

West Hartford Public School District

Agenda Item: Approval of Plans for the new Charter Oak International Academy

Meeting Date: September 2, 2014

From: Andrew Morrow, Assistant Superintendent for Administration

Through: Tom Moore, Superintendent

Recommendation:

That the Board of Education approve the final plans and specifications dated August 29, 2014 for construction of the new Charter Oak International Academy.

Background:

Plans and specification for the new Charter Oak International Academy have been prepared and require Board approval prior to state review. The plans and specifications meet the requirements laid out in the educational specification for the new Charter Oak approved by Board on June 4, 2013 (attached). The current cost estimate for the building is within the available \$45 million appropriation. The plans will be submitted to the State of Connecticut on September 3, 2014 to start their review process. Bidding is currently scheduled to start in November 2014 with construction commencing in January of 2015.

Agenda Item:
V. A.

West Hartford Public School District

Agenda Item: New Charter Oak Construction – Educational Specifications

Meeting Date: June 4, 2013

From: Tom Moore, Assistant Superintendent for Administration

Through: Karen L. List, Superintendent

Recommendation:

That the Board of Education accept the educational specification dated June 2013 for construction of a new Charter Oak International Academy and authorize the Superintendent to complete the necessary architectural drawings and submit an application to the State Department of Education for a construction grant.

Background:

As part of the district's plan to promote racial diversity at Charter Oak and Smith, the Board of Education and the Town Council have adopted a Capital Improvement Plan that includes funding for a new Charter Oak International Academy. In order to pursue state grant funding for this project, the Board must adopt educational specifications and authorize the Superintendent to begin design and submit a grant application

Tom Moore, Bob Palmer, Hugh Schweitzer and Chip Ward will be available to answer questions.

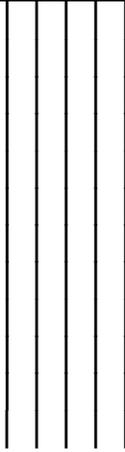
Agenda Item:
V. B.



EDUCATIONAL SPECIFICATIONS

FOR A NEW

CHARTER OAK INTERNATIONAL ACADEMY



JUNE 2013

**WEST HARTFORD PUBLIC SCHOOLS
WEST HARTFORD, CONNECTICUT**

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Karen L. List, Superintendent

Thomas Moore, Assistant Superintendent for Administration

EDUCATIONAL SPECIFICATIONS FOR A NEW CHARTER OAK INTERNATIONAL ACADEMY APPLYING AS A DIVERSITY SCHOOL PER 10-286(H)

SECTION I. RATIONALE

The Board of Education has directed its administration to initiate the steps necessary to design and build a new Charter Oak International Academy in the manner listed in this education specification. This project is applying to be considered a diversity school under C.G.S 10-286(h).

The purpose of this project is to reduce the racial imbalance at Charter Oak International Academy as detailed in the [report](#) “West Hartford’s Plan to Promote Racial Diversity in its ‘Unique Schools’ – Charter Oak and Smith” (Appendix A.) This report was presented to the State Board of Education on March 6, 2013 and received a unanimous vote of support from the State Board.

This project will replace the current Charter Oak International Academy which is a 3 section per grade Pre-K -5 school serving approximately 300 students in K-5 and 1 section of Pre-K students with a new school offering 4 sections per grade serving 480 students in K-5 and offering 5 sections of high-quality Pre-K serving 80 students. Total school population is projected at 560 students. The additional students will come from throughout the district and lower the racial imbalance at both Charter Oak and Smith to under 25%.

The Board of Education hired a planning architect that reviewed the options to meet the space needs through either a renovated and expanded Charter Oak or with a new building. The full report can be found [here](#) and is included in Appendix B. The Board of Education reviewed the findings of the architect’s report and based on the condition of the existing building and the higher cost for the renovation alternatives, unanimously voted to build a new Charter Oak school at its February 27, 2013 meeting. The Town Council unanimously voted to approve the Capital Budget which included \$45 million in combined state and local funding for the new Charter Oak facility at its April 23, 2013 meeting.

