

**GREENWICH BOARD OF EDUCATION
GREENWICH PUBLIC SCHOOLS
Greenwich, CT**

Board of Education Meeting Agenda Document Cover Sheet

Meeting Date: September 10, 2015

Agenda Item Title: **School Start Time Exploration**

Name of Submitter: Dr. William McKersie, Superintendent
Ms. Cynthia Womack, School Start Time Project Manager

The Superintendent has submitted for review and discussion a project plan to explore optimal school start times for Greenwich Public Schools. This project plan is comprised of two parts: 1) Charge Document and Project Plan Timeline and 2) School Start Time Options, Variables and Implications that are currently under review by the School Start Time (SST) Steering Committee.

The Committee has been tasked to analyze the School Start Time options based on the variables and implications that accompany each option. The work conducted by the committee in conjunction with Board, parent, student, staff and community input will enable the Superintendent to make a final recommendation to the members of the Board of Education.

Greenwich Public Schools
Exploration of a Change in School Start Times
Charge of the Steering Committee for School Start Times

September 10, 2015

Charge

A Steering Committee for School Start Times (SST) will develop and implement a Project Plan to explore optimal school start times for maximizing the academic success and social and emotional well-being of all Greenwich Public Schools students. There are currently six school start time options under consideration for Greenwich Public Schools. Four of the options were identified in the GPS School Start Time Survey administered in Spring 2015. Five of the six options are based on the research of case studies from other school districts in the US. These are the options most frequently used by other districts that have switched or delayed their high school start time. A sixth option was added as a product of the work from the School Start Time Steering Committee.

The Steering Committee will explore and highlight all the variables and budget implications that would accompany each option. Significant opportunities will be provided for student, staff, parent and community feedback on the options. The product of this exploration will be a recommendation to the Greenwich Board of Education for optimal School Start Times district-wide. The recommendation may focus on one of the six options, a hybrid solution, or conclude that the current school start times are optimal.

Background and Rationale

Last spring, the Superintendent of Schools, Dr. William McKersie established an advisory committee to conduct a survey on the interest among GPS students, staff and families to explore adjusting the start of school time district-wide. The School Start Time Survey found strong support among parent, student and staff respondents to explore a change in school start times. The survey, administered between May 26th and June 5th to GPS students in grade 8 -12, all parents and all staff, yielded response rates of 37%, 42% and 61% respectively. The majority of parents (75%) and students (77%) who responded are supportive or highly supportive of exploring a change in school start times. Staff respondents were largely supportive (45%) or neutral (20%) in their support of exploring a change in school start times.

Based on the survey results, Dr. McKersie advised the BOE in June 2015 that he would launch an exploration of optimal school start time options for maximizing student academic success, health and well-being in grades pre-K to 12. Dr. McKersie committed to submitting a Charge Document and Work Plan for the exploration to the BOE at its September 10, 2015 Work Session. He noted his intentions to establish a Steering Committee comprised of representatives from the schools and the community to facilitate this work. The SST survey data will provide initial

guidance for the SST Steering Committee on the level of support for potential models and areas of concern.

A number of studies have documented that the average adolescent in the United States is chronically sleep deprived and pathologically sleepy. High school students often seem to stay up too late and then have difficulty getting out of bed the next morning. From a biological perspective, at about the time of the onset of puberty, adolescents begin to experience a sleep-wake “phase delay” (later sleep onset and wake times), as a result of well- documented changes in circadian rhythms. Despite the inclination to think students simply need to make sleep a bigger priority and go to bed earlier, this delayed sleep wake cycle makes them want to naturally stay up later than younger children. While long seen as a cultural preference, later bedtimes among adolescents are now understood to be a biological response to puberty. It is widely recommended that teenagers receive nine – ten hours of sleep each night to be at their best and optimally alert. Although there might be other social and environmental factors that influence teenagers’ sleep behavior, the evidence supports that early school start times are a key factor to sleep loss among high school students.

