DIGITAL

Pre-K Through Grade 12
SCHOOL BUILDINGS CAPACITY STUDY

for the

Ichabod Crane Central School District

Valatie, New York

December 2009

DIGITAL

3487 Nelson Place East
Canastota, New York 13032

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PURPOSE OF THIS SCHOOL BUILDINGS CAPACITY STUDY

This study provides a school buildings capacity assessment that first documents a comparison of district-wide pupil enrollment with how the instructional spaces are utilized as of the 2009-2010 school year to deliver *the current program offered in grades kindergarten through twelve including special education.* Second, it provides an assessment of pupil capacity of each building that serves K through grade twelve measured against local district goals for grade level class sizes and measured against State Education Department building aid unit capacity guidelines for instructional space. Third, the study offers summary tools to help analyze the current assignment of special education classes among the schools and the overall designation of instructional support spaces among the elementary schools.

The protocol to accomplish the school building capacity assessment is an analysis of each instructional space compared to a New York State Education Department defined room schedule of minimum spaces necessary to house a district's educational program for a given number of pupils. The study is one that is focused on the implementation of the educational program within the school buildings of the district. It does not provide technical or qualitative evaluation regarding architectural specifications, design, construction or management of the facilities. The best source for such infrastructure analysis is the architect for the district.

The district is reviewing how best to serve its kindergarten through grade twelve students and community in the future with its various facility assets. The long range planning includes analyzing estimated future enrollments and demographic characteristics of the district; studying building infrastructure architectural studies; and reviewing the program vision of the district. At

this juncture, this space-use study has the main purpose of comparing existing school building capacities benchmarked to the current program offered by the district, without changes, to the pupil enrollments of the 2009-2010 school year. The space-use study is the foundation for an analysis of possible future facility use plans. It is a companion decision-making tool with the *Demographic/Enrollment Projection Study* completed in October. The *Demographic/Enrollment Projection Study* contains estimated future enrollment projection scenarios for kindergarten through grade six, five years from now; for grades seven through eight, eight years from now; and for grades nine through twelve, ten years from now based on historical enrollment data, live birth data, and the potential impact of planned residential construction within the school district.

BACKGROUND ABOUT PUPIL CAPACITIES OF SCHOOL BUILDINGS*

The Commissioner of Education must approve plans and specifications for capital construction projects undertaken by public schools and BOCES. Such construction may include new buildings, additions, and alterations/reconstruction of facilities. Eligibility for new construction as well as state building aid to help in funding the facility project is determined through an assessment of information contained in the school district's Facilities Needs Assessment Summary, enrollment projections, Instructional Space Review form, floor plans of actual and proposed use of space, as well as the required curriculum and the specific educational programs offered by the district. The reader may wish to review *A Well Thought-out Plan for Facility Projects* in ***Appendix D*** first before proceeding.

The instructional program envisioned by the district and how best to efficiently deploy that program within the educational facilities drive the analysis of school building pupil capacity. The calculated number of pupil capacity based on the program to be implemented represents a factor that is then used by the SED to determine a maximum 'aid ceiling' for proposed facility project contract and related incidental expenditures upon which NYS Building Aid is computed.

This 'aid ceiling' calculation is the total project expenditure amount *up to* which the State of New York will provide building aid.

*Information outlined, quoted, and discussed is sourced to the New York State Education Department Office of Facilities Planning documents

An estimate of building aid equals the calculated *maximum cost allowances* derived for both project contracts and for incidental costs or the actual costs incurred, *whichever is less,* multiplied by the district's Building Aid Ratio at the time a project is approved. A district may expend beyond the maximum cost allowance. However, such expenditure beyond the calculated maximum cost allowances for contracts and incidental expenses will receive no state building aid and thus would be fully funded by the local taxpayers.

The Maximum Cost Allowance is determined by three factors: the *Building Aid Units (BAU)* assigned to the project by grade level or category within existing space and proposed new space; the *Construction Cost Index* that is in effect the month the general construction contract is signed; and a *Regional Cost Factor* for the fiscal year that the project's contracts are signed.

The purpose of Building Aid is to help ensure that each school district provides suitable and adequate facilities to accommodate the students and programs of the district and that the allocation of building aid is done in an equitable manner regardless of the wealth or location of the school district in the State. Therefore, new buildings, additions to existing facilities, and major alterations to existing facilities must meet specific standards pertaining to the type, size and number of teaching stations, as well as building code requirements. Existing facilities must meet health and safety regulations, and reconstruction of existing facilities must meet building code requirements. A project is not eligible for building aid unless the construction costs of the project equal or exceeds $10,000 excluding incidental costs.

The determination of the eligibility for Building Aid is a result of an assessment that compares district-wide pupil enrollment projections with the efficient operating capacity of existing school buildings to determine building needs. The tool for this assessment is a room schedule of minimum spaces necessary to house a district's educational program for a given number of pupils. *The Room Schedule of Minimum Spaces and Sizes* is in ***Appendix A***. The tool is applied to how existing space, existing space that is proposed to be altered, and proposed new spaces will be used prospectively after the completion of a facility project.

DEFINITION OF TERMS RELATED TO PUPIL CAPACITY OF SCHOOL FACILITIES AND DETERMINING BUILDING AID

- ***ORIGINAL CAPACITY***

This represents the total number of pupils the original building, or total complex in the case of additions, was designed to accommodate. This number is the operational capacity of the building or complex when it was constructed and was the basis for the determination of minimum size of the site. The original capacity factor is not germane since current capacity is based on the current program offered in the facilities of the school district.

- ***STATE-RATED 'CAPACITY'—BUILDING AID UNITS***

The measure for the state-rated capacity is called *Building Aid Units (BAU's).* The BAU's assigned to a particular building is computed using space standards established by the Commissioner. Using these standards, the total anticipated pupil enrollment by grade levels ***across the district*** is compared to the actual number of Building Aid Units assigned by formula to the classrooms ***in all the buildings*** that serve specific grade levels of those pupils. When new buildings, additions, or major renovations are planned, the total projected pupil enrollments for the grade levels to be housed in a specific new/renovated building is compared to the total number of Building Aid Units generated by the classrooms in all district buildings proposed to deliver the program to the same grade levels.

Therefore, regardless of the grade level configuration of specific school buildings in the district, state-rated capacity allowed for the district as a whole is viewed as total K-6 pupils to be served; total 7-8 or 7-9 and total 9-12 or 10-12 pupils (if a separate building (s) for junior high or middle school or senior high exist in the district); and/or total 7-12 pupils to be served if separate buildings do not exist for secondary pupils.

Further, when determining building aid ceiling allowance for a facility project, the total state-rated capacity of all classrooms in all of the district's buildings designated for K-6 measured by BAU's cannot exceed the total projected enrollment of K-6 pupils five years from now. Similarly, the total state-rated BAU capacity of all classrooms in all of the district's buildings

designated for grades 7-8 or 7-9 (if separate building(s) are designated for junior high/middle school or senior high) cannot exceed the total projected enrollment of grades 7-8 or 7-9 pupils eight years from now and cannot exceed the total projected enrollment of grades 9-12 or 10-12 ten years from now. If there are not separate building(s) for grades 7-8, then the total state-rated BAU capacity of classrooms in the entire district's buildings designated for grades 7-12 cannot exceed the total projected enrollment of 7-12 pupils ten years from now.

In the case of the Ichabod Crane School District, there are three elementary schools: one kindergarten through grade two building; and two grades three through five buildings. There is one grades 6-8 middle school; and one grades 9-12 high school building. Therefore, the capacity of the set of three buildings that serve K-5 and the space allocated to serve grade 6 in the middle school program is analyzed with regard to the total enrollment in K-6. Since the secondary grades 7-8 are housed in a separate school building from the secondary grades 9-12 school building, the space allocated to serve grades 7-12 is analyzed specific to each of the two buildings.

It is important to note that *a change in room use to deliver the program may result in a change in Building Aid Units assigned as per the established SED space standard.* The capacity analyses offered in this study are benchmarked to the program use of the spaces by the principals to deliver the program in the 2009-2010 school year.

- ***OPERATING CAPACITY***

This measure reflects the total number of pupils a building can reasonably and efficiently house *based on the district's educational program and class size policy as per formal Board of Education policy and/or teacher contract language* and the number, square footage size, and the program delivery use of the rooms in that building. The operating capacity of a building is computed using the space standards established by the Commissioner to define state-rated capacity ***modified*** by any differences due to the district's documented educational program delivery model and/or formal class size policy or contract language.

Using these standards, the total pupil enrollment by grade levels ***across the district*** is compared to the number of Building Aid Units assigned by formula to the classrooms ***in all the buildings*** that serve specific grade levels of those pupils ***modified*** by formal class size practice as found in board policy or written teacher contract clauses. When new buildings, additions, or major renovations are planned that create classrooms, the total operating capacity BAU's projected for the grade levels to be served in a specific new/renovated building is compared to the total operating capacity BAU's in all district buildings proposed to deliver the program to the same grade levels.

When determining a building aid ceiling allowance for a facility project, the total of the K-6 BAU's calculated as the district's K-6 operating capacity and the total 7-12 BAU's calculated as the district's 7-12 operating capacity respectively cannot exceed the projected K-6 enrollment five years from now and the projected 7-12 enrollment ten years from now. If there is a separate stand-alone building(s) that houses grades 7 and 8(9), then the total of the 7-8(9) BAU's calculated as the district's 7-8(9) operating capacity cannot exceed the projected 7-8(9) enrollment eight years from now.

