Connecticut Technical High School System

Assuring Connecticut's Success: A Summary of Current Practices, Conditions and Forecasts in Technical Education at CTHSS

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Introduction

Having just celebrated its 100 year anniversary, the Connecticut Technical High School System (CTHSS) remains committed to its century-old tradition of educating students with the highest expectations for their success. Trade technology and academic curricula are on a continuous evaluation and revision cycle to meet current and forecasted labor market and economic outlooks. Preparing students to graduate from high school both career and college-ready, and able to contribute to their communities, the CTHSS strive to meet the needs of Connecticut's 21st century workforce while furnishing the State with informed, productive citizens.

The CTHSS includes 17 fully accredited diploma-granting high schools, regionally based in the following locations: Danbury, Bridgeport, Manchester, Danielson, New Britain, Groton, Waterbury, Norwich, Ansonia, Milford, Hartford, Middletown, Hamden, Meriden, Willimantic, Torrington, and Stamford, CT. All schools offer programs for students, grades 9 - 12, as well as programs for re-careering adults. The Stamford school, J. M. Wright Technical High School temporarily suspended its operations in 2009 and will reopen in 2014 as a completely renovated school with a revised program of study.

The CTHSS also operates Bristol Technical Education Center, a non-diploma granting institution for students from regional comprehensive high schools and re-careering adults seeking trade technology skills and credentials. Further, the CTHSS operates two Aviation Maintenance Technician training facilities for adults. They are CT Aero Tech in Hartford and Stratford School for Aviation Maintenance Technicians.

Currently 10, 896 students (grades 9 – 12) as well as 242 adult day and evening trade technology students (soon to be joined by an additional 250 Licensed Practical Nursing adult students) are benefitting from the career and post-secondary education options afforded them by technical education programs offered by the CTHSS. The exceptional results here are due in no small measure to the dedicated academic and trade technology instructors, student support and administrative professionals who work to update the curriculum and instructional delivery, as well as their own trade technology expertise, and ensure our students' competitive edge in meeting Connecticut's labor and economic needs.

Students have the opportunity to complete their high school career, mastering relevant and updated trade technology skills, while simultaneously meeting requirements for post-secondary education and college entry. Their trade technology skills are of high quality, and with earned business and industry credentials, they are able to sit for licensure examinations, serve qualifying apprenticeships at advanced levels, and access Connecticut's job market. CTHSS students graduate each year into the best of both worlds; doors opened to good jobs and post-secondary education/college entry.

Current Programs: Secondary

All CTHSS programs for grades 9 - 12 require students to meet the same comprehensive academic competencies demanded of all Connecticut students, in order to earn a high school diploma. And all CTHSS students must simultaneously complete a rigorous trade technology course of study in order to earn trade technology endorsements upon graduation. The technical programs under each career cluster have a post-exploratory three – and – a - half year program of study that incorporates all academic and technical coursework, resulting in the mastery of both theoretical content knowledge and technical performance skills. The trade technologies offered are grouped in seven career clusters as follows:

- Tourism, Hospitality and Guest Services Management
- Construction
- Manufacturing
- Transportation
- Computer Technologies
- Health Technology
- Arts, Audio/Video Technology and Communications

Tourism, Hospitality and Guest Services Management - Graduates of these programs are employed in the management, marketing and operation of restaurants, bakeries or lodging and travel-related services, personal services (hairdressing/barbering), and fashion design.

- Baking
- Culinary Arts
- Fashion Merchandising and Entrepreneurship
- Hairdressing/Barbering
- Retail Management and Entrepreneurship
- Tourism, Hospitality and Guest Service Management

Construction Cluster - Graduates are employed in residential, commercial and industrial construction areas.

- Architectural Technologies
- Carpentry
- Electrical

- Heating, Ventilation and Air Conditioning (HVAC)
- Masonry
- Plumbing and Heating
- Plumbing, Heating and Cooling

Manufacturing Cluster - Students in these interrelated technologies are employed in manufacturing and assembling goods, drafting and design, machining and welding/fabrication. They also pursue advanced training for production control, product and tooling design and manufacturing engineering.

