Middle School Study
Middletown Public Schools
July 4, 2017

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This report, approved by the Woodrow Wilson Building Committee at their September 19, 2017 - Special Meeting, is a concept study to establish feasibility and costs to upgrade the Woodrow Wilson Middle School; the ultimate design will continue to evolve as the project moves forward.

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I. MIDDLE SCHOOL STUDY - EXECUTIVE SUMMARY

This study involved many people – members of the Building Committee, school professionals, parents, community volunteers, and experts from many fields. Those involved are greatly appreciated for their time, their expertise and their commitment to the Middletown Public Schools.

In May of 2016, the Woodrow Wilson Building Committee began examining what should be done with the school. In February of 2017, the committee engaged TSKP Studio, Architects to study options for a new or renovated middle school. The following report is the conclusion of that effort.

The process began with months of planning and discussions by the building committee and Board of Education. This included information gathering and the hiring of a consultant, TSKP Studio, to assist in the effort. The community was engaged in a series of public forums to illicit comment on the needs and concerns of the community as they apply to the Woodrow Wilson School.

An Educational Specification was prepared and adopted by the Board of Education that identifies the needs of the educational program for a grade 6 - 8 middle school.

**Recommended Option 1.0**
The solution ultimately recommended was to build a new school on the existing Woodrow Wilson Middle School Site and salvage the existing Woodrow Wilson pool and gymnasiums as a stand-alone Park & Community Services facility (identified as Option 1.0 in the report and illustrated below).

- Project Cost of $87.35 million, with $45.8 million in expected state reimbursement.
- Net Cost to the City of Middletown of $41.55 million is comparable in cost to all other options studied.
- Best meets the Educational Specification and provides greatest planning flexibility.
- Minimizes disruption to current students.
- Preferred over renovating the existing Woodrow Wilson Middle School or building on the Keigwin or Municipal Field site.
II. MIDDLE SCHOOL STUDY - PROCESS

The process utilized in this study can be divided into three sections: Information Gathering; Program Analysis; and Options Evaluation.

Information Gathering

 Demographics. In order to determine the proper size of a middle school, one needs to estimate the number of students the school will house. Two firms were engaged to conduct a demographics study of the school population in Middletown over the next several years – Milone & MacBroom of Cheshire, CT and NESDEC (New England School Development Council) of Marlborough, MA. The demographic information was shared with officials at the Connecticut Office of School Construction Grants, and the consensus was that the target population for the middle school in Middletown should be 919 students, grades 6, 7, and 8.

 Historical Information. Representative from the architectural firm of TSKP Studio gathered old plans and drawings from the files of Middletown Public Schools and analyzed the original design of the existing Woodrow Wilson Middle School on Hunting Hill Avenue. It was clear that the existing building was built with many additions over many years. They also examined the original plans for Keigwin School.

 Inspection of Existing Building. TSKP Studio and its consultants conducted walk-throughs of the existing middle school to examine its present configuration and physical condition. Representatives from the State also visited Woodrow Wilson Middle School to make their own assessment of the existing building and site. The consensus was that the existing building was in need of replacement or significant upgrades.

 Observation of Activities. In order to better understand the existing school’s functional requirements, representatives from TSKP Studio observed various activities at the school – student lunch waves, bus loading and unloading, and traffic in and around the site, both vehicular and pedestrian. This direct observation helped inform TSKP Studio on the need for coordination between school traffic and potential construction activities.

 Interviews with Maintenance Personnel. TSKP Studio met with school maintenance personnel to review the conditions within the existing school, determine locations of major mechanical equipment, and identify ongoing facility problems.

 Community Forums. Public meetings were conducted with members of the community at three elementary schools in Middletown to collect input from parents, neighbors, and others. Certain concerns were raised a number of times. The most important concerns were community use of school facilities after hours, the importance of clustering classrooms to reinforce middle school teams, providing rooms that are adequately sized, keeping Grade 6 separate, and minimizing disruption to the existing school during construction activities.

Program Analysis

 Meetings with School Staff and Administration. Meetings were conducted with school staff and administration to discuss room configuration, room sizes, and school layout in terms of supporting the educational objectives. For example, what is the ideal team size? What are the subjects taught in the team classrooms? What are the subjects taught in the rooms outside the team clusters? Is one of the
goals to separate the grades, and, if so, would a three-storey configuration help achieve that goal? Considerable discussion was about the “middle school model” and why it was important in creating the new middle school plans.

**Writing the Ed Specs.** The State requires that “Educational Specifications” (Ed Specs) for the proposed school be written and submitted as part of the District’s grant application. The Ed Specs contain a detailed description of the spaces and the physical features that are necessary to support the educational activities in the proposed school. The Ed Specs were reviewed and approved by the Board of Education before they were submitted to the State.

**Options Evaluation**

**Visualizing Optional Configurations.** To better understand the options for a new school, a number of diagrams and plans were created and discussed with the Building Committee. These options were presented in public meetings to the Board of Education and Common Council where comments were solicited. Follow-up meetings were conducted with responses to comments.

**Independent Cost Analysis.** A third party construction professional was brought in to prepare cost estimates for each of the options studied. The cost of renovation, new construction, site improvements, furniture and equipment, moving expenses, escalation, demolition and abatement were all included in the cost analysis. Possible options included “Renovation Only”, “New Construction Only”, plus a hybrid that included both renovation and new construction.

**Site Considerations.** In addition to evaluating the existing site at Woodrow Wilson Middle School, consideration was given to the Municipal Field site west of Hunting Hill Avenue, just across the street from the middle school. Consideration was also given to the Keigwin site.

**Saving the Existing Pool and Gym.** The Building Committee considered the future use of the existing pool and gymnasium at Woodrow Wilson Middle School, which are valuable assets to the community, in its deliberation of options. The Committee concluded very early in its study that the pool and gym should be saved, even if they were no longer connected to a new middle school. Consequently, the project budget includes the cost of separating the utilities that serve the pool and gym from those that serve the school, as well as constructing the walls necessary to create a separate, stand-alone facility that could continue to serve the community in the future. The cost of major improvements to the existing pool and gym, however, cannot be included in the school project.

**Compliance with State Guidelines.** In order to be eligible for State reimbursement, school projects must follow State guidelines. The development of the Educational Specification, building planning options, and project costs incorporate these state guidelines.
III. RATIONALE FOR MIDDLE SCHOOL STUDY
(Excerpted from the Educational Specifications for Consolidated Middle school)

Woodrow Wilson Middle School
Woodrow Wilson Middle School was originally built in 1956 as Woodrow Wilson High School. As the population and program needs grew, additions to the original building were added in the 1970's, 1980's, and most recently in 1992. While the building continued to be used during this time as Middletown High School, it suffered from failing mechanicals, recurring maintenance issues, and continued overcrowding. A new high school was completed and opened in 2008 on the site of the old Woodrow Wilson Middle School. The high school students moved to their new location and middle school students moved into the old Middletown High School, which was renamed Woodrow Wilson Middle School. While enrollment became more manageable in the "new" middle school, the failing systems were patched and repaired, but no renovation projects were scheduled. The current Woodrow Wilson Middle School needs to be fully renovated or newly replaced. A 2014 assessment of the building cited numerous, significant issues with the mechanical systems, roofing, windows, doors, exterior masonry, and paved areas.

Woodrow Wilson Middle School was designed as a high school. Its design does not meet the programmatic needs and philosophy of a middle school. Middle schoolers are not junior versions of high school students. They have unique needs that are best served by structures that support teaming, interdisciplinary units, spaces that allow pupils to construct meaning and explore content in a hands-on interactive manner. The Association for Middle Level Education explains that the organizational structure is critical to purposeful learning and developing relationships, "The ways schools organize teachers and group and schedule students has a significant impact on the learning environment. Interdisciplinary teams, common planning time, block scheduling, and elimination of tracking are related conditions that contribute to improved achievement."

For these reasons, and others, the Board of Education identified the Woodrow Wilson Middle School building as the highest priority need facility.

Keigwin Middle School
Keigwin Middle School was first opened in November, 1973. From 1973 to 1984 it served as one of Middletown's Grade 7 and 8th grade middle schools. In 1985 Keigwin became a 7th grade school and then turned into a 6th grade school in the late 1980's and has continued to be a single grade school since then. Keigwin was slated for renovation in the early 2000's but that was postponed due to the building of a new Middletown High School. It has not been brought to the table for renovation since then and is in need of major upgrades to all systems.

Consolidation
The plan adopted by the Board of Education is to consolidate the two schools, Woodrow Wilson Middle School (Grades 7 & 8) and Keigwin School (Grade 6) into a single, new or renovated, facility. By consolidating both schools, renovation of Keigwin would not be necessary and in addition would eliminate one transition for the students and provide operational savings to the Board. Freeing up Keigwin would also provide the district flexibility as it considers other options to reduce the total amount of schools it operates, in response to reduced student enrollment.
IV. OPTIONS STUDIED AND EVALUATIONS

Several options for a 6-8 middle school were examined. These options can be characterized as either renovations/additions to the existing WWMS or construction of a new school.

New Construction
For the new school option, 3 sites were reviewed, the Municipal Field site, the Keigwin Middle School site, and the existing WWMS site.

Municipal Field Site
The first option that was examined was a new school on the Municipal Field Site along Farm Hill Road.

Figure 1-New 2-story school on Lower playfield. Existing ball fields would be relocated to the east on the site of the existing Woodrow Wilson school. Existing WWMS pool, shown in blue, would remain as a stand-alone Park & Community Services facility.
This option would displace the existing ball fields that would ultimately need to be relocated to the existing WWMS site once the existing building is demolished. Preliminary investigations determined that the site has chronic drainage issues that are partially the result of downstream off-site issues at the Pameacha Pond. In addition, the current Municipal Park renovation project would need to be suspended, significantly delaying this project and incurring additional costs that are not budgeted. This option was considered to be not viable.

**Keigwin Site**

The Keigwin site was also reviewed as a potential site for a new middle school. However the site is severely constrained by wetlands leaving little area available for construction, parking, and site circulation. Because of the limited available area, the existing school would need to be demolished before new construction can begin, requiring that the Keigwin students be relocated off-site during the project. In addition, the parcel abuts route 3, requiring a Major Traffic Generator Permit from the Office of the State Traffic Administration (OSTA). Given the intensive nature of current use created by the adjacent high school, it is likely that OSTA will have objections to the project that may be insurmountable. This option was also considered to be not viable.

![Figure 2-Existing Keigwin site. In the above illustration, existing wetlands along with their associated upland buffer areas are represented in blue.](image)

**Woodrow Wilson Middle School Site**

There were three viable options for the WWMS site, Option 1.0 (Entirely New), Option 1.1 (New with Renovated Auditorium) and Option 2.0 (Renovation Only). These options were reviewed for compliance with three primary criteria established by the Building Committee:

- Ability to meet the Educational Specifications
- Cost effectiveness
- Mitigate disruption to students during construction
Option 1.0
This option locates a new three story school on the existing site along Hunting Hill Avenue. Because the site slopes, the proposed building is set into the hill allowing grade level access from both the first and second floors. Larger, public oriented spaces such as the gymnasium, auditorium, library-media center, cafeteria, and health clinic face east toward the parking. Core classrooms, on the west side, are organized in classroom clusters that house teams of approximately 100 students. Grades can be organized by floor, one grade to a floor, or by tower, with each grade occupying all three floors of an academic “tower” connected by an internal stair and/or a small atrium.

The proposed site is an inverse from the current configuration. With the school adjacent to Hunting Hill Avenue, the east side can support a bus drop-off, separate parking for 200 cars and a play field. In addition, this option retains the existing pool and gymnasium of the existing WWMS as a stand-alone Park & Community Services facility.

Figure 3-construction completed. In the above illustration, the old building has been removed and a new parking lot and playfield have been built. The existing pool and gym, located within the blue area just east of the new building, will remain on site for use by Park & Community Services.
In this option, as an all new stand-alone building, we have the ability to create a facility that meets all of the requirements and goals of the educational specification. Once the existing WWMS is demolished, enough of the site is available that all parking and bus circulation requirements can be met with enough space left to provide an all-purpose play field and separate parking for the existing pool and gym facility that will become a Park & Community Services facility.

The cost of an entirely new building and associated site costs is $87.35M. As in the renovation option, there will be some costs, e.g. those costs necessary to allow the existing pool/gym to function as a stand-alone structure, that are not eligible for reimbursement. Of the $87.35M cost, it is estimated that $81.16M will be eligible for reimbursement at a 56.43% rate. The result is a state contribution to the project of approximately $45.8M for a net cost to the City of Middletown of $41.55M.

Figure 4—during construction. In the above illustration, a new building is shown in orange in front of the existing school. Temporary classrooms are shown in yellow. A bus loop during construction is indicated with a dashed blue line.
Because the proposed new building is to be constructed along Hunting Hill Avenue largely in the lawn area, the disruption of the day to day activities within the school should be minimal (see Figure 4). However, in order to build the new building, it will be necessary to first remove the existing WWMS auditorium wing, freeing up enough space for the new building and allowing for continued bus access to the existing WWMS during the construction period. This means that the facility will be without a dedicated auditorium and some support areas, including the main office, for the duration of the construction period. In conversations with the administration and staff, by using other existing spaces such as the auxiliary gym, cafeteria, a few portable classrooms, and using the high school auditorium for performances, it was thought that the temporary loss of the auditorium could be successfully managed.

