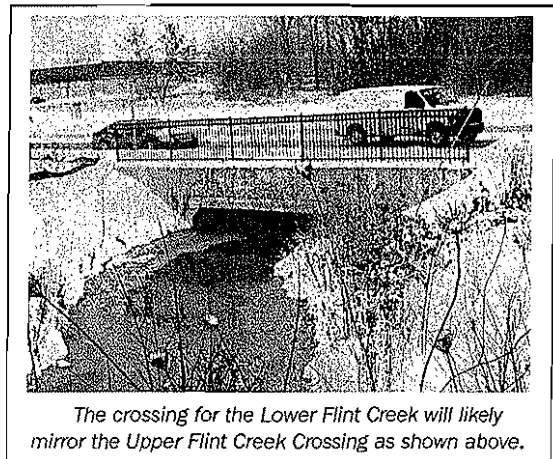
Bridge, Culvert and Retaining Wall Design

URS Corporation has designed numerous stream/river crossings using precast concrete box culverts and precast concrete three-sided culverts. For the Crescent Boulevard crossing, we will perform a detailed cost analysis of the proposed culvert type. Our results will be submitted to the City for consideration. The RFP states that the anticipated span for the culvert is 24 feet with a rise of 8 feet. A hydraulic analysis will be performed to verify the culvert size necessary to provide the proper waterway opening.

In addition, the lower Flint Street Crossing will be replaced with a box culvert.

The geotechnical recommendations in the RFP recommend a shallow foundation at the bridge. Due to potential scour concerns, we recommend deep foundations such as H-piling be considered.

The current design code for bridge design in the State of Michigan and the United States is the AASHTO LRFD Bridge Design Specifications. We assume that this is an acceptable design code to be used on this project, although it appears that the geotechnical recommendations included in the RFP are not provided in a manner consistent with the LRFD methodology.



URS will review the wall types listed in the RFP. A detailed cost comparison will be performed for each of the three wall types listed. It should be noted that although it is possible to build mechanically stabilized earth (MSE) walls in a flood plain, we anticipate that the Michigan Department of Transportation (MDOT) would suggest not doing so. We base this on past experience with MDOT projects involving MSE walls. If the bottom of the MSE wall is within the ground water table causing a "wet" construction, MSE walls are not recommended. This same cautionary advice also applies to modular block walls. Global stability of the retaining walls needs to be performed by a qualified geotechnical engineer. If pour soils exist, global stability will be a critical issue that must be addressed. It is our understanding that geotechnical work is included in the scope for this project.

UNDERSTANDING OF PROJECT

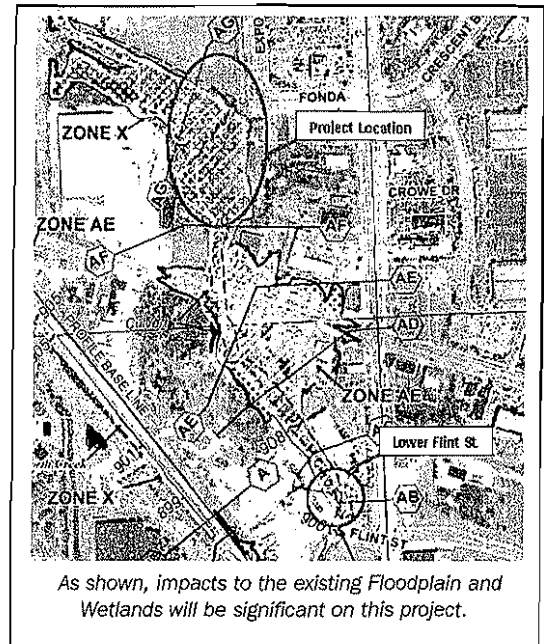
The current design code for retaining wall design in the State of Michigan and the United States is the AASHTO LRFD Bridge Design Specifications. We assume that this is an acceptable design code to be used on this project, although it appears that the geotechnical report included in the RFP was not authored in a manner consistent with the LRFD methodology. No foundation recommendations were given in the RFP related to the proposed retaining walls.