Pre- pubescent children are better suited to learn early in the morning than adolescents. Research on early start times for young students is limited, but it has shown elementary students do not benefit from a later start time. Some experts suggest that the academic achievement of elementary school students would not be adversely impacted by an earlier school start time, as young students are alert earlier in the day than adolescent students (Hagenauer, M.H., Perryman, J. I., Lee, T. M., and Carskadon, M. A. “Adolescent Changes in the Homeostatic and Circadian Regulation of Sleep.” *Developmental Neuroscience*, 314, pp. 276-284. 2009).

An in-depth study conducted by The Children’s National Medical Center’s Blueprint for Change Team in 2014 highlighted the adverse effects of sleep deprivation among adolescents and teens. The team commissioned by Fairfax County Public Schools (VA) developed a Blueprint for Change after evaluating other school districts across the country that have successfully implemented start time changes. The study identified the results and consequences of insufficient sleep among adolescents, which included impairments in mood, affect regulation, attention, memory, behavior control, executive function, and impulse control. In particular, many studies have shown an association between decreased sleep duration and lower academic achievement at the middle school, high school, and college levels, as well as higher rates of absenteeism and tardiness, and decreased motivation to learn (Wolfson AR, Carskadon MA. Understanding adolescents' sleep patterns and school performance: a critical appraisal. *Sleep Medicine Review*. 2003; 7(6):491-506. ~~Candio~~ G, Ferrara M, De Gennaro L. Sleep loss, learning capacity and academic performance. *Sleep Medicine Review*. 2006;10(5):323-37). Other documented health-related effects of sleep loss in adolescents include increased use of stimulants (e.g., caffeine, prescription medications) to counter the effects of chronic sleepiness, which in turn may increase the risk of substance use later in adolescence and early adulthood. Adolescents are also at greater risk for drowsy driving-related crashes, as well as athletic and other injuries, due to insufficient sleep.

A substantial body of research has now demonstrated that delaying school start times is an effective countermeasure to chronic sleep loss and has a wide range of potential benefits for students in regard to physical and mental health, safety, and academic achievement. Scientific literature has confirmed that delaying high school start times results in increased total sleep time, decreased tardiness rates and absenteeism, modest improvement on standardized tests, reduced self-reported depression, and fewer automobile crashes (Danner F, Phillips B. Adolescent sleep, school start times, and teen motor vehicle crashes Journal of Clinical Sleep Medicine. 2008;4 (6):533-5).

SST Tasks Will Include But Are Not Limited To:

- Formation of a Steering Committee to explore a change in SST that will include school staff, administrators, parents and community members
- While students will not be formal members of the Steering Committee, due to scheduling issues (the Steering Committee will be working intensively during school hours), student perspectives will be formally included through focus groups, interviews and other outreach
- Consideration of the six options most widely used by districts that have implemented a change in SST
- The implications of implementing each option in terms of academic offerings, extracurricular programs and participation, student employment, before and after school student support and care, transportation, budgets and related program modifications, staff contracts and morale, and competition with area private schools for students
- Identify and highlight the specific impact of changing SST on academic achievement and growth, as well as the social and emotional effects
- Consultation with districts and education experts that have instituted changes in school start times
- Extensive community outreach through public forums, surveys and other mechanisms to engage staff and community on SST options [Feedback from public forums, surveys and other mechanisms will serve as advisory to Steering Committee and superintendent].
- Updates on SST to the BOE and community via BOE website