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Option 1.1
This option incorporates the existing WWMS auditorium into the new building as well as saving the pool and gymnasium as part of a Park & Community Services facility. As in Option 1.0, it is a three story building with grade access from both the first and second floors. The existing auditorium stage floor falls half way between the proposed first and second floors and is connected by ramps/stairs to the main floors. The building is organized the same as Option 1.0, only the auditorium and gymnasium locations are reversed from the locations in Option 1.0.

The proposed site is essentially identical to Option 1.0, but because the existing auditorium that is saved projects further east, the proposed parking lot to the east has a slightly reduced capacity. However additional parking, available in the existing BOE lot immediately to the North, can be used to supplement required school parking.

Figure 5-construction completed. In the above illustration, the old building has been removed and a new parking lot and playfield have been built. The existing pool and gym, located within the blue area just east of the new building, will remain on site for use by Park & Community Services. The existing auditorium has been incorporated into the new building.
In this option, in the hopes of significant savings and to mitigate the temporary loss of a dedicated auditorium, the existing auditorium was incorporated into the new building. The result is a mostly new structure that complies with the educational specifications. Because the existing auditorium floor levels do not coincide with those required for the new building, various compromised strategies involving ramps and elevators may be necessary to allow handicapped access to all levels. The site is developed similarly to Option 1.0, with a slightly reduced parking count of 180 spaces versus the required 200. However, the additional 20 parking spaces can be achieved by reducing the size of the proposed multi-purpose play field to the east.

The cost of this option and its associated site costs is $85.1M. Similar to Option 1.0, there will be some costs, e.g. those costs necessary to allow the existing pool/gym to function as a stand-alone structure, that are not eligible for reimbursement. Of the $85.1M cost, it is estimated that $82M will be eligible for reimbursement at a 56.43% rate. The result is a state contribution to the project of approximately $45.2M for a net cost to the City of Middletown of $39.9M.

Figure 6—during construction. In the above illustration, the new building is shown in orange and the existing auditorium is shown in gray. A bus loop, indicated with a dashed blue line, would need to be created along the southern edge of the site in order to serve the existing building during construction of the new building. A parent drop-off loop is shown at the northern end of the site during construction of the new building.
Similar to Option 1.0, the disruption to the day to day activities within the school will be minimal and because the existing auditorium is salvaged, the necessary relocation of the activities from that wing during construction will not be necessary in this option. However, salvaging the auditorium results in logistical problems with the site during construction that are significant. During construction, bus circulation cannot continue adjacent to the existing WWMS and must be relocated to the BoE parking lot to the north of the site. This location is remote from the school, insufficient in size to accommodate all the buses, and will displace much of the parking in that lot. This loss of parking and the additional loss of the parking between the existing auditorium and Hunting Hill Ave and most of the parking along the existing bus loop will result in a severe parking shortage for the school during construction. Staff will need to park off-site and be shuttled to the school. Access for emergency vehicles to the existing WWMS will also be severely compromised during construction. Although a small parking lot can be provided during construction along the southern edge of the property, it must also serve as a parent pick-up/drop-off, limiting available parking at this location to visitor parking only (see Figure 6).
**Renovations to the Existing WWMS**

The existing WWMS, originally built as a high school, is not conducive to the middle school model of discreet educational teams of approximately 100 students where core classes of Language Arts, Math, Social Studies, and Science are taught. Moreover, the building is oversized for the projected middle school use and is inefficient in layout. The renovation option reorganizes the building to allow each grade to occupy its own discreet wing where the core curriculum is delivered. Common spaces, shared by all grades, are located in separate areas of the building. The buildings overall size is reduced and its efficiency is improved.

Figure 7-renovation completed. This diagram illustrates how separate grades might be created within the footprint of the existing building. This configuration is not ideal for middle school teaming because students must travel through other team areas in order to get to common areas such as the cafeteria and media center.
To achieve this reorganization, most of the interior partitions of the building would be removed and rebuilt in new locations. The existing Library Media Center (LMC) would be demolished and relocated to the front of the building in the “common” area of the building and would take advantage of the deeper building footprint where existing windowless labs are located. This new location allows for daylight as well as easy access for students and the community. In addition, the two story wing to the southeast would be removed and replaced with a smaller addition to accommodate the core classrooms. Although this portion of the building is newer, retaining it would result in excess square footage or the need to locate common space in a core area.

Excess square footage is penalized in the state reimbursement formulas. Other areas that would be demolished to stay within the state square footage guidelines are the weight room in the northeast corner of the building, the art room on the east side of the building and a portion of the cafeteria that was added to handle the student population when the building housed the high school. The main office would be relocated adjacent to the gym and cafeteria where it would be more prominent.

The site would also be upgraded. Some additional parking would be added along the south side of the property and existing pavement would be replaced. The desire to separate car and bus traffic cannot be achieved within the existing site and building constraints. Consequently, site circulation remains largely unchanged and parking capacity would continue to be a challenge.

The completed renovation project would result in all new finishes, windows, doors, roofing, mechanical, electrical, and plumbing systems for the entire building. The entire facility would be air conditioned and provided with current technology and equipment throughout. The exception to these renovations would be the pool and its support spaces. As the pool is not part of the curriculum, nor allowed under state reimbursement formulas, it would be left “as is.”

The renovation option has constraints that make full compliance with the educational specifications extremely difficult. Though all individual room requirements can largely be met, the “Design Guiding Principles” of the Educational Specifications to create smaller learning communities of approximately 100 students within each grade cannot be supported by the constraints imposed by the existing construction.

Although individual grades are separated into communities in the proposed option, the existing circulation pattern of the school means that students of one grade must traverse the other grade communities to get to the common spaces shared by all grades. This further undermines the cohesion of the learning community.

Though approximately 70 spaces are proposed to the south of the site, this will result in a total parking capacity of approximately 160 spaces, less than the required 200 parking spaces. In addition, bus traffic cannot be separated from car circulation.

The renovation option does result in a reduced project cost of $81M. However, there is always increased risk of unforeseen circumstances in a renovation project that can result in unanticipated cost overruns. Moreover, as a result of state reimbursement guidelines, more of the costs of the renovation will be ineligible for reimbursement. Of the $81M project cost, approximately $64M will be eligible for reimbursement at a 66.43% rate. The result is a state contribution to the project of approximately $41.6M for a net cost to the City of Middletown of $39.8M.
One of the inherent difficulties in an occupied renovation is the associated disruption caused by construction activities in close proximity to students and the need to relocate students from existing areas to allow for them to be renovated. In this case, with no significant addition required, there is no available swing space to move the students and staff. This would require that a large number of portable classrooms be provided for the duration of the construction to free up areas of the building to be renovated. Because the renovation must be done incrementally, in phases, the construction duration would need to be extended an additional 10 months. As a full phasing plan is developed, it is certain that all students and staff would be moved at least once, and some may experience several moves over the course of the renovations (see Figure 8).

Figure 8— During construction. In the above illustration, new additions are shown in orange at three locations adjacent to the existing building, shown in blue. In order to create enough swing space within the school so that portions could be vacated during renovation work, temporary classrooms, shown in yellow, would need to be built at the southern end of the existing building. Portions of the existing building that need to be removed are outlined with a dashed orange line.
V. CONCLUSION

Because the costs to the City of Middletown for all three options are projected to be within 5% (see Appendix), the criterion of Cost Effectiveness is not differentiating.

Of the remaining two criteria, adherence to the Educational Specifications and Mitigation of Disruption to students, the Renovation Option is unsatisfactory. The existing building and site requires too many compromises and the extended construction duration and multiple relocations of students and staff results in significant disruption to the delivery of the curriculum. Also, as much of the existing building is retained, the opportunity to fundamentally create a new and vibrant facility that is able to serve the community over a 20 to 30 year horizon and adequately reflect the significant capital investment of the City of Middletown is doubtful.

Both Options 1.0 and 1.1 address the Educational Specifications, though option 1.0 allows maximum flexibility in tailoring a building solution to the particular needs of Middletown. The factor that ultimately differentiates the two options is the extreme difficulty during the construction period of managing the site in Option 1.1. The logistical difficulties of the school will be matched by those of the contractor as they try and navigate this congested site. Because of this difficulty, Option 1.0, with its minimal impact to students and staff during construction and its ability to fully meet the educational needs of Middletown is the preferred option.
EDUCATIONAL SPECIFICATIONS FOR CONSOLIDATED MIDDLE SCHOOL

PROJECT RATIONALE

Woodrow Wilson Middle School was originally built in 1956 as Woodrow Wilson High School. As the population and program needs grew, additions to the original building were added in the 1970's, 1980's, and most recently in 1992. While the building continued to be used during this time as Middletown High School, it suffered from failing mechanicals, recurring maintenance issues, and continued overcrowding. A new high school was completed and opened in 2008 on the site of the old Woodrow Wilson Middle School. The high school students moved to their new location and middle school students moved into the old Middletown High School, which was renamed Woodrow Wilson Middle School. While enrollment became more manageable in the “new” middle school, the failing systems were patched and repaired, but no renovation projects were scheduled. The current Woodrow Wilson Middle School needs to be fully renovated or newly replaced. A 2014 assessment of the building cited the following issues:

- Roof repair/replacement to prevent interior damage, leaks noted throughout the building
- HVAC code compliance issues
- Window treatment for sun on front of building
- Reseal and fill cracks in parking lots
- Abatement of tile (mostly completed)
- Tuck point areas damaged and reseal with water protection
- Replace boilers
- Upgrade controls
- Upgrade mechanicals air handlers and rooftop units
- Additionally, temperatures in the classrooms regularly reach temperatures in the 90's on warm days. (Some small portable air conditioning units were purchased but are insufficient. Electrical upgrades are needed to fully address the issue.)

For these reasons, and others, we identified the Woodrow Wilson Middle School building as the highest priority need facility.

This plan, however, would result in the consolidation of two schools, Woodrow Wilson Middle School (Grades 7 & 8) and Keigwin School (Grade 6). Keigwin was slated for renovation in the early 2000's but that was postponed due to the building of a new Middletown High School. It has not been brought to the table for renovation since then and is in need of work. By consolidating both schools, renovation of Keigwin would not be necessary and in addition would eliminate one transition for the students and provide operational savings to the Board. Freeing up Keigwin would also provide the district flexibility as it considers other options to reduce the total amount of schools it operates, in response to reduced student enrollment.
Keigwin Middle School was first opened in November, 1973. From 1973 to 1984 it served as one of Middletown's Grade 7 and 8th grade middle schools. In 1985 Keigwin became a 7th grade school and then turned into a 6th grade school in the late 1980's and has continued to be a single grade school since then.

Middletown experiences a considerable loss of students to magnet schools. It is difficult for the district to compete with the beautiful facilities that attract our students and families to attend school out-of-town. Middletown students deserve and should have a similar state-of-the-art facility in which they can take pride and learn with their peers in a developmentally appropriate environment.

Woodrow Wilson Middle School was designed as a high school. Its design does not meet the programmatic needs and philosophy of a middle school. Middle schoolers are not junior versions of high school students. They have unique needs that are best served by structures that support learning, interdisciplinary units, spaces that allow pupils to construct meaning and explore content in a hands-on interactive manner. The Association for Middle Level Education explains that the organizational structure is critical to purposeful learning and developing relationships, "The ways schools organize teachers and group and schedule students has a significant impact on the learning environment. Interdisciplinary teams, common planning time, block scheduling, and elimination of tracking are related conditions that contribute to improved achievement."

These educational specifications propose that the Middletown Public Schools renovate as new or construct a new, consolidated middle school for grades 6-8. The proposed school construction plan is the result of work done by various groups over a two year period.

In March 2017 a team of content area teachers and administrators developed educational specifications for grades 6-8 to foster 21st Century teaching and learning. Additional input was sought from parents, community, administrators, and members of the Board of Education the following month. The Board of Education approved the Educational Specifications in May 2017 and Council approval was sought in June.

**EXECUTIVE SUMMARY**

This document details the educational specifications for a school that meets the unique needs of a middle school student. The middle school student differs from an elementary or high school student and so does the space in which a young adolescent learns. Different from the conventional classroom, middle school research supports designs that provide learning opportunities focused on collaboration and encourage teaming. Differentiating instruction for the middle school student includes catering to the learning style of the individual and provide a variety of ways in which the student can absorb information and demonstrate learning. Tables, chairs, and technology must be movable to enhance the learning experience and encourage individual and group learning.

Middletown Consolidated Middle School: Page 2
The Middletown Board of Education vision of instruction is to “meet the needs of every child through collaboration, focus, and determination in a high quality school system passionate about student achievement.” Additionally we believe:

- Every child deserves rigorous curriculum, dynamic teaching, and the tools and materials to facilitate learning.
- High expectations for all children and differentiated learning opportunities will enable students to reach their potential.

The new consolidated middle school proposed in this document reflects Middletown’s beliefs about our students and best practices in education.