SECTION II. LONG RANGE EDUCATIONAL PLAN

The mission of West Hartford Public Schools is to “inspire and prepare all students to realize their potential and enhance our global community.” The District Development and Performance Plan for Continuous Improvement can be found [here](#) and in Appendix C.

Goals and priorities are identified through a synthesis of input from the Superintendent, the Board of Education, the district’s PK-12 administrators and faculty, the Curriculum and Professional Development Council, as well as from the literature and research on curriculum, instruction, and assessment. The initiatives in the District Development and Performance Plan for Continuous Improvement are intended to support the Board of Education mission of the school system, core

values, goals, and the school development plans for continuous improvement that exist for each school in West Hartford. Most importantly, it supports each student in realizing their potential through high expectations, a rigorous and relevant curriculum, and dynamic teaching. Teacher and administrator collaborative work and shared and distributed leadership throughout the school system all support the implementation of this District Development and Performance Plan for Continuous Improvement. This plan is grounded in the belief that those who are closest to the work should have a hand in helping to shape the work.

Teachers and principals have worked to define specific needs based on data and have determined steps to address those issues. Together, the various teacher and administrator teams create a “community of practice” that works together to achieve the mission of the school system.

The district is organized into three levels of school buildings: 11 elementary schools - Pre-K to grade 5, three middle schools serving grade 6 to grade 8, and two high schools serving grades 9 to 12. Among the elementary school there are two magnet schools, Charter Oak International Academy and Smith STEM School. Both of these schools have operated as magnet schools since the mid 1990's.

The new Charter Oak International Academy building will further the district's mission by opening up additional spaces for students to experience the unique International Baccalaureate curriculum at this school. The school will significantly expand the high quality Pre-K opportunities in the district. Currently we offer regular education preschool programs in four classrooms – one at each of four schools. This project will increase the number of classrooms in the district offering high quality preschool instruction to nine classrooms.

The current Charter Oak building has been in continuous use as a school for over 80 years. We anticipate a similar life for the new Charter Oak school building.

SECTION III. LEARNING/EDUCATIONAL ACTIVITIES

The primary goal of the West Hartford Public Schools is the intellectual and personal development of each student. Intellectual development leads to excellence in an ability to analyze critically, reason and think independently, and acquire learning skills and bodies of knowledge. Personal development goals include continuing growth of students' understanding of themselves and the world in which they live, recognition of the contribution of varying career roles to society, sustaining curiosity about life and respect for the diversity of other people and societies. Schools play a major role in helping students to appreciate culture, develop a sense of self-worth, personal initiative, social responsibility, develop the ability to be creative and flexible and to acquire a life-long appreciation of learning.

Educational experiences are organized into a curriculum that promotes these goals and recognizes individual differences. High expectations and equal educational opportunities are provided for all students. Instruction integrates content and process, concepts and attitudes, and reflects the understanding that students learn through active involvement.

To give a sense of the Pre-K – 5 educational experiences a program description, including goals for each content area, is provided below:

A. Visual Arts

The Visual Arts program is anchored by a Discipline-Based Art Education Curriculum. Students are engaged in art production while also developing the skills and knowledge necessary to understand the place of art in history and culture, employ art criticism and make informed aesthetic judgments.

B. Music

The Music Program focuses on development of musical skills and attitudes essential in effecting aesthetic knowledge and awareness. These skills are acquired sequentially through a planned program that includes a variety of experiences. Music teachers provide vocal and instrumental music lessons with additional experiences in large ensembles such as band, orchestra and choir. Pupils have the opportunity of performing in both day and evening concerts.

C. Physical Education

The Physical Education Program provides students with the opportunity to participate in a wide range of activities with emphasis on learning skills and concepts; promoting positive social interaction; and establishing an atmosphere of fun and success through movement.

D. Health

The goal of health education is to provide a planned program of learning experiences that motivate and prepare students to promote and ensure the quality of individual, family, and community health.