- Automated Manufacturing Technology
- Computer-Aided Drafting and Design (CADD)
- Electromechanical Technology
- General Drafting and Design
- Manufacturing Technology
- Welding and Metal Fabrication

Transportation Cluster - Graduates apply technical knowledge and skills in diagnostics, repair and maintenance of automotive and heavy-duty engines and equipment as automotive mechanics, diesel engine repair technicians, and in collision repair and refinishing.

- Automotive Collision and Repair Technology
- Automotive Technology
- Diesel and Heavy Equipment Repair

Computer Technology Cluster - Graduates are employed in designing, developing, managing and supporting hardware, software, multimedia and systems integration services within high-technology industries.

- Electronics Technology
- Graphics Technology
- Information Systems Technology (IST)
- Pre-Electrical Engineering and Applied Electronics

Health Technology Cluster - Graduates are employed in health-related and early care and education occupations, as well as those in bioscience and environmental technology research. Graduates may complete competency credentials or certifications within their specialty.

- Bioscience and Environmental Technology
- Early Care and Education
- Health Technology

The Arts, Audio/Video Technology and Communications Cluster - Graduates are employed in planning, organizing, evaluating, creating and performing in the Arts, Media, Music and Theatre Production Technologies.

- Media Production
- Music and Technical Theatre Production Technology

Current Programs: Adult

CTHSS also provides career and life changing training for adult students. These programs are offered at selected school sites and may be offered as day or evening, full-time or part-time programs.

- **Licensed Practical Nursing (LPN)**
- **Dental Assisting**
- **Certified Nursing Aide (CNA)**
- **Medical Assisting**
- **Surgical Technology**
- **Aviation/Aircraft Maintenance Technician**
- **Adult Apprenticeship and Extension Courses**

LPN Program – Graduates meet CT State Nursing Board of Examiners standards as well as prerequisites for Registered Nursing (RN) programs at the Connecticut Community Colleges (CCC). Graduates are eligible to sit for the CT State Board Licensure Examination. They are eligible for college credit by applying to Charter Oak State College.

Coursework in Practical Nursing, Med-Surg Nursing across the Life Span, Developmental Psychology across the Life Span, Fundamentals of Nursing, Pharmacology, Wellness and Health, Human Biology, Maternal to Newborn Nursing and Psychology is accompanied by clinical experiences in the care of adult patients and in the care of selected patients in any age group whose conditions are less than critical. Graduates meet Connecticut's documented high demand for Licensed Practical Nurses and earn competitive wages with strong retirement and benefits packages immediately after graduation. The average LPN in CT earns $52,283.00 with full benefits.

Dental Assisting - Graduates are employed in dental offices and clinics performing the full range of chair side procedures, patient care and office duties. Graduates earn Infection Control (ICE) and Radiation Health & Safety (RHS) certifications prior to the start of 350 hours of clinical rotations. The program's accreditation by the American Dental Association (ADA) provides students with eligibility to take the Dental Assisting National Board General Chairside Examination upon graduation. Successful completion of this exam along with the ICE and RHS certifications earns students the title of Certified Dental Assistant (CDA).

Certified Nurse Assistant – Graduates are employed in many areas of Long-term care (Geriatrics), Hospital and Home care, Clinics, Medical Offices. CNA graduates often further their education in health and allied health-related fields. Graduates are eligible to take the written and skills examinations for entry onto the CT Nurse Aide Registry.

Medical Assisting - An externship experience is guaranteed and all students are placed in physician's offices, walk-in centers, hospitals or clinics for six weeks and are prepared for employment in those venues.

Surgical Technology - All students are placed in a six month clinical externship in area hospitals. Graduates are in high demand in:

- Hospitals: operating rooms, cardiac catheter laboratories, birthing centers, central sterile supply depts., emergency rooms, endoscopy suites
- Ambulatory Care Centers
- MD Offices
- Harvest Teams
- Med-Surg Product Development
- Research
- Laser Technology

Aviation/Aircraft Maintenance Technology - This twenty-month (2400 hours) aviation maintenance technician program enables students to develop operative skills that meet the requirements of the Federal Aviation Administration (FAA). Students venture into the actual world of aviation, the theoretical content and practical experiences in metal work, woodwork, welding, hydraulics, electrical, electronics, painting and engine (turbine and reciprocating) overhaul. Students will become proficient in approximately 50 skilled trade areas and be able to interpret FAA regulations and manufacturer's technical specifications. Graduates enter jobs as technicians at airports and aircraft and power plant companies.

