

REPORT OF THE
STATE OF CONNECTICUT

TASK FORCE

ON

THE CONNECTICUT TECHNICAL
HIGH SCHOOL SYSTEM

Submitted to the
Education Committee
of the
Connecticut General Assembly

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Executive Summary

The task force, established under section 191 of Public Act 11-48, An Act Implementing Provisions of the Budget Concerning General Government, was charged with studying the Connecticut Technical High School System (CTHSS) and the merits of transferring operating responsibility from the State Board of Education to local entities. It was decided relatively early in discussions at task force meetings that the CTHSS should remain a centralized system operated by the state and enhancements to the system should be considered. Quality, statewide standards could be lost if the system was decentralized. And having this centralized entity overseeing the entire regional school system reduces duplication and provides better coordination of efforts.

While the cost of shifting operation of the system to local entities would be a potential cost savings to the state, analysis showed that this cost would shift to municipalities, requiring towns to increase their education budgets, some significantly, to educate the technical high school students for whom they have not had to budget funding.

Recommendations to improve the system are delineated in the report and include suggestions for enhancing planning and development through the collaboration of various state and private entities, improving the governance structure through further study and suggestions for making the system more efficient and fiscally accountable.

The CTHSS is an important resource for the educational needs and economic prosperity of Connecticut. It aligns very well with Governor Malloy's initiative to make education a key priority for the state and with the focus on job training that came out of the Jobs Special Session in October 2011.

Charge of the Task Force

Section 191 of Public Act 11-48, An Act Implementing Provisions of the Budget Concerning General Government, established this task force to study the finance, management and enrollment structure of the CTHSS. The task force was charged with:

- (1) Conducting a cost benefit analysis of:
 - a. Maintaining and strengthening the existing CTHSS operated by the State Board of Education (SBE);
 - b. Developing stronger articulation agreements between the CTHSS and the Regional Community-Technical Colleges (CTC);
 - c. Transferring the CTHSS to local and regional boards of education, regional educational service centers (RESCs) or the CTCs; and
 - d. Maintaining or transferring adult programs offered at the CTHSS.
- (2) Considering the effects on facilities, equipment and personnel management of maintaining the existing CTHSS or transferring it to local and regional boards of education, RESCs or the CTCs
- (3) Comparing and analyzing the findings of (1) and (2) above.

Task Force Membership

Mark E. Ojakian (Chair), Deputy Secretary, Office of Policy and Management

Joseph J. Vrabely Jr., Member of State Board of Education and Chair of Connecticut Technical High School Committee

Patricia A. Ciccone, Superintendent of Schools, CTHSS

Mary Ann Hanley, Department of Economic and Community Development

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Joe Carbone, President and CEO, The Workplace Inc.

Eric Fisher, UniServ Representative, Connecticut Education Association

Raymond Coombs Jr., President, Westminster Tools Inc.

Daniel Thibault, Department Head, Automotive Collision Repair and Refinishing, Wolcott THS

Steven Wodarski, Mathematics Teacher, Wilcox THS

Dr. Craig Edmondson, Executive Director, Area Cooperative Educational Services (ACES)

Scott Jackson, Mayor, Hamden

Irving Fox, Chair, Danbury Board of Education

John Sylvestre, Department Head, Electrical, Grasso THS

Dr. Mark McQuillan, Former Commissioner, Connecticut State Department of Education

Introduction

In light of the serious fiscal crisis that the state faces and in an effort to, in the long run, yield financial and efficiency benefits for the State of Connecticut, the Governor's FY 2012 – FY 2013 Biennial Budget recommended the gradual transfer of control for operating the Connecticut Technical High School System (CTHSS), now under the State Board of Education (SBE), to local or regional districts or Regional Educational Service Centers (RESCs). This proposal was not met with favor and ultimately, the Governor and the General Assembly agreed that the final budget would not include this proposal; however, legislation was passed that called for a task force to study the costs and benefits of such a proposal.

The CTHSS operates as a centrally managed statewide system of technical high schools under the Commissioner of the State Department of Education (SDE) and the State Board of Education, with the Superintendent being responsible for the day-to-day operation of the system. SDE currently operates 16 diploma granting technical high schools, one technical education center, and two aviation maintenance programs serving approximately 11,200 full-time high school and adult day students with comprehensive education and training. A seventeenth technical high school, J.M. Wright, is in the process of renovation and is planned to reopen in the next two years. There are currently 30 occupational trade areas offered for high school students, 6 occupational trade areas for adults and apprenticeship programs that serve approximately 2,000 students. Refer to **Appendix A** for a detailed list of trades offerings by school.

High school students receive a college preparatory curriculum and earn a Connecticut high school diploma as well as a certificate in a specific trade technology. For the graduating class of 2011, approximately 59 percent of graduates went on to college or other educational settings and approximately 37 percent pursued employment, apprenticeships or the military. The percentage of students going on to higher education has increased compared to the graduating class of 2001, in which 34 percent went on to pursue higher education.

Adult students are provided full-time post-high school programs, apprentice training and part-time programs for retraining and upgrading skills. Program relevance is evaluated through a network of technology advisory committees, assessment and a response to the implementation of emerging technologies of the workplace. Better coordination between the Departments of Labor, Economic and Community Development, Higher Education and business and industry could improve trade programming.

The Task Force met a total of five times between September 27, 2011 and January 10, 2012, and conducted one public hearing on December 13, 2011. The primary purpose of the initial meetings was to inform members on issues related to the CTHSS.

At the initial meeting, the Superintendent of the CTHSS presented the Task Force with information on CTHSS including enrollment statistics, student demographics, district improvement plans and curriculum, trade programs, adult programs and partnerships.

Three on-site meetings of the Task Force were held, in which Task Force members had the opportunity to tour the schools and talk with students and faculty in addition to gathering more detailed information on the CTHSS. The first on-site meeting was held at Eli Whitney Technical High School in Hamden, at which the Task Force was presented with detailed information about CTHSS funding and annual operating costs. The second on-site meeting was held at H.C. Wilcox Technical High School in Meriden, at which the Task Force was presented with detailed information about CTHSS adult programs as well as a presentation of the State's workforce needs from the Department of Labor. The third on-site meeting was held at A.I. Prince Technical High School in Hartford, at which the Task Force was presented with detailed information about articulation agreements with post-secondary institutions and ways the systems are working on resource collaboration.

A public hearing was held in the evening on December 13, 2011, and provided the public with an opportunity to voice their concerns and ideas for improving the CTHSS.

Cost Benefit of Maintaining and Strengthening the Existing CTHSS vs. Transferring the CTHSS Operation to Local Boards of Education, RESCs or CTCs

The charge of the task force to do a cost-benefit analysis of maintaining the current system is best viewed in comparison with the other charge to study transferring operation to another entity. The SBE currently operates the CTHSS with a state appropriation of \$149.6 million, not including fringe benefits, which are paid for out of the Comptroller's budget. Nearly the entire cost of operating the high school programs is borne by the state, with a small amount from other sources such as federal grants and tuition from the adult programs. The benefit of having one statewide entity overseeing the CTHSS is that there is consistency in curriculum and standards across the system that may not be achievable if 16 different school districts, RESCs or CTCs operated these schools separately. There is also a benefit of having a centralized, statewide planning entity for this school choice option because a certain amount of economy of scale can be achieved when providing professional development, developing and disseminating trade curriculum and analyzing market trends to determine which trade programs are viable. There are certainly some market differences across the state that are better addressed on a school by school basis; however, having this centralized entity overseeing the entire regional school system, reduces duplication and provides better coordination of efforts.

While there are many different nuanced scenarios for transferring the operation of the CTHSS to another entity, this report presents three for illustrative examples of the costs and benefits of transferring the system.

Scenario 1 – CTHSS is dissolved and students are absorbed into their home districts

Under this scenario, districts would not be required to maintain the Technical High Schools, resulting in students being returned to their home districts' high schools. For simplicity, it is assumed in the following cost analysis that all districts would choose to close the Technical High

Schools and send students to their home districts' high schools. There, of course, may be districts, RESCs or CTCs that choose to maintain the Technical High Schools, at which point a combination of the three scenarios presented in this report could occur.

Cost:

- Using October 2011 enrollment data, districts would have to absorb a little over 10,700 students into their schools. This would be challenging for some districts, which would have to add additional classes and teachers to educate these students. Using an average high school class size of 20 students per class, the hardest hit districts would have to absorb the following number of students and add the following number of classes and teachers:

Town	# Students	# Classes
Bridgeport	1,050	52
Hartford	759	38
Meriden	564	28
New Haven	473	24
Torrington	340	17
Waterbury	508	25

- Using the latest available Net Current Expenditure Per Pupil (NCEP) for each town, the additional cost to the districts would be \$144.4 million.
- An estimated \$56.6 million in additional ECS funding could offset this cost a little, leaving towns with approximately \$87.8 million to cover with local funds.
- Under this scenario, depending on the extent to which this is phased in, students may not be able to finish their trade programs.
- Capital and building issues, such as ownership, would need to be addressed.