It is important to note that a change in room use to deliver the program because of a renovation project may result in a change in Building Aid Units assigned as per the established SED space standards.

CALCULATION OF BUILDING AID UNITS FOR ELEMENTARY SCHOOLS

The SED does not endorse any one particular class size. Class size is at the discretion of the Board of Education of each school district. When defining state-rated capacity the Building Aid Units for a new or an existing elementary school is determined by assigning 27 BAU to each 770 square foot classroom used for grades 1-6 and to each 900 square foot kindergarten or pre-kindergarten room. The operating capacity is the same as state-rated capacity (Building Aid Units) *unless* formal board policy or union contract language exists that limits the number of students in a classroom to less than 27 for Pre-K through grade 6. When such policy or contract language is in place, the lesser number will be used to define the **operating** capacity of the elementary classrooms grades pre-K through grade 6 in all of the buildings in the district as a

whole. The higher state-rated capacity (Building Aid Units) is used by SED to define potential building aid ceilings for each school building.

In an existing elementary building, the BAU of a room over 550 square feet, but less than 770 square feet is determined by dividing the area of the room by 28.5 square feet per pupil and assigning the whole number without rounding up. Rooms of less than 550 square feet are not included in BAU calculations. Only classrooms for Pre-Kindergarten through grade 6 are counted for BAU in an elementary school. It is assumed by the State that the aid ceiling calculated by multiplying the BAU's times a cost index will be sufficient to provide for both classrooms and all ancillary spaces including instructional support spaces like a library, cafeteria, gymnasium, and auditorium. Normally, the aid ceiling for an elementary school will be sufficient for most reconstruction projects and possibly for a small addition. There is the possibility for BAU's (called 'supplemental' or 'special case' BAU) to be increased for an elementary project to build a new building or an addition that might include a library, cafeteria, gymnasium, auditorium and teacher-parent conference rooms only on an 'as needed' basis. An alternative method to determine BAU's for an elementary addition is the square foot method. The gross area for grades K-6 in the existing building is divided by 100. Then, the BAU are determined for the entire complex including existing and proposed as described above. The second factor is subtracted from the first. The result is the BAU of the addition for the purpose of determining maximum cost allowances. The square foot method for elementary schools may have application when a proposed building does not contain classrooms which produce BAU.

CALCULATION OF BUILDING AID UNITS FOR SPECIAL EDUCATION

The BAU's for special education classrooms is determined by assigning the BAU based on the disabilities of the students (i.e. 15:1, 12:1, 12:1:1, 12:1+3:1, 8:1, 6:1). Only classrooms are counted for BAU in K-6 buildings and in 7-12 buildings. It is assumed by the State that the aid ceiling calculated by multiplying the BAU's times a cost index will be sufficient to provide for both classrooms and all ancillary spaces including resource rooms and other spaces that may be needed to provide appropriate spaces for special education students.

CALCULATION OF BUILDING AID UNITS FOR SECONDARY SCHOOLS

A secondary school is a new or existing building housing any or all grades above sixth grade. When a school houses both elementary and secondary pupils, the Building Aid Units are separately determined for the elementary versus the secondary spaces. The Building Aid Units for a secondary school is determined by either of two methods: the Teaching Station Method or the Pupil Station Method, dependent on the size of the school. Teaching stations are considered to be:

1. Agricultural shop, including an agricultural classroom.
2. Art room (each).
3. Business education rooms (each).
4. Home and Careers (homemaking) (each, if 1000 sq. ft. or more).
5. Technology (industrial arts) shop (each).
6. Mechanical drawing room (each).
7. Music room (each, if 770 sq. ft. or more).
8. Physical education/gymnasium (each, if standard size).
9. Recitation classroom/interchangeable classroom (each).
10. Science general, earth or advanced (i.e. biology, physics, chemistry).
11. Study hall (each, if 770 sq. ft., or more, and cafeteria/study hall, if so labeled and used).
12. Swimming pool.

The Teaching Station Method applies to:

- Junior High Schools having 29 or fewer teaching stations.
- Junior/Senior High Schools having 25 or fewer teaching stations.
- Senior High Schools having 22 or fewer teaching stations.

For Junior High Schools with 29 or fewer teaching stations, the total number of teaching stations used only for English, social studies, mathematics, languages, health education and general or earth science (not biology, chemistry, or physics) is calculated. This total is multiplied by 30. The result is the Building Aid Units. The same calculation of teaching stations with the same criteria is done for Junior/Senior High Schools having 25 or fewer teaching stations. The total number of defined teaching stations is then multiplied by 33. The result is the BAU. For Senior High Schools with 22 or fewer teaching stations, the total number of teaching stations used only for English, social studies, mathematics, languages, and health education is calculated. This total **(X)** is used in the formula: 8 (7**X** – 12). The result is the BAU.

The Pupil Station Method applies to:

- Junior High Schools having 30 or more teaching stations.
- Junior/Senior High Schools having 26 or more teaching stations.
- Senior High Schools having 23 or more teaching stations.

The total number of pupil stations in a building is determined by first dividing the net square foot area of each of the rooms in the building that are listed in the "Pupil Stations" chart below by the listed square feet per pupil allowance to calculate the pupil stations in each room. The results of the pupil station calculations for each room are totaled not exceeding the maximums listed in the "Pupil Stations" chart. Then, the calculation continues by subtracting 200 from the total pupil stations calculated for the building, and dividing the remainder by 1.16. The resulting number of pupil stations is the Building Aid Units total of the building for calculating building aid ceiling. Note that the operating capacity by the pupil station method is computed using the same method as outlined, but ***modified*** by any differences due to the district's educational program and/or maximum class sizes which are clearly outlined in formal board policy and/or in teacher contract clauses.

Pupil Stations Chart

ROOM	SQUARE FEET PER PUPIL	MAXIMUM # OF PUPIL STATIONS
Agriculture shop and classroom	75	20
Art	45	25
Business or computer classrooms		
• Distributive education	50	20
• Office/secretarial/typing/keyboarding	35	24
• Computer classroom	35	24
Home and careers	50	24
Technology (industrial arts)	75	24
Mechanical drawing	35	25
Library—reading room only	25	Not to exceed 15% of PS total for recitation classrooms
Music		
• Classroom	25	30
• Instrumental	25	(area of room/25) x .4
• Vocal	20	(area of room/20) x .4
Physical education		
• Gymnasium	Per station	30
• Swimming pool	Per station	30
Recitation classroom		
• Interchangeable classroom	26	30
• Open planned classroom	30	-----
Science		

• General, earth	30	30
• Advanced—biology, chemistry, physics	50	24
Study hall	16.5	Not to exceed 40% of PS total for recitation classrooms
• Cafeteria/study hall (if so labeled and used)	16.5	Area of room/16.5) x .7 Not to exceed 40% of PS total for recitation classrooms

CALCULATION OF BUILDING AID UNITS FOR SECONDARY SCHOOL ADDITIONS

The Building Aid Units of the existing building considering the prospective space usage by applying the appropriate "Teaching Station" or "Pupil Station" method. Next, the BAU of the total building including the existing and the addition is calculated. The BAU calculation for the existing building is subtracted from the BAU calculated for the entire proposed complex. The result is the Building Aid Units assigned for the addition to the existing building. An alternative method to determine BAU's for a secondary school addition is the square foot method. The gross area for grades 7-9 or 7-12 (10-12) in the existing building is divided by 100 or 125 respectively. Then, the BAU are determined for the entire complex including existing and proposed as described above. The second factor is subtracted from the first. The result is the BAU of the addition for the purpose of determining maximum cost allowances. The square foot method for secondary schools may have application when a proposed building does not contain classrooms which produce BAU.

BUILDING AID

Regardless of the building aid for which a district may qualify, total expenditures for capital construction are limited to the amount properly authorized by either a district vote of the public in a referendum or as part of the annual budget vote. In specific circumstances, a declaration of an ordinary contingent expense by a Board of Education also can authorize facility work that qualifies for building aid. There are additional avenues for the Big Five City School Districts.

The formula for determining estimated building aid for a new building, addition, reconstruction and/or alteration is described below.

Building Aid Units are calculated using the rules and guidelines described earlier. The total Building Aid Units are multiplied by a *construction cost index* resulting in a dollar total called the *maximum cost allowance.* The construction cost index is prepared by the New York State Labor Department which represents the cost of labor and materials. It varies monthly. Each set of grade levels qualify for a factor of the monthly construction cost index. Grades K-6 qualify for 1.0 times the current index: grades 7-9 qualify for 1.4 times the current index; and 7-12 (10-12) qualifies for 1.5 times the index. Special Education housed in a separate facility qualifies for 2 times the index, while special education students served in a building with regular education students qualify for 3 times the index.

The index has two parts: one for *construction costs*, and one for *incidental costs*. Construction costs are normally those expenditures for labor and materials to accomplish the project. Incidental costs are expenditures for site purchase, grading or improvement of the site, original furnishings or equipment, professional fees both design, construction management, and legal, and other miscellaneous incidental costs such as insurance and general administrative costs during construction. Generally, the maximum cost allowance for incidentals is 25% of the maximum cost allowance for construction for secondary schools and special education, and 20% for elementary schools. Further, in the case of a project having construction of a new addition, as well as reconstruction or alterations of an existing building, a separate maximum cost allowance is determined for the construction costs and for the incidental costs for both the addition and the reconstruction or alterations separately. The month the district signs the major contract for the work proposed under each particular project determines what construction index amount is used to compute actual Building Aid.