**Keigwin Middle School Vision and Mission**

**Vision:** At Keigwin School, we build positive relationships with students, staff and parents that foster respect, kindness and support for learning. We honor diversity and equity and cultivate critical thinking, communication, collaboration, and creativity. We maximize the potential for all students to be successful and self-confident. We consistently reflect in order to create a culturally and academically inspiring school community of lifelong learners with healthy minds and bodies.

**Mission:** Keigwin School is committed to meeting the unique needs of the changing adolescent: intellectual, social, emotional and physical. Through our teaming environment, the staff actively engages students in the pursuit of academic excellence and character building. We challenge all students to learn through involvement in a rigorous curriculum within a richly diverse school culture that encourages independent thinking, self-worth, and mutual understanding.

**Woodrow Wilson Middle School Mission and Vision**

The Woodrow Wilson Middle School community is committed to fostering the academic, social and emotional potential of all. We are an inclusive community of open-minded, creative learners who value acceptance, perseverance, respect and empathy. All members communicate openly, and have the confidence to take healthy risks. We are mindful of our responsibility to make a positive impact on the greater community. We are the bridge that connects elementary school to high school.

Our new consolidated middle school will continue the ideals highlighted in the vision and mission statements above. We understand that the learning needs of the adolescent are different than that of an elementary or high school student and will create a program that develops the whole child within a community of learners.

**LONG-RANGE PLAN**

Like most school districts in the state, Middletown Public Schools is experiencing a decline
in student enrollment as well as demographic changes in the population, though our enrollment decline has been less severe than others. A study conducted by Milone & MacBroom in July 2015 showed a relatively modest, but steady reduction in students over the next 8 years.

The goals for the new middle school facility are as follows:
• construct a consolidated middle school for grades 6-8
• reduce the number of district schools to achieve greater efficiency and racial and economic parity in our district
• use the current grade 6 school as swing space for any future renovations
• improve academic programs for Middletown students
• ensure safe and appropriate learning environments for Middletown students
• incorporate current technology into instructional practice
• maintain the Middletown middle school students leaving to attend magnet schools

The new/renovated middle school is the first phase of a long range plan for the schools in Middletown. Once completed, Keigwin Middle School will be returned to the City of Middletown unless new educational programming or future renovation of other Middletown schools dictates the use of the facility. This long range plan will result in a reduction of Middletown schools from the current 11 to 10 by a projected date of 2021.

This plan will produce immediate and long-term savings for the district. Greater efficiencies in staffing and resources can be achieved while improving our facilities and reducing our use of energy with more cost-effective structures and equipment.

PURPOSE OF EDUCATIONAL SPECIFICATIONS

Connecticut General Statutes (Section 10-287c-1) define educational specifications as, “A description of the general nature and purpose of the proposed school building project, which may include the applicant’s long range educational plan and the relationship to the proposed project to such plan; enrollment data and proposed project capacity; the nature and organization of the educational program; support facilities; space needs; accommodation for educational technology; specialized equipment; and site needs, and any other supporting documents deemed necessary by the commissioner.”

The State guidelines provide a Practical Definition of Educational Specifications:
• Written justification of the educational need for the project
• Description of the educational activities which will be supported by the building at completion
• Text which describes the types of spaces which will best accommodate your program requirements
• A complete text version of your proposed building project (including the description of desired end-product and details of the construction process necessary to achieve the end

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result)

- A tool used by your design professionals to direct them through the design phases

These educational specifications provide the blueprint for completion of a school building that will meet the needs of Middletown students and the community. This comprehensive overview of the program and facility will carry out the vision and goals of the Board of Education.

These educational specifications are required as part of the construction grant approval process for the following purposes:

- Justification of the need for the proposed school building project
- Description of the academic activities that the proposed school building project is to support and the types of spaces that will best accommodate program requirements
- Determination by the Department of Administrative Service for the nature, scope, feasibility and funding level for the proposed school building project

**CATEGORY PRIORITY**

This project will analyze the feasibility of renovating or building a new middle school. Based on the results of this independent study, this project should receive a 66.43% reimbursement rate or 56.43% for new construction and be eligible as a Category 1 Project in accordance with the requirements of Section 10-283 (a-6) of the Regulations of Connecticut State Agencies, which states that Category One Projects are primarily required to:

"Create new facilities or alter existing facilities to provide for mandatory instructional programs pursuant to Title 10 of the General Statutes, including, but not limited to special education; the arts; career education; consumer education; health and safety; language arts, including reading, writing, grammar, speaking, spelling, and library media centers; mathematics; physical education; science, including laboratories; and at the secondary level one or more foreign languages and vocational education including shops; or for physical education facilities in compliance with Title IX of the US Elementary and Secondary Education Act of 1972 where such programs or such compliance cannot be provided within existing facilities."

**CAPACITY - ENROLLMENT DATA**

In July 2015, Rebecca Augur of Milone & MacBroom presented an enrollment projection as part of the elementary redistricting study for the Middletown Public Schools (appended). This report forecasted district enrollment through 2025. In 2017, NESDEC provided enrollment projections. A decrease in births beginning in 2009 and a depressed housing market are incorporated into projected enrollments for grades 6-8.
<table>
<thead>
<tr>
<th>YEAR</th>
<th>Grade 6-8 Enrollment Milone &amp; MacBroom</th>
<th>Grade 6-8 Enrollment NESDEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016-17</td>
<td>976</td>
<td>996 (actual)</td>
</tr>
<tr>
<td>2017-18</td>
<td>912</td>
<td>919</td>
</tr>
<tr>
<td>2018-19</td>
<td>900</td>
<td>904</td>
</tr>
<tr>
<td>2019-20</td>
<td>893</td>
<td>915</td>
</tr>
<tr>
<td>2020-21</td>
<td>873</td>
<td>898</td>
</tr>
<tr>
<td>2021-22</td>
<td>828</td>
<td>866</td>
</tr>
<tr>
<td>2022-23</td>
<td>800</td>
<td>821</td>
</tr>
<tr>
<td>2023-24</td>
<td>802</td>
<td>826</td>
</tr>
<tr>
<td>2024-25</td>
<td>804</td>
<td>821</td>
</tr>
<tr>
<td>2025-26</td>
<td>818</td>
<td></td>
</tr>
<tr>
<td>2026-27</td>
<td>785</td>
<td></td>
</tr>
</tbody>
</table>

The peak enrollment for this project is the 2017-2018 school year. The capacity for the new middle school during that year is as follows:

<table>
<thead>
<tr>
<th>GRADE</th>
<th>ENROLLMENT</th>
<th>NUMBER OF CLASSES</th>
<th>AVERAGE CLASS SIZE</th>
<th>THEORETICAL CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six</td>
<td>292</td>
<td>15</td>
<td>20</td>
<td>375</td>
</tr>
<tr>
<td>Seven</td>
<td>297</td>
<td>15</td>
<td>20</td>
<td>375</td>
</tr>
<tr>
<td>Eight</td>
<td>330</td>
<td>17</td>
<td>20</td>
<td>425</td>
</tr>
<tr>
<td>TOTALS</td>
<td>919</td>
<td>47</td>
<td>20</td>
<td>1,175</td>
</tr>
</tbody>
</table>

The functional capacity of the school is 919 students (20 students per class X 47 classes). This number assumes a district policy that targets class size for middle school at or around 22 students per class. The theoretical capacity depicts the maximum number of students who could reasonably be accommodated in each class at 25 per class.
EDUCATIONAL SPECIFICATIONS COMMON TO ALL SCHOOLS

Common educational specifications applicable and essential to all middle schools: The facility designed for grades 6-8 should accommodate projected enrollments through the year 2027, taking into account student enrollment and future needs. The designs support the concept that smaller learning communities within the fuller learning community enhance interactions among learners, increase a feeling of belonging, and emphasize the importance of individuality. The school will be physically organized in grade level clusters that facilitate teams of four academic core subject teachers [language arts, mathematics, science, and social studies] working with the same group of 100-120 students. There will be three teams per grade level. Support services including special education, Section 504, and SRBI, will be provided space within each grade level cluster for ease of access by students and for the facilitation of teacher collaboration.

Facility Design Guiding Principles:

- Accommodations for both current and future projected enrollments
- Smaller learning communities within the larger school community
- Student-driven, interactive, project-oriented learning experiences
- Adaptable space for dynamic and changing programs
- Spaces for multiple school functions
- Spaces for meetings of various sizes distributed throughout the facility
- Support for current and emerging technologies, i.e. charging stations for phones and laptops, tablets, and infrastructure for distance learning (MOOCs), etc.
- Support for 21st Century learning
- An inviting environment that welcomes students, staff, and community
- Free flowing, safe, easy movement
- Maximum exposure to natural light and ventilation
- Durable, high quality, age-appropriate furnishings to support the educational program
- Acoustical treatment designed to enhance learning by eliminating noisy distractions from outside the teaching spaces, and by improving sound quality within the teaching spaces
- Durable, easily maintained finishes
- Appropriate energy efficient technologies
- Central Heating, ventilation, and cooling (HVAC)
- Public access that does not compromise school security and that minimize disruption to educational activities
- Mechanical systems that continue to provide basic services to the building, such as power, light, heat and water, in the event of an emergency
- Outdoor and indoor spaces as an extension of the educational and athletic programs

School Safety and Security

The Safety Committee deemed security a vital factor. As documented in the Middletown Public Schools vision, goals and beliefs, a safe learning environment is one of the district’s key goals. Our
children must have a sense of physical and emotional well-being, which in turn, will enhance student achievement. Therefore, interior and exterior surveillance cameras will be placed throughout the buildings. The City of Middletown and the Middletown Public School District currently use S2 Global Security/Management Systems and Milestone XProtect Video Management Systems and will continue using this system. Electronic door locks will control access to the entire school include using swipe card entry systems for each classroom. In particular, front doors will be designed to control entry to the school. For security purposes, one entry door will lead directly to the main office. The designs of the building will ensure a secure vestibule as well as clear views of all areas, incorporating the inclusion of glass to provide maximum visibility for the monitoring of traffic. To maintain security, an addressable intrusion alarm system is essential. Areas designated for community use will be provided with accessible parking and convenient entry doors. Designated community use areas will include athletic facilities, auditoriums, media centers, and cafeteria. The school design will conform to the school safety standards as recommended by the School Safety Infrastructure Council, as charged by Public Act 13-3, Section 80(b), or its subsequent revisions. These standards include, but are not limited to: (1) entry ways to school buildings and classrooms, (2) cameras throughout the school building and at all entrances and exits, including closed-circuit television monitoring, (3) penetration resistant vestibules, and (4) other infrastructure devices and services as they become industry standards. A risk assessment of the potential school site will enable school district leadership, its building committee, and architects to determine an “all hazards” threshold level response to potential threats in order to plan the most effective mitigation for attaining the desired level of protection.

Critical compliance areas to be considered in school construction and site development are:

- School site perimeter
- Parking areas and vehicular and pedestrian routes
- Recreation areas (playgrounds, athletic areas, multi-purpose fields)
- Communication systems
- School building exterior
- Roofs
- Critical assets/utilities
- Other areas as indicated by the proposed school location, its site, design features

Site Considerations - Internal

The following safety considerations should be made in the design of the interior features:

- All exit doors to be monitored through the administrative offices for controlling access to the building
- Annunciator panels to alert office personnel to a breach of security
- A security system design to control and monitor visitor access to the school as well as night security
- A buzzer and video observation system controlled from the office and/or a security kiosk to control entrance to a main entrance vestibule where additional security clearance would be
required for access to the school lobby. All materials used in this area to be bullet and blast resistant and designed in a manner as to thwart intrusion.

- Classroom doors not to be recessed and, optimally, to swing 180 degrees. Each door will have a magnetic release for emergency evacuation or intrusion situations as well as a penetration resistant vision panel. Doors to be lockable from both sides, tamper resistant, and allow for quick release from the interior with one motion.
- School Resource Officer / Security Guard Room
- Mobile communication devices for bus area monitoring, security and emergency communications
- Voice-over integrated communication system
- The ability to “lock down” all exterior entrance doors from one central switch located in the school central office
- Student attendance via card reader

Site Considerations – External

The outdoor facilities for the Middle School complex should provide for the following safety considerations:

- Separate access to the building for bus transportation and parent vehicular traffic
- Visitor and general parking for approximately 300 cars
- Separate faculty and staff parking area for approximately 200 cars
- New roads and driveways to accommodate parking areas, bus queue, and separate parent drop-off areas; possible closure of a portion of Hunting Hill Avenue
- Well-lit parking areas and walkways to the parking areas
- School name in at least two outside locations, visible from both student and general public access roads and driveways
- Emergency vehicle accessibility signs
- Loading dock area for supplies and equipment
- Dumpster pad with privacy enclosure

Community Use and Security

All schools serve as centers of community-based programs, activities, and events for the citizens of Middletown. They should, therefore, be made available to the public to the extent practical while incorporating security measures that ensure the safety of our students and staff and maintaining as their primary function as a place of learning for our students. The designs will identify specific areas to be isolated for after-school activities and for community use, as well as for security and maintenance. School facilities serve the educational interests of its students as its primary function, while embracing the needs of the community for activities to enhance the quality of life for Middletown citizens.