Benefit:

- The benefit to the state in this scenario is that it would no longer run a school system, yielding a cost savings to the state of approximately \$113.1 for current operating and fringe benefit costs. Refer to **Appendix B** for more detail.

Scenario 2 – Local districts continue the programs with local control

Cost:

- Districts would inherit approximately a \$169.7 million system (\$146.5 million in expenses plus an estimate of fringe benefits of \$23.2 million – a fringe benefit rate of 18 percent was assumed, since towns do not contribute to the Teachers’ Retirement pension).
- If we assume an increase in ECS funding for students in the districts where the schools are located, the host districts would receive about \$30 million in ECS funding to operate these schools.
- This leaves a gap of \$140.5 million that would partially have to be absorbed by the towns or there could be a magnet-like grant and some invoicing of tuition expenses of sending districts that could help pay for the programs (\$26.6 million in potential additional ECS funding for sending districts could help the districts pay for some of the tuition).
- A lack of a centralized, statewide planning entity may have adverse effects on trade curriculum, professional development, etc. and there is a certain economy of scale that a centralized administration is able to achieve that won’t happen with 16 individual entities running the schools.
- Collective bargaining would be an issue that needs to be addressed since current CTHSS employees are state employees.

Benefit:

- The benefit to the state is that it is potentially less costly (depending on how much magnet-like grant funding would be appropriated) and the state would no longer need to run a school system.
- The benefit to the schools and districts is that potentially, local control of programs and curriculum would be made stronger but this is offset by potentially having an inconsistency in curriculum and standards across the system that a centralized approach is able to achieve. Local input could still be utilized and possibly enhanced while keeping the central office to oversee statewide standards, curriculum, and job outlook, among others. Refer to **Appendix C** for more detail.

Scenario 3 – Districts run the program using the Magnet School Grant program

Cost:

- The Magnet School Grant program could be amended to include the CTHSS or a new magnet-like grant could be developed to help offset the costs to districts for taking over control of the operation of these schools.

- Using the current Magnet School Grant amounts outlined in statute, the state would pay approximately \$82 million in Magnet School operating and transportation costs.
- Again assuming an increase in ECS funding, towns would receive an additional \$56.6 million in ECS funding that would help towns pay tuition for these schools to operate.
- It costs approximately \$169.7 million to run the schools (using the school budgets on the CTHSS Web site as well as a modest fringe benefit rate), which leaves a difference of approximately \$31 million that would need to be made up by towns to pay for their students going to these schools.

Benefit:

- Again, the benefit to the state is that it is potentially less costly (depending on how much magnet-like grant funding would be appropriated) and the state would no longer need to run a school system.
- The benefit to the schools and districts is that potentially, local control of programs and curriculum would be made stronger but this is offset by potentially having an inconsistency in curriculum and standards across the system that a centralized approach is able to achieve. Local input could still be utilized and possibly enhanced while keeping the central office to oversee statewide standards, curriculum, and job outlook, among others. Refer to **Appendix D** for more detail.

Developing Stronger Articulation Agreements Between the CTHSS and the CTCs

The Connecticut Technical High School System (CTHSS) has established several articulation and transfer agreements with individual institutions within the Connecticut Community Colleges and other educational entities.

The College Career Pathways (CCP) program is a course of study designed to encourage and prepare Connecticut Technical High School (CTHS) students to pursue an associate or baccalaureate degree in their chosen technical area. Through a planned sequence of academic and technical courses, students are prepared for the advanced courses required by two-year and four-year colleges. Students formally enroll in a community college and register for articulated academic and technical courses. Students have the opportunity to earn up to fourteen college credits at no cost in a non-duplicative sequence of coursework. The credits are transcribed and can transfer within the Community College system as well as to private and public universities and colleges in Connecticut and in other states. The following eighteen (18) high school trade and technology programs are currently articulated.

Computer Technology Cluster:

- Electronics Technology
- Information Systems Technology
- Pre-Electrical Engineering and Audio Visual Technology

Construction Cluster:

- Architectural Technologies
- Carpentry
- Electrical

Health Technology Cluster:

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

Manufacturing Cluster:

- Automated Manufacturing Technology
- Computer-Aided Drafting and Design (CADD)
- Electromechanical Technology
- Manufacturing Technology

Tourism, Hospitality and Guest Service Management:

- Baking
- Culinary Arts
- Retail Management and Entrepreneurship
- Tourism, Hospitality and Guest Service Management

Transportation Cluster:

- Automotive Technology

One of the important factors of the CTHSS as a choice program is that it offers students opportunities that are not readily available to students attending a comprehensive high school, i.e. education in a trade. The original purpose of the CTHSS was to train students in a trade for immediate employment upon graduation. While this is still a viable route for some students to take, the CTHSS prepares students for the opportunity to continue their education in a higher education setting as well. Today's economy requires a college degree for many more jobs. Students, should they choose to matriculate into higher education, are well prepared with the CTHSS curriculum. And, as the Task Force heard from many students, they are better prepared to pay for college with the higher paying jobs they can get with their trade education. Also, according to CTC, CTHSS students are more college ready and perform slightly better in college than their counterparts at comprehensive high schools. Refer to **Appendix E** for CTHSS CAPT results compared with the local districts.

While the administration at the CTHSS has worked hard with the administrations at the CTCs and Connecticut State Universities (CSUs), to build articulation agreements that allow for a better transition from the CTHSS to a CTC or CSU campus, there are ways that these agreements could be improved. Currently, articulation agreements are made school by school, course by course and sometimes even text book by text book. Each college and each course within a college has their own requirements. This is a cumbersome and time-consuming process that could be improved upon by making these articulation agreements on a system by system basis. The task force strongly encourages faculty, academic standards' committees, and college administrators to work diligently to develop programs on a statewide basis, in order to accomplish this goal. Refer to **Appendix F** for current articulation agreements between CTHSS and CTCs.

Maintaining or Transferring the Adult Programs Offered at the CTHSS

The CTHSS offers the following full-time adult education programs:

- Licensed Practical Nurse (LPN)
- Surgical Technology
- Dental Assistant
- Medical Assistant
- Certified Nurse Aide (CNA)
- Aviation Maintenance

The CTHSS also offers adult students the opportunity to fill available slots in a variety of trades offered at the Bristol Technical Education Center, which include the following trades:

- Automotive Technology
- Culinary Arts
- Electronics Technology
- Heating, Ventilation and Air Conditioning (HVAC)
- Manufacturing Technology
- Welding and Metal Fabrication

Completion of the programs offers students a variety of opportunities to be immediately employable or they can go on to higher education (i.e. LPN students are immediately employable or can further their education and become RNs).

Enrollment

Enrollment in the full-time adult programs was 433 as of October 1, 2011:

Adult Education Program	Number of locations	Locations	Total Enrollment
LPN	6	Bridgeport, Hamden, Hartford, Middletown, Norwich, and Waterbury	203
Aviation	2	Hartford and Stratford	86
Surgical Tech.	2	Hamden and Hartford	34
Dental Assisting	2	Hartford and Windham	29
Medical Assistant	1	Milford	13
Certified Nurse Aide	2	Bridgeport and Hamden	16
Post Graduates - Bristol	1	Bristol	52
Totals	16		433

In terms of the full-time health care services programs (LPN, Dental, Medical Assistant and C.N.A.) that provide classroom and clinical experiences to students – enrollment is predominately females of limited financial means attempting to secure a career in order to eliminate reliance on government assistance.

The breakdown by gender in the health care services programs (as of November 8, 2011):

Program	Females	Males
LPN	171 (86%)	29 (14%)
Dental	12 (93%)	2 (7%)
Med. Asst.	12 (100%)	0 (0%)
C.N.A.	12 (80%)	3 (20%)

The tuition rates in the LPN program were increased in January, 2011 from \$4,150 to \$10,250. This increase combined with the limited ability to secure educational financing, such as federal and private loans and scholarships, has resulted in a continued increase in the number of withdrawals from the program. Since the students are predominately people of limited financial means, if they are unable to secure financial assistance and keep up with the flexible payment plans that CTHSS can establish for them, they withdraw from the program.

