



**City of Rochester Hills
AGENDA SUMMARY
FINANCIAL ITEMS**

**1000 Rochester Hills Dr.
Rochester Hills, MI 48309
248.656.4630
www.rochesterhills.org**

Legislative File No: 2006- 0299

TO: Mayor and City Council Members

FROM: Roger H. Rousse, Department of Public Services; ext. 2497

DATE: October 18, 2006

SUBJECT: Tienken Road Bridge Replacement & Traffic Signal Installation at Kings Cove
City File #E02-024

REQUEST:

City Council is requested to amend the Tienken Road bridge replacement cost participation agreement with the Road Commission for Oakland County in an amount of \$500,000.00. The City's local share of the \$500,000.00 will be 50 percent and result in an increased contribution of \$250,000.00 by Rochester Hills. Tri-Party funds originally allocated in 2006 for the Avon Road (Princeton to Grovecrest) project will be used to fund the City's local share.

REASON FOR PURCHASE:

City Council is being asked to act upon this item because unforeseen project costs that have occurred during the water main relocation work. The costs exceed the amount that can be covered with the construction contingency. The additional cost increases are summarized in two parts: 1) Reimbursement to the bridge contractor for past work delays associated with the water main relocation 2) Payment to the bridge contractor for expediting the bridge construction.

The project design plans specified that the City of Rochester and Rochester Hills water main relocation crossings of the Paint Creek be completed by the jack and bore pipe installation method. This method consisted of digging two rectangular pits on either side of the Paint Creek. After the pits were dug down to the desired elevation, a machine with a horizontal slide rail was used in one pit to horizontally push a steel casing pipe through the earth while simultaneously removing the spoil inside the casing pipe by a rotating auger. The same pits would be used to install the 24-inch steel casing pipe for the City of Rochester and the 30-inch steel casing pipe for Rochester Hills. Twenty-foot steel casing pipe lengths were being used at the Paint Creek crossing and subsequent pieces were planned to be welded together as the process progressed to provide a continuous watertight steel casing pipe. After completion of the steel casing pipe installations, it was planned to place a 12-inch ductile iron pipe inside the 24-inch casing to relocate Rochester's main and 20-inch ductile iron pipe within the 30-inch steel casing to relocate the Rochester Hills' main.

The bore below the Paint Creek was also below the ground water level so a dewatering system composed of pumps and piping equipment was installed to temporarily lower the ground water. The lowered ground water helped keep the boring and receiving pits free from infiltrating ground water.

During the installation of the second piece of steel casing pipe, the streambed of the Paint Creek collapsed downward and permitted water to enter the steel casing pipe and also travel into the pit with the boring equipment. The workers in the boring pit turned off equipment to keep people from getting electrocuted and

also tried to recover the equipment before it became flooded. Fortunately, nobody was hurt during the incident and the equipment was eventually recovered from the flooded pit.

In an attempt to complete the water main relocations sooner after the failed jack and bore operation, an emergency open cut installation was requested and pursued with the Michigan Department of Environmental Quality (MDEQ). The MDEQ ultimately denied this request because it was determined to be potentially more risky and damaging from sediment disruption to the Paint Creek. Thus, it was then determined that the relocated water mains for Rochester and Rochester Hills would not be completed with a ductile iron pipe but instead with a plastic water main pipe that would be installed with another method called directional drilling.

As the directional drill method was discussed, the contractor raised the concern that trying to install the water main on the south side of Tienken would require the pipe to go deeper than originally planned. This deeper requirement would also cause the water main to extend beyond the limits of the water main easement and require additional tree removals at the Oakbrook West condominium complex. It was suggested to move the directional drilling of the two water mains to the north side of Tienken Road to permit a shallower water main installation that could also be kept within the existing Tienken Road right-of-way. However, it would also require that the two water mains would need to cross Tienken Road east and west of the Paint Creek in order to connect back to the existing water mains and would result in additional material and installation cost.

The Contractor is making a claim for cost recovery of the work associated with the failed jack and bore installation attempt, downtime delays, and additional pipe and installation costs for the Rochester and Rochester Hills water mains. The additional claim total is estimated to be approximately \$300,000.00 based on preliminary information submitted to the Road Commission for Oakland County by the contractor. Although final figures are not yet available, it appears that the claim is supported and will require reimbursement payment.

The second cost increase has not been incurred but is being requested that City Council decide tonight whether or not to support its expenditure. The delay associated with relocating the water mains has pushed out the completion date for the project. Whereas the Tienken bridge construction was initially planned for construction in late summer and early fall, it now has been pushed back into a late fall, early winter completion date at best. The original contract did not obligate the contractor to work overtime including Saturdays. If City Council would like the contractor to start working overtime and expedite the bridge construction schedule it is estimated to cost another \$200,000.00. The expedited schedule cost proposes 11-hour workdays Monday thru Friday and 8-hours each Saturday. The estimate also includes for providing cold weather protection since the bridge construction would be done during much colder temperatures that affect things such as concrete curing time, equipment warm-up, bridge painting, employee productivity, etc. The attached letter dated September 28, 2006 from James O'Donnell with Posen Construction further explains this request.

The downside of Council not agreeing to pay for the expedited work schedule and cold weather protection will likely result in the contractor stopping work on November 14th and possibly not returning to the project until July 1st. The Michigan Department of Transportation (MDOT) stipulates seasonal work suspensions between November 14th and April 16th. The Tienken Bridge project was setup per the MDOT requirements since the project was given over \$700,000.00 in federal funding. It should also be noted that the MDEQ permit does not allow work within the Paint Creek between the dates April 1 and June 30 to protect fish spawning periods. Assuming that the bridge construction would take three months of normal working hours after commencing in July, traffic might not be reopened to Tienken Road until the end of September 2007.

PROCESS:

Vendor Name and Address:

Road Commission for Oakland County
31001 Lahser Road
Beverly Hills, MI 48025

BUDGET:

The costs for delays to the contractor have resulted from the work to relocate the existing water mains. The complete downtime cost and water main replacement approximated at \$500,000.00 of which \$250,000 is the City’s 50% share.

Total Unforeseen Project Costs	\$500,000
Board/County	(\$166,666)
Rochester Hills	(\$83,334)
Board	<u>(\$250,000)</u>
	\$0

Tri-Party funds originally allocated in 2006 for the Avon Road (Princeton to Grovecrest) project will be used to fund this increase. The Tri-Party cost participation breakdown is as follows:

City of Rochester Hills	\$83,334
Board of Road Commissioners for Oakland County	\$83,333
Oakland County Road Commission	\$83,333

The next budget amendment will include this change.

Fund Name	Department Account No	Account No. Description	Budget Amount	Cost	Remaining Budget
Major Roads Expense	452.970000	Construction & Improvements MR-06A	0.00	\$83,334.00	(\$83,334.00)

RECOMMENDATION:

The Department of Public Services recommends that City Council approve an amendment to the Tienken Bridge cost sharing agreement with the Road Commission for Oakland County in the amount of \$250,000.00 and authorize the Mayor and Clerk to execute the agreement on behalf of the City.

RESOLUTION

NEXT AGENDA ITEM

RETURN TO AGENDA

APPROVALS:	SIGNATURE	DATE
Department Review		
Department Director		
Budget Content: Finance Director		
Purchasing Process: Supervisor of Procurement		
Mayor		
City Council Liaison		

**Attachment(s): September 28, 2006 letter from Posen Construction, Inc.
Tri-Party Cost Participation Agreement**

I:\Eng\Publ\E02024 Tienken Bridge Construction\costoverage.agenda.sumry.doc