The Middletown Board of Education believes that school buildings belong to the community. Areas most in demand for community use are:
• Gymnasiums
• Auditorium
• Library-Media Center
• Cafeteria
• Outdoor athletic facilities

The building will be accessible to handicapped citizens, to all public places, including lavatories, water fountains, and seating. The design, however, will respect the need for security of core school facilities and public areas. Visitors during the school day, therefore, will be directed to a single point of entry to the building. The middle school building will highlight student artwork and display academic projects. It will provide space for visiting lecturers and artists in formal and informal settings that promote student and guest engagement.

Specifications:

School Resource Officer/Security Staff Office 1 @ 100 sq ft
Video Surveillance Room 1 @ 100 sq ft
Admittance Kiosk (Vestibule) 1 @ 50 sq ft

250 sq ft Total

Collaboration with the community will allow the sharing of information through maker spaces, a place where participants learn new information through social interaction. The design, however, will respect the need for security of core school facilities and public areas. Visitors during the school day, therefore, will be directed to a single point of entry to the building.

The artistic and academic ability of our students will be presented through the display of artwork and projects in formal and informal places throughout the school. Small and large areas for visiting guests will promote interaction among audiences.

Middletown proposes construction of a new or fully renovated middle school. This facility will house a projected enrollment of 919 students in grades six through eight. The floor area of the building will be approximately 150,000 square feet. Classroom and program area sizes stated below are estimates and may be revised as the design work progresses.

With respect to the entire building, the following apply:

• Building will be sprinklered
• All new construction will comply with current codes, will address current and anticipate future technology, and will utilize energy efficient materials
• Special attention will be given to maximizing the use of natural lighting as appropriate to programmatic use of the space
• Unless otherwise indicated, floors throughout will be selected based on durability and ease of maintenance
• There will be one national flag per classroom space
• There will be hand-crank operated flagpoles outside
• Building will be designed to allow after hours use of large assembly spaces without compromising security of the remainder of the building

General Classrooms - 9 Language Arts, 9 Social Studies, 9 Mathematics, 6 World Language, 2 Health, 1 ROCKS, 1 PRIDE

• Classroom (780 square feet) large enough for student desks for 25 students, plus 1 dedicated u-shaped table for student groups to meet with teacher
• Lots of natural light
• Blinds/shades for room darkening
• Projector or interactive display board with wireless connectivity, document camera, built in audio, video conferencing capabilities
• Built in bookcases
• Counter space
• Lockable storage and closets
• File cabinet
• Bulletin boards for displaying student work
• Dry erase whiteboards on at least 2 walls
• Desks not connected to chairs that can be easily configured into group work tables (perhaps rolling)
• Ample electric outlets and phone charging capability spread throughout the room
• No carpets
• Phone near teacher computer
• Teacher laptop / tablet
• Laptop cart for students
• Charging station for 1:1 laptops
• Bank of 3-5 desktop computers with large touch screen displays
• Creative student work displays - perhaps like a clothesline or other art gallery feature (could be along the wall)
• Teacher desk with phone
• Student storage for their materials, books, lunch, etc.
• Digital and analog clock
• Speakers in multiple locations within the ceiling
• Sound suppression materials to reduce echoing within the classroom
• Room lights on multiple circuits to allow for different lighting schemes

Social Studies (in addition to above):  
• Trapezoid tables for group and individual work
• Updated maps and globe
• Extensive cabinet and counter space for storage of materials.  
• One (1) wall in all Social Studies rooms that has "wallpapered" world maps on it.

Mathematics (in addition to above):

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5 additional Chromebooks

Science
The Science rooms will be located with the grade level teams. The combined lab/classroom/prep space is 1150 square feet. (Prep Rooms 8 X 12 = 288 sq ft.)

All science labs should be equipped with the features listed for the regular classrooms and additionally the following:

- Goggle sanitizing cabinets with UV bulbs (in accordance with Connecticut General Statutes Sections 10-21a and amendments 10-214a-1 to 10-214a-3)
- Eye wash stations
- Emergency drench showers (see Connecticut Middle School Science Safety Prudent Practices and Regulations on the CSDE website)
- Fire blankets and fire extinguishers
- Chemical and water resistant counters and floor tiles
- Ample storage space which is lockable AND space where students can store projects from one day to the next
- Deep sinks located about the perimeter of the room
- 6 lab stations per lab with no sinks that serve as cooperative work areas where groups of up to 4 students can work at a time to develop models or conduct mini-activities to support learning, do research with laptops etc. Possibilities for shape include square (4’x4’), rectangular (4’x5’), hexagonal (5’x5’) etc.
- Space for 25 individual movable desks which can be configured into a circle for discussion or rows for other type of work
- All group work areas should have electricity available and all electrical outlets to be GFI’s
- Staff may select from fixed teacher demo tables or mobile demo tables
- Grade 6 work stations to include stools for students at the tables

All Science Prep Rooms should be equipped with the following basic safety features:

- Eye wash stations
- Fire blankets and fire extinguishers
- Flammables storage cabinet with appropriate ventilation (these cabinets do not need to be very large)
- Corrosives storage cabinet (these cabinets do not need to be very large)
- Chemical and water resistant counters and floor tiles

STEM (Science, Technology, Engineering, and Math) 1200 sq ft

The STEM classroom will provide instructional space for Gr. 6 STEM classroom instruction as well as storage and workspace for the Robotics Club. The combined lab/classroom/prep space is 1200 square feet.
The STEM classroom should be equipped with the features listed for the regular classrooms, such as a whiteboard and projector and additionally the following:

- Goggle sanitizing cabinets with UV bulbs (in accordance with Connecticut General Statutes Sections 10-21a and amendments 10-214a-1 to 10-214a-3)
- Eye wash station
- Emergency drench showers (see Connecticut Middle School Science Safety Prudent Practices and Regulations on the CSDE website)
- Fire blankets and fire extinguishers
- Chemical and water resistant counters and floor tiles
- Ample storage space which is lockable AND space where students can store projects and robots from one day to the next
- Deep sinks located about the perimeter of the room
- 6 lab stations per lab with no sinks that serve as cooperative work areas where groups of up to 4 students can work at a time to develop models or conduct mini-activities to support learning, do research with laptops etc. Possibilities for shape include square (4’x4”), rectangular (4’x5”) hexagonal (5’x5”) etc. These tables will have sets of 16 storage cubbies below each table.
- Space for 25 individual movable desks which can be configured into a circle for discussion or rows for other type of work
- All group work areas should have electricity available and all electrical outlets to be GFDIs
- Grade 6 work stations to include stools for students at the tables

Similar to the Science classrooms, the STEM classroom should be equipped with the following **basic safety features:**

- Eye wash station
- Fire blankets and fire extinguishers
- Flammables storage cabinet with appropriate ventilation (these cabinets do not need to be very large)
- Corrosives storage cabinet (these cabinets do not need to be very large)
- Chemical and water resistant counters and floor tiles
Special Education
There will be 9 resources rooms (400 sq.ft.), 3 per grade level, to accommodate students requiring resource room support. Classrooms will be equipped as regular classrooms, as stated above, with the following special features:
- 8 individual adjustable height desks with mobility seating (ball chairs, concentration cushions).
- Natural light
- Blinds/shades for room darkening
- Projector or interactive display board with wireless connectivity, document camera, built in audio, video conferencing capabilities
- Built in bookcase
- Counter space
- File cabinet
- Bulletin boards for displaying student work
- Dry erase whiteboard
- Ample electric outlets
- Teacher laptop
- Charging station for 6 laptops
- Teacher desk with phone
- Digital and analog clock
- Speakers within the ceiling
- Sound suppression materials to reduce echoing within the classroom
- Room lights on multiple circuits to allow for different lighting schemes
- A small attached office or additional locking cabinetry to support the confidential nature of the work of special education teachers (144 square ft.).

There will be 3 Intensive Case Management suites (550 sq. ft. total for each suite) to support students with significant social, emotional, behavioral and learning challenges - 1 per grade level. These spaces should be slightly removed from the grade level pods or clusters.
- Designed to include 3 separate spaces: of 2 attached rooms of approximately 300 and 200 square feet with an adjoining door
- 6 desks total
- 2 kidney tables for small group work, 1 each in the 300 and 200 square foot rooms
- Teacher desk with phone in 300 square foot room
- Teacher desk in 200 square foot room
- Locking file cabinet
- Teacher laptop
- Clock in 300 and 200 square foot rooms
- Dry erase board in 300 and 200 square foot rooms
- Counter space and cabinetry in 300 square foot rooms
- 1 room of approximately 100 square feet to be utilized as a cool down/quiet space.
  - noise reduction including carpet and acoustic tiles.
• The suite should have a bathroom included or in close proximity that is not used by the general student body. (50 sq ft)

2 offices to accommodate specialists such as Behavior Techs and Board Certified Behavior Analysts (BCBAs) as well as confidential records is needed. (100 sq ft each. Total 200 sq. ft.)
• 2 Teacher desks
• 2 Locking file cabinet

1 Intensive Case Management Suite for students with significant cognitive, adaptive, medical and or physical challenges (800 sq ft). This would include 2 adjoining rooms of approximately 400 square feet each. One room would support instructional tasks and the other would be set up for functional life skills that has handicapped accessible counters, a stove, refrigerator, washer and dryer, sink. The room should be equipped with an oversized closet for equipment storage.
• Handicapped accessible bathroom with mat table and changing table
• Adaptive equipment to include: hoery lift, wheelchair, IV Pole
• Technology to support specialized instruction
• Close proximity to the nurse’s office.
• 4 student desks
• Teacher desk in classroom space with phone
• White board in classroom space
• 2 adjustable round tables for small group work
• Projector
• Teacher laptop
• Locking cabinetry and counter space

6 related service rooms to support (social workers, psychologists, speech and language pathologists) (150 sq ft each). Ideally, these would be embedded as suites within grade level pods with 3 to 4 connected in each pod or grade level cluster.

• Round table for 5 to 6 students and clinician.
• White board
• carpeting
• desk
• chair bookcase
• teacher laptop
• small conference table and four (4) chairs are needed for small group meetings.
• telephone

2 rooms for the occupational therapist and physical therapist (200 sq ft each. Total 400 sq ft)

Effective School Solutions (ESS) requires 1 small classroom/therapy rooms (450 square feet each) and 1 office of approximately 60 square feet. (510 sq ft total)

The whole school should be wired for Frequency Modulations (FM) for students with hearing impairments who require FM systems.
**Culinary and Nutrition/Healthy Living Lab:**
There will be one Culinary & Nutrition Lab (1,400 square feet).
- 6 kitchen areas with ovens, microwaves, vented hoods, etc. so there is a safe student-oven ratio of 4 to 1
- Handicapped-accessible facilities
- 6 sink/food prep areas with deep, double sinks, dishwashers, and disposals
- Ample counter space for food preparation with the proper non-porous, easy clean material suitable for food prep
- Ample below-counter and above-counter cupboard space with easy-clean, durable surfaces
- Proper electrical for all the specific needs of ovens, etc. and available outlets at all kitchen stations to use other kitchen appliances such as toasters, blenders, etc.
- A separate, attached room for office staff (and office furniture), dry, cold, and frozen storage accessories (freezers, cabinets, five (5) refrigerator/freezers, etc., a large capacity washing machine and dryer, cleaning supplies storage (which is to be separate from food storage), and ample shelves for other storage.
- Storage for frozen, cold and dry food
- Flooring that is appropriate for food prep areas with regards to safety and sanitation.
- Display case
- Secure and unsecured storage
- Digital billboard
- Should be built on an outside edge with access to the road or an access pathway for food deliveries such as Peapod and/or repair and delivery of large appliances

**Technology and Manufacturing**  (2 classrooms with an office/storage in the center) (2440 sq ft total)

**Shop Type Room - Dusty Environment**
One room of 1,640 square feet total.

- 1,400 square feet
- 240 square feet Storage/Office
- Double door between room and office/storage
- Close to Art and Science areas
- On the First floor
- Drive up door with outside access
- Garage door
- Deep sink with hose connection
- Emergency power loop/dedicated breaker box per room
- Dust collection system
- Fume collection system
- Air filtration system and exhaust system
- Emergency safety shower
- Compressed air
- Sand-blast cabinet
- 10' ceilings
- CT OSHA approval
- Resilient floor
- Six (6) benches 6' x 4' with locker storage bases, metal and wood vise each, electrical and air drops
- Twenty-four (24) stools
- Flammable liquid cabinet
- Safety glass cabinet, one
- Sky light
- Six (6) benches 6' x 4' with under-bench storage
- Twenty-four (24) stools
- Storage cabinets
- Safety glass cabinet and eye-wash station
- Sky-light
- Twenty-four (24) desktop computer stations
- Electric drops above the benches
- One (1) Table Saw
- One (1) Jointer
- One (1) Radial Arm Saw
- One (1) Surface Planer
- Four (4) Band Saws
- Four (4) Drill Presses
- Four (4) Sanding Machine
- One (1) Cabinet Sand Blaster
- Four (4) Scroll Saw
- Two (2) Spindle Sander
- One (1) Miter Box
- One (1) Wood Lathe
- One (1) Small Engine Lathe
- One (1) Grinder
- One (1) Buffer
- One (1) Arbor Press
- Two (2) Lumber Racks
- Four (4) Metal Storage Cabinets, locking
- One (1) Jump Shear
- One (1) Slip Roll
- One (1) Box and Pan Brake
- One (1) Notcher
- One (1) Spot Welder

Equipment Needs: All should be “Saw Stop” brand which is the safest and turn off automatically when in contact with flesh.