E. Language Arts

The goals of West Hartford reading and writing curriculum and instruction reflects the district's commitment to helping each student become a literate, thinking citizen who uses reading and writing as a means of gathering and sharing information and exploring different cultures, attitudes, and points of view, and as sources of enjoyment and relaxation. Therefore, the first goal of the West Hartford reading and writing programs is to help each student become a self-directed, strategic reader and writer who determines a purpose for reading a particular text, decides how to approach reading or writing tasks, monitors understanding, and regulates reading and writing behavior. The second goal is to help each student become a life-long reader and writer. Literacy learning is viewed as a developmental process aligned with the Common Core State Standards that is supported and promoted in an environment that immerses students in oral language/discourse, focuses on authentic purposes for reading and writing, and incorporates a variety of quality fiction and nonfiction materials.

F. Mathematics

West Hartford mathematics curriculum and instruction encourages innovation, promotes critical thinking skills, and develops mathematical literacy, fluency, and mathematical self-confidence in all our students. To achieve this, the student must view mathematics as a process of investigating, reasoning, and communicating as well as a set of concepts and skills. Students will

explore and develop mathematical skill through assured, authentic learning experiences based on mathematics learning progressions defined through the Common Core State Standards.

G. Science

It is the goal of the science curriculum and instruction to provide instructional settings and experiences that nourish and fulfill children's strong innate curiosity about the world around them. They are engaged in activities that real scientists are involved in, discovering, cataloging, analyzing, exploring, inquiring and testing by means of engaging, hands-on experiences.

H. Social Studies

The goal of the social studies curriculum and instruction is to prepare all students to perform and understand their roles as effective citizens in a democratic society and global community in this nation and the world. Attention is given to the acquisition of specific knowledge, the development of skills that enable students to use that knowledge, and the opportunities to examine values in order to better understand themselves and contribute to society as individuals, family members, consumers, producers and citizens.

J. World Languages

World language study prepares students to communicate in languages other than English, gain knowledge and understanding of other cultures, connect with other disciplines and acquire new information, develop insight into one's own language and culture, and participate in multilingual communities and global societies. At Charter Oak, instruction in Spanish is offered from Pre-K to grade 5.

K. International Baccalaureate Program

The Primary Years Program (PYP) is one of the four IB programs, and is designed for students aged 3 to 12. It focuses on the development of the whole child as an inquirer, both in the classroom and in the world outside. It encourages independence, and asks that students take responsibility for their own learning. The program addresses each student's academic, social and emotional well-being. It is a framework guided by six transdisciplinary themes of global significance, explored using knowledge and skills derived from all subject areas:

- Who We Are
- Where We Are in Place and Time
- How We Express Ourselves
- How the World Works
- How We Organize Ourselves
- Sharing the Planet

The IB philosophy encourages international-mindedness in students. The philosophy is based on the belief that students must first develop an understanding of their own cultural and national identity. All IB students learn a second language and the skills to live and work with others in the international community—essential for life in the 21st century.

IB encourages a positive attitude toward learning by encouraging students to ask challenging questions, to reflect critically, to develop research skills, and to learn how to learn. At IB schools, community service is an essential component because, to be a citizen of the world, there is more to learning than academic studies alone.

In addition to a second language, the IB places a strong emphasis on the inclusion of the Arts and PE in all teaching units. The IB also believes that families play an integral part in the education of the child, and IB schools provide a welcoming atmosphere to all members of the school community.

L. Pre-K Program

The goal of the Preschool program is to develop children's positive disposition toward learning and foundational academic skills through curriculum aligned with CT Benchmarks for Preschool. These benchmarks guide plans for learning experiences, observing and documenting children's progress, and implementing developmentally appropriate self-initiated and teacher-facilitated learning activities. Teachers collaborate with families to achieve a shared understanding of each child and support the transition to kindergarten.

M. Family Resource Center

The Family Resource Center (FRC) is a partnership program of the Bridge Family Center and the West Hartford public school system. The FRC is funded by the State Department of Education and also receives assistance from numerous private foundations. As a school based family education and support program the FRC offers early childhood programs, summer Pre-K, support for grandparents raising grandchildren, home visits using the Parents as Teachers curriculum, adult education classes, after school enrichment programs, training for people who provide childcare in their homes, positive youth development programs, access to food for families in need, parent leadership programs, developmental screenings, family academies and early learning playgroups. The FRC is open 12 months a year and often schedules programs on Saturdays and in the evenings in order to meet the needs of families.

