



# CITY of NOVI CITY COUNCIL

**Agenda Item L**  
**May 3, 2010**

**SUBJECT:** Approval to award an amendment to the engineering services contract for construction engineering services related to the 2009 Federally Funded Major Road Projects to Orchard, Hiltz & McCliment, Inc. (OHM), for a not-to-exceed fee of \$37,466.

**SUBMITTING DEPARTMENT:** Department of Public Services, Engineering Division *BTC*

**CITY MANAGER APPROVAL:** *[Signature]*

<b>EXPENDITURE REQUIRED</b>	\$1,990 (Meadowbrook Road) \$2,936 (Nine Mile—Haggerty to Meadowbrook) <u>\$32,540 (Nine Mile—Novi to Taft)</u> \$37,466 Total
<b>AMOUNT BUDGETED</b>	\$ 54,937 (Meadowbrook Road) \$ 61,183 (Nine Mile—Haggerty to Meadowbrook) <u>\$ 83,847 (Nine Mile—Novi to Taft)</u> \$199,967 Total
<b>APPROPRIATION REQUIRED</b>	N/A
<b>LINE ITEM NUMBER</b>	202-202.00-805.651 (Meadowbrook Road) 202-202.00-805.652 (Nine Mile—Haggerty to Meadowbrook) 202-202.00-805.653 (Nine Mile—Novi to Taft)

**BACKGROUND INFORMATION:**

Construction engineering was awarded to OHM at the September 14, 2009 City Council meeting for the three 2009 Federally Funded Major Roads projects: 1) Meadowbrook Road (Eight Mile Road to Nine Mile Road), 2) Nine Mile Road (Haggerty Road to Meadowbrook Road), and 3) Nine Mile Road (Novi Road to Taft Road). The first two segments were substantially completed last year, and construction of the final segment along with minor signal work is scheduled to begin this spring. Each project consists of the repaving of one mile of road, with other improvements such as curb replacement, base repair, as well as some intersection improvements. A map of the three road segments is attached.

As discussed in a previous memo from Brian Coburn dated July 21, 2009 (attached), there were several additional scope items added to the project during the design phase. Additional engineering fees associated with last year's work include sidewalk ramp upgrades necessary to comply with federal requirements (\$3,980), and Nine Mile striping at the Solomon Boulevard to extend the center turn lane (\$946) which will be completed this summer. (It should be noted that soil borings for all three projects are included in the budgeted amount and were completed by a separate vendor at a total cost of \$7400.)

The field data collected for the section of Nine Mile to be completed this year (Novi to Taft) indicated that the road is so deteriorated that the all of the curb within this segment requires replacement and a revised pavement cross-section. The original scope of work for this project included a simple mill and overlay with limited full depth repairs. However, the design was revised prior to construction bidding to increase the pavement thickness which will extend the life of the road and will make future maintenance cheaper. The construction engineering fees associated with this change (\$28,840) were not awarded with the original contract but are recommended for

award at this time. The additional tasks are described in more detail in the attached work authorization request from OHM dated April 26, 2010.

Recent discussions between Engineering and Field Operations staff identified the need to investigate the condition of the two 48-inch culverts crossing under Nine Mile at Center Street. Field Operations staff was concerned that given the age of the culverts (30+ years) they should be evaluated to determine if any repair should be coordinated with the pending road project. The culverts were televised and evaluated (\$3,700) and it was determined that the culverts are in good condition and do not require repair.

This project is partially funded by the \$1,008,000 received in federal grant funding through the American Recovery and Reinvestment Act (ARRA) of 2009. The construction of the final segment will begin in May 2010 and it is anticipated that the project will be completed in summer 2010.

**RECOMMENDED ACTION:** Approval to award an amendment to the engineering services contract for construction engineering services related to the 2009 Federally Funded Major Road Projects to Orchard, Hiltz & McCliment, Inc. (OHM), for a not-to-exceed fee of \$37,466.

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

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



0 250 500 1,000  
 FEET  
 0 75 150 300 METERS

# LOCATION MAP

## 2009 FEDERALLY FUNDED MAJOR ROAD PROJECTS

Map Publication Date: 2/25/09

CITY OF NOVI

ENGINEERING DIVISION  
 4010 W. FARM ROAD #100  
 NOVI, MI 48240-3004  
 (248) 770-5944

MAP AUTHOR: W. A. C. GARDNER  
 MAP PUBLICATION: 2/25/09/09





## MEMORANDUM

**TO:** ROB HAYES, P.E.; DPS DIRECTOR/CITY ENGINEER  
**FROM:** BRIAN COBURN, P.E.; SENIOR CIVIL ENGINEER  
**SUBJECT:** FEDERALLY FUNDED MAJOR ROAD PROJECTS  
**DATE:** JULY 21, 2009

The federally funded major road projects for which Novi received federal stimulus funding under the American Recovery and Reinvestment Act (ARRA) have been tentatively scheduled for the September 4, 2009 bid letting. As a federally funded project, Michigan Department of Transportation (MDOT) Local Agency Programs is required to administer the project for Novi. The project includes the repair, mill and overlay of Meadowbrook Road (Eight Mile Road to Nine Mile Road), Nine Mile Road (Haggerty Road to Meadowbrook Road), and Nine Mile Road (Novi Road to Taft Road). The City of Novi received a capped grant in the amount of \$1,008,000 under ARRA for these projects.