Apprenticeship and Extension Courses - CTHSS offers a wide range of skilled trade licensure and advanced training in the following trade areas:

- Electrical
- Heating and Cooling
- Sheet Metal
- Plumbing

Additionally, courses for multi-trades include Basic Math Computations, Blueprint reading and Building Trade Safety. Further, courses offered may include: Manufacturing, Machine Theory, Welding, Computer Numerical Controls (CNC), MasterCamm, Phlebotomy, EKG Technology, and Central Sterile Supply.

Collaboration

The CTHSS prides itself on its ability to adapt, enhance and retool existing trade technologies, as well as create new trade technologies in response to emerging labor and economic realities. The CTHSS partners with Higher Education, Dept. of Labor and the Office of Workforce Competitiveness to identify job market trends, short and long-term occupational and economic outlooks, and college/university pathways. The CTHSS actively cultivates articulated agreements with community colleges and universities. Working collaboratively on numerous joint committees and shared grant projects, the CTHSS provides insight, data and a unique perspective on educational and technical issues, as well training, to its partners, and benefits reciprocally from Higher Education, DOL and OWC's research, projections and programming.

We provide ongoing professional development for all staff, monitor and provide training necessary for professional staff to maintain licenses and certifications. Assessment of trade and academic facilities, supplies, equipment and other resources is ongoing and disciplined in order to maintain appropriate teaching environments. Annual and biennium budgets reflect the educational demands of all school programs. Accountability obligations for the management of state and federal funds are monitored closely and the CTHSS vigorously engages in the pursuit of competitive grant funding to supplement the CTHSS budget shortfalls.

Finally, the superintendent's report to the State Board of Education is a standing item. On a monthly basis, the superintendent brings updated fiscal/grant, asset management and student achievement information, as well as recommendations, to the Board. To the extent that Section 3 of Public Act 10-76, known as the Vo-Tech Bill, requires this report, it is a pleasure to operationalize the aforementioned matters for the Joint Committee's attention.

Ramping Up Curriculum, Assessment and Trade Credentialing

"For all the rhetoric in education about 'preparing students for the 21st century,' today's schools are excruciatingly slow to leave the 20th." ("Multiple Pathways: Bringing School to Life," Education Week, July 20, 2009)

In contrast, CTHSS has placed curriculum and the pace of instructional delivery on a cycle of continuous revision and updating. Assessments, both formative and summative, are conscientiously examined for alignment with state standards, as well as business, industry and health standards for licensure, certification and professional credentialing. Our technical programs must be kept current, and the integration of our students' academic skills with trade technology requirements must be just as current. The CTHSS has a century-old tradition of prioritizing this critical work from the ground up.

Toward that end, each trade technology in each school maintains a vitally active Trade Technology Advisory Committee (TTAC), made up of representatives of the working trades. As tradespersons themselves, these men and women are the business owners, product suppliers, contract sales, designers, inventors of new industry standards. More importantly, they are the current employers. In many cases, TTAC members are also graduates of technical high schools and volunteer their time, service and donations to support the school with which they are

affiliated. Collectively, they serve as an important review team, making recommendations regarding technology shop practices, resources and procurement. They provide a fresh perspective on maintaining the delicate balance between safety and efficiency, facilities upgrades, equipment replacement or repair decisions and insuring sufficient supplies for performance and production experiences.

TTAC members are actively recruited to become reviewers and editors of our trade technology curricula & textbooks. Trade instructors and department heads discuss critical assessments with them to determine if the assessments are aligned to the curriculum, i.e. District Wide Trimester Assessments, the National Occupational Career Test Instrument, and other written and performance assessments used throughout grades 9 – 12. The purpose of these reviews are to ensure alignment with the trades as they exist today. This is critical work toward ensuring that CTHSS is training its students to meet the real needs of CT employers, so that they can legitimately enter the workforce, job-ready.