Drainage and Permitting

Three major components of the drainage design of the project include:

- A precast bridge crossing for the proposed Crescent Boulevard over the Walled Lake Branch of the Middle Rouge River.
- Eliminating the existing triple culverts in the Walled Lake Branch of the Middle Rouge River behind the City Center Plaza.
- Replacement of the existing culvert at the lower Flint Street crossing of the Walled Lake Branch of the Middle Rouge River.

Other project components related to the permitting of the above mentioned drainage features include associated road and retaining wall construction within the floodplain and wetland mitigation.



At this time, the full extent of permitting required to proceed with construction of this project is uncertain. However, it is important in terms of the project schedule to identify the permits needed for the project. The Final Draft Report by AEW indicated that a new or updated joint permit would be required from MDEQ/ACE for the following construction activities:

- For activities within streams (an MDEQ Part 301 permit).
- For activities within wetlands (an MDEQ Part 303 permit).
- For activities within the floodplain (an MDEQ Part 31 permit).

The Final Draft Report indicated that an MDEQ permit was issued in July of 1998 that only included Part 301 and 303 provisions. No copies of the permit or the permit application were included in the report, and there was no mention if any permit extensions have since been obtained. Typically, such MDEQ permits expire after one year.

UNDERSTANDING OF PROJECT

It seems unlikely, although possible, that MDEQ would have issued the 1998 construction permit for the project without examining the impacts to the regulatory floodplain. URS' work plan will include the careful examining of the permit history of the project to date, as well as a review of the hydraulic studies prepared for the City by JCK and AEW (we would expect to receive electronic copies of the input data files). A preliminary meeting with the MDEQ at that time to review project requirements would be helpful. URS will also prepare a hydraulic study modeling the final drainage design; this is particularly important if permits can more easily be facilitated by eliminating upstream tailwater increases and/or minimizing wetland impacts and floodplain encroachments through relatively minor design changes. After completing those tasks, URS will prepare an opinion of the regulatory requirements and arrange a pre-submittal review meeting with MDEQ.

URS is prepared to assist the City of Novi in applying for all required state permits, permit extensions, and/or permit revisions required for the project.

It should be noted that FEMA is not a permit agency, and a Letter of Map Revision (LOMAR) is not in and of itself a permit for construction activities within a floodplain. However, a LOMAR may be required as a precondition for issuance of state and local permits. Therefore, the City of Novi and the MDEQ will determine if one is required. If a LOMAR is required for the project, URS will assist the City in submitting the application along a timeline parallel to the MDEQ permit. FEMA will review the application so long as it has proof that all submissions to other jurisdictions have been made; however, they will not issue the LOMAR until all other jurisdictions have signed off on it. This would add time, probably a month and perhaps more, to the overall project schedule.

The need to prepare a LOMAR should be avoided if at all possible. Possible alternatives to a LOMAR could include regrading the stream banks to create cut areas to compensate for the fill areas and/or designing the stream bridges and culverts to eliminating upstream tail water increases. Early discussions with MDEQ with regard to this will be helpful.

Environmental Issues

As mentioned above, the drainage and permitting are significant environmental issues associated with this project. In addition, we also understand City requirements for soil erosion and sedimentation control. Minimizing impacts to trees is also very important to City staff and residents and will be made a priority by our team. Our review of the site indicates that there are many existing trees and brush that will need to be removed for the roadway. Others are close to the proposed pavement and will need to be protected during construction.

We have used Oakland County Drain Commission's standard details for Soil Erosion and Sedimentation Control on past City projects and plan to continue their use. These standards are comprehensive and incorporate the latest Best Management Practices for Soil Erosion and Sedimentation Control. The required City SESC Application form and SESC checklist form will be submitted along with the 90% submittal.

