

MACOMB COUNTY CTE ADVISORY COMMITTEE MEETING MINUTES

OCTOBER 27, 2010

Macomb Intermediate School District

ENGINEERING / MANUFACTURING AND INDUSTRIAL TECHNOLOGY PATHWAY

46.0000 Construction Trades

48.0701 Woodworking General

COMMITTEE MEMBERS PRESENT:

Brian Hefferan	Alpine Construction	bthefferan@hotmail.com
Jeff Atkins	Barton Malow	jeffatkins@bartmalow.com
Daniel Beckman	Beckman Electric, Inc.	beckmanelectric@aol.com
Michael Stoskopf	Bldg. Ind. Assoc of SE Michigan (BIA)	michaels@builders.org
Denny Papierski	Chippewa Valley - Dakota H.S.	jpapierski@cvs.k12.mi.us
Barbara Karchin	Chippewa Valley Schools	bkarchin@cvs.k12.mi.us
Gary Moscone	Clinton Twp. Building Department	g.moscone@clintontwpbldg.gov
Chad Campau	Dakota High School	ccampau@cvs.k12.mi.us
Joe Churches	Dakota High School	jchurches@cvs.k12.mi.us
Glenn Rothenhauser	Distinctive Construction Habitat for Humanity	rothenhauser@yahoo.com
Alan Groner	Electrician	agroner2@comcast.net
Phil Manor	Electrician	w8ic@wideglenwest.com
Steve Doud	Fraser High School	doud1sg@yahoo.com
Steven Parris	Gooding Construction	steven22028@yahoo.com
Ken Allen	Grosse Pointe Building Department	joken3jik@comcast.net
Dean Sabelhaus	L'Anse Creuse - Pankow Center	sabelde@lc-ps.org
Tim Smith	Lincoln High School	smithtim@vdps.net
George Rice	Lincoln High School	rice.george@vdps.net

Greg Fiscelli	Park Avenue Marble & Tile Co.	
Craig Bryant	Romeo Engineering Tech Center	craig.bryant@romeo.k12.mi.us
Mark Andrzejewski	Roseville High School	mandrzejewski@roseville.k12.mi.us
Chris Boylan	Student - Dakota High School	chrisboylan@comcast.net
Mike Bastone	Titanium Building	mbastone@sprint.blackberry.net
Dan Barterian	Warren Career Prep Center	barteria@wcskids.net

New Business: The evening began with Guest Keynote Speaker Kim Meltzer, State Representative for the 33rd District of Macomb County and Entrepreneur / co-owner of CAMmand Machining LLC, Romeo, Michigan.

She presented her “optimistic” view for all careers and pathways around Macomb County keeping in mind that she is coming from what all consider the most difficult career or pathway to recover from, Manufacturing. Dinner was served after her keynote address followed by our breakout session.

Breakout Session:

Welcome: **Facilitator:** **Claire Brisson**

Meeting Called to Order: **Chairperson:** **Jeff Atkins**

Introductions: **Scribe:** **Barb Karchin**

Round table introductions by all present

1. Business Partner Question:

- A. How have “Renewable Energy” issues (Sustainable and / or Green Technology) impacted your business endeavors?**

Response:

Solar Panels - Currently very expensive to install. There are many incentives for residential customers - Federal Incentives, utility incentives from DTE and Consumers Energy.

- **2 direction meters are slowly being introduced** - extra electricity sold back to the utility on a \$/KW hour basis.
- **There is significantly more interest in energy efficiency on the west side of Michigan than in the central or east side of the state.**

Geothermal - expensive to install

L'Anse Creuse Schools Construction Trades are working with geothermal contractors to teach their students how to "install" geothermal. Currently working on fifth house incorporating geothermal installation.

Wind - expensive to install

- *Large companies are selling windfarms to utilities – also looking for "offshore" installations.*
- *Takes a lot of wind to generate electricity and the issue of how to "store" generated electricity was discussed. Batteries are option, but they are also expensive.*
- *Self-contained windmills can generate a small amount of electricity - some uses are to power signs, i.e., 2000 KW) Not economically efficient to install in homes at this point.*

Batteries - still expensive to purchase; they are becoming more economical, lighter, and more efficient

Overall conclusion - *There is not yet significant employment demand in our area related to installation of renewable energy technologies such as solar, wind, or geothermal in spite of incentives. Economy needs to improve and these technologies need to become more cost effective.*

B. How do you believe our secondary school curricula should address those issues?

Response:

Mike Stoskopf, CEO, Building Industry Association, representing Residential Contractors in Michigan sponsors the National Home Builders Student Chapter at Dakota High School. (Chippewa Valley Schools) stated:

"Students need familiarity with building homes, systems that work within houses and how to subcontract with various trades."