Committee Membership and Participation

Project Manager-Cynthia Womack

Steering Committee

Tom Bobkowski- Director of School Safety Services

Jenny Byxbee - United Way Representative/Youth Services Coordinator

Janice Domiziano-Transportation Manager

Sophie Dowling- PTAC Representative-At-Large

Valerie Erde- Greenwich Chapter Leader- Start School Later

Mary Forde- Director of Pupil Personnel Services

Diane Chiappetta-Fox- GHS Student Activities Director
Mary Stuart Freyberg-PTAC Representative GHS
Anthony Giovannone- Accounting Supervisor
Tom Healy- Middle School Administrator/GOSA
Jim Hricay- Managing Director of Operations
Gus Lindine- Athletic Director
Rick Piotrkowski -High School Administrator/GOSA
Gene Schmidt- Elementary School Administrator/ GOSA
Bob Stacy- Director of Human Resources
Carol Sutton- GEA Representative
Mike Trogni - PTAC Representative –At Large
Bobby Walker- Boys & Girls Club Executive Director
Chris Winters- GHS Headmaster
TBD -PTAC Representative ES
TBD -PTAC Representative MS

General Timeline

1. September 2015- Charge Document and Project Plan presented to BOE
2. October 2015- Feasibility options with initial budget implications presented to BOE
3. October 2015- Staff and Community Forums on SST options
 - Two Community Forums w/Spanish translations (east and west side)
 - One Faculty Forum
4. November 2015- Supt. makes recommendation to change or not change SST
5. November 2015-Additional Staff and Community Forums on superintendent SST recommendation
 - Two Community Forums w/Spanish translations (east and west side)
 - One Faculty Forum
6. December 2015- BOE votes to change or not change SST

IF NEW START TIMES ARE RECOMMENDED AND APPROVED

7. January–August 2016- Intensive Planning for Implementation
8. August 2016–Onward—Implement New School Start Times
9. August 2016--Onward–Semi Annual Updates on School Start Time Effectiveness and Decision Considerations for Modifications

DETAILED TIMELINE – See Project Plan Timeline (attachment)

Project Plan for Development of School Start Time Options

Tasks/Milestones (Δ)	Owner	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16
Output: Development of a Project Plan to Explore a Change in School Start Times for Greenwich Public Schools																
1) Project Manager (PM) collects and reviews literature, case studies and survey data	PM	20-Jul														
2) PM develops a charge document and Project Plan (PP)	PM	31-Jul														
3) PM assembles and convenes a Steering Committee (SC) to review PP and assign roles to explore SST Options	PM		Aug. 24													
4) Supt. Updates BOE on SST charge document and PP	Supt.			Sept. 10												
5) SC presents feasibility options to Supt. that include budget implications to change school start times in GPS	SC				Oct. 2											
6) Supt. and cabinet reviews SST options and budget implications	Supt.				Oct. 5											
7) Leadership Council (LC) reviews SST options and budget implications for feedback	LC				October											
8) SC modifies SST options and budget implications based on feedback	PM/SC				Oct. 8											
9) Supt. updates BOE on budget implications of SST options	Supt.				Oct. 8											
10) Host Staff and Community Forums to present SST options and budget implications	PM				Oct. 8	Nov. 5										
11) PM collects and monitor information from the SC and community forums	PM				5-Oct	Nov. 9										
12) PM presents final report to Cabinet, LC and PTAC	PM					Nov. 1-9										
13) Supt. presents final report and SST recommendation to BOE	Supt.					Nov. 19										
14) Host Additional Staff and Community Forums to present SST options and budget implications	PM					Nov. 16	Dec. 1									
15) BOE reviews final report on changing SST	BOE					Nov. 19	Dec. 17									
16) BOE votes on final report on changing SST	BOE						Dec. 17									
Output: IF APPROVED Adoption of New School Start Times for Greenwich Public Schools 2016-17																
17) Intensive Planning for Implementation	PM							Jan. 4								
Output: IF APPROVED Implementation of New School Start Time 2016-17																
18) Implement New School Start Times	TBD															
19) Stakeholder Evaluation Implemented (includes Satisfaction Survey)	CIO															Mar. 2017
20) Semi-Annual Updates on School Start Time Effectiveness and Decision Considerations for Modifications	Supt.															

SUMMARY OF SCHOOL START TIME OPTIONS

The following are the six school start time options currently under consideration for Greenwich Public Schools. This document consists of two parts.