Funding for Adult Education Programs

In each of these programs, tuition and fees are charged to the adult students and the resulting revenue is deposited into a revolving fund (the extension fund). The revenue is then used to cover a portion of the operating costs of the adult education program including payroll, educational supplies and equipment, and other overhead costs. The remaining costs of the

programs are borne by the state, which in FY2011 was a general fund cost of approximately \$2.7 million.

Tuition Rates in the CTHSS

The following State Board of Education approved tuition rates are in effect for the 2011-12 school year:

Program	Tuition Rate	Registration Fees
LPN	\$10,200 over 18 months	\$50.00
Aviation	\$6,200 over 2 years	\$50.00
Other adult programs	\$1,650 per semester	\$50.00
C.N.A.	\$1,350 per semester	\$50.00
Apprentice*	\$100 per course	\$50.00
Extension	\$275 per course	\$50.00

*Limited by state statute to \$100 of which employers are responsible for a minimum of 50% of the tuition cost.

Tuition Rate Comparison

There are a number of private occupational schools in Connecticut that offer similar programs but usually at a significantly higher tuition rate than offered in the CTHSS.

Program	CTHSS Tuition Rate	Alternative Provider Rates
LPN	\$10,200	approx. \$24,500 (Stone Academy) (2010 rates)* approx. \$35,000 (Lincoln Tech) (2012 rates)* approx. \$37,000 (Porter and Chester) (2012 rates)*
Aviation	\$6,200	\$26,500 (National Aviation Academy) (2010 rates)*

*actual tuition rates in the occupational schools are difficult to determine without a visit to the school;

Apprentice Program

The district annually provides educational training to approximately 2,000 registered apprentices throughout the state. However, as further explained below, the program continues to operate at a loss despite continued consolidation efforts.

Per Section 10-95e of the Connecticut General Statutes, the tuition rate, which was last modified in 1992, for apprentice courses is limited to \$100 per course and the employer is required to pay at least 50 percent of the tuition costs. This is not sufficient to run the apprenticeship programs; therefore, due to the continued operating deficit generated by the apprenticeship program, the district has continued to consolidate the number of locations offering a program. The number of locations offering apprenticeship courses in the CTHSS has declined from fourteen (14) in FY 2009 to the current level of six (6) for FY 2012. CTHSS staff anticipates the operating deficit for the apprentice program will exceed \$100,000 for FY2012.

Recommendations

Operational Entity: The State should remain the operational entity of the CTHSS and the operation of the system should not be transferred to local boards of education, regional educational services centers or community technical colleges. Task force members feel strongly that the benefits of having a centralized system outweigh the benefits of transferring operations to another entity.

Planning and Development: The State Department of Education should develop CTHSS's strategic plan in conjunction with the Departments of Labor, Economic and Community Development, Higher Education and specific business and industry consortiums to drive both secondary and adult trade technology programming, staffing qualifications, equipment standards, technology integration and facilities upgrades.

Better coordination and collaboration with various stakeholders will be key in improving the CTHSS. The Department of Labor (DOL) can work more closely with the CTHSS to determine better if the trade programs offered to students align with DOL's occupational workforce projections.

The district should increase outreach efforts with business and industry, education groups, and think tanks, (i.e. manufacturing associations, allied health workforce development boards, the Connecticut Center for Advanced Technology and the like).

The CTHSS should also conduct graduation follow up surveys on a regular basis in order to inform the system on the planning and development of future trades. This can be a person and time intensive endeavor, so additional resources would be required.

Apprenticeship Program: Although the State Board of Education has approved the CTHSS' request to increase the apprentice tuition rate to \$275 per course, SDE's efforts to secure a legislative change to C.G.S. 10-95e have fallen short. The district has been pursuing an increase in the apprentice tuition rate for more than eight years. An increase in the tuition rate would help CTHSS maintain and probably expand the apprentice program to more schools, decreasing the amount of travel adult students have to attend a program at one of the six schools offering programs. An increase in the apprentice tuition rate will allow the program to operate without the use of general fund money.

Legislation should be pursued that would allow the district to set tuition rates within regulations similar to other programs operated by the CTHSS, rather than have the tuition rate outlined in statute. The Department of Labor should examine the apprenticeship program in terms of the ratios between students and instructors and how part-time apprentices are being counted.

Rethinking Education Delivery Systems: The CTHSS should explore the expansion of educational programming opportunities and leverage existing equipment and facilities. This could include expanding education access to its constituents, as well as targeted underserved populations (i.e. expanding time of day options as well as time of year). The CTHSS, in

collaboration with the unions representing CTHSS employees, should develop enhanced summer and evening opportunities in order to enhance opportunities to unemployed and under employed adults and for secondary students considering a technical school education. The CTHSS should establish partnerships with comprehensive high schools across the state to provide programs to students not enrolled in CTHSS with experiences in trade programs through evening and summer programs.

Marketing: The state should require better partnerships and cooperation between CTHSS and Magnet Schools, Local Education Agencies (LEAs) and other public schools. Public schools should clearly delineate for their students the opportunities available to them with school choice, including the CTHSS, on LEA Web sites and through school counselors in the middle schools. Marketing of the CTHSS as a dynamic educational opportunity should be enhanced.

Governance Structure: The state should establish a separate CTHSS board with 8 members, 4 appointed by the State Board of Education and 4 executives of Connecticut employers nominated by Regional Chambers of Commerce to the Commissioner who would recommend the candidates to the State Board of Education who in turn would select and appoint those members. The Superintendent would be accountable to the new CTHSS governing board. The new board should conduct standard setting exercises with global standards.

Global Standards and Local Access: The SDE should lead a process, in collaboration with aforementioned State Departments and partners, to place Connecticut's Technical High School system in a global context—benchmarking against international leaders in the field. It should also work to ensure access to a range of student populations—including struggling and vulnerable young people—while maintaining high standards, in a global context. Taken together, these are challenging objectives, but important to pursue.

More Efficient and Fiscally Accountable Operations: There are disconnects between the timing of the state's biennial and midterm budget approval process and the acceptance date for new students into the CTHSS. The prolonged budget approval process often results in the state budget being approved in June or later while the acceptance decisions are made in late winter/very early spring.

The size of a freshman class that can annually be enrolled in the district is limited by the budget capacity to serve those students. Capacity limitations include each school's instructional staffing levels and the size of the facility.

When student acceptance decisions are made, the district assumes its full complement of instructional positions will be appropriately filled by highly qualified and certified teachers prior to the start of the new school year. When instructional positions cannot be refilled prior to the start of the new school year, substitute instructors must be hired to staff the classrooms and trade/technology areas.

The state employee ethics laws should be reviewed and revised to allow state employees to use the CTHSS services. These services are conducted by the students in their trade for hands-on

experience and have the added benefit of providing revenue to the CTHSS that is used for programming.

Capital and Equipment Funding: Apart from the need to provide additional operating funds for infrastructure repairs, rather than remaining tied to the state bonding process, the district requires additional trade supply funding in order to increase the hands-on training opportunities for our students. In addition, the CTHSS would greatly benefit if stable funding levels were made available in the operating budget for the replacement of trade and academic equipment and for technology enhancements.

The physical conditions of these state schools differ widely across the system, with brand new facilities such as A.I. Prince and Howell Cheney and older facilities such as Eli Whitney and Windham. Funding is needed for these older facilities for basic maintenance to provide students with a safe learning environment until they are scheduled for renovation. Refer to **Appendix G** for the CTHSS facility renovation schedule.

Recommendations for Further Study in Other Arenas

Education Cost Sharing Group: The CTHSS statutorily has the same status as any LEA. Operationally, the CTHSS can and should seek to supplement state operating dollars with competitive grant funding. Viewed as a state agency, the CTHSS cannot compete for priority school district dollars or English Language Learners (ELL) grant funding as an example. The ECS task force should consider this with regard to its work on cost sharing structures.

Graduation Requirements Task Force: The CTHSS' unique mission and technical education component should be recognized as a compliant design. Waivers might be considered to recognize the technical aspects of each program as meeting Science, Technology, Engineering and Math (STEM), Advanced Placement (AP) and language requirements.

Community Technical Colleges:

Curricula Articulation: Articulation agreements (9-12) with the CTHSS should be delineated in a system to system manner.

Administrative Coordination: Discussions are currently underway to have the CTHSS utilize the existing resources at the CTCs to provide financial aid services, bursar services and the like for the students in the adult education programs at CTHSS. This will provide the adult students with better service since the CTHSS is currently not set up to provide these services to students. The task force urges the parties to work hard to overcome any financial, staffing, regulatory, collective bargaining and cross-system technical software issues in order to provide this coordination. This may also aid in strengthening the articulation agreements and coordination between systems.