To meet these program needs for the projected 560 students, the new building will need to provide for the following instructional spaces

Program Space Description for a New Charter Oak International Academy

Room Group / Type	Proposed Number	Typical Net S.F.	Total S.F.	Comments
Classrooms				
Pre-K	5	1200	6000	Will be capped at 16 students Separate entrance for PK classes opening onto completely enclosed dedicated PK playground. Accessible for parents to drop off / pick up at exterior classroom doors. Include toilets within classrooms.
Kindergarten	4	1200	4800	Could be as high as 22, but will average 20 Includes toilets in classrooms.
Grade 1	4	850	3400	Could be as high as 22, but will average 20 Include easily accessible bathrooms shared with grade level cluster.
Grade 2	4	850	3400	Could be as high as 22, but will average 20
Grade 3	4	850	3400	Could be as high as 22, but will average 20
Grade 4	4	850	3400	Could be as high as 22, but will average 20
Grade 5	4	850	3400	Could be as high as 22, but will average 20
Team Learning Space	4	240	960	Collaborative workspace adjacent to classrooms. (Grades 2-5)
Special Classrooms for large group instruction				
Art	1	1100	1100	
World Language	1	1000	1000	
Art / Language space	1	1000	1000	Additional space needed for 29 sections of Art / Language
Vocal Music	1	850	850	
Instrumental Music	1	850	850	Used for instrumental instruction in grade 4-5. Will also be used for K-3 Suzuki and overflow Vocal Music classes
Instrumental Music Office	1	120	120	Locate adjacent to Instrumental Classroom
IB related room	1	1400	1400	An IB theme related room - projects. With classroom instruction space, computer lab and storage
Smaller Instructional Spaces - 5-7 students plus teacher				
QuEST	1	850	850	Separate classroom
Learning Kitchen	1	300	300	Locate near primary classrooms.
Spec Ed Resource	2	300	600	
Reading Support	1	300	300	For pull-out instruction - other instruction will be push in
Math Support	1	300	300	For pull-out instruction/enrichment
ELL	1	300	300	For pull-out instruction - other instruction will be push in
Core Spaces				
Media Center	1	2500	2500	Include Office, Shelf Area for resouces, SmartBoard teaching area, Read Aloud area, Amphitheater (small performance area)
Computer Lab	1	900	900	Adjacent to Media Center - may not be traditional lab
Gym	1	6200	6200	2 teaching stations. Competition Court 50x84 w/ 200 seats
P.E. Office	1	150	150	Plus toilet
Gym Storage	2	200	400	
Auditorium	1	3050	3050	350 seats, sloped floor, fixed seats - could be a multipurpose room
Stage	1	1150	1150	Integrated with instrumental music room via acoustical wall
Main Office	1	1200	1200	Includes 2 conference rooms, waiting, reception, clerical space
Health Services	1	600	600	Includes handicapped toilet
Cafeteria	1	2400	2400	160 seats x 3 waves = 480; plus 80 in PK = 560 total - plan for 4 waves
Kitchen	1	1500	1500	Heat and serve food preparation
Family Resource	1	2000	2000	Dedicated entrance to FRC

Program Space Description for a New Charter Oak International Academy

Room Group / Type	Proposed Number	Typical Net S.F.	Total S.F.	Comments
Office Space - not included in above spaces				
Principal	1	400	400	
Assistant Principal	1	200	200	
Curriculum Specialist	1	200	200	
Psychologist	1	150	150	
Social Worker	1	150	150	
Speech	1	150	150	
Instructional technology Coord.	1	150	150	
Other space needs				
Storage	1	150	150	
Outdoor storage	1	0	0	200sf - part of net to gross ratio
Faculty Workroom	1	300	300	
Teachers' Lounge	1	425	425	
Subtotal of Net Areas				
		71%	62,055	
Net to Gross Difference				
		29%	24,822	(1.4 multiplier) Includes circulation space, mechanical, electrical, data, custodial space, common toilets, and wall thicknesses.
Total Gross Area				
		100%	86,877	