The first part is a list of the six school start time options that are currently being considered. The first four options were taken from the GPS School Start Time Survey administered in Spring 2015. Options 1-5 are based on the research of case studies in the US. These are the options most frequently used by other districts that have revised their high school start time. The sixth option was generated as a result of the work of the School Start Time Steering Committee.

The second part of this document includes the variables and implications that are being examined relative to each of the six options. These are key areas that the School Start Time Steering Committee will be analyzing in order to develop recommendations.

Option 1

Switch Elementary School and High School Start Time

High School would start at 8:15 or 8:45 and end at 2:45 or 3:15

Elementary Schools would start at 7:30 and end at 2:00pm

Supportive/Highly Supportive in Survey: Parents 49%, Students 54%, Staff 40%

Districts that have implemented this strategy: Pulaski County, AK; Bentonville, AK; Wilton, CT; Milford County, DE; Harlem, IL; Fayette County, KY; Mahtomedi, MN; Bedford County, VA*

Option 2

Switch Entire District Start by 30 Minutes Later

High School would start at 8:00/end at 2:45

Middle School would start at 8:15/end at 3:05

Elementary Schools would start at 8:45 or 9:15/end at 3:15 or 3:45

Supportive/Highly Supportive in Survey: Parents 61%, Students 65%, Staff 34%*

Districts that have implemented this strategy: North Andover, MA; Brunswick County, ME (elementary schools were only shifted 15 minutes later); Hudson County, OH*

Option 3

Switch Entire District by 60 Minutes Later

High School would start at 8:30/end at 3:15

Middle School would start at 8:45/end at 3:35

Elementary Schools would start at 9:15 or 9:45/end at 3:45 or 4:15

Supportive/Highly Supportive in Survey: Parents 36%, Students 51%, Staff 16%

Districts that have implemented this strategy: Long Beach Unified SD, CA; Holyoke PS, MA*

Option 4

Extend the High School Schedule by One Block at the End of the Day

Supportive/Highly Supportive in Survey: Parents 48%, Students 35%, Staff 32%

Districts that have implemented this strategy: Denver, CO; West Hartford, CT*

Option 5 (not on survey)

Switch High School Start Time Later OR

5A- Different Start Times for the Different Houses within the High School

(all other school start/end times remain the same)

Districts that have implemented this strategy: Colorado Springs, CO; Santa Rosa County, FL; Marion County, FL; Bonneville Joint School District, ID; Needham, MA; Edina, MN; Moore County, NC; North Clackamas, OR; Dallas, TX; Austin, TX*

Option 6 (not on survey)

Recharge Schedule

(There would be a delayed opening one day a week on a designated day. For example- Every Wednesday high school start time would begin 2 hours later)

Districts that have implemented a variation of this strategy: Long Beach Unified School District, CA; Milford County, DE*

**Information taken from "School Start Time Change: An In-Depth Examination of School Districts in the US" by The Children's National Medical Center, April 2014*

SCHOOL START TIME OPTION VARIABLES AND IMPLICATIONS

<i>VARIABLES</i>	<i>IMPLICATIONS</i>	<i>RESPONSIBLE PARTY</i>
Transportation (Buses)	<ul style="list-style-type: none">• Which SST options would require additional buses and what is the cost?• How many additional buses would be needed to go from our current tiered bus schedule to a non-tiered system? Cost?• How many additional bus drivers would we need to hire for each SST option?• How can we deliver district-wide bus services at the lowest possible cost?• Would this mean a longer bus ride for students? What is the current longest bus route or ride for students?• Would we need to redesign bus routes to change SST and for which options?• Are bus passes an option for some of the older students?• Would a change in SST increase the number of students who will need or require bus service? Which SST options? How many students currently ride the bus to school?	Jim Hricay Janice Domiziano