The result of multiplying the total Building Units by category (i.e. K-6, 7-9, 7-12, or 10-12 as applicable, special education integrated, and special education stand alone) times the construction cost index results in a total called *the maximum cost allowance.* An allowance is determined separated for new construction as well as renovation and/or reconstruction for each project by building in a school district with multiple projects even though the projects were approved by the public in one referendum. The maximum cost allowances for new versus

existing BAU and contracts versus incidental costs, are *adjusted* by the district's *regional cost factor.* The regional cost factor is used to compensate for higher construction costs in various geographical areas of the State. No part of the State can have a regional cost factor less than 1.0. The 2009-2010 regional cost factor for Columbia County is designated as 1.0926 by the SED.

To determine the *estimated building aid* a district will receive for a project, the maximum cost allowance adjusted by the regional cost factor is multiplied by the *district's building aid ratio.* The district building aid ratio represents a fixed percentage determined annually for each individual school district in the State. The ratio is based on the full value of property in the district and the number of students in the district and reflects the wealth of the school district. Normally, the building aid ratio varies from 0% in the wealthiest districts to as high as 95% in the poorest districts in the State. The State Education Department in the Building Aid Output Report for 2009-2010 has calculated that the Ichabod Crane School District 'selected' building state aid ratio for planning of projects in the current year is 73.5%. In addition, Ichabod Crane was allocated an amount through a new facility grant type aid under a 2006 legislative program called *Excel. Excel Aid* may be used towards the local share of a facility project that is approved by SED as meeting the purposes of the special building aid program.

The actual building aid a district will ultimately receive is determined when the *final cost report* for an approved project is filed with the SED when the project is completed. If the documented actual expenses allowed for construction and incidentals are equal to, or less than the adjusted maximum cost allowances for construction and incidentals, the district will receive building aid equal to its building aid ratio times those documented expenditures. If the final documented expenses in either the construction or incidental categories exceed the adjusted maximum cost allowances provided to the district for those categories before the project began, there is no penalty. However, the building aid ratio will be applied only to the adjusted maximum cost allowances and not to the total expenditures the district documents by category in the final cost report.

ICHABOD CRANE SCHOOL DISTRICT GUIDELINES GOVERNING CLASS SIZE

The analyses in this study of the capacities of the school buildings first reviewed to see if there is board policy or teacher contract language that would modify the calculation of operating capacity from the calculation of state-rated capacity. In June of 2008 the Board of Education adopted as one of the district's strategic planning goals the following:

Primary and Elementary Schools

Program Goals

1. In Grades K-3, limit class size to 18 or fewer students.

Article 20, (A) of the contract with the Teachers' Association delineates other class size goals of the district as follows:

A. To the extent possible, within existing facilities and available staff, every effort shall be made to schedule and maintain a maximum student class size, as indicated below:

Building/Subject	*Enrollment Per Section*
1. Elementary School District	*30*
2. Middle School District	*30*
Study Halls	*90*
3. High School	
All instruction (except as follows)	*30*
Technology, Business Education and Consumer Economics	*20*
Art	*20*
Physical Education	*40*
Study Halls	*90*

5. Children shall not be assigned to any classroom in larger numbers than the capacity of the teaching facilities available in that classroom.

7. Regents skills classes in the High School shall not exceed twenty-five (25) students.

Pre-Kindergarten is not addressed. The state-wide class size practice for pre-kindergarten is 18 pupils.

The district class size guidelines for class sizes are used by the study to modify the state-rated capacity calculations to determine the operating capacity of the buildings. At the time of a facility project submittal to the SED, the class size school district guidelines endorsed by the

Board is the substantiation provided to SED to document the class size practices of the district are *core and critical* to the program vision of the school district in helping all pupils successfully complete high school with the achievement of expected State and local standards. Twenty-seven Building Aid Units is the minimum standard used by SED guidelines to calculate state-rated and operating elementary school capacities when no class size maximum below 27 is outlined in local guidelines, board policy or local teachers' contract. The local district class size guidelines are incorporated in the capacity analysis of each elementary school and classroom space allocated for the high school grades. The pupil station method or teaching station method as applicable is used to determine grades 7-12 building capacity using the SED class size allocations for the particular program space. If the SED guideline for rated pupil capacity of a space is smaller than the class size delineated by Board Policy or teacher contract language, then the study uses the SED guideline to quantify pupil capacity for the respective space.

A district cannot supersede *district-wide* the number of classrooms necessary to house projected enrollment K-6 and 7-12. Normally, SED project managers are granted some discretion of approving an aid ceiling for a facility project without deductions for excess capacity if the operating capacity of the project is within 10% of the projected enrollment. The availability of up to at least 10% additional pupil capacity over the estimated enrollment projection is prudent planning by a district to ensure the district can be flexible and serve the ebb and flow of unforeseen additional future enrollments district-wide and by designated attendance zone and/or to encourage additional program offerings.

Appendix B includes the detailed capacity analysis for each of the school buildings in the Ichabod Crane School District. The operating capacity of each building is listed using both the minimum and maximum local policy with regard to class size. The *operating capacity calculation* of each building reflects the class size goals of the district documented in the Board of Education strategic plan and or teachers' contract. The analyses are benchmarked to and reflect how the instructional spaces are deployed in each building in the school year 2009-2010 to deliver the curriculum and the program from kindergarten through grade 12 as reported by each respective building principal.

SUMMARY TABLES

A series of **Tables** follow. **Table One** charts the current year enrollment of each school building; the operating capacity of the building based on how space in each school is deployed by each principal; and the Building Aidable Units that the instructional space qualifies for as per SED guidelines. This table is useful in planning about potential capital renovation tasks. **Table Two** compares current enrollment to current capacity of each school building as defined by how the space is deployed to provide the program to determine to what percentage level each building is over or under its pupil capacity based on the school district's class size guidelines.

Tables One and **Two** are useful with regard to decisions and discussions about class size values, program visioning, and assessing the gap between what the district values in how to implement the program and how the existing facilities support or impede those values. Both tables also provide baseline data to compare current program capacity of the schools with anticipated enrollments of the future.

Table Three lists the locations by school building of all of the designated special needs classrooms in grades kindergarten through twelve. This table quickly and visually provides a scan of where self-contained special needs programs are implemented in the district. **Table Four** inventories all of the instructional support spaces in the K-5 buildings as currently deployed by the principals of each building. This table is useful in reviewing the equity of available instructional support services in all of the buildings serving elementary pupils.

TABLE ONE: SUMMARY OF CAPACITY ANALYSES GRADES KINDERGARTEN THROUGH GRADE 12 BY BUILDING GIVEN CURRENT ENROLLMENT AND CURRENT 2009-2010 DEPLOYMENT OF THE FACILITIES TO DELIVER THE PROGRAM

SCHOOL	OCTOBER 1, 2009 TOTAL ENROLLMENT	CURRENT DISTRICT-WIDE OPERATING CAPACITY AS PER LOCAL GUIDELINES REFLECTING THE CURRENT PROGRAM AND THE DEPLOYMENT OF SPACES				BUILDING AID UNITS (SED RATED) CAPACITY BASED ON CURRENT USE OF FACILITIES	
		PRE-K	GRADE LEVEL/SUBJECT CLASSROOMS	SPECIAL NEEDS CLASSRMS	TOTAL (GRADE LEVEL) OPERATING PUPIL CAPACITY	PRE-K AND GRADE LEVEL/SUBJECT CLASSROOMS	INSTRUCTIONAL SPACES SPECIAL NEEDS CLASSROOMS
PRIMARY K-2	412	18	414	0	**414**	601	0
MARTN VAN BUREN 3-5	218		213	0	**213**	233	0
MARTIN H. GLYNN 3-5	229		214	0	**214**	238	0
MIDDLE SCHOOL 6-8	476		846	0	**846**	846	8 (BOCES Rental)
HIGH SCHOOL 9-12	737		744	0	**744**	812	6 (BOCES Rental)
TOTAL K-12	2072	18	2431	0	**2431**	2730	14
ELEMENTARY AND SECONDARY GRADE LEVEL TOTALS DISTRICT-WIDE							
TOTAL K-5	859		841	0	841	1072	0
TOTAL 6-8	476		846	0	846	846	0
TOTAL 9-12	737		744	0	744	812	14

TABLE TWO: ANALYSIS OF CURRENT K THROUGH GRADE 12 CLASSROOMS OPERATING CAPACITY COMPARED TO CURRENT ENROLLMENT *MINIMUM CLASS SIZE DISTRICT GOALS*						
GRADE LEVEL	**CURRENT DISTRICT-WIDE OPERATING CAPACITY BENCHMARKED TO MINIMUM CLASS SIZE GOALS GIVEN THE CURRENT IMPLEMENTATION OF THE PROGRAM**	**OCT. 2009 ENROLL.**	**NUMBER AND PERCENT OVER/ UNDER DISTRICT CURRENT OPERATING CAPACITY**	**SCHOOL BUILDING AND OCTOBER 2009 ENROLLMENT**	**CURRENT OPERATING CAPACITY BENCHMARKED TO MINIMUM CLASS SIZE GOALS GIVEN THE CURRENT IMPLEMENTATION OF THE PROGRAM**	**ENROLLMENT AND PERCENT OVER OR UNDER THE CURRENT PUPIL OPERATING CAPACITY OF THE SCHOOL BUILDING**
TOTAL K-5	841	859	18; 2.1% OVER			
TOTAL 6-8	846	476	370; 43.7% UNDER			
TOTAL 9-12	744	737	7; .9% UNDER			
TOTAL K-12	2431	2072	359; 18.8% UNDER			
GRADES KINDERGARTEN THROUGH FIVE				PRIMARY SCHOOL 412	414	2; .5% OVER
				VAN BUREN 218	213	5; 2.3% OVER
				GLYNN 229	214	15; 7% OVER
GRADES SIX THROUGH EIGHT				MIDDLE SCHOOL 476 GRADE 6; 162 GRADES 7-8; 314	846 GRADE 6; 216 GRADES 7-8; 630	370; 43.7% UNDER 54; 25% UNDER 316; 50.2% UNDER
GRADES NINE THROUGH TWELVE				HIGH SCHOOL 737	744	7; .9% UNDER