Glossary of Acronyms

AP – Advanced Placement

CADD – Computer-Aided Drafting and Design

CAPT - Connecticut Academic Performance Test

CCAT – Connecticut Center for Advanced Technology

CCP – College Career Pathways

CNA – Certified Nurse Aide

CSU – Connecticut State University

CTC – Community Technical Colleges

CTHSS – Connecticut Technical High School System

DOL – Department of Labor

ECS – Education Cost Sharing Grant

ELL – English Language Learners

HVAC – Heating, Ventilation and Air Conditioning

LEA – Local Education Agency

LPN – Licensed Practical Nurse

RESC – Regional Educational Service Center

RN – Registered Nurse

SBE – State Board of Education

SDE – State Department of Education

STEM – Science, Technology, Engineering and Math

Appendix A

Connecticut Technical High School System 2011-12 Listed by Trade Cluster

	E. O'Brien, Ansonia	Bullard Havens, Bridgeport	Bristol T. E. C	Henry Abbott, Danbury	H. H. Ellis, Danielson	E. T. Grasso, Groton	Eli Whitney, Hamden	A. I. Prince, Hartford	Howell Cheney, Manchester	H.C. Wilcox, Meriden	Vinal, Middletown	Platt, Milford	Aviation School, Brainard	Aviation School, Stratford	E.C. Goodwin, New Britain	Norwich	J.M. Wright, Stamford (suspended)	Oliver Wolcott, Torrington	W. F. Kaynor, Waterbury	Windham	Number of Shops
Number of Secondary Shops per School	10	13	6	12	10	11	11	13	11	12	11	14	0	0	10	12	0	12	12	9	189
30 Trades / 189 shop locations (secondary only)																					
Tourism, Hospitality and Guest Services Management: 6 Trades / 37 Shop Locations																					
Baking		X																			1
Culinary Arts	X	X	X	X		X	X	X	X	X	X			X	X			X	X	X	16
Fashion Merchandising and Entrepreneurship		X						X											X		3
Hairdressing/Barbering	X	X		X	X	X	X	X		X	X	X			X	X		X	X		14
Marketing Management & Entrepreneurship							X									X					2
Tourism, Hospitality and Guest Services Management						X															1
Construction Cluster: 7 Trades / 62 Shop Locations																					
Architectural Technologies		X			X							X								X	4
Carpentry	X	X		X	X	X	X	X	X	X	X			X	X			X	X	X	16
Electrical	X	X		X	X	X	X	X	X	X	X			X	X			X	X	X	16
Heating, Ventilation and Air Conditioning	X		X	X					X	X	X	X			X	X				X	10
Masonry		X			X			X													3
Plumbing and Heating	X	X		X	X	X	X	X		X		X		X	X					X	12
Plumbing, Heating and Cooling																		X			1
Manufacturing Cluster: 5 Trades / 29 Shop Locations																					
Automated Manufacturing Technology							X														1
Computer Aided Drafting and Design	X			X		X	X		X		X	X		X	X			X	X		11
Electromechanical Technology										X	X										2
Manufacturing Technology	X		X	X	X		X		X	X	X	X		X				X	X	X	13
Welding and Metal Fabrication			X						X												2
Transportation Cluster: 3 Trades / 26 Shop Locations																					
Automotive Collision Repair and Refinishing				X	X	X		X			X	X						X	X		8
Automotive Technology	X	X	X	X	X	X	X	X	X	X	X	X		X	X			X	X	X	17
Diesel and Heavy Duty Equipment Repair								X													1
Computer Technologies Cluster: 4 Trades / 25 Shop Locations																					
Electronics Technology	X		X	X	X					X		X		X				X	X	X	10
Graphics Technology		X		X			X	X		X					X			X			7
Information Systems Technology		X				X		X	X	X	X	X									7
Pre-Electrical Engineering and Audio Visual Technology															X						1
Health Technologies Cluster: 3 Trades / 8 Shop Locations																					
Bioscience and Environmental Technology						X															1
Early Care and Education		X																			1
Health Technology						X			X					X			X	X	X		6
Arts, Audio/Visual Technology and Communications: 2 Trades / 2 Shop Locations																					
Media Production								X													1
Music Production and Technical Theatre							X														1
Adult only: 6 Trades / 15 Shop Locations																					
Aviation Maintenance Technician												X	X								2
Certified Nurse Assistant		X				X															2
Dental Assistant							X													X	2
Medical Assistant											X										1
Licensed Practical Nurse Program*		X				X	X			X				X				X			6
Surgical Technician						X	X														2

Appendix B - Scenario 1
CTHSS Closed and Students Absorbed by Sending Towns

DRG	Town Code	(A) Town	Number of Students	(B) NCEP	(C) NCEP x #	(D) # New	(E) ECS	(F) Additional ECS	Add'l Town Cost (C-F)
					CTHSS Students by	classrooms	per	aid to towns	
					Town of Residence	needed in each town	student	absorbing CTHSS students	
I	64	Hartford	759	17,524.99	13,301,467	37.95	8,767.00	6,654,152	6,647,315
I	15	Bridgeport	1050	13,125.15	13,781,408	52.5	7,810.11	8,200,618	5,580,790
I	93	New Haven	473	17,899.04	8,466,246	23.65	8,031.11	3,798,714	4,667,532
I	151	Waterbury	508	14,242.89	7,235,388	25.4	6,451.94	3,277,587	3,957,801
H	80	Meriden	564	12,340.68	6,960,144	28.2	5,818.33	3,281,538	3,678,605
H	34	Danbury	336	11,811.99	3,968,829	16.8	2,230.01	749,284	3,219,545
G	143	Torrington	340	13,431.36	4,566,662	17	5,002.02	1,700,685	2,865,977
I	89	New Britain	415	12,131.80	5,034,697	20.75	6,798.88	2,821,537	2,213,160
D	84	Milford	154	14,331.92	2,207,116	7.7	1,496.98	230,535	1,976,580
I	95	New London	237	13,699.12	3,246,691	11.85	6,623.10	1,569,675	1,677,017
G	77	Manchester	177	13,441.90	2,379,216	8.85	4,083.66	722,807	1,656,409
G	83	Middletown	161	13,144.08	2,116,197	8.05	3,118.21	502,032	1,614,165
I	163	Windham	234	13,975.60	3,270,290	11.7	7,130.57	1,668,554	1,601,736
H	156	West Haven	231	12,218.80	2,822,543	11.55	5,579.86	1,288,949	1,533,594
H	104	Norwich	203	13,398.27	2,719,849	10.15	5,870.47	1,191,706	1,528,143
D	148	Wallingford	145	12,837.86	1,861,490	7.25	3,134.93	454,565	1,406,925
G	138	Stratford	143	12,472.94	1,783,630	7.15	2,717.23	388,563	1,395,067
G	59	Groton	141	14,175.81	1,998,789	7.05	4,873.85	687,213	1,311,576
G	88	Naugatuck	198	12,230.08	2,421,556	9.9	5,719.02	1,132,367	1,289,189
G	69	Killingly	154	13,860.21	2,134,472	7.7	5,840.19	899,389	1,235,084
H	43	East Hartford	197	11,412.69	2,248,300	9.85	5,207.74	1,025,925	1,222,375
D	126	Shelton	96	11,668.99	1,120,223	4.8	892.94	85,722	1,034,501
F	86	Montville	119	12,849.79	1,529,125	5.95	4,537.57	539,971	989,154
G	109	Plainfield	136	12,902.65	1,754,760	6.8	5,967.28	811,550	943,211
G	17	Bristol	122	12,156.39	1,483,080	6.1	4,742.06	578,532	904,548
H	2	Ansonia	161	10,520.88	1,693,862	8.05	5,241.22	843,837	850,025
G	62	Hamden	69	14,926.49	1,029,928	3.45	3,348.07	231,017	798,911
D	131	Southington	86	12,119.33	1,042,262	4.3	2,906.21	249,934	792,329
D	96	New Milford	84	11,490.55	965,206	4.2	2,499.90	209,991	755,215
E	32	Coventry	94	12,317.51	1,157,846	4.7	4,454.72	418,744	739,102
F	111	Plymouth	97	11,633.43	1,128,443	4.85	5,013.44	486,304	642,139
F	134	Stafford	79	13,269.96	1,048,327	3.95	5,221.28	412,481	635,846
D	152	Waterford	49	12,726.62	623,604	2.45	445.97	21,853	601,752
H	37	Derby	78	11,772.79	918,278	3.9	4,364.63	340,441	577,837
D	153	Watertown	73	11,198.55	817,494	3.65	3,601.01	262,874	554,620
D	72	Ledyard	65	12,899.26	838,452	3.25	4,632.34	301,102	537,350
F	124	Seymour	68	11,694.32	795,214	3.4	3,899.28	265,151	530,063
G	162	Winchester	65	13,662.12	888,038	3.25	5,525.38	359,150	528,888
F	141	Thompson	81	12,088.99	979,208	4.05	5,666.18	458,961	520,248
D	42	East Hampton	58	12,683.35	735,634	2.9	3,722.53	215,907	519,727
G	44	East Haven	64	13,001.11	832,071	3.2	4,933.81	315,764	516,307
B	97	Newtown	45	12,087.13	543,921	2.25	778.72	35,043	508,878
B	18	Brookfield	42	11,582.87	486,481	2.1	511.41	21,479	465,001
D	9	Bethel	42	13,192.16	554,071	2.1	2,664.82	111,922	442,148
E	21	Canaan	23	19,702.49	453,157	1.15	1,522.01	35,006	418,151