Clean/Dust Free Lab:
One split room of 800 square feet total

- Double door between room and office/storage
- Close to Art and Science
- First floor
- Drive up door with outside access
- Garage door
- Deep sink
- Emergency power loop/dedicated breaker box per room
- Compressed air
- 10’ ceilings
- CT OSHA approval/guidelines

Art 4100 sq ft

3 Art Classrooms General Art, 2D Art and Computer Graphics, and Pottery & Sculpture with attached Kiln room/Storage room/work room

For room layouts, the teacher should be oriented in the “front” of the room where a main presentation area should be established. A large interactive display board for the teacher to use to present information to the whole class. These interactive display boards should have the capability of allowing teachers and students share the content from their mobile devices (MacBooks, Chromebooks, Tablets, phones etc.) to the display board wirelessly as well as a panel located in an area to connect permeant devices. The display board should also have an integrated speaker system for the classroom. Student seating should be designed so that view of the front of the room is unobstructed. Each room should also have separate white boards. Sufficient power outlets should be placed throughout the room. Special consideration should be given to natural lighting for these spaces. There should be a sufficient space for work which is drying or being displayed. A storage/workroom should be attached to all three rooms so that all rooms can access all equipment and materials. The Kiln room should be built within this space to accommodate 2-3 kilns and can be locked off. The Kiln room will include exhaust ventilation directly to the outside. Student Safety should be considered in the design of the art room space and the placement of instructional equipment and supplies

Storage Room/Workroom Connecting all 3 rooms (600 Square Feet):

- Should connect all three classrooms to allow all three teachers access to materials and equipment
- Will house large equipment used on a daily basis which can not be stored in general classrooms for safety reasons
- Provide adequate shelving for Paper Storage, supplies, equipment and other Material Storage.
- Should have access to the kiln room
- Large mat cutters, laminator, Ellisen Machine, Large Paper Cutters, Industrial equipment. Open work area to access Equipment

Kiln Room room to include:(200 square feet)

1. Kilns and clay storage
2. Ceramics work adjacent to the Kiln Room
3. 2-3 kilns
4. Appropriate exhaust and Ventilation systems
5. Spray booth for Glazing
6. Should be connected to storage room & 8th grade classroom

General Art Classroom (Grade 6) (1,100 Square Feet), the following are needed: 6 large tables and chairs for 25 students with ample work surface for various art mediums; storage cabinets for supplies; desk and chair for instructor; laptop and computer for instructor; tack boards; dry erase boards, room darkening window treatments; built-countertop and stainless steel sink area; easels, drying racks/ fire extinguisher; color printer. Locking storage Cabinets. A large interactive display board for the teacher to use to present information to the whole class. These interactive display boards should have the capability of allowing teachers and students share the content from their mobile devices (MacBooks, Chromebooks, Tablets, phones etc.) to the display board wirelessly as well as a panel located in an area to connect permanent devices. The display board should also have an integrated speaker system for the classroom. Student seating should be designed so that view of the front of the room is unobstructed. Each room should also have separate white boards. Sufficient power outlets should be placed throughout the room. Special consideration should be given to natural lighting for these spaces. There should be a sufficient space for work which is drying or being displayed. A storage/workroom should be attached to all three rooms so that all rooms can access all equipment and materials.

Pottery and sculpture Classroom (Grade 8) (1,100 Square Feet), The following are needed: Clay Extruder, Clay Pug mill, Ceramic Drying Racks, SEPPA Vacuum, Clay Slab Roller, 7 large tables and chairs for 25 students (4 per table) with ample work surface for potters; storage cabinets for supplies: desk and chair for instructor; laptop and computer for instructor; tack boards; dry erase boards, room darkening window treatments; built-countertop and stainless steel sink area (3 large, deep and wide); drying racks/ fire extinguisher; color printer, Rolling work carts. Non-slip and water resistant flooring. A large interactive display board for the teacher to use to present information to the whole class. These interactive display boards should have the capability of allowing teachers and students share the content from their mobile devices (MacBooks, Chromebooks, Tablets, phones etc.) to the display board wirelessly as well as a panel located in an area to connect permanent devices. The display board should also have an integrated speaker system for the classroom. Student seating should be designed so that view of the front of the room is unobstructed. Each room should also have separate white boards. Sufficient power outlets should be placed throughout the room. Special consideration should be given to natural lighting for these spaces. There should be a sufficient space for work which is drying or being displayed. A storage/workroom should be attached to all three rooms so that all rooms can access all equipment and materials.

2D General Art & Computer Graphics classroom (Grade 7) (1,100 Square Feet), Teacher demonstration area; appropriate storage space including upper and lower cabinets, cubbies, bookcase, specialty casework for portfolio storage, a dry rack area, all cabinets/storage should be lockable. Maximized display spaces; minimum of 3 stainless steel sinks with counter space; Non-slip and water resistant flooring. This room should also have 25 Mac Laptops and Mac Teacher station/desk, A school or District Photoshop package should be purchased on a yearly basis to accommodate the computer graphics programs both at

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WWWMS & the HS. A large interactive display board (current projection board is 6’x 11’) for the teacher to use to present information to the whole class; high quality projector to demonstrate computer graphics skills. These interactive display boards should have the capability of allowing teachers and students share the content from their mobile devices (MacBooks, Chromebooks, Tablets, phones etc.) to the display board wirelessly as well as a panel located in an area to connect permeant devices. The display board should also have an integrated speaker system for the classroom. Student seating should be designed so that view of the front of the room is unobstructed. Each room should also have separate white boards. Sufficient power outlets should be placed throughout the room. Special consideration should be given to natural lighting for these spaces. There should be a sufficient space for work which is drying or being displayed. A storage/workroom should be attached to all three rooms so that all rooms can access all equipment and materials.

**Music Total Square Footage 5,792**

2 vocal music classrooms of approximately 1,000 square feet

For room layout, the teacher should be oriented in the “front” of the room where a main presentation area should be established. Student seating should be flexible so that view of the front of the room is unobstructed. The technology center (Projector/Teacher work station) should be located so that its use results in minimal interruption to instruction for the remainder of the class.

- A large interactive display board for the teacher to use to present information to the whole class. Ability to share content from mobile devices (Chromebook, tablet, phone, etc.) to the display board wirelessly
- Panel located in an area to connect permeant devices.
- Integrated speaker system for the classroom.
- Sufficient power outlets should be placed throughout the room.
- Acoustical treatments for the walls and well insulated from the rest of the school.
- Choral risers to accommodate approximately 120 students;
- Music stands;
- Storage cabinets for supplies;
- Desk and chair for instructor;
- Computer for instructor;
- Tackboards;
- Dry erase boards;
- Smart Board and projection areas;
- Room darkening window treatments;
- Piano;
- Keyboard;
- Miscellaneous student instruments.
- The minimum ceiling height should be 10 feet.
- Wenger Flex Conductors System with Podium
- Wenger Rehearsal Resource Center.

2 Band classrooms of approximately 1,200 square feet each (6th Grade Band Room, 7th and
**8th Grade Band Room**

For room layout, the teacher should be oriented in the “front” of the room where a main presentation area should be established. Student seating should be flexible so that view of the front of the room is unobstructed. The technology center (Projector/Teacher work station) should be located so that its use results in minimal interruption to instruction for the remainder of the class.

- A large interactive display board for the teacher to use to present information to the whole class. Ability to share content from mobile devices (Chromebook, tablet, phone, etc.) to the display board wirelessly
- panel located in an area to connect permeant devices.
- integrated speaker system for the classroom.
- Sufficient power outlets should be placed throughout the room.
- acoustical treatments for the walls and well insulated from the rest of the school.
- music stands;
- storage cabinets for supplies;
- desk and chair for instructor;
- computer for instructor; tack boards;
- dry erase boards;
- monitor and an interactive display board with wireless connectivity;
- room darkening window treatments;
- piano;
- keyboard;
- miscellaneous student instruments.
- A secure storage space of 500 square feet should be provided for instruments.
- The minimum ceiling height should be 12.5 feet.
- Wenger Flex Conductors System with Podium
- Wenger Rehearsal Resource Center.

**1 String/Orchestra Classroom of approximately 1,000 square feet**

For room layout, the teacher should be oriented in the “front” of the room where a main presentation area should be established. Student seating should be flexible so that view of the front of the room is unobstructed. The technology center (Projector/Teacher work station) should be located so that its use results in minimal interruption to instruction for the remainder of the class.

- A large interactive display board for the teacher to use to present information to the whole class. Ability to share content from mobile devices (Chromebook, tablet, phone, etc.) to the display board wirelessly
- panel located in an area to connect permeant devices.
- integrated speaker system for the classroom.
- Sufficient power outlets should be placed throughout the room.
- acoustical treatments for the walls and well insulated from the rest of the school.
- music stands;
- storage cabinets for supplies;
- desk and chair for instructor;
- computer for instructor; tack boards;
- dry erase boards;
- monitor and an interactive display board with wireless connectivity;
- room darkening window treatments;
- piano;
- keyboard;
- miscellaneous student instruments.
- Secure storage space for instruments.
- The minimum ceiling height should be 12.5 feet.
- Wenger Flex Conductors System with Podium
- Wenger Rehearsal Resource Center

I Music Library of approximately 200 square feet

Music Library for choral octavos, instrumental band music, orchestral music, books, CDs and recordings, 12x20 ft, with Wenger Sheet Music Storage System. Should include copy machine.

Music Office 192 square feet

Teacher desk, cabinets, shelving, 1 desktop computer, five teacher laptops

Hallway located adjacent to Band Room/Strings Room

Wenger Instrument Lockers with grill doors for 300 instruments

Auditorium 7100 sq ft
The auditorium space will be appropriate to meet the needs of the Theater and Music Programs for both boys and girls.
- Space is required to assemble, present, and instruct a school population of 450 pupils (½ of total students)

The following will be included in the new auditorium:
- Separate entrance for public
- Padded seating for 400
- Lobby Area should include bathrooms, separate ticket booth and concession area
- Stage suitable for musical and theatrical performances as well as special educational programs. Performance Stage Dimensions: 40x30 ft, 1,500 square feet; Wing Dimensions: 10x30 on stage left, 10x30 on stage right, 600 square feet total
- Full Fly Space: 20 Line sets, counterweight rigging system (JR Clancy)
- Orchestral Pit located in front of stage, Lower two (2) feet into Pit
- Designed for flexible venue changes, and community use; Right and Left Back sections installed dividers for use as Lecture Halls (50 seats each)
- Lighting and sound systems to support dramatic productions as well as the educational and
instructional use of the space. LED Lighting with ION 1000 Lighting Console.
- Sound/Light Booth (secured). Dimensions: 8x14 feet located in rear of Auditorium.
- Cat Walk for lighting
- Close proximity to music rehearsal and classrooms
- Student bathrooms separate from public bathrooms
- Loading Dock
- Theater Storage room located near the loading dock, 800 square feet
- Adequate technology including, but not limited to, a Projector with integrated audio and screen on stage
- Acoustical treatment of wall and ceiling to support the use of the space
- Air conditioned and provided with adequate air ventilation to meet current codes
- Interconnected fire alarm system with horn/strobe notification
- Interconnected school-wide intercom system
- Sprinkler system
- Emergency lighting as required by code

Dimensions (square feet):
Auditorium/Theater: Stage including wings: 2,100
Seating: 4,000 (approx. 400 students)
Sound/Lighting Booth: 200
Theater Storage: 800

Total: 7,100 total square feet

Physical Education

1 Gymnasium of approximately 8,200 square feet (22’ clear height) with bleachers

1 Auxiliary Gym 3,000 square feet (22’ clear height) rectangle, not square

The gymnasiums will have a wooden floor with a cushioning substrate. The larger gym floor should be properly lined for volleyball, badminton, and basketball. Gym floors need a clear safety space of 6’ on each side and 8’ on each end of a basketball court free of bleachers or intrusions to prevent accidents or injury.

Gymnasium bleachers will be bench style without seats, allowing for easier maintenance. A built in lower step is requested. Both electronic and manual capability is required in the event that the bleachers need to be moved in or out and there is a loss of power. Provide the ability to raise and lower baskets, operate divider and batting cage by using switches in one central location.

The location of the gymnasium should be such that the community may have access without having to walk through the entire building.
Large lavatories of sufficient size to accommodate public events should be constructed in this area of the building. If possible with close access for student use during PE classes. A gender neutral bathroom is also required.

Use team colors in flooring, lockers, and wall paint. Mascot art on walls, flooring, and lockers. Create a “wall of fame” of past successful seasons and athletes. Display team and individual records and awards.