Working with TTAC's is vital and designed to include monthly meetings with members, visits to the shops, inspections of supplies and equipment. Further, it provides opportunities for mentorship and for students to communicate with their future employers. Twice a year, all TTAC's are brought together to consult on trade changes, new and emerging trends, and future projections for growth and jobs. Minutes of these meetings are preserved and sent to Central Office as well so that trade technology consultants, managers and the superintendent will be updated on the needs and outlook of each trade. This process is also foundational to collecting and providing data to the State Board of Education during the Trade Reauthorization process.

TTACs are dedicated one to the next, and members are as generous with their connections, supplies, equipment and dollars as they are with their time. Often, the day after TTAC meetings, the plumbing shop will find a load of copper pipe on their loading dock, the carpentry shop will find more board lengths than they can find space to store, the electro-mechanical shop will be burgeoning with small appliances and other items for students to diagnose and repair or the manufacturing shop will be asked to accept lathes and grinding equipment that is more updated than that which they have on the shop floor. In these difficult times, their donations have made production experiences for our students a reality.

The point to be taken here is that all of the input of the TTAC members becomes a factor in our curriculum design and delivery, in our ability to place students in Work-based Learning Experiences, provide them with opportunities to observe, inspect and job shadow, and most important, present them with job prospects.

To be certain, keeping curriculum current, having an updated blueprint for teaching and learning in all trade and academic areas to discuss with the TTAC members and others, requires a high level of vigilance on the part of our trade consultants and our instructors. They must maintain strong ties to the trades they represent, as well as to the world of research and higher education to assure curriculum updates are making it into revisions in real time. A recent presentation to the State Board of Education on November 3, 2010 on the state of Green

Technology incorporation within the Construction Cluster programs, Architectural Drafting, Carpentry, Electrical, HVAC, and Plumbing & Heating curriculums, entitled: "Growing up Green in Connecticut," showed clearly the collaboration efforts of our instructors, department heads and trade consultants with other organizations. In this case, work with representatives from the CT Community Colleges, CT Clean Energy Fund (CCEF), CT Energy Efficiency Fund (CEEF), United Illuminating (UI), Northeast Utilities (NU), The Institute for Sustainable and Renewable Energy, Eastern CT State University, The Navigant Report's Consulting Study on the Impact of the U.S. Electric Industry's Regulatory and Market Changes on Renewable Energy, and the Building Performance Institute (BPI), nationally recognized organization for setting standards in Home Performance and Weatherization was involved. Central to the success of this work are the efforts of the CTHSS to respond to the superintendent's call to contribute to the many task forces and committees charged with the responsibility of assuring CT's lead in new technologies. This past year, both the superintendent, as well as trade consultants, joined Speaker of the House, Chris Donovan's Task Force on Green Technology, among others.

Collaboration to the degree mentioned above, has resulted in curriculum updating and the incorporation of the "E-House" in our students' education. These buildings are being constructed on 6 of our campuses (to date) and our students will have the experience of constructing, installing services, and working and operating the energy systems of these buildings which display construction, weatherization and energy efficiency over the past 100 years. **All of this work is being done with partners, without state dollars and with the cooperation (and in many cases personal dollars) of our trade technology professionals.**

What does this have to do with incorporating and revising curriculum and technical education? Simply put, we begin now to move our students toward credentialing. Within the structure of our assessments, the opportunity presents itself to incorporate the various trade standards of expertise that exist in the trade world of work. Students working with "Green" industry standards will be experienced in Solar Photovoltaic and Solar Thermal systems. They will be educated to work with new products and designs, to reduce energy costs by improving energy efficiency, and ensure the health and safety of themselves and others while using renewable energy sources. Those students will earn other kinds of credentials, such as graduating with OSHA 10 Safety certification.

Getting out in front of change is imperative in technical education and the aforementioned green project is an example of the CTHSS obligation to be leaders. Despite labor market projections for a slowdown in the construction cluster due to the economic impact on new and renovation construction, CTHSS has trained its students to be ready for emerging "green" technology jobs: Crew/Chiefs, Supervisors & Installers of green efficiency systems, Energy Auditors, Intake/Eligibility Specialists, Client Education Specialists, Local Agency Coordinators, On-site Technical Monitors, Energy Program Administration Monitors, Energy Efficiency Trainers, and many more new job categories. Surveys have shown that the emerging green sector jobs will be found in the very trades that the CTHSS offers.