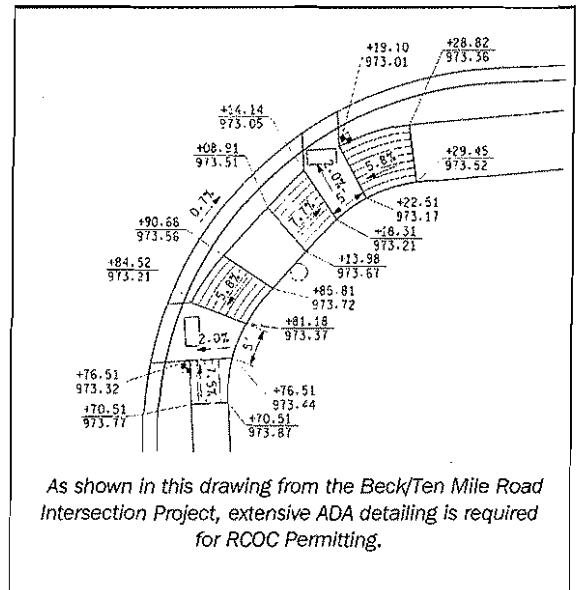
UNDERSTANDING OF PROJECT

We also will use contract language for tree protection and preservation that have been successfully used on past City projects to ensure that the Contractor places the same value on tree preservation issues as the City does.

Traffic Signal Design and RCOC Coordination

URS will prepare traffic signal design plans for the new signal proposed at the Grand River Avenue/Crescent Center Boulevard intersection. The proposed traffic signal will be designed with decorative mast arms, lighted street name signs, autoscope cameras, and ADA-compliant pedestrian facilities, including pedestrian push buttons and ramps. Crescent Center Boulevard is proposed to "T" into Grand River Avenue adjacent to General Filters, Inc. The proposed intersection may be slightly offset from the existing driveway to County Building Supplies on the opposite side of Grand River Avenue. A full-access driveway right next to a signalized intersection is not ideal, and URS will examine whether the driveway can somehow become the fourth leg of the proposed traffic signal.

In addition to the proposed new signal along Grand River Avenue, the existing diagonal span-wire mounted traffic signal at the Novi Road/Fonda Drive intersection will be upgraded to include decorative mast arms, lighted street name signs, autoscope detection, and ADA facilities. URS is fully conversant with the latest ADA requirements, having completed numerous designs for MDOT and various local government clients, including the City of Novi. URS is also aware of the various design requirements and coordination needs of the Road Commission for Oakland County (RCOC), having completed recent traffic signals designs in the Novi and Wixom area, including at the 10 Mile Road/Beck Road intersection in 2008 and at other intersections adjacent to the I-96/Wixom Road interchange.



Right of Way

The construction of Ring Road requires significant right-of-way acquisition. It is our understanding that all (or at least the majority) of the right-of-way required for this project has been secured by the City. Because right-of-way acquisition is a time consuming process, it will be critical to develop a design that stays within the right-of-way envelope. URS will establish alignments (both vertical and horizontal) and utilize the modeling software to cut cross sections early in the design process. These preliminary cross sections will serve as the basis for confirming that the project construction limits fall within the right-of-way. The URS team will review the cross sections in conjunction with the City. During this review, the City

UNDERSTANDING OF PROJECT

and URS can interactively (utilizing modeling software) modify cross sections in order to minimize needs in sensitive areas. The plan included in the Scoping Report will be used as a starting point in the design.

Stakeholder Involvement

Although technical issues are important, project coordination, communication and stakeholder involvement may be the most critical factor for the success of this project. As such, project coordination and communication will be a distinct component of our Project Management Plan for this assignment.

URS will assist the City in incorporating a stakeholder involvement process on the project. URS recently teamed with the MDOT Oakland TSC regarding stakeholder sensitive issues related to the I-96/Wixom Road interchange project. The I-96/Wixom Road interchange project included numerous meetings with stakeholders (i.e. City, County, businesses) and public informational meetings to develop a majority consensus regarding key issues (such as aesthetics, pedestrian mobility, and maintaining traffic). As part of the process for Ring Road, it will be important to meet early in the process with the City and stakeholders (i.e. General Filter, Progressive Tool, MDEQ, Oakland County, etc.) to establish goals for the project. After goals are established, URS can develop conceptual graphics and preliminary cost estimates to ensure the goals are met within an acceptable budget.