SECTION IV. ENROLLMENT DATA AND PROPOSED PROJECT CAPACITY

The new Charter Oak International Academy will be designed to accommodate 80 students in Pre-K and 480 students in grades K-5. The Pre-K students will be drawn half from the Charter Oak attendance zone and half for the rest of West Hartford. The K-5 students will be drawn similarly with about half from Charter Oak, 50 students from Smith and the rest from the other 9 elementary districts in West Hartford. We anticipate opening the school in the Fall of 2016. At that time, we will move the students from the existing Charter Oak facility into the new school and, with the additional space, offering magnet spaces to students from the rest of the district. For planning purposes, we are assuming that grades Pre-K to 1 will fill to the targeted 80 students per grade in 2016-17 and then each year another grade level will fill to the 80 student capacity. This is the basis of these 8 –year enrollment projections. Please see Section 6 of the ED-049 application for the detailed elementary enrollment projections. The table below summarizes the enrollment projections. The school is projected to be fully enrolled in the 8th year of the enrollment projections.

Enrollment Projections:

School Year	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21
K-5 Neighborhood Enrollment	224	212	214	218	232	237	229	233
K-5 Magnet Enrollment	76	83	84	149	177	193	224	247
Pre K Enrollment	15	15	15	80	80	80	80	80
Total Enrollment	315	310	313	447	489	510	533	560

The school will be built with 24 total K-5 classrooms and 5 Pre-K classrooms with the associated core facilities and office space to meet the instructional needs for the 560 students.

SECTION V. DETAILED DESCRIPTION

A. Standard Classrooms

1. Accessible counters and shelving.
2. Storage cabinets.
3. Cubbies for student use.
4. Lockable wardrobe and storage.
5. White boards and tack boards.
6. Window treatments that provide room darkening capability.
7. Map rack track above selected white boards.
8. A manual, pull-down audio-visual screen, appropriately sized for the room configuration, number of viewers and their distance from the screen.

B. Kindergarten Classrooms

1. Toilets at each classroom.
2. Accessible counters and shelving.
3. Storage cabinets.
4. Cubbies for student use.
5. Lockable wardrobe and storage.
6. White boards and tack boards.
7. Window treatments that provide room darkening capability.
8. Map rack track above selected white boards.
9. Sink in each room

C. Pre-Kindergarten Classrooms

1. Separate entrance for parent drop-off and pick-up
2. Dedicated, fenced Pre-K playground.
3. Toilets at each classroom.
4. Accessible counters and shelving.
5. Storage cabinets.
6. Cubbies for student use.
7. Lockable wardrobe and storage.
8. White boards and tack boards.
9. Window treatments that provide room darkening capability.
10. Map rack track above selected white boards.
11. Learning kitchen located nearby.
12. Sink in each room

D. Special Classrooms for Large Group Instruction

1. Art
 - a) Tables and chairs appropriate for individual or small group interaction.
 - b) Cabinets
 - c) Lockable storage
 - d) Drying racks

- e) Kiln
- f) Sink
- 2. Vocal Music
 - a) Cabinets
 - b) Lockable storage
- 3. Shared vocal/instrumental room
 - a) Tables and chairs appropriate for individual or small group interaction.
 - b) Cabinets
 - c) Lockable storage
 - d) Instrumental office space
- 4. World Language
 - a) Tables and chairs appropriate for individual or small group interaction.
 - b) Cabinets
 - c) Lockable storage
- 5. Shared Art/World Language space
 - a) Tables and chairs appropriate for individual or small group interaction.
 - b) Cabinets
 - c) Lockable storage
 - d) Sink
- 6. International Baccalaureate Room
 - a) Tables and chairs appropriate for individual or small group interaction.
 - b) White boards and tack boards.
 - c) Adjacent to the Media Center
 - d) Cabinets
 - e) Lockable storage

E. Smaller Instructional Spaces

- 1. Reading
 - a. Tables and chairs appropriate for individual or small group interaction.
 - b. Cabinets
 - c. Lockable storage
- 2. ELL
 - a. Tables and chairs appropriate for individual or small group interaction.
 - b. Cabinets
 - c. Lockable storage
- 3. Quest
 - a. Located adjacent to the Media Center
 - b. Tables and chairs appropriate for individual or small group interaction.
 - c. Cabinets
 - d. Lockable storage
- 4. Learning Kitchen located near primary classrooms.
- 5. Special Education Resource
 - a. Tables and chairs appropriate for individual or small group interaction.
 - b. Cabinets
 - c. Lockable storage
- 6. Math Support
 - a. Tables and chairs appropriate for individual or small group interaction.