And the Construction Cluster is not alone. Many of our trades are incorporating model business and industry standards, certifications, levels of expertise endorsements that are standard in the working trades. Examples include: Culinary students now must earn the National Restaurant Association's ServSafe Certification before graduating. They will be earning the American Culinary Federation (ACF) professional accreditation as Certified Junior Culinarians. Manufacturing students are now graduating with the first 4 National Institute of Metalworking Skills credentials. Automotive students are becoming ASE and National Automotive Tech Ed Foundation (NATEF) certified. Students are earning job and income enhancing credentials in new production methods and becoming continuous improvement certified within their trades. And we have only just begun!

Transitioning our graduating students into the labor market or to meet college entry requirements demands the aforementioned work. Preparing students to meet the current and future demands of their trade technology, means that CTHSS is obligated to be part of the firsthand research and forecasting of all workforce projections.

Labor Market Indicators and the SBE Trade Reauthorization Process

Trade Reauthorization is another important process that impresses the need for CTHSS to be in front of the current and future viability of the trades. In accordance with CGS Section 10-95i(b), the State Board of Education must evaluate each trade program in the CTHSS and consider reauthorization of each trade for a period of not more than 5 years. A trade program may be reauthorized following each evaluation on the basis of projected employment demand for enrolled students; consideration of the employment of graduates during the preceding five years; anticipated technological changes and 21st century trends that may impact skill employment and advancements in content knowledge training; the availability of qualified instructors; the existence of similar programs at other institutions, as well as student recruitment/interest in the trades.

As part of the evaluation, the State Board of Education must consider geographic differences that may make a trade program feasible at one school and not at another, and whether certain combinations of program offerings might be required. Prior to making any decision to reauthorize, the state board must consult with the committee's (TTAC) evaluations for any trade being evaluated, as was mentioned in the section above. This is done through CTHSS staff research, awareness of and archiving of TTAC recommendations among other sources of information including Dept. of Labor and Office of Workforce Competitiveness research.

The Dept. of Labor conducts comprehensive research and publishes labor market projections and economic outlooks every two years, projecting out for the next ten years (i.e. CT Dept. of Labor occupational projections 2008-2018). CTHSS management and trade technology consultants work with and consult the DOL reports regularly and incorporate projections in the preparation of trade reauthorization documents and in retooling curriculum. Current study and projected employment demands in job categories associated with the trades are collected, reviewed and disseminated.

As a case in point, the most recent DOL study (2008 – 2018) indicates that in 2008, 34,123 jobs in Health Technology fields existed and there was a projected growth of 4,241 jobs in 2018. DOL estimates Health Technology related jobs to present approx. 1,218 new jobs per year. The CTHSS works to further that information by collecting its own graduate data approximately 4 months after graduation. Five (5) years-worth of such data is used along with other TTAC trade indicators and recommendations, to make decisions for changing the curriculum, purchasing equipment, supplies, and managing shop enrollment and staffing levels, going forward.

As an example: our graduate employment data for the Health Technology trade indicates the number of graduates for the last 5 years and their immediate post-graduation placements. The data shows that a significant number have gone to post-secondary education, while a smaller number became immediately employed in their field. For planning educational delivery that is current, these statistics along with the DOL projections for 10 years indicates that our curriculum must be reviewed and/or revised toward greater pathways to college or post-secondary education. We can document the demands for advanced skills in the trade/field. However, we cannot assume that the students accessing post-secondary education are not also working simultaneously in their field, as programs exist in regionally based community colleges. Currently, the manner in which graduate data is collected for the ED 540 report to the State of CT, which is required of all public high schools, is limiting and does not survey so that the data can be used to distinguish between pursuit of education exclusively or pursuit of education while employed.