TABLE THREE: SUMMARY OF CURRENT 2009-2010 SPECIAL EDUCATION SELF-CONTAINED CLASSROOM CAPACITY IN EACH SCHOOL BUILDING

SCHOOL	CLASS	ROOM NUMBER	SQUARE FOOTAGE	OPERATING CAPACITY	BUILDING AID UNITS
PRIMARY SCHOOL				0	0
MARTIN VAN BUREN ELEMENTARY				0	0
MARTIN H. GLYNN ELEMENTARY				0	0
MIDDLE SCH0OL	BOCES 8:1:1	205	1169	8	8
HIGH SCHOOL	BOCES 6:1:1	220	644	6	6
TOTAL K-12				**14**	**14**

TABLE FOUR: SUMMARY OF ROOMS/SQUARE FOOTAGE ASSIGNED FOR INSTRUCTIONAL SUPPORT SPACE SERVING GRADES K-5 IN 2009-2010 AS LISTED BY THE PRINCIPALS
(NUMBER DENOTES SQUARE FOOTAGE; 'X' DENOTES PRESENCE; BLANK DENOTES NO ASSIGNED PRESENCE IN THE BUILDING)

INSTRUCTIONAL SUPPORT SPACE	PRIMARY	VAN BUREN	GLYNN
Library	1298	754	995
Computer Lab	610	170	
Music	974		170
Music/Art		675*	700*
Art	755*		
Band		356	
Physical Education/Caf	3744		
Physical Education		3564	3584
Stage	1300		420
Cafeteria		1454	1675
Resource Room			
Special Ed. Support	755	675	475
Special Ed. Support			562
AIS/Special Ed.		675	
AIS			475
Nurse	416	198	128
Psychologist	160	198	192
Speech/Enrichment	556		
Physical Therapy	885	356	
Occupational Therapy	192		
Reading	885		
Guidance	132		
OT/PT/ESL			710
Faculty Workroom	638	675	528

FINDINGS AND SUGGESTIONS

Reported below are program findings resulting from the inventory of all the spaces in each building as a result of the capacity study. The study methodology did not include comprehensive visits to each school building. Therefore, please note that the study does not include suggestions or observations about safety, codes, infrastructure needs or deficiencies, or the quality of the various instructional spaces in all of the buildings. The architect of the district and various staff of the district are the best sources for such suggestions. The focus of the study is to provide

insights about the operating capacity of all instructional spaces in all of the district's school buildings as deployed in the 2009-2010 school year to deliver the program.

Future planning about school facilities is first a *comprehensive curriculum improvement project* to determine the functions necessary for each of the buildings. Then, future planning becomes a '*brick and mortar project'* to determine the form of the facilities needed to implement the envisioned curriculum plan. The observations shared below are not meant to be definitive comments about proficiencies or deficiencies specific to each school. They are offered to encourage district discussion as the district makes decisions about the future of its facilities and the deployment of them to achieve the district's vision of the expected instructional program and the pupil enrollments forecasted for the future.

- It is recommended that the district analyze its technology plan and revise it as necessary to reflect the future goals of the district in supporting instruction with technology. The use of technology to deliver learning is often a prime variable in school building planning. Bandwidth (size of data lines), types of equipment, staff training, and pedagogical impact on learning outcomes given the investment are important topics that once decided usually translate into 'brick and mortar' decisions. The technology plan of the district will give insights as to the provision of computers for student instruction and video enhanced instructional tools for teachers in the future. The technology plan is often a district's blueprint in defining the vision and the instructional goals of infusing technology in the curriculum. It also can give direction as to what are the program delivery roles of all the instructional spaces in a school building including the classrooms, library and computer labs as they are interrelated to bring about the use of technology for learning and instruction.

- The recommended minimum size standard for elementary classrooms is 770 square feet; 900 for kindergarten and pre-kindergarten. Only 12 elementary grade level classrooms in the district meet the minimum size standard. There are no recommended standards for instructional support rooms. Three rooms used for instructional support services also do meet the minimum 770 square foot standard for use as grade level classrooms.

Direct instruction classroom sizes and elementary school locations are charted below. Self-contained Special Needs program rooms are included.

Square Footage	Primary	Van Buren	Glynn
Direct Instruction Classrooms			
900+			
800 to 899	**12**		
770 to 799			
700 to 769	**12**	**1**	**5**
600 to 699		**9**	**5**
Instructional Support Rooms			
900+	**1**		
800 to 899	**2**		
770 to 799			
700 to 769	**2**		**2**

- An instructional asset of the middle school is also the sizes of the direct instructional classrooms. All are above 798 square feet and are above the minimum of 770 square feet. There are 26 core subject classrooms at the high school (English, Social Studies, Math, Science). Fifteen are below the 770 square feet minimum. If the district undertakes renovation projects in the elementary schools, expanding the size of classrooms that are now below 770 square may be a worthwhile goal. A focus on the future regarding the integration of technology into day-to-day learning is a major reason that particularly elementary classrooms are often built having between 800 and 1000 square feet.

- **Table Three** charts the location of special education classrooms in the Ichabod Crane school buildings. There are only two self-contained special needs classrooms; one at the middle school and one at the high school. Special needs pupils are integrated and served in the grade level classes and take part in instructional support service programs as appropriate. The district provides and supports 'push-in' instructional services in collaboration with the classroom teacher to serve pupils with special needs.

- **Table Four** charts the instructional support spaces in each of the K through grade 5 elementary schools for 2009-2010 as delineated by each principal. Common instructional

support space found in each elementary school includes: library, computer lab, music, physical education, cafeteria, nurse, stage area, speech, psychologist, art, occupational and physical therapy, and varied custom remedial-extra help services. The number of spaces allocated for each of the above instructional support spaces varies depending upon the size and needs of the enrollments served in each building. **Table Four** can be a useful tool for discussions about future K-5 programming and the necessary facilities to support the program vision. Some typical discussion questions include:

- What should be the reason for the availability of a unique instructional support space and program in an elementary building and not in other elementary buildings?
- What currently unique instructional support spaces and services should be in each elementary school consistently as district-wide elements of the Board authorized elementary program?
- What instructional support spaces and services are *appropriately* unique to one or more elementary buildings and attendance zones?
- Are there other instructional support spaces or services that should be authorized as part of the program of each elementary school building?

The discussion of these suggested topics will help the district to craft its program vision for the future. It is that vision which will determine the quantity and type of space necessary in each school to implement the elementary program.

- The operating capacity analysis is based on school building space usage to deliver the program in 2009-2010. Please note that support spaces like storage, the stage, offices, bathrooms, nurse station or remedial and similar instructional support spaces do not carry capacity. Only grade level or subject classrooms generate capacity. The re-deployment of space that now generates capacity to an assignment that carries no capacity (example: academic intervention services, storage, offices), will **lower** the capacity for the building without a renovation or additions project. Similarly, if the deployment of space that now generates no capacity (example: reading, computer lab, office, Academic Intervention) to an assignment that qualifies capacity (example: grade 3), then the operating capacity of

the building will **increase** without a renovation or additions project. **Tables One** and **Two** chart the school building capacity findings of the study based on the October 1, 2009 enrollments of the district and school district class size guidelines.

The capacities of the district school buildings based on the deployment of them by the respective principals to implement the 2009-2010 program for 2072 pupils are summarized below. Note that the capacities reflect the class size goals of the district.

SCHOOL GRADE LEVEL CONFIGURATION	LOCAL ICHABOD CRANE SCHOOL DISTRICT CLASS SIZE CRITERIA
K-5	Current enrollment is **2.1% over** the pupil capacity available.
6-8	Current enrollment is **43.7% under** the pupil capacity available.
9-12	Current enrollment is **.9% under** the pupil capacity available
Total K-12	Current total enrollment is 18.8% under the total pupil capacity available district-wide

- A district cannot supersede *district-wide* the number of classrooms necessary to house projected enrollment K-6 and 7-12. Normally, SED project managers are granted some discretion of approving an aid ceiling for a facility project without deductions for excess capacity if the operating capacity of the project is within 10% of the projected enrollment. The availability of up to 10% additional pupil capacity over the estimated enrollment projection is prudent planning by a district to ensure the district can be flexible and serve the ebb and flow of unforeseen additional future enrollments district-wide and by designated attendance zone. Therefore, if the 10% flexibility factor is applied to the pupil capacity data documented for Ichabod Crane, then the ***functional operating pupil capacity*** of the school district is:

ICHABOD CRANE CSD FUNCTIONAL OPERATING PUPIL CAPACITY	
SCHOOL GRADE LEVEL CONFIGURATION	**LOCAL ICHABOD CRANE SCHOOL DISTRICT CLASS SIZE CRITERIA TAKING INTO ACCOUNT A 10% UNASSIGNED PUPIL CAPACITY FLEXIBILITY FACTOR**
K-5	Current enrollment is **13.5% over** the functional pupil capacity available.
6-8	Current enrollment is **37.5% under** the functional pupil capacity available.
9-12	Current enrollment is **10% over** the functional pupil capacity available
Total K-12	Current total enrollment is 5.3% under the functional total pupil capacity available district-wide