- b. Cabinets
- c. Lockable storage

F. Core Spaces

1. Media Center
 - a) Tables and chairs appropriate for individual or small group interaction.
 - b) Shelving units.
 - c) Computer lab space
 - d) Smart board teaching area.
 - e) Read-aloud area.
 - f) Office.
 - g) IB room located adjacent to the Media Center.
 - h) Small performance amphitheater.
2. Gymnasium
 - a) Competition court with swing-away basketball hoops
 - b) Wall padding
 - c) Public address system
 - d) (2) teaching stations
 - e) Retractable seating for 200 spectators
 - f) Physical Education Office with toilet.
 - g) Storage
3. Auditorium
 - a) Fixed seating for 350
 - b) Sloped floor
 - c) Stage
 - i. Curtains, theatrical lighting, audio system
 - ii. Instrumental music instruction takes place on the stage
 - iii. Moveable acoustic wall
 - iv. Storage space
4. Main Office
 - a) Reception area with reception counter
 - b) Waiting area with soft seating
 - c) Support staff areas
 - d) Principal's office
 - e) Assistant Principal's office
 - f) Conference rooms (2)
 - i. a/v-enabled table; and seating
 - ii. credenza
 - g) Private toilets.
 - h) Coat Closet.
 - i) Secure records storage.
5. Health Services
 - a) Administration area with secure records storage.
 - b) Private waiting area
 - c) Examination area with base and wall cabinets; handwash sink.
 - d) Lockable storage for medications and supplies.
 - e) Rest area with cots, with ceiling-hung privacy curtains.

- f) Separate, accessible toilet
- 6. Cafeteria
 - a) Seating and tables for 160 students per sitting
 - b) Tray return; trash and recycling station(s)
- 7. Kitchen and Servery
 - a) Receiving and storage
 - i. Dry storage
 - ii. Refrigerated and frozen storage
 - b) Hot and cold food preparation areas, with commercial-grade equipment
 - c) Serving stations with 2 lines
 - d) Dish and pot washing
- 8. Family Resource Center with dedicated exterior entrance.
 - a) Separate door to the exterior
 - b) Tables and chairs appropriate for individual or small group interaction and for preschool students and toddlers
 - c) Toilet room within the FRC
 - d) Accessible counters and shelving.
 - e) Storage cabinets.
 - f) Cubbies for student use.
 - g) Lockable wardrobe and storage.
 - h) White boards and tack boards.
 - i) Window treatments that provide room darkening capability.
 - j) Sink in each room
 - k) Small kitchen area

G. Other Office Space

- 1. Curriculum Specialist
- 2. International Baccalaureate Specialist
- 3. Psychologist
- 4. Social Worker
- 5. Speech
- 6. Instructional Coordinator of Technology
 - a) Small black box space for video production
- 7. IT Office and workspace – located near server rooms
- 8. Faculty workroom
 - a) Casework
 - b) Copier station
- 9. Teachers' Lounge
 - a) Cabinets with sink
 - b) Refrigerator, microwave
 - c) Toilet rooms.

H. Storage Rooms

- 1. Multiple storage rooms, dispersed on each level. At selected storage rooms, provide adequate area for a center work space.
- 2. Provide a separate storage room for custodial supplies, adjacent to the receiving area.

I. Custodial

1. Head custodian office.
2. Custodial storage adjacent to receiving area.
 - a) Space for parking/recharging floor cleaning machine(s).
3. Multiple housekeeping closets, dispersed on each level.
 - a) Provide wall-mounted shelving.
 - b) Floor-mounted basins as noted in Plumbing section.
 - c) Ventilation as noted in the HVAC section.