Further data and evidence in the trade reauthorization process which is derived from other research sources and documented by the CTHSS, provides direction and planning toward the educational decision making process. For example: we know that there is a major change in the technology used in the pharmaceutical and biotechnology-related industries. Computer software connecting hospitals to physicians is a nationwide installation goal. Advancement in epidemiology and toxicology has resulted in more efficient instrumentation, including rehabilitative devices. The internet is allowing for patient monitoring from central locations. We know that 21st century changes in Medicare reimbursement regulations have resulted in significantly less and shorter hospital stays. Patients are discharged in greater numbers to nursing homes, home care agencies, rehab centers and outpatient clinics. Skills taught in the core curriculum and content knowledge must reflect these new demands, putting more focus on intervention/preventative services, holistic care in other than hospital settings.

Given the time-sensitive information above, the CTHSS has an obligation to maintain a just-in-time approach to educational delivery so that students are prepared for the trade's current vernacular and for the changes that are coming more rapidly than ever before. We agree with the Dept. of Labor and Office of Workforce Competitiveness in that projections should look ahead 5 – 10 years at most. Technology changes rapidly, the fluidity of economics responds to those changes and projecting 30 years out is not valuable. The CTHSS must be an agent of rapid response, and prepare our students for lifelong learning and professional flexibility demands.

Tracking CTHSS Students After Graduation

As referenced above, the CTHSS collects data annually, as required by the CT Dept. of Education for the ED540 Graduate Follow-Up Report. The collection occurs in the fall of each new school year (4 months after the graduation of the class preceding the current school year). The composite report is comprised of 5 sections, each dealing with a different aspect of a student's technical high school career, includes data on graduation requirements by content area, student enrollment by content area, disaggregated by ethnicity and gender, data on the number of college level courses taken and the number of students in each of the courses, and finally, post-graduation activities of each graduate.

While a good start, the post-graduation activities collection more accurately represents our graduates' intentions after leaving their technical school. A sample of the coding used to collect this data is as follows: enrolled at an in-state 2-year college, enrolled in the military, entered the workforce, enrolled in a 4-year out-of-state college. Any information from that capture date going forward is not gathered for technical school or any other public high school graduates. Reasons for that are implicit in the recommendations following that will be necessary to begin that work at the CTHSS.

- A database must be created to track graduates activities and progress to reflect first year, 5 year and possibly 10 year activities.
- High school-aged students, especially students with marketable skills as well as college entry preparation, often change residences swiftly after graduation and frequently as they assume adult roles in their future. Tracking systems would involve a multifaceted approach to gather such information, and involve many staff at central office and in each school to make/take calls, enter information gathered on the spot to a database, create newsletters, flyers, 5 and 10 year reunion questionnaires, and motivate small alumni groups to solicit graduate reporting.

The commitment of funding, staffing and other resources in pursuit of longitudinal post-graduate study cannot be more highly recommended. However, as most colleges and universities with major Alumni, Development and Advancement offices report, producing high percentages of accurate data is costly and difficult. Mitigating factors that interfere with this kind of data collection involve more than address and career path changes. Financial stability, job readiness, local and national economic factors impacting family units, other human factors such as family support, health and death are among those noted.

The CTHSS would like to begin this work and will undertake a fiscal, staffing and technology needs assessment toward accomplishing this goal.

Resources and Funding

C.G.S. 10-220 mandates that school districts "provide an appropriate learning environment for its students which includes (1) adequate instructional books, supplies, materials, equipment,

staffing, facilities and technology, (2) equitable allocation of resources among its schools, (3) a safe school setting." To ensure compliance with these mandates and ensure equitable allocation of resources the CTHSS requires additional funding.

Our report to the Joint Committees has included much reference to the unique delivery of the CTHSS technical and academic mission. Recognizing the economic condition of the State of Connecticut, the CTHSS nonetheless has to respond to the needs of students as well as the State of CT, who look to this school district to provide career and college ready preparation which will be life sustaining and meet the needs for a skilled workforce, and ultimately job creation in CT. In discussing the immediate and ongoing need to keep our current technical programs updated and lead the educational "rapid response" to address labor market and economic outlook predictions, the urgent needs of the school district have been flagged. While the CTHSS is meeting the needs of our students as well as those of CT's business and industries, it is with less and less resources to deploy in this pursuit.