COST SAVINGS AND INNOVATIONS SUMMARY

We have identified and will investigate items during design that may result in cost savings to the City. These include:

1. Box Culvert versus ConSpan Culvert for Proposed Bridge

As an alternate to the three-sided culvert proposed at the Crescent Boulevard crossing, the use of a box culvert will also be reviewed to determine if it is feasible. Box culverts with a clear span of 24 feet and rises ranging from 7 to 12 feet are available. A potential disadvantage of a box culvert is that the Michigan Department of Environmental Quality sometimes prefers the natural stream bottom that a three-sided culvert provides. A box culvert, however, is likely to provide a greater waterway opening than an "arched" style three-sided culvert. The larger waterway opening of the box culvert is a definite advantage.

2. MDOT Design Standards

Although construction dollars are not identified at this time, the potential economic stimulus package could be a vehicle to construct this project. With this stimulus package, projects will likely have to be ready for construction quickly after the bill is signed (i.e. 'shovel ready'). With potential federal dollars from the stimulus package, it might make sense for Novi to prepare the plans per the 2003 MDOT Standard Specifications for Construction. This will likely be a requirement if federal dollars were secured.

UNDERSTANDING OF PROJECT

3. Vissim Simulation for Roundabout Alternative

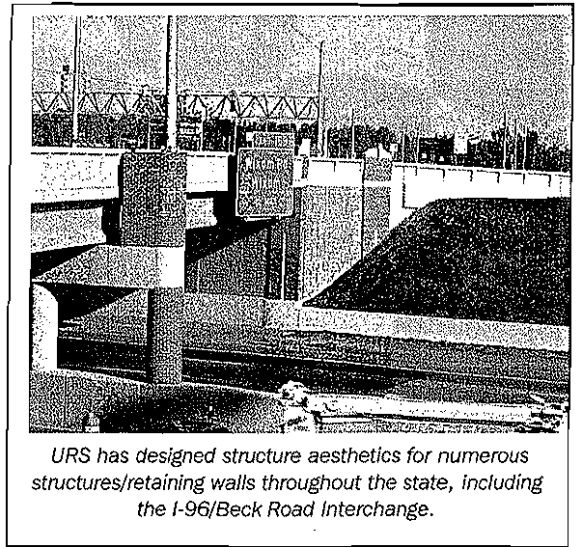
Should the Expo Center driveway be designed as a modern roundabout, URS recommends preparing a traffic simulation using VISSIM software which will show how traffic navigates the roundabout--a very useful tool for any public information efforts that may take place during design.

4. Retaining Wall Aesthetics

Per the scoping report, aesthetics are to be considered for proposed retaining walls. Several attractive alternatives are presented within the report. URS is very familiar with cost efficient aesthetic techniques for retaining walls and structure. Both the I-96/Beck and I-96/Wixom Interchanges included creative texturing and stamping techniques.

However, prior to implementing these aesthetics, URS suggests reviewing the visibility of the proposed retaining walls. Based on a quick review of the terrain, it appears that portions of these retaining walls may not be visible (due to trees

and wall location). If it is determined that these walls are not visible, it might make sense to eliminate the aesthetics in order to reduce construction costs.



5. Underdrain for Proposed Pavement Section

Per the Scoping Document, it is our understanding that underdrains have not been included with the proposed pavement design. Given the soils typically encountered in Novi, it might make sense to include underdrains. As the City has discovered on many of their neighborhood roads, poor subgrade drainage can quickly lead to serious pavement deterioration. In addition, at \$4 to \$6 per foot, underdrain can be included without significant impacts to the project budget.

STAFFING

URS has approximately 350 professionals in Southfield and Grand Rapids. If needed, URS has more than 55,000 employees worldwide that can provide virtually any specialized engineering or planning service that the City may require.

An organization chart follows for the Northwest Quadrant Ring Road Project. Resumes for all key staff members listed were included in the Statement of Qualifications for 2007-2008 Roadway Projects, submitted in February, 2007.