Appendix B - Scenario 1
CTHSS Closed and Students Absorbed by Sending Towns

DRG	Town		Number of Students	(B) NCEP	(C) NCEP x #	(D) # New	(E) ECS per student	(F) Additional ECS	Add'l Town Cost (C-F)
	Code	(A) Town			CTHSS Students by Town of Residence	classrooms needed in each town		aid to towns absorbing CTHSS students	
B	57	Griswold	59	12,540.23	739,874	2.95	5,657.87	333,815	406,059
F	166	Wolcott	65	10,688.03	694,722	3.25	4,474.12	290,818	403,904
B	91	New Fairfield	39	11,700.52	456,320	1.95	1,478.95	57,679	398,641
E	71	Lebanon	51	11,901.43	606,973	2.55	4,192.97	213,842	393,131
F	49	Enfield	54	11,845.57	639,661	2.7	4,566.37	246,584	393,077
F	110	Plainville	43	13,102.48	563,407	2.15	3,981.90	171,222	392,185
C	61	Haddam	33	13,109.91	432,627	1.65	1,269.20	41,884	390,743
G	11	Bloomfield	27	16,438.49	443,839	1.35	2,138.13	57,730	386,110
E	114	Preston	33	15,708.65	518,385	1.65	4,555.99	150,348	368,038
D	137	Stonington	31	12,405.91	384,583	1.55	803.04	24,894	359,689
C	30	Columbia	34	13,765.08	468,013	1.7	3,204.17	108,942	359,071
E	123	Scotland	28	18,507.09	518,199	1.4	5,803.83	162,507	355,691
E	140	Thomaston	49	11,400.79	558,639	2.45	4,377.17	214,481	344,157
F	136	Sterling	49	11,430.84	560,111	2.45	4,747.22	232,614	327,498
B	132	South Windsor	32	12,774.04	408,769	1.6	2,674.44	85,582	323,187
G	146	Vernon	41	12,523.20	513,451	2.05	4,675.17	191,682	321,769
F	22	Canterbury	41	13,917.01	570,597	2.05	6,145.49	251,965	318,632
E	24	Chaplin	26	18,507.09	481,184	1.3	6,510.74	169,279	311,905
D	28	Colchester	46	10,929.93	502,777	2.3	4,166.51	191,659	311,117
G	116	Putnam	38	14,443.90	548,868	1.9	6,513.02	247,495	301,373
B	144	Trumbull	24	12,599.20	302,381	1.2	438.53	10,525	291,856
D	101	North Haven	26	11,940.77	310,460	1.3	849.71	22,092	288,368
D	164	Windsor	23	14,371.34	330,541	1.15	2,713.39	62,408	268,133
C	82	Middlefield	23	14,129.54	324,979	1.15	2,844.89	65,432	259,547
E	99	North Branford	31	11,674.67	361,915	1.55	3,336.38	103,428	258,487
D	33	Cromwell	25	12,415.95	310,399	1.25	2,103.90	52,598	257,801
B	25	Cheshire	26	11,774.63	306,140	1.3	1,881.07	48,908	257,232
E	113	Portland	28	11,958.90	334,849	1.4	2,903.67	81,303	253,546
D	119	Rocky Hill	23	12,170.08	279,912	1.15	1,254.98	28,865	251,047
E	115	Prospect	27	12,541.81	338,629	1.35	3,379.01	91,233	247,396
B	130	Southbury	21	12,463.99	261,744	1.05	755.02	15,855	245,888
F	133	Sprague	32	13,521.11	432,676	1.6	5,854.42	187,341	245,334
C	108	Oxford	26	11,240.08	292,242	1.3	2,057.07	53,484	238,758
C	38	Durham	21	14,129.54	296,720	1.05	2,883.38	60,551	236,169
D	7	Berlin	22	12,503.29	275,072	1.1	1,916.36	42,160	232,912
E	73	Lisbon	32	12,204.53	390,545	1.6	5,145.00	164,640	225,905
D	94	Newington	21	13,418.00	281,778	1.05	2,804.77	58,900	222,878
E	19	Brooklyn	31	12,387.32	384,007	1.55	5,315.05	164,767	219,240
C	78	Mansfield	23	14,440.27	332,126	1.15	5,146.27	118,364	213,762
E	41	East Haddam	21	12,749.92	267,748	1.05	2,622.16	55,065	212,683
D	27	Clinton	18	14,679.69	264,234	0	3,124.68	56,244	207,990
E	13	Bozrah	19	13,704.80	260,391	0	3,169.74	60,225	200,166
D	159	Wethersfield	18	13,071.11	235,280	0	2,021.23	36,382	198,898
B	60	Guilford	16	13,240.00	211,840	0	819.32	13,109	198,731
E	53	Franklin	19	13,517.63	256,835	0	3,107.10	59,035	197,800

Appendix B - Scenario 1
CTHSS Closed and Students Absorbed by Sending Towns

DRG	Town Code	(A) Town	Number of Students	(B) NCEP	(C) NCEP x # CTHSS Students by Town of Residence	(D) # New classrooms needed in each town	(E) ECS per student	(F) Additional ECS aid to towns absorbing CTHSS students	Add'l Town Cost (C-F)
E	6	Beacon Falls	22	12,541.81	275,920	1.1	3,896.47	85,722	190,198
F	165	Windsor Locks	15	15,023.52	225,353	0	2,401.57	36,024	189,329
D	14	Branford	14	13,393.47	187,509	0	493.01	6,902	180,606
E	55	Goshen	12	15,299.80	183,598	0	504.15	6,050	177,548
F	147	Voluntown	21	14,554.33	305,641	1.05	6,112.30	128,358	177,283
C	66	Harwinton	21	11,344.85	238,242	1.05	2,915.58	61,227	177,015
E	3	Ashford	20	14,440.27	288,805	1	5,591.85	111,837	176,968
C	67	Hebron	21	11,669.51	245,060	1.05	3,244.95	68,144	176,916
E	160	Willington	17	14,440.27	245,485	0	4,499.45	76,491	168,994
C	5	Barkhamsted	15	13,507.67	202,615	0	2,405.18	36,078	166,537
E	63	Hampton	13	18,507.09	240,592	0	6,014.04	78,182	162,410
C	121	Salem	17	13,021.45	221,365	0	4,047.07	68,800	152,564
D	45	East Lyme	14	13,096.84	183,356	0	2,454.14	34,358	148,998
E	169	Woodstock	20	11,190.47	223,809	1	3,910.43	78,209	145,601
B	155	West Hartford	13	12,475.80	162,185	0	1,558.65	20,262	141,923
E	74	Litchfield	12	12,970.06	155,641	0	1,200.99	14,412	141,229
E	102	North Stonington	13	14,360.25	186,683	0	3,558.22	46,257	140,426
C	150	Washington	7	19,781.50	138,471	0	562.73	3,939	134,531
C	48	Ellington	19	10,544.96	200,354	0	3,524.57	66,967	133,387
B	167	Woodbridge	10	13,652.92	136,529	0	471.63	4,716	131,813
C	92	New Hartford	12	13,507.67	162,092	0	2,730.72	32,769	129,323
C	12	Bolton	12	14,251.32	171,016	0	3,609.19	43,310	127,706
C	20	Burlington	14	11,344.85	158,828	0	2,291.95	32,087	126,741
C	142	Tolland	17	10,605.57	180,295	0	3,319.65	56,434	123,861
E	36	Deep River	10	14,801.84	148,018	0	2,577.53	25,775	122,243
F	47	East Windsor	12	12,908.80	154,906	0	3,714.54	44,574	110,331
E	29	Colebrook	9	13,507.67	121,569	0	1,941.20	17,471	104,098
C	70	Killingworth	9	13,109.91	117,989	0	1,938.50	17,446	100,543
B	85	Monroe	9	12,812.64	115,314	0	1,660.59	14,945	100,368
B	51	Fairfield	7	14,457.58	101,203	0	354.94	2,485	98,718
C	105	Old Lyme	6	16,580.35	99,482	0	500.38	3,002	96,480
B	81	Middlebury	8	12,463.99	99,712	0	498.95	3,992	95,720
C	10	Bethlehem	8	14,314.13	114,513	0	2,651.46	21,212	93,301
C	129	Somers	11	11,806.87	129,876	0	3,621.31	39,834	90,041
B	52	Farmington	7	12,619.51	88,337	0	388.83	2,722	85,615
C	79	Marlborough	9	11,669.51	105,026	0	2,562.66	23,064	81,962
E	26	Chester	6	14,801.84	88,811	0	1,159.73	6,958	81,853
E	154	Westbrook	6	13,861.94	83,172	0	431.94	2,592	80,580
C	1	Andover	10	11,669.51	116,695	0	3,711.73	37,117	79,578
E	125	Sharon	4	19,702.49	78,810	0	497.01	1,988	76,822
E	39	Eastford	7	15,560.11	108,921	0	4,665.88	32,661	76,260
E	149	Warren	5	15,299.80	76,499	0	566.79	2,834	73,665
C	127	Sherman	6	12,578.16	75,469	0	390.93	2,346	73,123
C	112	Pomfret	8	12,890.87	103,127	0	4,008.58	32,069	71,058
B	54	Glastonbury	6	12,071.63	72,430	0	886.11	5,317	67,113