J. Mechanical Room

1. Provide access directly from exterior.

SECTION VI. BUILDING SYSTEMS

A. LEED Gold Standards

1. Per Town policy, this building will be built to meet or exceed LEED Gold standards

B. Security

1. Provide comprehensive security system including:
 - a. Interior and exterior video surveillance using IP cameras
 - b. Access-controlled door hardware using proximity cards and readers
 - c. Panic button and lockdown communications

C. Technology

1. Building-wide commercial grade wireless that meet or exceed the current building-wide wireless systems at Charter Oak.
2. Cat6 or better cabling throughout
3. Air conditioned MDF/IDFs server rooms
4. All new PoE switches
5. New servers for school
6. All new computers/laptops for school
7. Several network drops per room, placed in appropriate areas (i.e. by teacher's desk, demonstration stations)
8. Interactive whiteboards in every classroom (e.g. SmartBoard)
9. LED or LCD projectors, short throw preferred mounted on wall for interactive whiteboard (better for shadow purposes, brighter, etc)
10. Projector management system (projector wall controls and web-access to schedule on/off times, manage bulb life, etc)
11. VoIP phones
12. Video/TV distribution system using IP (e.g. vBrick solution)

D. Mechanical

1. Provide building management system (BMS) to control HVAC . Occupied/unoccupied cycles shall be established to avoid unnecessary energy consumption.
2. Heating plant to be natural gas-fired boilers.
3. Cooling plant to be site-mounted air-cooled chiller(s), with sound control enclosure(s).
4. Rooftop units are not desired. If air handling units are to be used, a mechanical room should contain the equipment. Adequate space must be provided around air handling equipment for service technicians. Mechanical room(s) to contain floor drains.
5. Exhaust systems may utilize rooftop units.
6. Noise through either sound transmission or vibration must be isolated from instructional spaces.
7. Specific areas:
 - a. Kitchen:
 - i. Provide grease exhaust hoods as required.
 - ii. Dishwasher exhaust fan.

- b. Auditorium, Gymnasium, Cafeteria: provide separate VAV indoor air handlers with demand control ventilation.
- c. Academic Areas, including special classrooms, small instructional spaces, media center, administration areas and other offices spaces: provide dedicated outdoor air system.
- d. Toilet rooms, mechanical/electrical rooms and storage areas: provide exhaust systems.
- e. Storage areas, mechanical and electrical rooms: provide hot water unit heaters.
- f. Stairwells, entrances and vestibules: provide hot water cabinet unit heaters.

E. Electrical

- 1. Provide 480/277v 3-phase, 4-wire main electrical service with circuit breaker distribution and integral TVSS.
- 2. Electrical service provided underground from the utility's pad-mounted transformer.
- 3. Copper conductors.
- 4. Provide standby generator with outdoor-rated weatherproof sound attenuated enclosure.
- 5. In the main electrical room provide main switchgear, and separate metering for lighting, receptacle, kitchen and HVAC loads.
- 6. Step-down transformers.
- 7. Remote electrical rooms; minimum (1) per floor.
- 8. Branch circuits for convenience power, lighting, HVAC, plumbing, fire alarm, and telecom/data.

F. Lighting and Sound

- 1. Provide building management system (BMS) to control selected lighting. Occupied/unoccupied cycles shall be established to avoid unnecessary energy consumption.
- 2. Emergency lighting with battery backup as required.
- 3. Fixtures:
 - a) Classrooms, offices: 1'x4' indirect/direct pendants, T8 lamping
 - b) Corridors: 2'x2' recessed fluorescent troffers
 - c) Gymnasium: 2'x4' direct/indirect pendants, T5HO lamping
- 4. Natural daylighting is preferred. Provide daylight sensors and dimming control in classrooms and other select rooms containing exterior window walls.
- 5. Occupancy sensors in all lit areas except as exempted by code.
- 6. Theatrical lighting at auditorium/stage.
- 7. Site lighting: pole-mounted LED luminaires; controlled by the BMS.
- 8. Sound system -- A speaker will be installed in each classroom capable of one way communication from the office to the classroom. The sound system is to be connected to a sound console.
- 9. Telephones -- Each classroom will be equipped with an extension telephone from the office switchboard.

G. Plumbing

1. Provide accessible fixtures:
 - a) Lavatories to be:
 - i. Solid synthetic surface at student areas
 - ii. Wall hung vitreous china at faculty areas
 - iii. Provided with low consumption faucets with automatic controls
 - iv. Toilet stalls to have locking partitions with doors
 - b) Drinking fountains to be stainless steel, dual height recessed type – with water filling stations
 - c) Classroom sinks to be stainless steel with gooseneck faucets.
2. Mop basins of molded stone; wall-mounted faucet
3. Floor drains and hose bibs at all toilet rooms.
4. Frost-proof wall hydrants not less than 100 feet apart at building perimeter.