Our Project Manager, **Sean Kelsch, PE** has extensive expertise with similar multi-disciplined projects. Mr. Kelsch served as Project Manager for the recently completed I-96/Wixom Road Interchange. This interchange project had several similar challenges to the Ring Road Project. These challenges included significant impacts to existing drainage courses, wetland impacts, environmental permitting, coordination with RCOC, retaining wall construction, and box culvert/consolidation construction. In addition, Mr. Kelsch has managed several projects for the City including Beck Road Improvements and the 2007 and 2008 Neighborhood Roads Program.

Tara Weise, PE, Paula Johnson, PE, and Jim Hess, CET will be working on the design phase and the preparation of cost estimates. These staff members completed the design of previous projects for the City. In addition, Tara Weise has been involved in the planning and design of numerous roundabouts throughout the State.

Phillip Vogelsang, PE, will be working on the drainage design and environmental permitting for the project. Phil has over 25 years of experience working with environmental agencies related to floodplain and wetland impacts. Phil was intimately involved with the permitting for the I-96/Wixom Road Interchange Project.

Matt Klawon, PE, (signals) and **Mike DeVries, PE (signing, striping and traffic analysis)** will lead the traffic engineering efforts. Mr. Klawon is very familiar with RCOC standards and has been involved with RCOC permitting for numerous signals (including Beck/Ten Mile Intersection). Mr. DeVries will lead the remaining traffic engineering tasks which will include any modeling/studying required for the proposed roundabout.

Sherry Slocum will head-up the wetland delineation process. Sherry has worked with MDEQ resources on projects throughout the state. Sherry is well respected by the MDEQ, and this relationship will allow us to determine precise wetland limits early in the project. Sherry was intimately involved with the wetland delineation for the I-96/Wixom Road Interchange Project.