Appendix B - Scenario 1
CTHSS Closed and Students Absorbed by Sending Towns

DRG	Town		Number of Students	(B) NCEP	(C) NCEP x #	(D) # New	(E) ECS	(F) Additional ECS	Add'l Town Cost (C-F)
	Code	(A) Town			CTHSS Students by Town of Residence	classrooms needed in each town	per student	aid to towns absorbing CTHSS students	
A	117	Redding	4	16,501.13	66,005	0	392.45	1,570	64,435
D	106	Old Saybrook	5	13,153.78	65,769	0	407.72	2,039	63,730
C	120	Roxbury	3	19,781.50	59,345	0	540.45	1,621	57,723
B	4	Avon	5	11,675.09	58,375	0	340.85	1,704	56,671
C	168	Woodbury	4	14,314.13	57,257	0	618.26	2,473	54,783
B	107	Orange	4	13,652.92	54,612	0	419.14	1,677	52,935
E	65	Hartland	5	13,994.61	69,973	0	4,260.64	21,303	48,670
B	128	Simsbury	4	12,861.66	51,447	0	1,089.65	4,359	47,088
H	103	Norwalk	3	15,595.54	46,787	0	922.53	2,768	44,019
E	145	Union	4	12,826.50	51,306	0	2,174.21	8,697	42,609
A	118	Ridgefield	3	13,869.74	41,609	0	374.08	1,122	40,487
E	122	Salisbury	2	19,702.49	39,405	0	462.37	925	38,480
C	31	Cornwall	2	19,702.49	39,405	0	468.31	937	38,468
E	68	Kent	2	19,702.49	39,405	0	471.45	943	38,462
B	56	Granby	4	11,805.33	47,221	0	2,388.32	9,553	37,668
E	98	Norfolk	3	13,507.67	40,523	0	1,510.07	4,530	35,993
C	8	Bethany	3	13,652.92	40,959	0	1,953.51	5,861	35,098
C	23	Canton	3	12,582.59	37,748	0	1,867.37	5,602	32,146
H	135	Stamford	2	16,134.40	32,269	0	533.16	1,066	31,202
C	139	Suffield	3	12,102.90	36,309	0	2,503.27	7,510	28,799
B	76	Madison	2	12,488.34	24,977	0	420.60	841	24,135
C	75	Lyme	1	16,580.35	16,580	0	461.77	462	16,119
A	161	Wilton	1	15,692.19	15,692	0	357.11	357	15,335
F	100	North Canaan	1	19,702.49	19,702	0	4,533.58	4,534	15,169
C	50	Essex	1	14,801.84	14,802	0	395.11	395	14,407
E	87	Morris	1	15,299.80	15,300	0	1,832.29	1,832	13,468
Totals			10,740		144,400,207	508		56,649,683	87,750,523
					# New				Add'l Town
DRG			Avg NCEP	Total Add'l Cost	Classrooms	Avg PP ECS	Add'l ECS	Cost	
A			15,354.35	123,306	0	374.55	3,049	120,257	
B			12,561.91	4,729,811	14	1,213.03	694,568	4,035,243	
C			13,704.12	5,229,624	10	2,320.32	1,119,362	4,110,262	
D			12,726.03	14,377,222	53	2,222.22	2,763,907	11,613,315	
E			14,586.22	9,651,547	27	3,114.51	2,769,572	6,881,975	
F			13,215.38	9,647,092	37	4,724.62	3,756,901	5,890,190	
G			13,520.72	24,894,559	94	4,613.14	8,825,974	16,068,584	
H			12,800.67	21,410,858	89	3,974.22	8,725,513	12,685,345	
I			14,656.94	54,336,188	184	7,373.25	27,990,837	26,345,351	
Totals				144,400,207	508		56,649,683	87,750,523	

**Appendix C - Scenario 2
Cost to Districts to Continue the Technical High Schools**

School	Town	# FT Staff	FY11 Expenditures	Fringes	Total Cost	Cost per pupil	Current ECS Grant Per Pupil	# Students		Add'l ECS Funding from State	Difference between Cost and ECS
								from Resident Town			
A. I. Prince	Hartford	97	11,298,931	1,789,751	13,088,682	17,452	8,767	565		4,953,355	8,135,327
E.C. Goodwin	New Britain	83	9,485,907	1,502,568	10,988,474	17,781	6,799	386		2,624,414	8,364,060
Howell Cheney	Manchester	80	8,384,208	1,328,059	9,712,266	14,453	4,084	138		563,592	9,148,674
Vinal	Middletown	81	8,779,192	1,390,624	10,169,816	16,782	3,118	161		501,998	9,667,818
Bullard Havens	Bridgeport	100	11,083,833	1,755,679	12,839,513	14,724	7,810	833		6,505,730	6,333,783
Eli Whitney	Hamden	83	8,986,452	1,423,454	10,409,906	20,058	3,348	45		150,660	10,259,246
W.F. Kaynor	Waterbury	87	10,865,589	1,721,109	12,586,698	16,561	6,452	502		3,238,904	9,347,794
Windham	Windham	71	7,344,734	1,163,406	8,508,140	14,927	7,131	222		1,583,082	6,925,058
H.C. Wilcox	Meriden	88	9,449,638	1,496,823	10,946,461	14,235	5,818	531		3,089,358	7,857,103
Henry Abbott	Danbury	85	8,678,237	1,374,633	10,052,870	15,732	2,230	336		749,280	9,303,590
Oliver Wolcott	Torrington	83	8,571,478	1,357,722	9,929,200	14,909	5,002	320		1,600,640	8,328,560
Platt	Milford	98	9,531,723	1,509,825	11,041,547	12,448	1,497	148		221,556	10,819,991
Bristol TEC	Bristol	14	2,297,711	363,957	2,661,668	26,353	4,742	29		137,518	2,524,150
Emmett O'Brien	Ansonia	67	7,284,128	1,153,806	8,437,934	15,454	5,241	123		644,643	7,793,291
Grasso Southeastern	Groton	83	8,511,622	1,348,241	9,859,863	17,298	4,874	140		682,360	9,177,503
H. H. Ellis	Danielson	69	7,359,208	1,165,698	8,524,906	15,816	5,840	154		899,360	7,625,546
Norwich	Norwich	79	8,545,919	1,353,674	9,899,593	15,068	5,870	171		1,003,770	8,895,823
			146,458,511	23,199,028	169,657,539			4,804		29,150,220	140,507,319

Bristol TEC is only part time program

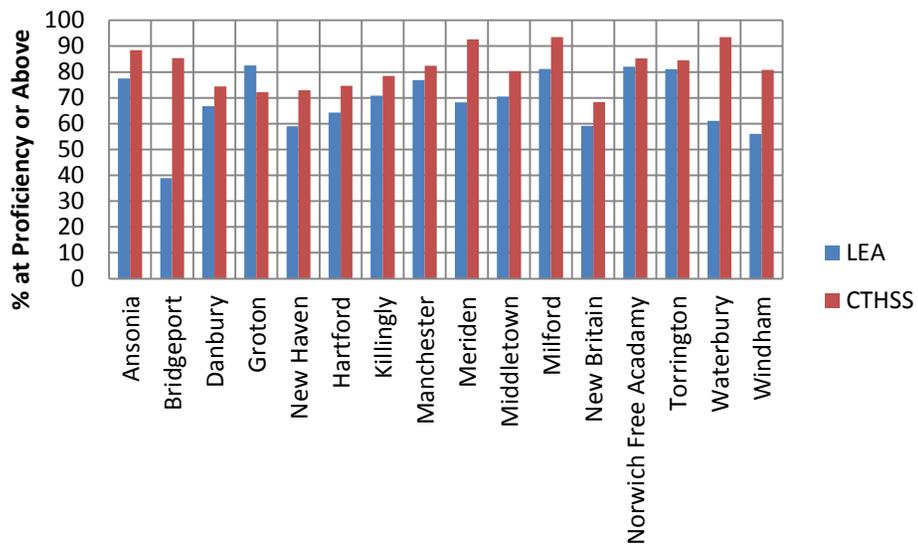
PS is approx 88% of total budget and fringes are roughly 28% of salary (does not include pension).