The following items will be necessary:
- Wall padding;
- Public address system;
- Electronic scoreboard;
- 4 retractable basketball backboards
- 2 fixed backboards
- Retractable bleachers;
- Volleyball stanchions and nets;
- Miscellaneous equipment for baseball, softball, volleyball, badminton, soccer, flag football;
- Water fountains in the gym
- Floor mats;
- Sound System that is bluetooth compatible
- WiFi access in both main and auxiliary gym
- White Board on Wall for all gymnasium facilities

**Fitness Center (1500 sq ft.)**
- 1 recumbent bicycle
- 10 elliptical machines
- 2 stationary bikes
- 1 upper body ergometers
- RUBBER FLOOR
- Sound system that is bluetooth compatible
- weight training equipment (will be updated by 5/9)
- Projector
- TH9923 Triumph Series Selectorized Chest Press
- TH9913 Triumph Series Selectorized Shoulder Press
- TH9911 Triumph Series Selectorized Bicep Curl
- TH9917 Triumph Series Selectorized Leg Extension
- TH9921A Triumph Series Selectorized Prone Leg Curl
- TH9918 Triumph Series Selectorized Ab / Low Back
- TH6646D Triumph Series 45 Degree Leg Press
- TH9945 Triumph Series Seated Calf
- TH9953 Triumph Series Flat / Incline Adjustable Benches
- TH9952 Triumph Series Adjustable Decline Sit-Up Bench
- TH9972 Triumph Series 45 Degree Hyper Extension
- TH6877B Triumph Series Leg Raise / Dip Station
  TH9971 Triumph Series Olympic Plate Tree
- TH9943M Dumbbell Rack
- Set Rubber Encased Dumbbells (5 lbs – 100 lbs in 5 lb increments)
- TH9930 Triumph Series Triceps Extension
- TH9924 Triumph Series Seated Row with Chest Pad
- 1,000 lbs. Rubber Encased Olympic Weights
- squat racks
- bars
- weight trees
- water fountain

**Locker Rooms** - 2 @ 800 sq ft., 1600 total sq ft.

Locker Rooms should be constructed so PE teachers and coaches have the ability to monitor students/athletes easily and without obstructed views. Locker rooms should be provided with the following:

- One locker for each student within 1 class scheduled for physical education; one for each gender
- Complete privacy against visibility from the outside.
- Provide convenient access from lockers to the gymnasium teaching station it serves.
- Non-absorbent, nonslip floors in all areas, with appropriate drainage and dehumidification.
- A janitor’s closet in or convenient to all locker rooms.
- Bottle filling stations/water fountain and water jug filling stations within locker rooms

**Shower/Rest Rooms** - 2 @ 200 sq ft., 400 total sq ft.

2 Shower/Restrooms should be provided with the following:

- Private shower stalls - 2 per gender
- 3 toilets
- Shower room finishes should be provided as follows:
- Nonskid floors, moisture resistant surfaces.
2 Physical Education Offices 120 sq ft each. Total 240 sq ft.
Separate offices for male and female staff in main gym.
Staff offices should be provided with the following:
• Instructor desk & chair,
• Desktop computer;
• 1 laptop for each PE instructor
• Storage racks, shelves, and locking cabinetry.
• View windows to the gym, and a view window from the female office to the window to the
gym. The design of the room should be configured to restrict line of sight to the locker
room when office door is open.
• A toilet in each office.
• Non-absorbent, nonslip floors in office areas.
• A lockable coat closet in each office.

1 Laundry 150 sq ft
• One washer dryer
• cabinets for storage
• ice machine
• sink

Storage for Physical Education Equipment 1600 total sq ft

Interior storage for equipment should be provided as follows:
A minimum of 800 square feet.
Outside storage of field equipment:
A minimum 800 square feet.

Media Center (plus maker space) of approximately 4,350 square feet

Room will consist of two primary spaces: Library and maker space. There should also be an enclosed
administrative area to accommodate at least two people/workstations as well as a server room and storage
areas. Carpet will be required for the library as will acoustical treatments for the walls.
The media center should be designed so that an area may be utilized for class instruction concurrently with
library use by individual students or small groups.

Reading/ Circulation Area (2700 sq. feet)
(700 sq. feet)
We will require:
Casework for administrative area;
30 shelving units for books; 2 computer workstations;
2 television monitors
8 tables and chairs to accommodate 48-50 students.
Laptop Cart;
3 color printers;

TV Studio with Green Room - (600 sq. ft.) Integrate a room designed for video production to create, edit and broadcast videos to the entire school. In the media center there should be access to a video mixer to allow for the use of multiple cameras for live broadcasts. There should also be room for students to work independently on video editing with video editing software.

3-D printers

Storage (150 sq. ft.)

Library Office Space (120 sq. ft.)

Server room (80 sq. ft.)
The server room will be climate controlled with a tile floor. A central MDF (Main Distribution Facility) will act as the center of all the technology needs of the school. The school wide computer network will be used to run the other systems besides the computers; such as security cameras, phones, clocks, digital signage and video distribution.

The MDF (Main Distribution Facility) should be designed as a central network location for the entire district to provide co-location with the High School. The room should have all power via a backup generator to allow for systems to remain functional during a power outage. Cooling for the room should be appropriate for the space with room for growth to maintain an appropriate temperature for all equipment.

The MDF should have 8 4-Post server racks for server, local area network, wide area network, telephone and other equipment to be installed.
Adjacent to the MDF there should be a workroom for technology support and maintenance for the teachers and the students. In this technology work room there should be room for two desks / workstations as well as workbenches for working on new or broken equipment, and shelving for manuals and storage.

The IDF (Independent Distribution Facility) closets should be connected with Multi-Mode and Single-Mode Fiber to the MDF and should be appropriately located to meet maximum distances for copper wiring using Category 6 cables. The IDF closets should be secured, cooled and used only for technical equipment, not storage.

The building should have a wireless network designed to allow for expansion. Every classroom should have 2 network drops in the ceiling to connect to wireless access points. The wireless network needs to have the ability to handle a large number of devices connecting in areas where large numbers of students can be at one time, such as the auditorium, library, cafeteria, and gymnasium. These locations should have wiring run for multiple access points in each location with each access point having multiple network drops.

Cafeteria / Kitchen 8140 sq ft
A kitchen and serving area with total square footage of 2540 square feet

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• A Kitchen, the layout and equipment which is appropriate for a middle school of 919 students
• Separate food storage space(s) planned in accordance with health codes, and surfaces must be washable, including the ceiling
• An office for the food service manager with computer access to network
• Telephone for internal and external communication
• Bathroom and lockers for food service staff adjacent to the kitchen,
• Loading dock and receiving area

The following items will be necessary:

• Commercial stove with fire suppression hood system (approx. 15-20 ft) Four Burner
• Cutting boards
• Pots, pans and other utensils
• Fire extinguisher
• Separate sinks for food and hand washing
• Ovens for warming and baking
• Two (2) microwave ovens
• Commercial refrigerator
• Washer/dryer
• Range, Manitowoc steamer, 5 FT tilt skillet, 30 GL Steam Kettle w/ drain system
• Ansul fire suppression system
• Blodgett 2x Stack convection oven
• 5FT Griddle (Panini’s)
• Two Holding heated cabinets-single
• 3 Bay Pot & Pan Sink, drain board
• Metro Shelving: Dry storage, walk-in cooler, freezer, Dish room
• Alto-Shaam Combi oven
• MEIKO dish machine
• InSinkErator disposers
• Walk-in cooler: 12 x 15
• Walk-In Freezer: 15 x 20
• Three Pass through Hold & Cold Single cabinets (Kitchen into Servery for front-line employees)
• Six Stainless 6 ft work tables w/ under shelving

Kitchen Small Wares: (complete separate list of kitchen & dish room utensils to include pots & pans,
• Rolling carts and Cres-Cor racks, can rack) $10,000.00-$15,000 approx

Servery:

• Serving counters, hot wells, cold wells, food shields
• 5 Bay Steamtable
• 4 Bay Deli Station w/ Single door Refrig
• Hatco display merchandisers, heated decorative lamps, booster heater
• Two refrig. merchandiser

Cafeteria  5000 sq ft
The cafeteria will be organized along a food court concept with a variety of options for students.
• Cafeteria to have acoustical treatments for the walls to dampen sound
• Dining Capacity 350 students
• Student traffic flow should be considered in the placement of the food serving area
• A storage room should be constructed adjacent to this room for storage of tables, chairs and other equipment
• Provide windows with abundant natural light and create relationships to exterior
• Provide exterior dining - if courtyard created
• Vitreous painted or masonry walls for durability and high lay-in ceilings, durable and washable
• High out-put LED lighting for efficiency and color correction for dining and multi-purpose activities
• Portable round cafeteria tables and chairs
• Convenience power for cleaning equipment and staff/visitor laptops
• Ability to connect to microphone for public address system
• Wireless network access points throughout cafeteria as well as electrical outlets and charging lockers for charging devices for use by staff, students and visitors.
• Large projection screen, overhead LCD projector rack, and integrated audio with centrally located connections for presentations and communications
• Fire alarm system with horn/strobe notification and voice evacuation as required by code
• Air conditioned and ventilated to current air-quality standards

Attributes:
• Ease of serving, dining, and waste recycling
• Multiple serving lines with a minimum of two hot lunch lines and two a la carte lines
• Appropriate acoustic treatments for this space
• Total capacity for student dining not to exceed 350
• Controlled access allowing for community use
• Access to restrooms
• Access to outdoor areas with naturalized outdoor seating
• Variety of floor finishes
• Access to storage space, constructed adjacent to the cafeteria
• Access to drinking water
• Well-ventilated with local temperature control in both kitchen and dining area
• Lighting levels for daytime and nighttime use

Furnishings:
• Round foldable tables for cafeteria seating
• Cubicles for student storage
• Water fountains with waterbottle refill feature

Communication and technology:

• Ability to connect to video network
• Public address speakers
• Ability to connect microphone to public address system
• Computer station in kitchen connected to network
• Telephone in kitchen capable of internal and external communication
• Access to projector, screen and computer workstation
• Easy access to the building loading dock

Specifications:

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<tr>
<th>Service</th>
<th>Capacity</th>
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<tr>
<td>Cafeteria</td>
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<tr>
<td>Staff Dining</td>
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<tr>
<td>Kitchen and Servery</td>
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<td>Storage: Cold, dry, freezer</td>
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<td>Office/Safe (Money Storage) &amp; Lavatory/staff lockers</td>
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<td>Ware Washing</td>
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<td>8,140</td>
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**Total**

Teachers' Workroom of approximately 450 square feet (one per grade- 1,350 total sq ft)

3 teacher prep room will be provided, one per grade (Total square feet 1350). It will be equipped with the following:

• Digital copier which collates and faxes
• Thermofax machine
• Ellison machine
• Casework for storage and work-surface area around the perimeter of the room
• Fire extinguisher
• Small table and four (4) chairs

Instructional Storage Space of approximately 200 square feet x 9 = 1800 sq ft

The Instructional storage space will require locking storage space with shelving for books and other supplies.

Small Group Room 150 sq ft ea x 9 = 1350 sq ft total

9 rooms, one per cluster, will be provided.

Staff Rest Rooms 60 sq ft ea x 6 = 360 sq ft total

6 staff restrooms will be provided, 2 per floor.
Administration
The Main Office will include 1630 square feet for the following:
- Reception area for the Main office 300 square feet for visitors to the principal’s office or for parents picking up children
- Secretarial Area 700 square feet to include desk & work space for three secretaries
- Mail/Work/Copy Room 200 sq ft
- Restroom 60 square feet
- Conference Room 250 square feet
- Storage 120 square feet
- House the main communications and public address functions for the school
- Security monitors
- Copier and storage cabinets for paper and supplies

Principal's Office
The principal’s office must be adjacent to the front office and near the other administrative offices. This office will include 200 square feet total:

- 150 sq ft office
- A private bathroom 50 square feet
- Carpeting
- Appropriate lighting
- A window
- Walls will be treated with vinyl wall covering
- Desk and chair
- 2 visitor chairs
- Locking storage
- Laptop and desktop computer

Assistant Principal's Office X 3 = 360 sq ft.
The assistant principal offices will be located on each floor and will include:
- 120 sq ft office
- Carpeting
- Appropriate lighting
- A window
- Walls will be treated with vinyl wall covering
- Desk and chair
- 2 visitor chairs
- Locking storage
- Laptop and desktop computers

The assistant principal offices will be located adjacent to an office suitable for a secretary and a student/parent waiting area (144 sq ft X 3 = 432 sq ft) and will include:

- Secretary work station with computer
- Seating for waiting students and parents
Guidance/School Counseling Suite approximately 900 square feet

- The Guidance office should separate the counseling area from the office area allowing privacy to occupants
- 3 guidance offices of 120 sq ft. (360 sq ft total) with Desk, chair, and bookcase for counselor, computer and laptop for each office.
- 1 social services room 120 sq ft 1 computer and laptop
- Conference room 150 sq ft
- Reception area 150 sq ft Secretarial space for 1 secretary
- Storage 120 sq ft
- The room should be carpeted and walls will be treated with vinyl wall covering
- The Guidance area should be readily accessible to the public and must be near the other administrative offices
- Storage cabinets and bookcases included
- A conference table and chair

School Nurses Office 880 sq ft and School Based Health Center (SBHC) 810 sq ft

This space accommodates:

- Appropriate staffing
- Cots
- Waiting/treatment areas
- Standard health room equipment
- Supplies in the School Nurse's office and the School Based Health Center (SBHC).
- The proposal will include components for both separate and shared space between the two facilities.