ANALYSIS OF CAPACITIES OF CURRENT SCHOOL BUILDINGS COMPARED TO PROJECTED ENROLLMENT ESTIMATES

The *Demographic/Enrollment Projection Study* of October 2009 provides Ichabod Crane enrollment projections for the future based on various assumptions. The low, mid and high sets of projections suggest the following about future enrollments in the district:

Set I: Base Cohort Projections

- K-2 may stay stable or slowly decrease by about 25 to 35 pupils over the next five years
- 3-5 may stay stable or slowly decrease by about 30 to 40 pupils over the next five years
- 6-8 may slowly decrease by about 50 to 60 pupils over the next eight years
- 9-12 may be most affected in the next 10 years with enrollments declining to the 525 range

Set II: Base Cohort plus AIS Program Influence

- K-2 may stay stable or slowly decrease by about 25 to 35 pupils over the next five years
- 3-5 may stay stable or slowly decrease by about 30 to 40 pupils over the next five years
- 6-8 may slowly decrease by about 50 to 60 pupils over the next eight years
- 9-12 may slowly decrease to about the 600 range over the next ten years

Set III: Base Cohort plus AIS Program Influence, plus a Positive Housing Market

- K-2 may stay stable or slowly increase by about 20 to 30 pupils over the next five years
- 3-5 may stay stable or slowly decrease by about 20 to 30 pupils over the next five years
- 6-8 may likely stay stable or slowly decrease by about 40 pupils over the next eight years
- 9-12 may likely slowly decrease by about 100 pupils to the 630 range in ten years

The table that follows summarizes the nine enrollment projection calculations through 2019-2020 from the *Enrollment Projection Study* through 2019-2020. Three projections are baseline estimates based on historical trends of pupil enrollment; three projections add to the baseline estimate the potential influence of the continued systemic implementation of AIS services over the next ten years; and three projections estimate the influence of an added housing market based on information gathered from the various municipalities that encompass the Ichabod Crane school district. The table reports the enrollment projection data presented by the study in the format necessary to form the basis for determining State Education Department building aid ceiling allowances for potential facility projects involving additions. The total state-rated capacity of all classrooms in all respective district buildings designated for K-6 as measured by the SED Building Aidable Units (BAU's) protocol cannot exceed the total projected enrollment of K-6 pupils five years from now in order to qualify for the maximum aid ceiling including grade six students at the middle school. Grades 7 and 8 enrollment at the middle school is projected out eight years to determine a Building Aid Unit total for those grade levels. The secondary school which serves grades 9-12 qualifies for Building Aid Unit capacity of the classrooms based on the total projected enrollment of grades 9-12 pupils ten years from now.

ENROLLMENT PROJECTIONS TO HELP DEFINE BUILDING AIDABLE UNITS

Enrollment Projections: Baseline linear cohort survival statistic calculations based on live birth trends and historical enrollment since 2004-2005 to the present and the estimated influence of a systemic AIS implementation and an enhanced housing market.

Calculation	Year	Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
CURRENT ENROLLMENT	2009-2010	425	444	six: 138 seven and eight:326	736
Base Low Range	2014-2015	380	406	132	
	2017-2018			270	
	2019-2020				537
Base Mid Range	2014-2015	452	403	156	
	2017-2018			259	
	2019-2020				526
Base High Range	2014-2015	465	415	147	
	2017-2018			264	
	2019-2020				532
Base Low Range Plus AIS	2014-2015	380	406	132	
	2017-2018			270	
	2019-2020				608
Base Mid Range Plus AIS	2014-2015	452	403	139	
	2017-2018			260	
	2019-2020				597
Base High Range Plus AIS	2014-2015	465	415	147	
	2017-2018			264	
	2019-2020				602
Base Low Range Plus AIS and Housing Model	2014-2015	388	415	137	
	2017-2018			280	
	2019-2020				630
Base Mid Range Plus AIS and Housing Model	2014-2015	460	412	144	
	2017-2018			270	
	2019-2020				619
Base High Range Plus AIS and Housing Model	2014-2015	473	424	151	
	2017-2018			275	
	2019-2020				625

Typically, the mid and high range projections that take into account the estimated influence of program efforts to keep students in school through high school completion plus an anticipated positive housing market, suggest the enrollment projections most useful for future facility planning. The charts below illustrate the *mid and high range base plus AIS scenario* and *the mid and high range base plus AIS plus housing market scenario*. The enrollment data estimates provide a context for comparison of current capacity and enrollments with estimated future

enrollments as the district proceeds with its strategic program plan and facility resources planning. An 'unassigned' pupil capacity flexibility factor of 10% as discussed in the study is reflected in the charts. Also, because the program vision for Pre-Kindergarten is not yet defined, capacity for Pre-Kindergarten enrollments is not reflected in the charts. The capacity of the Pre-K classroom currently allocated at the Primary School is not included in the charts below.

High Range Projection Scenario: Live births base cohort, plus the influence of systemic AIS efforts.			
ANALYSIS OF CURRENT TOTAL SCHOOL BUILDING FUNCTIONAL PUPIL CAPACITIES COMPARED TO PROJECTED ENROLLMENT ESTIMATES (K-5 and 6 in 2014 * 7-8 in 2017* 9-12 in 2019)			
GRADE LEVEL	**CURRENT DISTRICT- WIDE FUNCTIONAL OPERATING CAPACITY 2009-2010 INCLUDING A 10% UNALLOCATED CAPACITY FOR PROGRAM FLEXIBILITY**	**PROJECTED ENROLLMENT:** ***BASE PLUS AIS HIGH RANGE ESTIMATE***	**PERCENT THAT FUTURE ENROLLMENT PROJECTION IS OVER/UNDER CURRENT FUNCTIONAL OPERATING CAPACITY**
K-5	757	880	**16.2% OVER**
6		147	
7-8		264	
6-8	762	411	**46.1% UNDER**
9-12	670	602	**10.1% UNDER**

Mid Range Projection Scenario: Live births base cohort, plus the influence of systemic AIS efforts.			
ANALYSIS OF CURRENT TOTAL SCHOOL BUILDING FUNCTIONAL PUPIL CAPACITIES COMPARED TO PROJECTED ENROLLMENT ESTIMATES (K-5 and 6 in 2014 * 7-8 in 2017* 9-12 in 2019)			
GRADE LEVEL	**CURRENT DISTRICT- WIDE FUNCTIONAL OPERATING CAPACITY 2009-2010 INCLUDING A 10% UNALLOCATED CAPACITY FOR PROGRAM FLEXIBILITY**	**PROJECTED ENROLLMENT:** ***BASE PLUS AIS MID RANGE ESTIMATE***	**PERCENT THAT FUTURE ENROLLMENT PROJECTION IS OVER/UNDER CURRENT FUNCTIONAL OPERATING CAPACITY**
K-5	757	855	**12.9% OVER**
6		139	
7-8		260	
6-8	762	399	**47.6% UNDER**
9-12	670	597	**10.9% UNDER**

High Range Projection Scenario: Live births base cohort, plus the influence of systemic AIS efforts, plus the potential influence of a robust housing market.			
ANALYSIS OF CURRENT TOTAL SCHOOL BUILDING FUNCTIONAL PUPIL CAPACITIES COMPARED TO PROJECTED ENROLLMENT ESTIMATES (K-5 and 6 in 2014 * 7-8 in 2017* 9-12 in 2019)			
GRADE LEVEL	**CURRENT DISTRICT- WIDE FUNCTIONAL OPERATING CAPACITY 2009-2010 INCLUDING A 10% UNALLOCATED CAPACITY FOR PROGRAM FLEXIBILITY**	**PROJECTED ENROLLMENT:** ***BASE PLUS AIS PLUS HOUSING MARKET HIGH RANGE ESTIMATE***	**PERCENT THAT FUTURE ENROLLMENT PROJECTION IS OVER/UNDER CURRENT FUNCTIONAL OPERATING CAPACITY**
K-5	757	897	**18.5% OVER**
6		151	
7-8		275	
6-8	762	426	**44.1% UNDER**
9-12	670	625	**6.7% UNDER**

Mid Range Projection Scenario: Live births base cohort, plus the influence of systemic AIS efforts, plus the potential influence of a robust housing market.			
ANALYSIS OF CURRENT TOTAL SCHOOL BUILDING FUNCTIONAL PUPIL CAPACITIES COMPARED TO PROJECTED ENROLLMENT ESTIMATES (K-5 and 6 in 2014 * 7-8 in 2017* 9-12 in 2019)			
GRADE LEVEL	**CURRENT DISTRICT- WIDE FUNCTIONAL OPERATING CAPACITY 2009-2010 INCLUDING A 10% UNALLOCATED CAPACITY FOR PROGRAM FLEXIBILITY**	**PROJECTED ENROLLMENT:** ***BASE PLUS AIS PLUS HOUSING MARKET MID RANGE ESTIMATE***	**PERCENT THAT FUTURE ENROLLMENT PROJECTION IS OVER/UNDER CURRENT FUNCTIONAL OPERATING CAPACITY**
K-5	757	872	**15.2% OVER**
6		144	
7-8		270	
6-8	762	414	**45.7% UNDER**
9-12	670	619	**7.6% UNDER**

CAUTIONS CONCERNING ENROLLMENT PROJECTION ESTIMATES

The enrollment projections are based on assumptions about future human behavior and as such there are built-in uncertainties, especially for years further in the future. Key factors of population change relating to school enrollments are often interrelated and can multiply as one or more factors unexpectedly change or change significantly from their status at the time of this study. Future enrollments are positively affected by:

- Added births in the district and the resulting added kindergarten enrollments.
- The reductions in private school/home school/charter school enrollments
- The increase in the enrollment retention of students through grade 12 as completers of a diploma program.
- A robust employment market that can attract new residents with children and/or who are at childbearing age.
- A robust housing market that can attract new residents with children and/ or who are at childbearing age.
- Increased enrollment of tuitioned students from other school districts.