H. Fire Protection

1. Provide an addressable fire alarm system with voice evacuation capability.
 - a) Control panel with remote monitoring by municipal public safety staff.
 - b) Manual pull stations.
 - c) Audible and visual signaling devices
 - d) Annunciator panel at main entrance.
2. Provide a compliant NFPA 13 system throughout the facility, including concealed head sprinklers, sprinkler tamper and flow switches.
3. Provide a dry chemical extinguishing system at kitchen hoods.

I. Finishes

1. Floor finishes shall be:
 - a) Classrooms, corridors, tel/data closets and server rooms: VCT
 - b) Art room(s): vinyl tile
 - c) Gym: solid wood strip
 - d) Media Center: carpet.
 - e) Toilet rooms: ceramic mosaic tile
 - f) Storage and custodian: sealed concrete
2. Wall finishes shall be:
 - a) Classrooms, corridors, art rooms, and storage: painted gypsum wallboard. Corridor walls shall have abuse-resistant construction.
 - b) Gym: painted masonry
 - c) Toilet and locker rooms: porcelain tile wainscot; painted gypsum wallboard above
 - d) Custodian: impact resistant wall panel wainscot; paint above
 - e) Provide corner guards at high traffic areas.
3. Ceiling finishes shall be:
 - a) Painted gypsum wallboard at toilet rooms.
 - b) Acoustical lay-in ceilings elsewhere.
 - c) Ceilings shall be not less than 9' above finish floor.
 - d) No finished ceiling is needed in storage or custodial rooms.

SECTION VII. SITE DEVELOPMENT

A. Site Circulation and Parking

A range of amenities will be coordinated for safety and efficiency:

1. Compliant handicapped parking shall be provided.
2. Faculty and visitor parking. Some or all may be a reconfiguration of existing paved areas.
3. Drop-off and pickup areas.
4. Bus queuing area.
5. Sidewalks.

B. Outdoor Facilities

1. Playgrounds and outdoor athletic facilities will be designed to support both instructional and recreational use. Facilities shall be accessible.
2. Provide a new flag pole, bicycle racks and benches.

C. Plantings, Drainage and Grading

1. To the greatest extent possible, plantings shall be indigenous and require no irrigation.
2. To the greatest extent possible, transitions between paved and planted areas shall be flush.
3. Swales, berms and contours will be designed to carry water away from the building into a storm sewer system.

SECTION VIII: CONSTRUCTION BONUS REQUESTS

Charter Oak International Academy is applying as a Diversity School per C.G.S. 10-286(h) but qualifies for no other construction bonuses.

SECTION IX: COMMUNITY USES

As a significant new facility in the south end of town, the school will be designed to facilitate activities before and after school hours and throughout the calendar year. Examples of the community use of the school include, but are not limited to:

- Adult education will be offered in the evenings
- Day care services will be provided before and after school
- PTO will use meeting spaces in the building before and after school
- The Leisure Services department will use the gymnasium for programming after school and on the weekends
- Summer school offerings will be provided
- The school will be used for other community and town-wide meetings in the evening

SECTION X. FURNITURE, FIXTURES & SPECIALIZED EQUIPMENT

Furnishings, fixtures and equipment have been described in their respective rooms in Section V above; and Section VI describes technology needs. These items in the existing school will not be redeployed into the new school.

Generally, instructional spaces are to be furnished with:

- A. Chairs
- B. Desks
- C. Teacher's chair and desk
- D. Visitors' chairs
- E. White boards
- F. Interactive white boards
- G. LCD or LED projector
- H. Tack boards
- I. Pull-down projector screen
- J. Roller shades at windows
- K. File cabinets
- L. Student Lockers in hallway near classrooms

B. Storage Rooms shall be furnished with the following:

1. Metal shelving
2. Work table.

FOOTNOTE TO SECTION X - This section contains only equipment. Supplies will be purchased from the Board of Education's operating budget.