<p>Transportation and Student Commute</p>	<ul style="list-style-type: none"> • Of the children receiving rides to school, how many students are dropped off at school on the parent's way to work? • How would a change in SST impact families if the school hours and parent work schedule were no longer aligned? • How many students walk to school? • Would changing SST require some students to walk home in the dark after-school? ...after drop off by the school bus? ...after sports practice? ...after school sponsored and non-school sponsored programs? ...after daylight saving time in the fall? • How many students would be required to wait in the dark for the school bus to arrive in the morning for pick up? • What is the number of auto accidents involving high school students per year? Would delaying SST reduce teen accidents and drowsy driving? • What is the impact of changing SST on our students' commute time? • Would more students need to drive to school, thus increasing congestion and decreasing available parking space? 	<p>Jim Hricay Tom Bobkowski Janice Domiziano Steering Committee Member(s)</p>
<p>GHS Athletic Schedules</p>	<ul style="list-style-type: none"> • Which sports teams would be affected if school began 30 minutes or an hour later and how? (Games and practices) • Could after-school sports practice be shifted to before school? Which sports? • How would a later dismissal time impact a student's ability to participate in sports? • Would daylight hours impact or reduce time for sports' practices and matches? • Would we need to light or better light the fields for some sports? Which sports? • Would a later dismissal time require teams or coaches to compete for field and/or gym space? • Would any sport games and/or matches require students to be dismissed from school earlier (early release) in order to participate in competitive sports? • Could we adjust the frequency and duration of practices or game time? • What, if any, impact would a change in SST have on the teachers who also serve as coaches? Would it make it difficult to find or hire quality coaches? 	<p>Gus Lindine</p>

<p>GHS Extra-curricular Activities</p>	<ul style="list-style-type: none"> • Which extra-curricular activities would be affected by a change in SST? Band? Orchestra? Chorus? Theater? Other? • Could some of these programs or activities be incorporated into the school day schedule? 	<p>Diane Fox</p>
<p>Extra-curricular Activities</p>	<ul style="list-style-type: none"> • How can we fit more activities (homework completion, sports, clubs, band) into the entire full day school schedule? Could we make it possible for students to get more done at/in school so that other activities become a part of the school day? 	<p>Diane Fox</p>
<p>Contractual Obligations</p>	<ul style="list-style-type: none"> • Would changing the SST impact the teachers' contract or the contractual hours they are required to work? How? • How would staff hours need to be adjusted or shifted for each option? • If staff is staunchly opposed to a change in SST, could BOE adjust their work schedule in the middle of a contract? • What could BOE do to help staff adjust or transition to a change in SST? • How would a change in SST impact other unions? Custodial union and their contract? Professional assistants? • How would a change in SST affect itinerant staff with flexible schedules? 	<p>Bob Stacy Carol Sutton</p>
<p>Non-contractual Issues related to Staff</p>	<ul style="list-style-type: none"> • How many staff members have less than 30minute, 45minute or 60 minutes or longer commute to work? The Fairfield County Commute is the 19th worst commute in the country. (Greenwich Times-August 27, 2015) • How would changing the SST impact the commute for staff? • What are the time lost and costs (fuel) associated with an increased commute time for staff? • How many staff would need child-care for their children before or after-school? • Survey the staff to discern how a change in SST would impact family life, routines and management issues? • Would a change in SST leave staff with less or more time with their families? • How would shifting the SST impact staff members who have a second or part-time job after school? 	<p>Bob Stacy Carol Sutton</p>

<p>Building Operation, Custodial and Security</p>	<ul style="list-style-type: none"> • How would the operation of the schools be impacted by a change in SST? Would buildings need to stay heated longer? ...lights in the buildings?... lights on the playing fields? 	<p>Jim Hricay Ron Matten Tom Bobkowski</p>
<p>Childcare and Childcare Arrangements</p>	<ul style="list-style-type: none"> • Would a change in SST increase the number of students who are home alone (latch key) after school until their parents get home from work? • What local and how many community organizations are able to provide childcare before and after school? • Would an earlier SST be reasonable for elementary students? • Would an earlier SST for younger students mean an earlier bedtime? Would parents be home from work by bedtime? How much time would parent and student interaction before bed time decrease or increase? • Would more parents require childcare and for which option? • How many parents rely on older siblings to care for the younger siblings before and after school? <p>(Survey: 21% of high school students care for siblings before/after school)</p>	<p>Steering Committee Member(s)</p>
<p>Budget</p>	<ul style="list-style-type: none"> • What is the cost to increase the number of buses so that high school SST is the same as elementary SST? • Would BOE need to hire more crossing guards in order to switch elementary SST to the high school SST (option 1)? • What are other costs associated with changing the SST? Lights on the fields, electricity, utility and heating usage and demands? 	<p>Jim Hricay Anthony Giovannone</p>