**Appendix D - Scenario 3
CTHSS Run with Magnet-Like Grants**

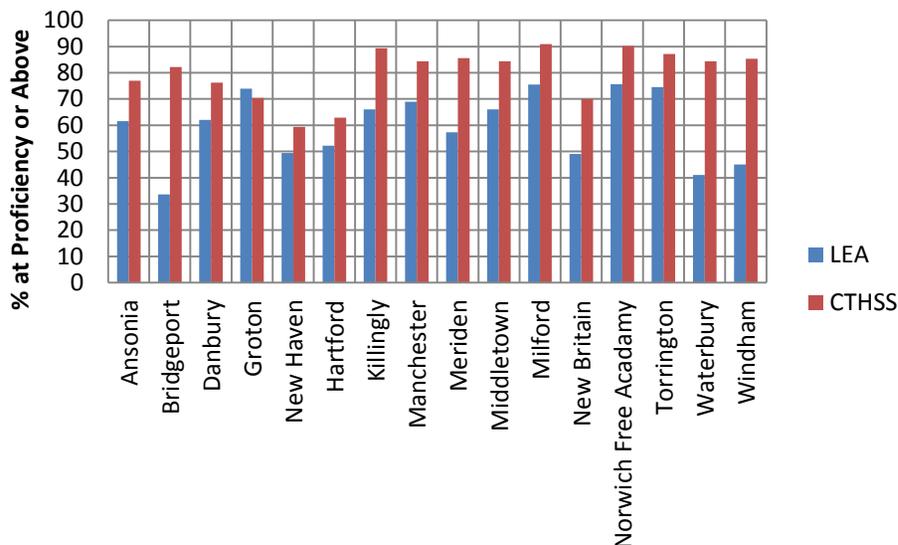
		FY12	FY2013			
		Number	In District	Out District	Percent	Grant
Town	School	Students	Students	Students	In District	Calculation
Ansonia	Emmett O'Brien	546	123	423	22.53%	\$3,215,790
Bridgeport	Bullard Havens	872	833	39	95.53%	\$2,761,470
Danbury	Henry Abbott	639	0	639	0.00%	\$4,300,470
Groton	ET Grasso	570	0	570	0.00%	\$3,836,100
Hamden	Eli Whitney	519	1	518	0.19%	\$3,489,140
Hartford	Al Prince (Sheff)	750	0	750	0.00%	\$9,790,500
Killingly	HH Ellis	539	0	539	0.00%	\$3,627,470
Manchester	Cheney (Sheff)	672	138	534	20.54%	\$6,970,836
Meriden	Wilcox	769	531	238	69.05%	\$3,194,740
Middletown	Vinal (Sheff)	606	161	445	26.57%	\$5,809,030
Milford	Platt	887	148	739	16.69%	\$5,417,470
New Britain	EC Goodwin (Sheff)	618	386	232	62.46%	\$3,028,528
Norwich	Norwich Tech	657	171	486	26.03%	\$3,783,780
Torrington	Oliver Wolcott	666	320	346	48.05%	\$3,288,580
Waterbury	Kaynor	760	502	258	66.05%	\$3,242,340
Windham	Windham Tech	570	0	570	0.00%	\$3,836,100
Totals		10,640	3,314	7,326		\$69,592,344
Transportation						\$12,374,500
Total Magnet School Grant						\$81,966,844
Additional ECS Grant						\$56,649,683
Total State Funds						\$138,616,527
Cost of Running Technical High Schools						\$169,657,539
Difference that would need to be made up by participating towns						-\$31,041,011
Per Student Magnet School Grant:						
		In District Student	Out of District Student			
Towns Outside Sheff Region		\$3,000	\$6,730			
Sheff Region		\$0	\$13,054			

Appendix E

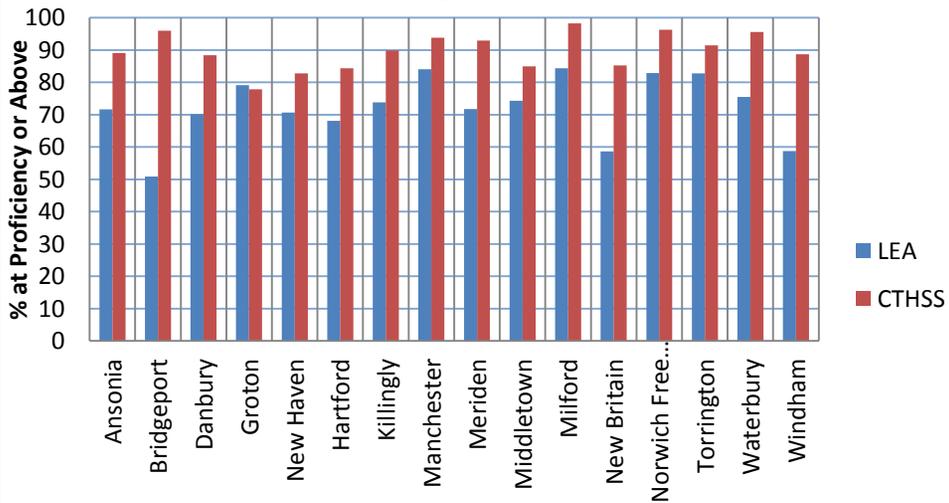
LEA vs CTHSS Reading-CAPT 2010



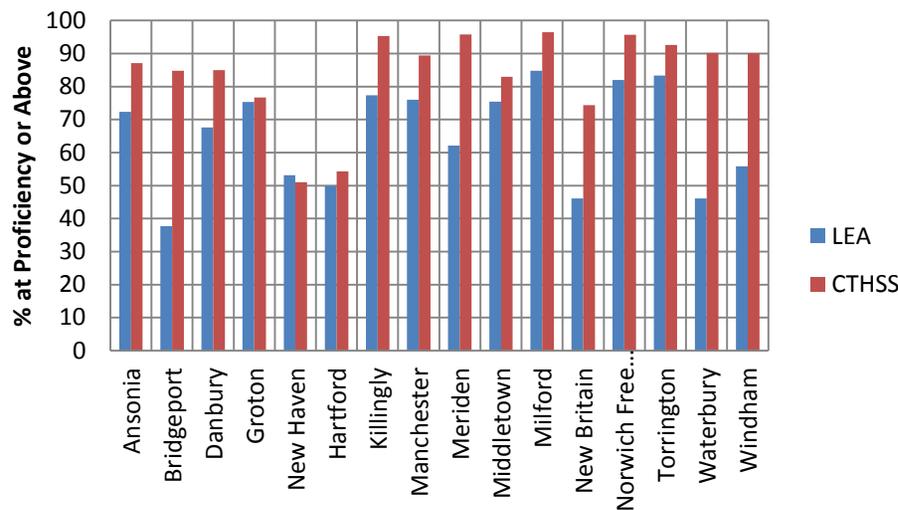
Mathematics- CAPT 2010



LEA vs CTHSS Writing -CAPT 2010



LEA vs CTHSS Science-CAPT 2010



Appendix F

Connecticut Technical High Schools (CTHS) Transfer and Articulation Agreements 2011-12