Similarly, future enrollment projections can be negatively affected by the antitheses of the same variables. Therefore, the enrollment projection estimates should be revisited and updated yearly if there are any major changes in: the assumptions that base the methodology of this study, the annual live birth data for the district, major shifts in housing market and employment market opportunities from what has been expected, changes in the educational program offered, and/or changes in the non-public school, charter school, or out of school district enrollments by Ichabod Crane School District residents.

SUMMARY CONCLUSTIONS

- Benchmarked to the class size policy goals of the district and taking into account a 10% unallocated pupil capacity factor:
  - ✓ K-5 facilities are currently at 113.5% of operating capacity
  - ✓ 6-8 facilities are currently at 62.5% of operating capacity
  - ✓ 9-12 facilities are currently at 110% of operating capacity

- Ongoing efforts intrinsic to the planning by the district to define what the vision of the expected instructional program is for the children of the Ichabod Crane School District should continue. What are the implications, if any, of this vision on the current facilities of the school district? At what point do the K-5 enrollments compared to the building pupil capacities jeopardize the values of the school district and the community with regard to the elementary program that is expected to be delivered? The district may want to address how the opportunity of the availability of an expanded pre-kindergarten program offering is or is not part of the program vision for the school district.
- The district should continue its work/planning with the architect of the district to evaluate regularly the infrastructure items of the facilities of the district like roofs, HVAC elements, utility efficiencies, and other building-site elements that are not directly related to enrollments, but do need attention due to normal life cycles of such systems.
- The study suggests that the district subscribe to the wisdom of having ***at least a 10% flexibility factor*** regarding facility capacity as it undertakes the development of its long range program and facility plan.
- The capacity analysis data and the enrollment projection data suggest that the estimated K-5 enrollments in five years will be greater than the functional operating capacity of the current K-5 facilities. Depending upon the assumptions about future housing in the district, the future estimated grades K-5 enrollment will be greater than the current K-5 pupil capacity from between 13% and 19%.
- The capacity analysis data and the enrollment projection data suggest that the estimated 6-8 enrollments in eight years will be smaller than the functional operating capacity of the current 6-8 facilities. Depending upon the assumptions about future housing in the district, the future estimated grades 6-8 enrollment will be smaller than the current 6-8 pupil capacity from between 44% and 48%.
- The capacity analysis data and the enrollment projection data suggest that the estimated 9-12 enrollments in ten years will be smaller than the functional operating capacity of the current 9-12 facilities. Depending upon the assumptions about future housing in the district, the future estimated grades 9-12 enrollment will be smaller than the current 9-12 pupil capacity from between 7% and 11%.

- Potential facility use options and scenarios the district may want to research and discuss singly or in combination might include:

  - ✓ The middle school currently has abut one-third of its functional pupil capacity not used benchmarked to the class size minimum goal of the district. A potential reconfiguration option is possible given the pupil capacity available. However, it is complicated and constitutes a major change in culture. Currently, the district has allocated a pupil capacity of 142 to serve the current enrollment of 153 grade five pupils district-wide. The Middle School currently has room to serve about 286 pupils more than it has enrolled. It is possible to serve the grade 5 district enrollment at the current middle school thus allowing space in the three elementary buildings to serve K-4 within the parameters of the local class size goals and taking into account a 10% unassigned pupil capacity flexibility factor. Undertaking such a 5-8 program option with a middle school delivery model should be carefully and comprehensively analyzed. For example, some items in addition to others that will need careful review and planning include: scope and sequence of the curriculum; the differences in delivering a 5-8 middle school program compared to a 6-8 program: what the research says about the physical, emotional, and learning development of fifth graders compared to sixth graders; transportation logistics; the adequacy of existing playground space and physical education instructional space; Part 100 program opportunities not now available to fifth graders that could be in a 5-8 setting.

  - ✓ Given the operating capacity available at the middle school, explore the serving of all grade 5 pupils district-wide in a self-contained classroom manner in a separate wing from grades 6-8 and not in a combined middle school delivery model at the existing middle school building. Such an option opens operating capacity at the elementary schools and uses available operating space at the middle school with little or no facility renovation impact. The logistic of pupil transportation is an item that would need review in such an option.

- ✓ The classrooms at Van Buren and Glynn are all below 770 square feet. Only one classroom at Van Buren is in the 700 square foot range while five classrooms at Glynn are in the 700 square foot range. Van Buren is an historical building with restrictions with regard to renovations. To what extent do those restrictions hinder the delivery of the expected curriculum? The district may want to review the opportunities and challenges of having one grades 3-5 elementary school building serving about 427 pupils at an enlarged and renovated Glynn Elementary School eliminating the use of Van Buren as a school building. Similarly, another option is to serve grades K-3 at the Primary School and grades 4-5 at Glynn. Both the Primary and Glynn would require some renovations and some addition with the latter option.

- ✓ Are there options to rent space at the middle school for regional shared programming through the BOCES consortium or to related community service agencies directly related to the mission of public education and serving young people?

- ✓ Renovate and/or add to the existing 3 elementary schools such that there is sufficient pupil capacity in five years to meet the class size goals of the district and to allow for a 10% unassigned pupil capacity to ensure K-5 program flexibility.

- ✓ Communicate with the public that in all likelihood the middle school will have more pupil capacity than is necessary to serve estimated grade 6-8 enrollments at least over the next eight years.

- ✓ The current functional pupil capacity at the high school seems to be satisfactory to serve the estimated enrollment scenarios ten years from now. No immediate program challenge or hardship in delivering the instructional program as it exists in 2009-2010 is reported by the district. However, secondary schools contain specialized spaces like advanced science rooms, art and music rooms, media

centers, and physical education space including locker rooms. It is a good practice to review the adequacy of such spaces in meeting the expected curriculum goals on a periodic basis.

If the vision of the high school program changes differently for the future, then the high school pupil capacity should be reviewed to ensure that it is a sufficient tool to enable the vision. Until then, a plan for ongoing maintenance and upkeep, and infrastructure review should be continued.

APPENDIX A:

ROOM SCHEDULE
OF MINIMUM SPACES AND SIZES

(Source: SED Office of Facility Planning)

MINIMUM ROOM SIZES – required for new buildings and additions; recommended for new spaces created within existing space.

General

a. Spaces in new buildings and additions which are required to house a district's educational program shall meet the size standards listed below. Where no square footage (sq. ft.) is listed; the size may be as determined locally.
b. In every case, listed square footage means minimum, net, clear, new educational space.
c. Newly-created spaces in alterations to existing school buildings should attempt to meet the size standards insofar as possible or practical.
d. Criteria to determine the number of spaces necessary is also included below.

Elementary School

a. Classrooms --
1. Grades 1-6 ..... 770 sq. ft.
(27 BAU/room)
2. Pre-kindergarten/kindergarten.....900 sq. ft.
(27 BAU/room)

b. Library ..... 900 sq. ft.
(1 thru 12 classroom buildings -- none required)
(13 plus classroom building -- 1 required)

c. Physical Education - gymnasium ..... 36' x 52'
(1 and 2 classroom buildings -- none required)
(2 thru 14 classroom building -- 1 required)
(1 thru 14 additional classrooms -- 1 additional)

d. Special Education

Student/Teacher/Ratio	Max. Pupil Capacity	Min. Classroom Size
12:1 or 15:1	12 or 15	770 sq. ft.
12:1:1	12	770 sq. ft.
6:1:1	6	450 sq. ft.
8:1:1	8	550 sq. ft.
12:1+3:1	12	900 sq. ft.
Resource Room	----	300 sq. ft.

NOTE: Provide ancillary space equivalent to at least ¼ of the area of a special education classroom for each special education classroom being constructed, either as part of the new classroom or other designated space. Preschool: 50 sq. ft. per student or 60 sq. ft. for classroom serving non-ambulatory students (maximum of 12 students per room).