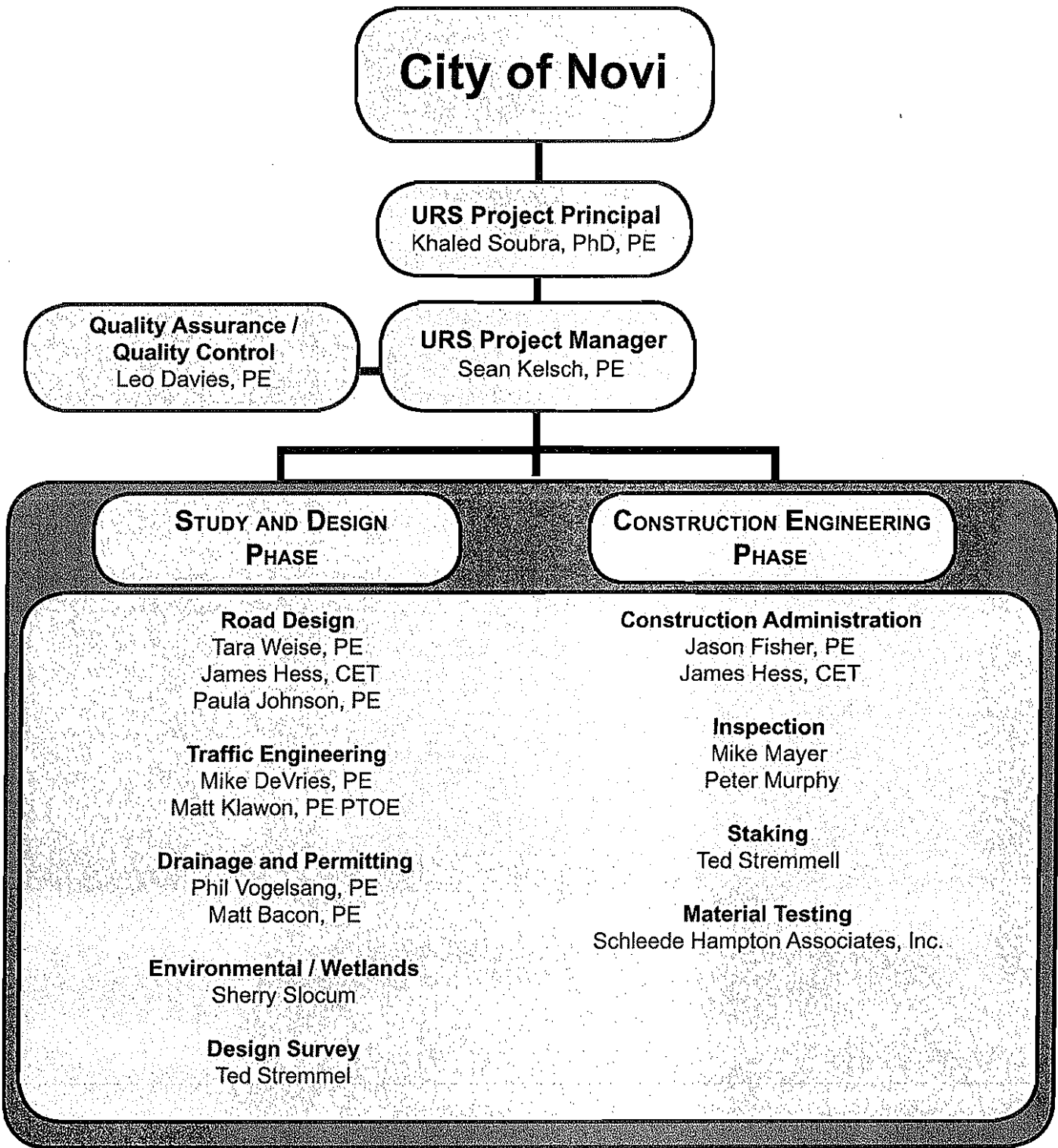
STAFFING

All deliverables will be reviewed by the QA / QC senior engineer, **Leo Davies, PE**. Mr. Davies is very familiar with the City of Novi requirements and procedures and has extensive expertise on road design and construction projects.

Jason Fisher, PE will manage the construction phase. Our Senior Inspector in charge of supervision of day-to-day inspection activities will be **Mike Mayer**. Mr. Mayer has extensive experience in road construction and recently completed the 2007 and 2008 Neighborhood Roads Program Project for the City of Novi. Mr. Mayer will utilize certified inspectors to monitor the progress of construction on a daily basis.