<p>Before and After-school Programs</p>	<ul style="list-style-type: none"> • How are school and non-school related programs impacted by changing SST? • How are after-school tutorials, religious classes, instrumental lessons, community service and school clubs impacted by a change in SST? • Would students have less and how much less time to access community services (i.e. library, supply and specialty stores) • Would parents require more before or after-school programs? • Are after and before school programs affordable for all members of the community? What are the costs associated with having to use before or after-school programs for students for the school year? • How would the B&G Club continue to employ high students to run their after-school program? They rely on the high school students to arrive first to receive and supervise the elementary students? • How would changing SST impact the breakfast program? Would more or fewer students participate or need to participate in the breakfast program? • Would students have less time to complete homework in the evenings? 	<p>Diane Fox Steering Committee Member(s)</p>
<p>Traffic Flow and Congestion Around Town</p>	<ul style="list-style-type: none"> • An early SST has had little impact on the traffic flow around GHS, would a later start time create more congestion as the roads become busier with commuters? How much more traffic would result? • When is peak time for traffic and congestion around town? Where are the busiest and most congested areas? 	<p>Jim Hricay Tom Bobkowski</p>
<p>Private Schools</p>	<ul style="list-style-type: none"> • Would we be able to compete for students with the private schools if we were to implement a change in SST? 	<p>Steering Committee Member(s)</p>

Discipline	<ul style="list-style-type: none"> • Studies show that most students are likely to get into trouble and demonstrate high-risk behaviors between the hours of 2:00-5:00pm? Would a change in SST increase/reduce discipline problems and these unwanted behaviors? • How would students respond to a change in SST? • Would a change in SST result in a rise or decrease in student misbehavior? Teenage crimes? Crimes against students? • Would the number of students who are unsupervised after-school increase or decrease? • Would discipline and office referrals increase/ decrease as a result of delaying or switching SST? 	Mary Forde
Student Employment	<ul style="list-style-type: none"> • How many students are employed in after-school jobs? • How many families rely on the extra income from the students who are employed after-school? • Would a change in SST impact the number of hours a student can work after school or during the entire week? • How would a change in SST impact the potential employers of our students? • How can B & G Club employ high school students in their after-school program if elementary students are dismissed first? 	Steering Committee Member(s)

Below are some lessons learned from other districts around the US that have switched their high school start time to later in the morning. (This information was taken from “School Start Time Change: An In-Depth Examination of School Districts in the United States” by the Children’s National Medical Center, April 2014).

- Many districts realized transportation cost savings by consolidating bus routes and bus depots. Many also undertook a comprehensive transportation study to determine if their bus routes/stops were the most efficient.
- Extensive community outreach through public meetings is essential in providing stakeholders an opportunity to express their concerns.

- Many of the concerns raised by parents regarding athletics were not realized. A number of districts found that athletic participation grew and their teams performed better after changing to a later high school start time.
- Districts should consider the views of staff, teachers, principals (from each level) and high school students when deciding on options regarding a later school start.
- Successful steering committee includes key staff from several areas (transportation, curriculum, athletics) to identify logistical issues and develop solutions before opening debate to the wider community.
- It is important to educate the community about the science behind starting school later. Once a later start has been implemented, high school students and parents should be educated on sleep health and time management.

(September 3-2015, First Edition)