One important note: Building houses cannot be “outsourced”, homes are built locally, and homes are customized to meet home owner’s needs.

Solar: awareness of Solar is growing in Michigan, but the states of New Mexico, Arizona and California are on the forefront of this energy growth area.

Concerns of residents about property restrictions - according to one electrical inspector, there are no restrictions on the books regarding solar installation.

Michigan residents are “pooh-poohing” solar installation even though new solar panels can generate power in the dark.

SUNTRACKERS (solar panels) - 80% more electricity generated from panels that rotate 180 degrees; need more property for these panels and these panels are more expensive to purchase. Cost = kilowatt hour generated/dollar spent.

Tract homes in Macomb County were not built with energy conservation in mind. Many homes need to be made more efficient; “retrofit” non-energy efficient homes with new energy conserving products including better R - value insulation, low e-glass windows, etc.

Suggestion that **Government** update older buildings, show students how to retrofit and upgrade these existing structures with low energy consuming products. This would provide training and jobs for students graduating with a basic knowledge of construction trades.

Geothermal: one contractor has installed 3 geothermal units and 1 solar project.

Local contractors do not see the profit in installing energy efficient products, even with the government and utility rebates. This geographic area does not have sufficient financial resources to support ‘extra’ expenses when people are just trying to make their monthly mortgage payments.

An example described: \$24,000 job for solar project, with federal and utility rebates of 33%, cost the homeowner \$9,800 out of pocket to generate 1500KW of energy.

Several Construction Trades instructors were “Green Certified” through a course taught by Bruce Frost and sponsored by the Michigan Construction Trades Association and the Home Builders Association. Green Certified training program incorporates the concepts and applications of green for students in the Construction Trades program.

The Dakota HS program has just been awarded a MITES grant to build a water retention system for the Construction Trades building using the water to flush the building toilet and used the overflow to water the garden. They also use sustainable and recyclable products. They recycle as much as possible scrap materials, including a composting area behind the building.

Tine Meese in Lincoln Park created a solar system in her room to provide enough energy to heat the room. She used empty beer cans, filled them with water and created a unique system that worked.

2. Post-Secondary (if Present):

What can our secondary programs do to provide a better connection to post-secondary programs?

Response: No representative from a post-secondary institution was present.

3. Discretionary Question or Discussion:

Response: CONSTRUCTION TRADES

New Standards were recently issued by the State of Michigan for Construction Trades. A copy was shared with each participant.

Consensus that building an actual house engages students.

Standards include Technical and Employability Skills.

Industry representative input regarding new standards: Train students to get into ENTRY level positions. The students need to develop BASIC SKILL SETS to successfully use hand and power tools in carpentry, mechanical, plumbing, electrical or any other skills that they learn from building a house. The strong connections developed with students building a "Habitat for Humanity" house provide a life-long basic marketable skill set. Students have time to develop some expertise in rough carpentry and can leave high school with the skill set to get hired on a crew building a house.

Teach students enough to pass the exam to be certified in "Green Build."

Construction programs should provide the foundation for students to obtain their builder's license. After graduation, it cost upwards of \$1,000 to take a class and sit for the exam. Industry representative explained that Michigan has instituted a 60-hour pre-licensure requirement to earn a builder's license. The 60 hour

program is a residential-based curriculum. The information as it was taught at Schoolcraft College was based on a textbook and covers the information from a basic level. Students who complete a Construction program have a better knowledge base, but still need to learn about some of the other areas that are covered in the licensure test, including the law relating to building construction, owning a small business, marketing and sales.

Some programs are using pre-tests for the builder's license test as a final exam.

The Michigan Construction Teachers Association is exploring how to enable students to qualify to take their builders license exam upon completion of their 2-year curriculum.

Building a house, whether for Habitat for Humanity or not, provides students with "engaging work." The process of building a house also teaches employability skills of "how to work effectively."