The separation of spaces reflects the differences in "mission" between the School Nurse and the SBHC. The school nurse is available to any student enrolled in the school and sees a much higher volume of students at any given time throughout the day. The SBHC, on the other hand, sees only students enrolled in the program and are not required to conduct the same mandatory screening or collect the same data for State reporting purposes that the school nurse's office staff.

The regular school nurse requires more "staff, supplies, space and stuff".

However, staff members from both the SBHC and nurse's office recognize the value in keeping their offices within close proximity to each other. It provides ease in transitioning enrolled students to the SBHC when necessary, provides open and shared communication between the two offices regarding individual and population-based health, and it encourages team building and partnership between the two programs.
Shared space will be identified with ** in facility description below.

**School Nurse’s Office: 880 Sq Ft Total**

Facing parent/student pick up area with large one-way glass picture window for visibility of off-on loading of transport vehicles.

Examination / treatment rooms (capability of converting to a private space (curtain) is essential for medication administration, physical examination, and patient interviews).

Exam/treatment space should also include: 320 sq ft (2 cots):

- Sink and refrigerator;
- Two (2) Waste baskets (1 regular trash, 1 hazardous waste)
- Wall-mounted counter or mobile standing work station with computer network access for laptop documentation capabilities
- Cabinets for medical supply storage and medication storage cabinet (double locked)

Adjacent lavatory (60 sq. ft.):

- Overhead light
- Exhaust fan
- Shower for students presenting with gastrointestinal and feminine health issues (nurses must be able to observe students entering/leaving bathroom)
- Plumbing and space should include accommodations for stackable washer and dryer

Adjacent or shared (with exam area) space for a minimum of three (3) cots for ill and resting students (520 sq ft):

- Resting space should include dimmer switches or localized lighting control over resting area (migraine headaches) but must not impede upon nurse’s ability to conduct physical assessments in exam area
- Supply closet (a portion of the closet must have shelves for audiometer, and disposables, space must also accommodate Snellen chart, broom/dustpan)
- Tiled floor surfaces
- Non-porous wall surfaces with ceiling-mounted privacy curtain tracks

Nurse administrative space must accommodate work space (desk/chair/computer) for three nurses (150 sq. ft.) and storage (100 sq.ft.):

- Desks/chair, computer and telephone with internal and external network capabilities, and waste basket for each employee
- Work area with printer, copier, fax, scanner, and shredder capabilities with waste basket
- Lockable student filing cabinets (7th and 8th grades)
- Coat closet for employee cold winter garments and personal items

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• Bookcase for policy and procedural binders, as well as reference materials and health provider manuals
• Tiled floor surfaces

Medical assistant/in-take space (150 square feet):
• Desk and two (2) chairs, computer and telephone with internal and external network capabilities and waste basket for medical assistant (may be shared but distinctly separate from RN work space)
• Waiting space should include six (6) chairs and space for “coffee table-like” accessory for health-related brochures, surveys, or medical disposables
• Separate room with cot, desk and bedside table for isolation and/or reporting/interviews surrounding abuse/neglect/intimate partner violence

School Based Health Center (810 square feet minimum)

Two (2) Examination/treatment rooms (100 square feet):
• Mounted counter top/upper cabinets with sink
• Computer internal/external access for laptop documentation capabilities
• Exam table and lamp with waste baskets (1 regular, 1 hazardous waste)

Mobile Dental Space/Lab:
• 100 square feet
• Computer internal/external access for laptop documentation capabilities
• Sink, and small (dormitory sized) refrigerator
• Wall-mounted counter with computer network access for laptop documentation capabilities.

Behavioral Health:
• 100 square feet
• Behavioral health provider work space: desk, chair, telephone, computer with internal/external access

Reception/Intake
• 120 sq ft

Group work space:
• 150 sq ft
• Large room to accommodate behavioral health work/support groups
• Collapsible table and chairs (12 students and facilitator;** this space may be used for PPT/504 meetings and as quiet meditative space when not in use by SBHC groups**)
• Adjacent lavatory for students presenting with gastrointestinal and feminine health issues (health care providers must be able to observe students entering/leaving bathroom) 60 sq ft.
• To ensure school security, all persons outside the school community should be required to enter the building through the "single point of entry", main office, and will gain access to the Health offices once they once they have been authorized.
• Storage 20 sq ft

The School Nurse's Office and Health Center should have separate entrances and reception areas from within the school hallways into the health offices. However, the distance to access between the two separate spaces should be no greater than a short hallway.

• A lockable employee bathroom, shared with the nurses, which includes a toilet, sink, handwashing accessories and waste basket) should be available in between the two spaces 60 sq ft
• A water fountain (bubbler) should be available in between the two spaces
• The health offices can share exit doorway to parking/road access for purposes of student pick-up for health-related issues (school nurse excused from school or following SBHC appointment)

Environment/Aesthetics

The interior design and color scheme of the health office should be calming and comfortable to immerse persons visiting the health office(s) in a warm atmosphere. It is important that the space invites trust and open discussion through color, sound, and creative displays of health, wellness, and mindful caring.

Custodial office and General Storage of approximately 700 square feet

Include space for tall lockers with enough lockers for all custodians to store safety gear, jackets, clothing, boots etc. Also needed are extra lockers/cabinetry to store supplies.

FF&E for General Storage to include:

• Cabinets for chemical storage
• Ride-On Autoscrubber (preferably standup)
• Buckets, mops, and brooms
• Large garbage cans on wheels
• Recycle bins of adequate size
• Shelves for miscellaneous storage

FF&E for the Office to include:

• A desk and chair
• Central computer system for control of the energy management system
• Fire extinguisher
• Computer for Building Superintendent

Other interior custodial equipment, depending on types of flooring surfaces includes the following:

• Ride on Burnisher
• Ride on Carpet/Hard Surface Vacuum
• Small walk behind autoscrubber with chemical free stripping potential

There needs to be a facility for securing storage of building plans, specifications, and operation and maintenance manuals. These should be easily accessible in cases of emergency.

Training on and review of O & M manuals by WWMS custodial staff should be mandatory.

**Custodians' Closets 3 @ 64 sq ft ea**

The closets should have 40" wide doors or larger.

The walls should be block or a least impervious to water.

• Sufficient custodians’ closets should be provided to conveniently serve all areas on each floor. Each Custodial closet should have a space to hang a 6’ ladder and back pack vacuums. When possible, access to wet walls/pipe chases should NOT be in custodial closets as the door takes up valuable space that could be used for shelving or storage.

• Each custodian’s closet should be well-ventilated and contain a mop sink, hot and cold water faucet, mop hangers, hose and hose bracket. A recessed floor sink is ideal. Having floor drains is a MUST. The floor should also be non-slip epoxy or a stone tile that makes cleaning equipment and draining equipment convenient. VCT is not recommended. Faucets must swivel or be mounted higher to make it easier to work on cleaning items in the sinks. Rubbermaid custodial carts, as used at Middletown High School work well.

• Shelving units should be supplied in all custodial closets in either stainless or heavy duty plastic/polyurethane with 72" tall x 12"deep x 36" wide with adjustable shelves. Shelving units on wheels are advantageous.

• Consumable products storage areas conveniently located to serve all areas on every floor. Adequate storage in the school is essential, especially for items like copy paper which is purchased by the pallet.

**Roof Access**

• Each low pitch or flat roof surface having mechanical equipment mounted on it or which is 12 feet or more above adjacent grade, should be accessible from within the building by means of a permanent roof hatch and ships ladder or stairs.

• Changes in roof levels should also be accessible by steps or ladder if the level change exceeds 36 inches.

• A Freight Elevator to accommodate pallet-size loads and exit onto roof is recommended.

**Maintenance (300 sq. ft.)**

• The storage space for lawn maintenance equipment and combustible materials must be well ventilated.

• A separate building from the main building for the storage of combustibles is required on
school grounds.
• Said Storage Space should have garage doors that open at least 10 feet high to accommodate the height of ride-on equipment.

Flooring surfaces and wall materials
• Polished sealed concrete flooring doesn't require stripping and waxing or constant maintenance.
• Block walls or other low-maintenance materials should be used in bathrooms.

Walls, Toilets, Circulation, and Mechanical spaces

Construction Materials

Classrooms:
• Walls constructed using cinderblock at least up to 4' High (4-5 courses of block) with Sheetrock above. Concrete block in high traffic areas.
• Curved block where floor meets bottom of wall
• Glazed Cinderblock interior walls preferably
• No textured block on interior walls
• Painted Cinderblock/sheetrock with eggshell or satin low VOC paint
• Magnets on all bathroom doors
• Steel doors where appropriate -- No wood veneer doors
• Heavy Duty door hardware, closers, and hinge systems
• Stainless Steel railing systems for stairwells, ramps, etc.
• Low maintenance flooring including epoxy, sealed concrete, resinous concrete, rubber, hardwood, Terrazo, etc. No VCT, linoleum, sheet vinyl, or quarry tile
• Carpeting should be stain/fade resistant with carpet tiles used in appropriate places
• Stair treads and flooring surfaces in stairwells should be speckled, non-slip, sound deadening, and anti-static where feasible
• Exterior entry systems should include scrape off matting or removable grids
• No floor mounted electrical, communications, USB, or other connections
• Waterhog entrance mats
• No laminate counter tops
• Art Room sinks should be stainless steel
• Lockers mounted so upper portion is covered by upper section of wall leaving no area to gather dust
• All Hallways, classrooms, rooms, etc. having minimal structural or architectural bump-outs to minimize corners
• Minimal cove base/cove molding
• Freight Elevator to roof big enough to load at least one pallet with a pallet jack and near custodial supply storage area
• No Exposed HVAC ductwork
• Stainless steel outlet, wall plate, and switch covers
• Covers for radiant heat must end 8" from the floor
• Window sills must be too narrow to sit on
• No thermostats in stairwells, foyers, entry ways, etc.
• Audible Alarms on emergency exit doors
• No Pillars in Cafeteria, Auditorium, Media Center, Gymnasium, etc.

Bathrooms/Plumbing Fixtures

• Wall mounted toilets, urinals, and sinks
• Hands-free faucets
• Anti-vandalism coated, solid polymer, phenolic, or SCRC partitions that are floor mounted with overhead bracing.
• Tamper-resistant hardware and hinges for partitions
• Block walls, porcelain tile walls, or ceramic tiles with dark grout
• Curved tiles or blocks where walls meet floor
• Epoxy flooring or porcelain tile with dark grout
• Labyrinth entrances, if possible
• Stainless water fountains with built in bottle fillers
• Wet walls wide enough to work in and not entrances, not located in custodial closets
• Floor Drains in all bathrooms/locker rooms/shower rooms

Miscellaneous

• Battery backpack vacuum for Auditorium
• Plenty of power outlets in Auditorium, Cafeteria, Gymnasium
• Four (4) Campus Security Officers (CSOs) for Middle School with separate offices for CSOs and Security Resource Officers (RSOs)
• All kitchen appliances, work stations, merchandisers, grills, fixtures, etc. have quick disconnects and mounted on casters
• Stain, graffiti, and fade-resistant upholstery on furniture
• No wood veneer on furniture
• Solid surface, speckled counter tops with under-mount sinks in Science classrooms
• All plumbing shut offs, plumbing supplies, HVAC ductwork, conspicuously labeled/market in overhead, walls, etc.
• All electrical panels marked corresponding with respective Woodrow Wilson Middle School (WWMS)-associated classroom, office, area number at turnover
• Automatic dock plate for loading dock
• Garage door access and single exterior door access to custodial supply storage area
• Enough storage for one (1) change-out of HVAC air filters
• Classroom furniture, fixtures, file cabinets, etc. must be easily removed from classrooms
Bathrooms in Cafeteria

BUILDING SYSTEMS

Security: An electronic security system will be installed in the school. The school will be designed to prevent access to instructional areas of the school when community events take place during non-school hours.

Public Address: The building public address system will be comprehensive. It will be addressed as part of the Technology component of the project and will incorporate internal building communications, as well as external communications. Concurrently, the systems for the phones, clocks, and data/voice/video will be developed.

Technology: In looking at the educational specifications for classrooms, in terms of the use of technology, the focus is to make sure that the classroom space is flexible for current and future technologies.