NOTE: Approval may be given for classrooms less than 50 sq. ft. per student if other areas of the building are allocated for preschool recreational or instructional use.
e. Usual ancillary spaces --
1. Administration
2. Adult Education
3. Auditorium or multi-purpose room
(number of fixed seats, or 36’ x 52’ usual, 7 sq. ft./person)

4. Art Room (usual) …… ….770 sq. ft.
5. Cafeteria and Kitchen
(36'x52' usual, 15 sq. ft./person)
(operating capacity of building divided by number of servings)
6. Computer Lab
7. Conference Room
8. Gifted and Talented
9. Grounds Maintenance
10. Health Suite
11. Music Room (usual) ……..... 770 sq. ft.
12. Music Practice room(s) -- small, individual
13. Remedial Rooms
14. Resource Rooms
15. Storage
16. Swimming Pool -- 25 meters x 7 ft. lanes
17. Teachers' room(s)
18. Toilets -- individual and/or gang

Secondary School

a. Agricultural shop .....1500 sq. ft.
and classroom ..... 400 sq. ft.

b. Art room, including storage .....1200 sq. ft.
(1 room for each 400 7th and 8th grade pupils)
(1 room for each 500 9th-12th grade pupils)

c. Business and Computer Classrooms
1. Distributive Education .....1000 sq. ft.
2. Office Practice/Secretarial Practice/Computer..... 840 sq. ft.
classrooms

d. Home and Careers (homemaking)..... (first room) 1200 sq. ft.
(1 room for each 500 pupils, other rooms per program)

e. Technology Classroom including 200 sq. ft. storage
(1 space for each 500 pupils) .....2000 sq. ft.
Mechanical Drawing/CAD ..... 840 sq. ft.

f. Vocational shops -- including storage . . . . varies with program

g. Library Reading Room
(10% of planned building enrollment in reading room at 25 sq. ft./person)
(See Study Hall, item "1", below)

h. Music (1 room for each 500 pupils including #1, 2 and 3, below)
1. Classroom ..... 770 sq. ft.
2. Instrumental/Band (15 sq.ft./pupil) ..... ……(usual minimum) 1400 sq. ft.
3. Vocal (7 sq. ft./pupil) ..... .(usual minimum) 1200 sq. ft.
4. Practice Rooms (1 for a piano)

i. Physical Education -- gymnasium – 48'x 66'
(up to 500 pupils) -- 1 required
(501 to 1000 pupils) -- 1 additional
(each additional 500 pupils or fraction thereof -- 1 additional station --
36'x 52'minimum or a swimming pool, 25 meters x 7 ft lanes)

j. Recitation room/interchangeable classroom ..... 770 sq. ft.
Number of classrooms equals (planned building enrollment ÷ 9) + 33 ÷ (# of teaching periods/day)

k. Science -- including preparation and storage
1. General Science ..... ……...1000 sq. ft.
Number of rooms = (100% of 7th and 8th grades ÷ 25) ÷ (# of teaching periods/day)
2. Earth Science..... .....1000 sq. ft.
Number of rooms = (100% of 9th grade ÷ 25) ÷ (# of teaching periods/day)
3. Biology.....1200 sq. ft.
Number of rooms = (70% of 10th grade ÷ 24) ÷ (# of teaching periods/day)
4. Chemistry.....1200 sq. ft.
Number of rooms = (40% of 11th grade ÷ 24) ÷ (# of teaching periods/day)
5. Physics.....1200 sq. ft.
Number of rooms = (35% of 12th grade ÷ 24) ÷ (# of teaching periods/day)

l. Study Hall -- up to 25% of pupil enrollment may be out of class at any given time.
Accommodate these in library or study hall -- number of fixed seats.
m. Special Education

Student/Teacher/Ratio	Max. Pupil Capacity	Min. Classroom Size
12:1 or 15:1	12 or 15	770 sq. ft.
12:1:1	12	770 sq. ft.
6:1:1	6	450 sq. ft.
8:1:1	8	550 sq. ft.
12:1+3:1	12	900 sq. ft.
Resource Room	----	300 sq. ft.

NOTE: Provide ancillary space equivalent to at least 1/4 of the area of a special education classroom for each special education classroom being constructed, either as part of the new classroom or other designated space.

n. Usual ancillary spaces --
1. Administration
2. Adult education
3. Auditorium (no. of fixed seats, 7 sq. ft./person)
4. Cafeteria/Kitchen (15 sq. ft./person)
5. Conference Rooms
6. Computer Laboratory
7. Guidance Suite
8. Health Suite
9. Lockers and showers (for 100% of pupil enrollment)
10. Large group instruction (no. of fixed seats, 7 sq. ft./person)
11. Resource Rooms
12. Remedial Rooms
13. Storage
14. Maintenance
15. Teachers' room(s)
16. Toilets

APPENDIX B:

PUPIL CAPACITY ANALYSIS OF EACH SCHOOL BUILDING OF THE ICHABOD CRANE SCHOOL DISTRICT GRADES KINDERGARTEN THROUGH GRADE 12

ICHABOD CRANE
PRIMARY SCHOOL

Total Enrollment as of October, 2009	
• **Grades K-2 including Special Needs Self-contained**	**412**

BUILDING CAPACITY ANALYSIS:
'OPERATING' BASED ON LOCAL INSTRUCTIONAL DELIVERY STANDARDS;
'RATED' BASED ON CURRENT SED GUIDELINES AS OF 10/1/09

PRIMARY SCHOOL OPERATING CAPACITY BENCHMARKED TO HOW SPACE IS CURRENTLY ASSIGNED TO MEET THE EXPECTED INSTRUCTIONAL PROGRAM FOR 2009-2010:

OPERATING CAPACITY	
PRE-KINDERGARTEN	18
KINDERGARTEN-GRADE 2 AS PER DISTRICTCLASS SIZE GOAL OF 18 FOR GRADES K-3	
414	
SPECIAL EDUCATION	
0	
TOTAL OPERATING CAPACITY GRADES K-2: 414	
SED 'RATED' CAPACITY (BUILDING AID UNITS) FOR ESTIMATED BUILDING AID CEILING CALCULATIONS	
PRE-KINDERGARTEN	27
KINDERARTEN–GRADE 2	574
SPECIAL EDUCATION	0
ESTIMATED TOTAL BUILDING AID UNITS	**601**

UNDER OR OVER TOTAL BUILDING PUPIL CAPACITY	**CURRENT GRADES K-2 ENROLLMENT COMPARED TO THE PUPIL CAPACITY SCHOOL'S BENCHMARKED TO THE IMPLEMENTATION OF THE 2009-2010 PROGRAM**
OPERATING CAPACITY K-2	*UNDER BY 2 PUPILS OR BY .5%*
INCORPORATING GENERALLY ACCEPTED OPERATING PRACTICE OF 10% UNASSSIGNED CAPACITY FACTOR TO ALLOW PROGRAM FLEXIBIITY	***OVER BY 39 PUPILS OR BY 10.5%***

CAPACITY ANALYSIS ICHABOD CRANE PRIMARY SCHOOL

*Denotes classrooms under state minimum recommended square footage of 770 square feet.

CLASSROOM USE	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY DISTRICT PROGRAM GOAL	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
Pre-K	203	755	18	27
Kindergarten	102	885	18	27
Kindergarten	103	885	18	27
Kindergarten	114	885	18	27
Kindergarten	115	885	18	27
Kindergarten	205	755*	18	26
Kindergarten	207	755*	18	26
Kindergarten	216	755*	18	26
Kindergarten	217	755*	18	26
Grade 1	107	885	18	27
Grade 1	108	885	18	27
Grade 1	109	885	18	27
Grade 1	110	885	18	27
Grade 1	208	755*	18	26
Grade 1	210	755*	18	26
Grade 1	211	755*	18	26
Grade 1	213	755*	18	26
Grade 2	104	885	18	27
Grade 2	105	885	18	27
Grade 2	112	885	18	27
Grade 2	113	885	18	27
Grade 2	212	755*	18	26
Grade 2	214	755*	18	26
Grade 2	215	755*	18	26
TOTAL GRADES K-2			**414**	**574**

PRIMARY SCHOOL INSTRUCTIONAL SUPPORT SPACE

SUPPORT SERVICE/PROGRAM	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY DISTRICT GUIDELINES	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
Library	218	1298		
Computer Lab	201	610		
Music	101	974		
Music/Art				
Band				

SUPPORT SERVICE/PROGRAM	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY DISTRICT GUIDELINES	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
Physical Education/Caf	415	3744		
Physical Education				
Stage	416	1300		
Cafeteria				
Resource Room	404			
Special Ed. Support	206	755		
Special Ed. Support				
AIS/Special Ed.				
AIS				
Nurse	406	416		
Psychologist	209	160		
Speech/Enrichment	202	556		
Physical Therapy	106	885		
Occupational Therapy	117	192		
Reading	111	885		
Guidance	116	132		
Art	204	755*		
OT/PT/ESL				
Faculty Workroom	412	638		
TOTAL GRADES K-2				**0**

PRIMARY SCHOOL SPECIAL EDUCATION INSTRUCTIONAL CLASSROOMS				
CLASS	**ROOM NUMBER**	**SQUARE FEET**	**OPERATING CAPACITY**	**BUILDING AID UNITS**
TOTAL SPECIAL EDUCATION			**0**	**0**

MARTIN VAN BUREN ELEMENTARY SCHOOL

Total Enrollment as of October, 2009	
• **Grades 3-5 including Special Needs Self-contained**	**218**

BUILDING CAPACITY ANALYSIS:
'OPERATING' BASED ON LOCAL INSTRUCTIONAL DELIVERY STANDARDS;
'RATED' BASED ON CURRENT SED GUIDELINES AS OF 10/1/09

VAN BUREN OPERATING CAPACITY BENCHMARKED TO HOW SPACE IS CURRENTLY ASSIGNED TO MEET THE EXPECTED INSTRUCTIONAL PROGRAM FOR 2009-2010:

OPERATING CAPACITY	
PRE-KINDERGARTEN	0
GRADE 3-GRADE 5 AS PER DISTRICTCLASS SIZE GOAL OF 18 FOR GRADES K-3	
213	
SPECIAL EDUCATION	
0	
TOTAL OPERATING CAPACITY GRADES 3-5: 213	
SED 'RATED' CAPACITY (BUILDING AID UNITS) FOR ESTIMATED BUILDING AID CEILING CALCULATIONS	
PRE-KINDERGARTEN	0
GRADES 3-5	233
SPECIAL EDUCATION	0
ESTIMATED TOTAL BUILDING AID UNITS	**233**

UNDER OR OVER TOTAL BUILDING PUPIL CAPACITY	**CURRENT GRADES 3-5 ENROLLMENT COMPARED TO THE PUPIL CAPACITY SCHOOL'S BENCHMARKED TO THE IMPLEMENTATION OF THE 2009-2010 PROGRAM**
OPERATING CAPACITY	*OVER BY 5 PUPILS OR BY 2.3%*
INCORPORATING GENERALLY ACCEPTED OPERATING PRACTICE OF 10% UNASSSIGNED CAPACITY FACTOR TO ALLOW PROGRAM FLEXIBIITY	***OVER BY 26 PUPILS OR BY 13.5%***

CAPACITY ANALYSIS VAN BUREN ELEMENTARY SCHOOL

*Denotes classrooms under state minimum recommended square footage of 770 square feet.

