

Oak Tech Park road engineering to start

The Oakland County Road Commission has authorized preliminary engineering for five road improvements in the Oak Tech Park, which will be the site of multibillion-dollar investments by Chrysler Corp. and other firms.

The road panel contracted with the Livonia firm of Orchard, Hiltz and McCliment Inc. It is the consult-

ing firm to the city of Auburn Hills, where the Tech Park is located.

"All are currently two-lane paved roadways and will certainly have to be widened to provide more than one lane in each direction and turn lanes because of the vast increase in traffic demand anticipated," said John R. Gnaou Jr., who chairs the three-member board.

THE COST, \$2.5 million, is being advanced by the county general fund in a tri-party agreement.

"That agreement calls for us to hire a consulting engineering firm and invoice the county for the amounts of the firm's billings," said John R. Gnaou Jr., who chairs the three-member board.

County road segments under study are:

- University between Opdyke and Squirrel.
- Squirrel between M-59 and Butler.
- Featherstone between Opdyke and Squirrel.
- Hamlin between Squirrel and the east city limit of Auburn Hills.
- Hamlin-Adams from the west city limit of Rochester Hills to East Hamlin.

"THE TYPE of roads to be built will be determined in preliminary engineering," said Gnaou.

Work is to be done by next April 1 so that construction contracts can be let April 21.

The engineering contract calls for Orchard, Hiltz and McCliment to do soil borings, right-of-way services, hydraulic analysis, environmental assessments, investigation of wetlands, housing or business replacements, historic evaluation and public involvement.

OTHER CONTRACTS let last week by the board of Oakland County Road Commissioners are:

- West Bloomfield Township — Drake Road: replace culvert, ditching and regrading for a half-mile north from 14 Mile — \$43,074, Waterville Construction of Farmington Hills.
- Farmington Hills — Middlebelt at Killarney, passing lane — \$41,427, A.V.S. Construction Specialists Inc., of Auburn Hills.
- Bloomfield Hills — Long Lake Road at Woodward, construct right turn lane for westbound vehicles — \$50,489, Posen Construction Co. of Utica.
- Bloomfield Township — Maple, left turn lane from Franklin through the Wing Lake Intersection — \$164,074, Posen.
- West Bloomfield Township — Long Lake Road at Middlebelt, reconstruct intersection — \$29,266, Posen.

WSU, Oakland firm designing 'supertools'

"Supertools" that have amazing wear resistance could soon be available to manufacturers because of a state-funded joint research project. Partners are Wayne State University and Ion Surface Technology Inc. of Clawson.

With a \$50,000 grant from the state research fund, the researchers will study a process to specially treat tools for characteristics that will help manufacturers improve quality and productivity.

The process is called ion-beam mixing. It will vastly increase surface hardness without changing the dimensions of the material.

"THE PROCESS is like an atomic Mixmaster," said Dr. Ralph Alexander, former WSU professor and now president of Ion Surface Technology. It involves coating a material with boron, then bombarding it with a nitrogen ion beam.

He explained that the ion beam literally mixes boron and nitrogen into the surface while leaving the dimensions unchanged, it alters the surface characteristics to produce super hardness and slickness.

WSU physics Professor Karur R. Padmanabhan is the main university researcher in the project. He said WSU will perform both implantation and analysis on samples, and Ion Surface Technology will do the industrial trials.

ION SURFACE Technology Inc., formed in 1984, already provides an ion implantation service as an alternative to the coatings often used to improve production tools.

"While coatings are hard," Alexander said, "they can chip off and, when applied at high temperatures, can cause distortion. Ion implantation has an advantage because it is a low heat process and it is not a coating so that it won't peel or chip."

Ion beam mixing with boron nitride will have all of the benefits of nitrogen ion implantation and the added bonus of even harder and more slick surfaces, Dr. Alexander said. Future uses for the technology include creating new alloys of elements and/or materials.

THE STATE research fund grant to study the process represents the first time that the Michigan Department of Commerce, which administers the fund, has awarded money for the metals area of materials science, said WSU associate provost Marietta L. Baba.

"With this grant and the research that will come of it, we are showing that Wayne State University is an effective citizen in the business community," said Garrett Heberlein, WSU vice president for research and dean of the graduate school.

"This grant benefits the state, business and university by improving the state's economy, upgrading manufacturing productivity and furthering scientific research."

"Given the importance of advanced manufacturing techniques as outlined in the state's strategic goals, we believe that a research program to improve material needed for production tools is very significant."

Consumers Power issues upgraded

Duff and Phelps announced it has raised its ratings on Consumers Power Co.'s securities, the Jackson-based utility announced.

Earlier this week, another securities rating firm, Moody's Investors Service, announced it is considering

upgrading Consumers Power Co.'s credit rating.

These actions follow the announcement of an agreement in principle with the Dow Chemical Co. to complete the Midland Plant as a combined-cycle, gas-fired cogeneration facility.



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