During the design phase, there were several additional scope items that were either required to comply with grant requirements, permit requirement or otherwise necessary to construct a quality final product. As a result of these scope changes, the revised cost estimate has increased to approximately \$1,720,000, an increase of \$386,000 from the initial budget estimate. The increased costs are attributable to the following items which were unforeseen at the time of grant application and prior to detailed design of the project:

- Sidewalk ramp upgrades to meet the requirements of the Americans with Disabilities Act (ADA). The federal guidelines require ramp upgrades when the pavement adjacent to the sidewalk ramp is disturbed as part of a repaving project. MDOT is requiring ramp upgrades at locations that are outside of the project limits but near the work. For example, the repaving of Nine Mile is stopping 300 feet west of the Novi Road intersection where the concrete pavement that is in better condition begins, however MDOT is requiring the upgrade of the ramps on the west side of the intersection as part of the project.
- The upgrade of sidewalk ramps to meet ADA requirements also requires modification to the existing traffic signals to upgrade the pedestrian signals and to replace and relocate the pedestrian pushbuttons.
- The original grant application for Nine Mile Road from Novi Road to Taft Road included the replacement of 30-40% of the curb and gutter; however the curb and gutter is so deteriorated that almost all of the curb along this segment will be replaced as part of this project.
- The condition of Nine Mile Road from Novi Road to Taft Road is so deteriorated that major undercutting is required to repair the base material to ensure a longer life from the rehabilitation.

We are working to secure the permit applications from Road Commission for Oakland County and Wayne County Department of Public Services for the work within their respective rights-of-way. Once these permits are approved, we will be scheduled for bidding by MDOT.

## Authorization for Additional Services

Project: Engineering Services for  
Federally Funded Major Roads Program  
Contract Administration and Inspection Services

Date: April 26, 2010

### Description of Additional Services:

The Federally Funded Major Roads Program consisted of three one-mile segments of major roadways. The scope of work was expanded to include the upgrade of existing sidewalk ramps, sidewalks, and pedestrian signals to meet MDOT and RCOC requirements that was not anticipated in the original request. In addition, the Nine Mile Road segment from Novi Road to Taft Road, has drastically increased in scope due to the existing conditions of the roadway as determined by the soil boring information. The original scope of work for this segment of Nine Mile Road included a mill and overlay, spot full depth repairs, and spot curb repairs. The current scope of work includes full curb removal and replacement, raising of the curb elevation, and additional driveway replacements. The amount of construction work due these changes has approximately doubled in size. The following is detailed breakdown of the additional work as well as a comparison to the original scope of work if applicable.

### Meadowbrook Road (Eight Mile to Nine Mile Road) Additional Work

- Staking of sidewalk, sidewalk ramps, and appurtenances, for grading and limits of removals. Construction engineering services for adjustments in grades due to "as-built" gutter elevations and utility conflicts. \$1,382.00
- Inspection of placement of sidewalk and related work. 1 inspector day \$608.00

### Original Scope of Work

- No sidewalk work was included in the original scope of work

### Nine Mile Road (Meadowbrook to Haggerty) Additional Work

- Staking of sidewalk, sidewalk ramps, and appurtenances, for grading and limits of removals. Construction engineering services for adjustments in grades due to "as-built" gutter elevations and utility conflicts. \$1,382.00
- Inspection of placement of sidewalk and related work. 1 inspector day \$608.00

- The City through its traffic consultant, Birchler Arroyo, came up with a center lane concept to utilize instead of the original design, if feasible. Our effort related to this work included placement of the striping concept on engineering drawings and checking the concept against FHWA/MDOT standards for radii, lane widths, deflection angles, and taper lengths. Review of proposal with MDOT and discussion of process for a design exception. \$945.50

#### Original Scope of Work

- No sidewalk work was included in the original scope of work
- Roadway striping design was included in the original scope of work and was designed in accordance with MDOT and FHWA standards. Evaluation of the new concept subsequent to the design was not included.

#### Nine Mile Road (Novi Road to Taft Road) Additional Work

- Survey grade staking with offset stakes for the proposed new curb elevations for the entire length of the roadway (both sides), sidewalks, and sidewalk ramps. \$9,280.00
- Additional construction engineering and contract administration due to the increase of construction work: additional curb, driveways, and sidewalk. \$4,360.00
- Additional inspection and testing required due to the increase in the amount of construction work. 25 inspector days \$15,200
- Investigation and analysis of the Thornton Creek crossing, work included solicitation and evaluation of TV inspection proposals, administration of the TV inspection contractor, and review of the video regarding potential work of the creek crossing. Analysis also included investigation of requirements that would be applied by the MDEQ regarding the culvert crossing, how those requirements would be met, and what impact they would have on the current construction project. \$3,700.00

#### Original Scope of Work

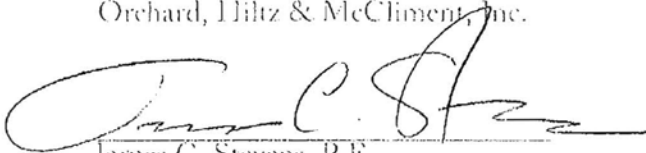
- Staking was included in the original scope only for limits of removals. Survey grade stakes were not included as grades were not proposed to be changed in the original scope of work, and curb repair was originally intended to be spot repairs.
- Construction engineering and contract administration time was included in the original scope of work for the construction project which is about ½ of the current project.
- Inspection time was included in the original scope of work for the construction project which is about ½ of the current project.
- No work regarding Thornton Creek was included as part of the original scope of work.

Proposed budget amount for additional services:

Meadowbrook Road	\$1,990.00
Nine Mile Road (M-H)	\$2,935.50
Nine Mile Road (N-T)	\$32,540.00
Total	\$37,465.50

Based upon the increase in the scope of work we respectfully request a budget amendment in the amount of \$37,465.50.

Sincerely,  
Orchard, Hiltz & McCliment, Inc.



James C. Stevens, P.E.

Approved By:  
City of Novi

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\_\_\_\_\_ Date