Transfer/ Articulation Program	College Career Pathways	Memorandum of Understanding	Advanced Technology	Freshman Advanced Study Track	College of Technologies
With Whom?	Capital Community College (CC) Gateway CC Housatonic CC Manchester CC Quinebaug Valley CC Three Rivers CC	Middlesex CC	New England Institute of Technology (NEIT), Rhode Island	Johnson & Wales (J & W), Rhode Island	University of Northwestern Ohio
Why established?	Legislation-Carl D. Perkins Vocational and Applied Technology Act of 1990/ Federal Grant funded. Opportunity for students to earn college credit while in high school.	Advanced placement opportunity.	Opportunity for advanced standing at college.	Opportunity for advanced standing at college.	Opportunity for advanced standing at college.
Who established?	CC deans & faculty with CTHS central office & instructors.	CC Program coordinator and CTHS Consultant	College deans & faculty with CTHS central office & instructors.	College deans and faculty with CTHS central office & instructors.	Program coordinator and CTHS Consultant
Who signed?	CC President, CTHS Superintendent, and CTHS School Principal.	CC Program Coordinator CC Division Chair CTHS Consultant	College Vice-President and CTHS Superintendent.	College Vice-President, CTHS Superintendent and School Principal.	Vice President for Academic Affairs and CTHS Superintendent
Which students are eligible?	11 th & 12 th grade students in articulated programs who meet G.P.A. (78 or higher) eligibility.	CTHS Manufacturing technology graduates who have earned NIMS credentials and/or received a minimum score of 70 on comprehensive exam.	CTHS graduates with a B average.	CTHS graduates with a B average.	CTHS Graduates with a B average.
How many credits?	14 credits maximum upon graduation from CTHS. No cost to student.	11 credits maximum upon enrollment to Middlesex CC. No cost to student.	3 to 20 quarter credits depending on the program upon enrollment in NEIT. No cost to student.	6 to 9 quarter credits depending on the program upon enrollment in J & W. No cost to student.	6 credits- HVAC 12 credits- Automotive No cost to students.
What Courses?	Eligible for college credit in one trade course and Oral Communication, Algebra II and an 11 th or 12 th grade science course.	Manufacturing courses.	Trade/technology course(s)	Trade/technology course(s)	Trade/technology courses

Appendix F

Connecticut Technical High Schools (CTHS) Transfer and Articulation Agreements 2011-12

Transfer/ Articulation Program	College Career Pathways	Memorandum of Understanding	Advanced Technology	Freshman Advanced Study Track	College of Technologies
Which programs?	<ol style="list-style-type: none"> 1. Architectural Technologies 2. Automated Manufacturing 3. Automotive Technology 4. Baking 5. Bioscience and Environmental Technology 6. Carpentry 7. Computer-Aided Drafting and Design 8. Culinary Arts 9. Electrical 10. Electronics 11. Electromechanical 12. Health Technology 13. Tourism, Hospitality and Guest Services Management 14. Information Systems Technology 15. Manufacturing Technology 16. Pre-Electrical Engineering and Audiovisual Technology 17. Retail Management and Entrepreneurship. <p>Trade/Technology course articulation only: Early Care and Education</p> <p>Elective course:</p>	<p>Manufacturing Technology</p>	<ol style="list-style-type: none"> 1. Architectural Technologies 2. Automotive Technology 3. Automotive Collision 4. Computer-Aided Drafting and Design 5. Carpentry 6. Electronics 7. Electrical 8. Heating, Ventilation, and Air Conditioning 	<ol style="list-style-type: none"> 1. Culinary Arts 2. Tourism, Hospitality and Guest Services 	<ol style="list-style-type: none"> 1. NATEF certified automotive programs (Whitney, Platt, Norwich, Ellis, Windham and Abbott) 2. HVAC

Appendix F

Connecticut Technical High Schools (CTHS) Transfer and Articulation Agreements 2011-12

Transfer/ Articulation Program	College Career Pathways	Memorandum of Understanding	Advanced Technology	Freshman Advanced Study Track	College of Technologies
	Computer Applications course				
Review Date	Yearly		As needed	Yearly	As needed
Review Process	Curriculum review and alignment. Site visits.		Curriculum review and alignment. Site visits.	Curriculum review and alignment. Site visits.	Curriculum review.

Appendix G

CT Technical High School System Task Force

What is the status of the CTHSS' Long-Range Strategic Education and Physical Plant Master Plan?

Thus far, the State of Connecticut has granted more than \$400 million dollars for new construction and renovations to existing space in seven (7) of the twenty (20) facilities in the Connecticut Technical High School System. The chart below provides additional details for each of these projects:

School	Description of Work	Latest Legislative Authorization	Status
Henry Abbott – Danbury	Provided approximately 94,197 square feet of new educational facilities plus renovations of approximately 85,716 square feet. Also included reconstruction of athletic fields, parking lots and roadways.	\$62.9M	Completed August 2008
CT Aero – Hartford	Provided approximately 35,000 square feet of new educational facilities including a new aviation hanger, classrooms, and administrative offices. Also included construction of parking lots and roadways.	\$10.0M	Completed January 2009
E.C. Goodwin – New Britain	Provided approximately 54,269 square feet of new educational facilities plus renovations of approximately 176,944 square feet. Also included reconstruction of athletic fields, parking lots and roadways.	\$61.6M	Completed August 2009
W.F. Kaynor – Waterbury	Provided approximately 87,577 square feet of new educational facilities plus renovations of approximately 127,918 square feet. Also included reconstruction of athletic fields, parking lots and roadways.	\$67.8M	Completed August 2009

CT Technical High School System Task Force

School	Description of Work	Latest Legislative Authorization	Status
A.I. Prince - Hartford	Provided approximately 43,204 square feet of new educational facilities plus renovations of approximately 228,054 square feet. This project also included the annexation and renovation of approximately 33,033 square feet of space which formerly housed the Capital Community Technical College. Also included the relocation and reconstruction of athletic fields, a running track, parking lots and roadways.	\$85.3M	Completed August 2009
Howell Cheney - Manchester	Provided approximately 87,577 square feet of new educational facilities plus renovations of approximately 127,918 square feet. Also included reconstruction of athletic fields, parking lots and roadways.	\$48M	Completed November 2009
Norwich – Norwich	Provided approximately 93,934 square feet of new educational facilities plus renovations of approximately 99,891 located at the former Mohegan Community College campus. Also included reconstruction of athletic fields, parking lots and roadways.	\$65.7M	Completed December 2009

In addition to these seven completed projects, the district has five (5) other projects at an approximate cost of \$427 million that have been legislative authorized and are undergoing the construction review and approval process. These five projects are explained in the chart on the following page.

CT Technical High School System Task Force

Nearly Shovel-Ready Projects

School	Description of Work	Latest Legislative Authorization	Status
H.H. Ellis – Danielson	This project will provide approximately 13,060 square feet of new educational facilities plus renovations of approximately 179,944 square feet. Also included will be reconstruction of athletic fields, parking lots and roadways.	\$83.8M	Pending signing of a construction contract in October 2011.
H.C. Wilcox - Meriden	This project will provide approximately 60,000 square feet of new educational facilities plus renovations of approximately 137,000 square feet. This project will also include new and expanded trade shops, a two-story academic wing, media center, a fitness center and site improvements.	\$77.6M	Bid opening for hiring of construction contractor scheduled for October 25, 2011; Estimated construction start date of January 2012; Estimated completion date of February 2015.
Eli Whitney – Hamden	This project will provide approximately 118,405 square feet of new educational facilities plus renovations of approximately 111,362 square feet. Also included will be reconstruction of athletic fields, parking lots and roadways.	\$98M	Estimated date for issuance of construction bids is April 2012; Estimated construction start date of August 2012;
Emmett O’Brien – Ansonia	This project will provide approximately 47,296 square feet of new educational facilities plus renovations of approximately 172,130 square feet.	\$77.7M	Estimated date for issuance of construction bids is Fall 2012;

CT Technical High School System Task Force

Nearly Shovel-Ready Projects

School	Description of Work	Latest Legislative Authorization	Status
J.M. Wright - Stamford	This project will provide renovations of approximately 196,667 square feet.	\$90.2M	Currently in the schematic design stage. Planned construction start date of 2012 with estimated opening date of September 2014.

The remaining eight (8) facilities included in the master plan are tentatively planned for fiscal years 2014 and beyond as further described below:

Remaining Projects

School	Planned new square footage	Planned renovations of existing square footage	Latest Legislative Authorization	Status
Ella T. Grasso – Groton	34,350	205,190	\$61.5M	Pending
Platt - Milford	18,281	212,229	\$57.9M	Pending
Bullard Havens – Bridgeport (A Building)	N/A	70,616	\$27.3M	Pending
Windham - Willimantic	7,170	177,045	\$42.1M	Pending
Oliver Wolcott - Torrington	30,001	161,549	\$44.1M	Pending
Vinal - Middletown	24,394	202,783	\$51.1M	Pending
Bristol Tech. Ed. Center - Bristol	24,000	50,000	\$25.8M	Pending
Stratford School for Aviation Maintenance Technicians - Stratford	3,000	43,000	\$11.2M	Pending