• The global classrooms should be designed to allow for the teacher to facilitate instruction from any location in the classroom.
• There should be a large interactive display board for the teacher to use to present information to the whole class.
• These interactive display boards should have the capability of allowing teachers and students to share the content from their mobile devices (Chromebook, tablet, phone, etc.) to the display board wirelessly as well as a panel located in an area to connect permanent devices.
• The display board should also have an integrated speaker system for the classroom to allow for audio from devices to be heard throughout the classroom and work with Frequency Modulations (FM) audio systems for hearing impaired students as well as Bluetooth to allow for easy connection for other devices.
• The classroom should also have the ability for the entire class to take part in video conferencing with experts and other classes from around the world, requiring an integrated web camera and microphone to allow for clear audio and video for these interactions.
• The classrooms should have space for students to be able to work in small groups on projects and assignments as well as room for full class instruction.
• Desks for student use should provide space for having a device (Chromebook, tablet, etc.) on the desk along with room for other class related items.
• Tables or desks should be able to easily moved into groups for use individually or small group work.
• Students should have options to work at different heights using traditional desks or standing desks.
• The rooms should have charging locations for student devices in locations other than the side of the room, such as floor outlets, to allow for students to charge their devices while they are using them.
• Classrooms should also have large touch-screen workstations for students to be able to work collaboratively using a single screen.
• Besides traditional classrooms, there should be common areas for students work in small groups
• These areas should have large touch-screen workstations or interactive tables for students to use for group work
• Also, individual locking charging stations should be in these common areas as well as the Cafeteria, Gym area and Library for students to store and charge devices as necessary

SUGGESTIONS FOR OTHER AREAS

• The Auditorium and Library should have a mounted projector and integrated sounds system in each for connecting mobile devices for sharing for large groups with easy setup for teachers to use
• There should be 3-D Printers in centrally located areas, such as the library, that can be used by all students
• Traditional student lockers should have the ability for students to plug in and charge their individual devices when they are not in use

Technical Specifications

• The network for the new middle school should have a central Main Distribution Frame (MDF) (the main server and network room for the building) to act as the center of all the technology needs of the school
  o The school-wide computer network can be used to run the other systems besides the computers: such as security cameras, phones, clocks, digital signage
  o The MDF should be designed as a central network location for the entire district to provide co-location with the High School
  o The room should have all power and a backup generator to allow for systems to remain functional during a power outage
  o Cooling for the room should be appropriate for the space including considerations for growth to maintain an appropriate temperature for all equipment.
• Adjacent to the MDF there should be a technology workroom for technology support and maintenance for teachers and students.
  o In this technology workroom there should be space for a desk, as well as workbenches, for working on new or broken equipment.
• The Independent Distribution Facility (IDF) closets should be connected with multimode and single-mode fiber to the MDF and should be appropriately located to meet maximum distances for copper wiring using Category 6 cables.
  o The IDF closets should be secured, cooled and used only for technical equipment, not storage
• All classrooms should have 2 network drops per wall to allow for flexible connection of network devices
  • The building should have a wireless network designed to allow for expansion
    o Every classroom should have 2 network drops in the ceiling to connect to wireless access points
    o The wireless network must have the ability to handle a large number of devices connecting in areas where large numbers of students can be at one time, such as the auditorium, library, cafeteria, and/or gymnasium
    o These locations should have wiring run for multiple access points in each location with each access point having multiple network drops
• Locations throughout the building should be wired with network cable and electricity for digital signage in public locations
• Network copiers should be evenly distributed throughout the building to allow for central access for teachers in different areas of the building

Phone System: A comprehensive phone system will be integrated with the technology component of the project, and phones will be installed throughout the facility. All support and instructional spaces will be included.

Clocks: The clocks, like the phone system, will be integrated into the technology component of the project. All support and instructional spaces will be included.

**INTERIOR BUILDING ENVIRONMENT**

TSKP Studio will advise.

**SITE DEVELOPMENT**

Parking: Parking for 155 staff and 45 visitors will be developed. Bus loading area for 28 busses in a queue. As well, in determining the size of the lots, consideration will be given to parking space requirements for special events, such as school performances, athletic events, graduations, etc. The Americans With Disabilities Act (ADA) and other code requirements will be addressed in design of parking.

Drives: Appropriate access and driveway configuration will be determined. Consideration will be given to bus traffic, community access, parking locations, and student safety.

Walkways: Walkways will be featured around the perimeter of the school. In addition,
access to parking lots, playfields, and bus pick-up/drop-off locations will be addressed. Student safety is a key concern in design of walkways as well as ADA compliance.

Outdoor Athletic Facilities: A generic playfield will be constructed for use during recess and physical education.

Landscaping: Landscaping will be designed to enhance the school setting. Trees and other greenery will be of a hearty variety which require little maintenance and which complement the building and site. Trees will be planted a sufficient distance from the building to avoid future maintenance problems. Consideration will be given to safety and security when placing foliage around walkways and areas of building access.

Site Improvements: Site will be graded as necessary for construction and as necessary to finish the site at the completion of construction. A flagpole, sign, bike racks, and benches will be installed at the main entrance to the school.

CONSTRUCTION BONUS REQUESTS

The new consolidated middle school does not house any of the special programs eligible for a school construction bonus.

<table>
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<th>Eligibility</th>
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<td>School Readiness</td>
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<tr>
<td>Lighthouse Schools</td>
<td>C.G.S. 10-285a(f)--Not applicable.</td>
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<td>CHOICE</td>
<td>C.G.S. 10-285a(g), as amended--Not applicable.</td>
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<td>C.G.S. 10-285a(h)--Not applicable.</td>
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<td>Reduced Class Size</td>
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<td>Regional Vo-Ag Center</td>
<td>C.G.S. 10-65--Not applicable.</td>
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<td>Interdistrict Magnet School</td>
<td>C.G.S. 10-264h--Not applicable.</td>
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<td>Interdistrict Cooperative School</td>
<td>C.G.S. 10-158a--Not applicable.</td>
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<tr>
<td>Regional Special Education Center</td>
<td>C.G.S. 10-76e--Not applicable.</td>
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COMMUNITY USES

The new middle school will be designed to facilitate activities during the school hours, before and after school hours, and throughout the calendar year.

• Adult Education will be offered in the evenings
• The Governance Council/PTO will use the media center and conference rooms for meetings before and after school; it should be noted that they have a designated office and storage
space within the building
• The gymnasium and pool will be separated from the middle school and turned over to the City
• Summer Enrichment Programs will be held in this building
• Neighborhood and City-wide Community Meetings take place in the evenings
• Boy and Girl Scout programs are run here after school, as are several other youth clubs
• Adult Education classes utilize the school after the regular hours.
• Community performances and productions take place in the auditorium Small conference table and chairs
  • 2 Phones
  • 2 laptops
MIDDLETOWN MIDDLE SCHOOL

MIDDLETOWN, CT

CONCEPTUAL DESIGN ESTIMATE: ORDER OF MAGNITUDE
OPTIONS 1.0 / 1.1 / 2.0

April 26, 2017

DRAFT

ARCHITECT
TSKP STUDIO

PREPARED BY: BRUCE GELBAR
SENIOR ESTIMATOR

KEN BIEGA
ASSISTANT VICE PRESIDENT

O&G INDUSTRIES, INC.
112 Wall Street, Torrington, CT 06790
(860) 489-9261, FX (860) 496-4227
www.ogind.com
## Conceptual Design Estimate: Order of Magnitude

### Construction Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit Cost</th>
<th>Option 1.0</th>
<th>Unit Cost</th>
<th>Option 1.1</th>
<th>Unit Cost</th>
<th>Option 2.0</th>
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<td>12.00%</td>
<td>5,831,896</td>
<td></td>
</tr>
<tr>
<td>ESCALATION, 26 MO TO &quot;START OF CONST. &quot;JUNE 2019&quot; @ 4.5% / YR</td>
<td>9.75%</td>
<td>5,494,444</td>
<td>5,702,067</td>
<td>5,307,026</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMR - GMP CONTINGENCY</td>
<td>3.00%</td>
<td>2,009,081</td>
<td>1,925,544</td>
<td>1,792,142</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUBTOTAL:**

<table>
<thead>
<tr>
<th>CM FEES</th>
<th>UNIT COST</th>
<th>OPTION 1.0</th>
<th>UNIT COST</th>
<th>OPTION 1.1</th>
<th>UNIT COST</th>
<th>OPTION 2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE-CONSTRUCTION PHASE</td>
<td>1 LS</td>
<td>190,000</td>
<td>190,000</td>
<td>190,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION PHASE</td>
<td>2.00%</td>
<td>1,415,553</td>
<td>1,358,191</td>
<td>1,280,428</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUBTOTAL:**

<table>
<thead>
<tr>
<th>CM: BOND / INSURANCE</th>
<th>UNIT COST</th>
<th>OPTION 1.0</th>
<th>UNIT COST</th>
<th>OPTION 1.1</th>
<th>UNIT COST</th>
<th>OPTION 2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERFORMANCE &amp; PAYMENT BOND</td>
<td>0.5660%</td>
<td>412,008</td>
<td>395,356</td>
<td>372,782</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INSURANCE GL / PL</td>
<td>0.8500%</td>
<td>626,892</td>
<td>601,555</td>
<td>567,207</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUBTOTAL:**

**TOTAL CONSTRUCTION COSTS**

| | O&G Industries, Inc. | MIDDLETOWN MIDDLE SCHOOL |
| | 150,000 GSF | 150,000 GSF | 149,797 |
| | 150,000 | 150,000 | 149,797 |
| | 489.48 | 73,422,112 | 469.70 | 70,454,652 | 443.48 | 66,431,816 |
## Owners Estimated "Soft" Costs - To Be Confirmed by Owner

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit Cost</th>
<th>Option 1.0</th>
<th>Option 1.1</th>
<th>Option 2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Land Acquisition: None</td>
<td>----</td>
<td>26,000</td>
<td>26,000</td>
<td>----</td>
</tr>
<tr>
<td>2. Miscellaneous Administration Costs</td>
<td>1,000</td>
<td>881,665</td>
<td>845,456</td>
<td>1,461,500</td>
</tr>
<tr>
<td>4. Environmental Consultant Fees</td>
<td>12%</td>
<td>127,499</td>
<td>140,504</td>
<td>169,539</td>
</tr>
<tr>
<td>5. Surveys, Boring, Geotechnical Report</td>
<td>1 LS</td>
<td>60,000</td>
<td>60,000</td>
<td>40,000</td>
</tr>
<tr>
<td>6. Traffic Study</td>
<td>1 LS</td>
<td>8,500</td>
<td>8,500</td>
<td>8,500</td>
</tr>
<tr>
<td>7. Testing, Inspections, Special Inspections</td>
<td>1 LS</td>
<td>160,000</td>
<td>160,000</td>
<td>160,000</td>
</tr>
<tr>
<td>8. Independent Structural Review</td>
<td>1 LS</td>
<td>25,000</td>
<td>25,000</td>
<td>25,000</td>
</tr>
<tr>
<td>9. Independent Code Compliance (Local) Review</td>
<td>1 LS</td>
<td>12,000</td>
<td>12,000</td>
<td>4,500</td>
</tr>
<tr>
<td>10. Printing, Mailing, Allowance</td>
<td>1 LS</td>
<td>15,000</td>
<td>15,000</td>
<td>15,000</td>
</tr>
<tr>
<td>11. Furniture, Equipment</td>
<td>900 STDTS 1,500</td>
<td>1,350,000</td>
<td>1,350,000</td>
<td>1,350,000</td>
</tr>
<tr>
<td>12. Telephone System</td>
<td>1.00</td>
<td>150,000</td>
<td>150,000</td>
<td>148,797</td>
</tr>
<tr>
<td>13. Technology Equipment</td>
<td>900 STDTS 1,800</td>
<td>1,620,000</td>
<td>1,620,000</td>
<td>1,620,000</td>
</tr>
<tr>
<td>14. Security System (Hardware)</td>
<td>1.50</td>
<td>225,000</td>
<td>225,000</td>
<td>224,696</td>
</tr>
<tr>
<td>15. Builder's Risk Insurance</td>
<td>0.27%</td>
<td>198,240</td>
<td>190,228</td>
<td>179,366</td>
</tr>
<tr>
<td>16. Moving Expenses, Storage</td>
<td>0.35</td>
<td>52,500</td>
<td>52,500</td>
<td>52,500</td>
</tr>
<tr>
<td>17. Bonding / Legal Expenses</td>
<td>1 LS</td>
<td>120,000</td>
<td>120,000</td>
<td>120,000</td>
</tr>
<tr>
<td>18. Short Term Financing (Allowance)</td>
<td>1 LS</td>
<td>200,000</td>
<td>200,000</td>
<td>200,000</td>
</tr>
<tr>
<td>19. State Permit Fee (0.26 / 1000 of Const. Cost)</td>
<td>0.26%</td>
<td>19,090</td>
<td>18,318</td>
<td>17,272</td>
</tr>
<tr>
<td>20. Commissioning</td>
<td>1.00</td>
<td>150,000</td>
<td>150,000</td>
<td>149,797</td>
</tr>
<tr>
<td>21. Utility Fee</td>
<td>1 LS</td>
<td>50,000</td>
<td>50,000</td>
<td>50,000</td>
</tr>
<tr>
<td>22. Owners Project Contingency</td>
<td>5.00%</td>
<td>4,111,837</td>
<td>3,955,519</td>
<td>3,779,468</td>
</tr>
<tr>
<td>23. Owners Representative (None)</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>

**Estimated Total of Owners "Soft" Costs:**

12,926,467

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**Total Project Cost:**

- $575.66
- $86,348,579
- $553.77
- $83,065,903
- $529.84
- $79,368,821

**Extra Energy Saving Measures (Allowance):**

+1,000,000

**Total amount proposed at Referendum:**

$87,350,000

(as adopted by the Common Council on July 3, 2017)