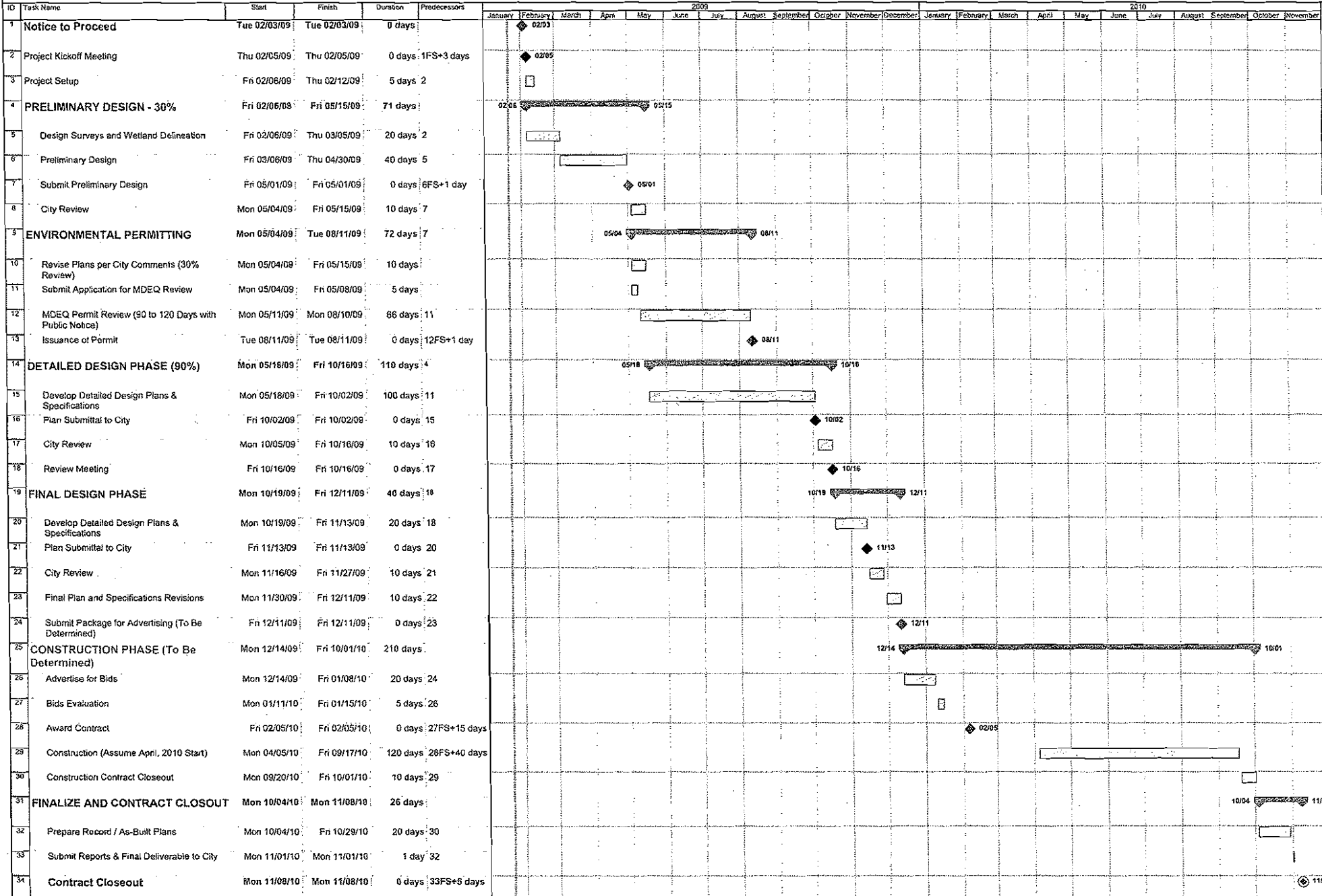
In addition, Mike Mayer will serve as the certified soil erosion senior inspector. Mike will conduct soil erosion control measure checks periodically and after rain events to make sure the contractor is maintaining the soil erosion control at all times during construction.

**Organizational Chart
Northwest Quadrant Ring Road
Novi Road and Grand River Avenue**



All proposed staff are employees of URS Corporation.

Implementation Design and Construction Schedule Northwest Ring Road Project City of Novi





**EXHIBIT A
FEE PROPOSAL
CITY OF NOVI**

**ENGINEERING SERVICES FOR
NORTHWEST QUADRANT RING ROAD -
NOVI ROAD AND GRAND RIVER AVENUE**

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 January 6, 2009, 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
Northwest Quadrant Ring Road—Novi Road and Grand River Avenue	Design Phase (no soil borings)	\$ 190,000
	Construction Cost Estimate: \$ 3,800,000	
	Construction Phase: <u>6.5</u> % of Construction Cost \$3,800,000	\$ 247,000
	TOTAL ESTIMATED FEE*	\$ 437,000

*Total Estimated Fee consists of a not-to-exceed design phase fee 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.

PLEASE TYPE:

Company Name: URS Corporation Great Lakes
 Address: 27777 Franklin Road, Suite 2000, Southfield, MI 48034
 Agent's Name: Theresa S. Petko, AICP
 Agent's Title: Vice President / Transportation Manager
 Agent's Signature: *Theresa S. Petko*
 Telephone Number: 616-574-8500 Fax Number: 616-222-4969
 E-mail Address: theresa_petko@urscorp.com Date: January 21, 2009

RATE TABLE

URS Corporation Great Lakes

For January 1, 2009 through December 31, 2009

<u>Classification</u>	<u>Hourly Rate</u>
Project Manager	\$150
Senior Engineer	\$105
Engineer	\$80
Junior Engineer	\$60
Professional Surveyor	\$100
Surveyor	\$70
Senior Technician	\$80
Technician	\$50
Administration / Clerical	\$45