Budgetary requests for Current Services for FY 2012 and FY 2013 as well as Capital Budget requests reflect difficulty in meeting the above statutory responsibilities. Facilities disrepair and hazardous conditions have become more critical by a lack of bond funds released for buildings that are on renovation schedules. Coupled with a year-long freeze on renovation projects that had been moved forward, a catch-22 of funding requests for repairs to plant operations has been created. The condition of the un-renovated buildings, as well as new systems installation in renovated buildings, and lack of adequately trained staff to care for them, has significantly increased the CTHSS need for repair and emergency repair funds. Routine maintenance, inspection and repair cannot be performed due to aforementioned staffing issues and school facilities cannot provide safe and healthy learning environments. Shops which should replicate the current status of the trade technologies are full of outdated and obsolete equipment. Shops in schools where grant funds have been sourced have been able to do somewhat better in replacing outdated equipment, purchase state-of-the-art equipment and production supplies, but often that good fortune is hampered by the age of the building and its capacity to provide safe and efficient power, lighting, etc. for the new equipment.

Trade manuals and textbooks, supplies, and materials are underfunded, and were presented during school year 2009-10 as falling woefully short of what is needed to maintain basic curriculum delivery. A much-publicized $105.00 is allocated per year, per student, for trade supplies. In an effort to deliver updated curriculum which incorporates 21st century concepts, i.e. green technology, credentialing, etc., the CTHSS has asked for $1 million for trade supplies that would effectively increase the per student allotment to $200.00 per year.

The SDE's Bureau of Information Technology has identified computer technology infrastructure that must be replaced due to aged equipment and the availability of improved technologies which would result in cost savings as well as improved productivity. They have identified CTHSS computers, printers, network switches, backup power supply and servers in need of replacement. Without additional funding in each year, the technical education programs as

well as other school operations will continue to fall short of having what is necessary to function, let alone keep current.

The CTHSS does not transport students to technical high schools from the sending school districts. However, it does operate a minimal fleet of production buses in order to provide critical field experience and outside production work to support the education of young tradesmen and women. Lack of funding for replacement and repair of buses for the purpose has significantly hampered the technical education process. $6.6 million was released at the March 2010 Bond Commission. However, those funds are now committed to the replacement of

- 45 buses removed in accordance with P.A. 10-76 at a cost of $4.1 million
- Network switches and classroom computers noted above $1 million
- Trade and academic equipment $500K
- Infrastructure repairs and PCB remediation $960K

More funding will be needed to address many more deficiencies in each of those categories.

Obviously, another area of serious depletion is staffing. The CTHSS has lost a significant number of staffing positions and the dollars associated with them. Both classified and non-classified position refill approvals have been refused or indefinitely delayed. Temporary solutions to the impact of this situation on instructional capacity, administrator presence, school safety and cleanliness are becoming more costly in terms of substitute teacher and other staff overtime costs. Those costs are increasing rapidly.

As a division of a state agency (i.e. the State Dept. of Education), the CTHSS has been subject to numerous budget mitigation plans requested by the Governor. As a result the ability to refill critical professional educator and administrator positions has further complicated our equitable staffing distribution among schools or meet the demands of real time instruction without interruption. The ability to find qualified and quality instructors, especially in the highly technical trade technologies, further hampers student success.

The examples cited are but a few with which to illustrate the growing depletion of the CTHSS academic and trade technology programs. The category of concern in Sec. 3 of P.A. 10-76 addresses adequate resources to deliver the CTHSS mission so sorely needed by the State of CT. The resources are inadequate and the CTHSS superintendent will continue to present requests for more resources to the State Dept. of Education and the Board of Education.

Recommendation

Many recommendations have been made throughout this report, presented as requests folded into the state of our affairs. And, there is no doubt that CT's circumstances impact the ability of the Board of Education to endorse all of them. Respecting the position I am afforded as superintendent to report to the Board monthly, and further, to work with a dedicated Board

subcommittee, I am aware that representing the most important method of educating high school students in the 21st century must also mean bringing this opportunity to more of Connecticut's students. Our mission is uniquely tied to the solvency and stability of our state, and CTHSS graduates have for 100 years shown their capacity to make immediate contributions toward that end. I recommend the Board and the Legislature look to CTHSS to continue to lead secondary school reform initiatives and to open its doors to more Connecticut students. We are up to the challenge.