There was agreement among industry representatives that the emphasis on heavy/highway & civil structures and heavy equipment operation included in the 2010 technical standards is not appropriate at the secondary level. It needs to be taught at the post-secondary level in programs taught by such universities as Michigan State University, Ferris state University, Central Michigan University, Northern Michigan University and local community colleges.

Some industry representatives wanted to know where the focus on heavy equipment came from and why were there not components of commercial, foundation, or steel, addressed? The heavy industry component does not fit into a high school curriculum.

Industry representatives asked: What is the process within the Department of Education, Career Technical Education and the legislature to change standards? Industry representatives also asked, "Who were the industry representatives involved in this process?" All agreed that these "new standards" are NOT the best outcome for our instructors and students.

Teaching students about "green" and incorporating it into a high school curriculum is a much better focus than teaching about bulldozers. Industry representatives also wanted answers to "who did the research to come up with these results to include emphasis on "heavy equipment/projects" at the high school instructional level?"

The Standards for Construction Trades were just updated in 2007-2008 which focused on residential construction and allowed for construction of residential homes and collaborations with Habitat for Humanity. One district recently purchased textbooks for \$5,500 based on these standards which is not as relevant under the new standards.

With the implementation of **the Michigan Merit Curriculum**, there are significantly more courses required to graduate from high school including Math through Algebra 2. Many of the Career Technical Education courses have district support to offer classes to seniors as their fourth year math option. Courses typically are identified in the course schedule book with a statement, such as **"This course has been approved to meet the MMC senior year math-related credit requirement."**

It is extremely difficult to embed an Algebra 2 or Geometry class into a prescribed Career Technical Education curriculum without the benefit of a Highly Qualified Mathematics Instructor. There are a few high school consortia in Michigan that have embraced this idea, but it has not happened in Macomb County. According to one instructor, Traverse City, Branch Area Career Center and Jackson have embedded Geometry or Algebra 2 course content into their Career Technical Education programs in Construction Trades.

The Instructors present at the meeting indicated they cannot afford the equipment necessary to teach a "hands-on" program in heavy construction and roadwork. Students can learn about flatwork and soil conditions.

There are 130 programs in Michigan and each is taught to the instructor's strengths. Teachers want to know, "Why doesn't the state listen to instructors?"

WOODWORKING AND CABINETMAKING

Two programs were represented at the County Advisory meeting for Woodworking - Dakota High School and Fraser High School.

Technology in the field of Cabinetmaking and Woodworking has changed dramatically since 1993. The CNC machine was introduced and high-end cabinet makers are using CNC machines with a few super-skilled employees. Advanced manufacturing has 'come of age' in the field of fine woodworking. Developing skills in CNC also transfers into the fields of plastics and metals.

Field research completed during the summer of 2010, indicated that LaFata Cabinetry utilized cross-trained employees who were capable in using the CNC machine as well as knowing the skills to create high-end cabinetry. Having both sets of competencies also opens options for students to pursue post-secondary programs at the college and university level.

**Federal mandate for all Career Technical Education (CTE) programs:
All CTE programs are focused on High Skill, High Demand and High Wage occupations.**

We, as educators and industry representatives cannot predict the future of where jobs are going to be. CTE is providing "relevant" skills.

The future requires TRANSFERABLE SKILLS, not necessarily Technical Skills, but 21st Century Skills, as defined by Tony Wagner in The Global Achievement Gap. Wagner identified Seven Survival Skills:

The Seven Survival Skills are 1) Critical Thinking and Problem Solving; 2) Collaboration Across Networks and Leading by Influence; 3) Agility and Adaptability; 4) Initiative and Entrepreneurship; 5) Effective Oral and Written Communication; 5) Accessing and Analyzing Information; and 7) Curiosity and Imagination.

Career Technical Education needs to utilize methodology to teach students the process of "how to think" and be able to visualize how to ask the right questions. The academic and technical themes are vehicles to teach 21st century skills. The future requires students to address their thinking in how to "Design the Problem" and then have a methodology to solve it using 21st Century Skills.

The best of what Career Technical Education offers is teaching students to effectively work in collaborative models.

Meeting Adjourned: 8:00 pm

Respectfully Submitted, Scribe: Barb Karchin

MAKE PLANS NOW !!!

Next Regional Meeting MISD

OCTOBER 19, 2011

Time TBA