CLASSROOM USE	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY DISTRICT GUIDELINES	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
Grade 3	111	675*	18	23
Grade 3	112	675*	18	23
Grade 3	115	675*	18	23
Grade 3	117	675*	18	23
Grade 4	216	675*	23	23
Grade 4	218	754*	26	26
Grade 4	221	675*	23	23
Grade 5	211	675*	23	23
Grade 5	212	675*	23	23
Grade 5	215	675*	23	23
TOTAL GRADES 3-5			**213**	**233**

VAN BUREN ELEMENTARY INSTRUCTIONAL SUPPORT SPACE

SUPPORT SERVICE/PROGRAM	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY DISTRICT GUIDELINES	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
Library	219	754		
Computer Lab	11	170		
Music				
Music/Art	122	675*		
Band	119.1	356		
Physical Education/Caf				
Physical Education	120	3564		
Stage				
Cafeteria	6	1454		
Resource Room				
Special Ed. Support	214	675		
Special Ed. Support				
AIS/Special Ed.	116	675		
AIS				
Nurse	114	198		
Psychologist	113	198		
Speech/Enrichment				
Physical Therapy	119.2	356		
Occupational Therapy				

SUPPORT SERVICE/PROGRAM	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY DISTRICT GUIDELINES	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
Reading				
Guidance				
Art				
OT/PT/ESL				
Faculty Workroom	1	675		
TOTAL GRADES 3-5				**0**

*****Denotes classrooms under state minimum recommended square footage of 770 square feet.

VAN BUREN SPECIAL EDUCATION INSTRUCTIONAL CLASSROOMS				
CLASS	**ROOM NUMBER**	**SQUARE FEET**	**OPERATING CAPACITY**	**BUILDING AID UNITS**
TOTAL SPECIAL EDUCATION			**0**	**0**

MARTIN H. GLYNN
ELEMENTARY SCHOOL

Total Enrollment as of October, 2009	
• **Grades 3-5 including Special Needs Self-contained**	**229**

BUILDING CAPACITY ANALYSIS:
'OPERATING' BASED ON LOCAL INSTRUCTIONAL DELIVERY STANDARDS;
'RATED' BASED ON CURRENT SED GUIDELINES AS OF 10/1/09

GLYNN OPERATING CAPACITY BENCHMARKED TO HOW SPACE IS CURRENTLY ASSIGNED TO MEET THE EXPECTED INSTRUCTIONAL PROGRAM FOR 2009-2010:

OPERATING CAPACITY	
PRE-KINDERGARTEN	0
GRADE 3-GRADE 5 AS PER DISTRICTCLASS SIZE GOAL OF 18 FOR GRADES K-3	
	214
SPECIAL EDUCATION	
	0
TOTAL OPERATING CAPACITY GRADES 3-5: 214	
SED 'RATED' CAPACITY (BUILDING AID UNITS) FOR ESTIMATED BUILDING AID CEILING CALCULATIONS	
PRE-KINDERGARTEN	0
GRADES 3-5	238
SPECIAL EDUCATION	0
ESTIMATED TOTAL BUILDING AID UNITS	**238**

UNDER OR OVER TOTAL BUILDING PUPIL CAPACITY	**CURRENT GRADES 3-5 ENROLLMENT COMPARED TO THE PUPIL CAPACITY SCHOOL'S BENCHMARKED TO THE IMPLEMENTATION OF THE 2009-2010 PROGRAM**
OPERATING CAPACITY	*OVER BY 15 PUPILS OR BY 7%*
INCORPORATING GENERALLY ACCEPTED OPERATING PRACTICE OF 10% UNASSSIGNED CAPACITY FACTOR TO ALLOW PROGRAM FLEXIBIITY	***OVER BY 36 PUPILS OR BY 18.7%***

CAPACITY ANALYSIS GLYNN ELEMENTARY SCHOOL

*Denotes classrooms under state minimum recommended square footage of 770 square feet.

CLASSROOM USE	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY DISTRICT GUIDELINES	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
Grade 3	105	690*	18	24
Grade 3	208	719*	18	25
Grade 3 and 4	207	680*	18	23
Grade 3 and 4	211	700*	18	24
Grade 4	102	662*	23	23
Grade 4	103	662*	23	23
Grade 5	209	686*	23	23
Grade 5	210	735*	23	23
Grade 5	213	741*	26	26
Grade 5	214	700*	24	24
TOTAL GRADES 3-5			**214**	**238**

GLYNN ELEMENTARY INSTRUCTIONAL SUPPORT SPACE

SUPPORT SERVICE/PROGRAM	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY DISTRICT GUIDELINES	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
Library	100.3	995		
Computer Lab				
Music	10	170		
Music/Art	104	700*		
Band				
Physical Education/Caf				
Physical Education	107	3584		
Stage	107.1	420		
Cafeteria	12	1675		
Resource Room				
Special Ed. Support	01	475		
Special Ed. Support	212	562		
AIS/Special Ed.				
AIS	5	475		
Nurse	216	128		
Psychologist	215	192		
Speech/Enrichment				
Physical Therapy				
Occupational Therapy				

SUPPORT SERVICE/PROGRAM	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY DISTRICT GUIDELINES	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
Reading				
Guidance				
Art				
OT/PT/ESL	9	710		
Faculty Workroom	9	528		
TOTAL GRADES 3-5				**0**

GLYNN ELEMENTARY SPECIAL EDUCATION INSTRUCTIONAL CLASSROOMS				
CLASS	**ROOM NUMBER**	**SQUARE FEET**	**OPERATING CAPACITY**	**BUILDING AID UNITS**
TOTAL SPECIAL EDUCATION			**0**	**0**

ICHABOD CRANE MIDDLE SCHOOL

Total Enrollment as of October, 2009	
• Elementary grade 6 and Special Needs Self-contained	162
• Secondary grades 7-8 and Special Needs Self-contained	314
Total enrollment 6-8	**476**

BUILDING CAPACITY ANALYSIS:
'OPERATING' BASED ON LOCAL INSTRUCTIONAL DELIVERY STANDARDS;
'RATED' BASED ON CURRENT SED GUIDELINES AS OF 10/1/09

ICHABOD CRANE MIDDLE SCHOOL BUILDING OPERATING CAPACITY BENCHMARKED TO HOW SPACE IS CURRENTLY ASSIGNED TO MEET THE EXPECTED INSTRUCTIONAL PROGRAM FOR 2009-2010:

OPERATING CAPACITY	
GRADE 6	
CLASSROOMS	216
SECONDARY GRADES 7-8	
TEACHING STATION METHODOLOGY	
CLASSROOMS	630
SPECIAL EDUCATION (Ichabod Crane CSD)	0
ESTIMATED TOTAL OPERATING CAPACITY GRADES 6-8	**846**
SED 'RATED' CAPACITY (BUILDING AID UNITS) FOR ESTIMATED BUILDING AID CEILING CALCULATIONS	
GRADE 6	216
GRADES 7-8	630
SPECIAL EDUCATION 6-8 BOCES rental	8
ESTIMATED TOTAL BUILDING AID UNITS 6-8	**854**

UNDER OR OVER TOTAL BUILDING PUPIL CAPACITY	**CURRENT GRADES 6-8 ENROLLMENT COMPARED TO THE MIDDLE SCHOOL'S PUPIL CAPACITY BENCHMARKED TO THE IMPLEMENTATION OF THE 2009-2010 PROGRAM:**
OPERATING CAPACITY	*GRADE 6: UNDER BY 54 PUPILS OR BY 25%* *GRADES 7-8: UNDER BY 316 PUPILS OR BY 50%*
INCORPORATING GENERALLY ACCEPTED OPERATING PRACTICE OF 10% UNASSSIGNED CAPACITY FACTOR TO ALLOW PROGRAM FELEXIBIITY	*GRADE 6: UNDER BY 33 PUPILS OR BY 16.9%* *GRADES 7-8: UNDER BY 253 PUPILS OR BY 44.6%*

CAPACITY ANALYSIS MIDDLE SCHOOL GRADE 6

*Denotes classrooms under state minimum recommended square footage of 770 square feet.

CLASSROOM USE	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
Grade 6	100	844	27	27
Grade 6	101	1019	27	27
Grade 6	102	1019	27	27
Grade 6	103	1019	27	27
Grade 6	105	801	27	27
Grade 6	106	800	27	27
Grade 6	107	800	27	27
Grade 6	111	800	27	27
TOTAL GRADE 6			**216**	**216**

CAPACITY ANALYSIS ICHABOD CRANE MIDDLE SCHOOL GRADES 7 AND 8 – TEACHING STATION METHODOLOGY (7-8 have fewer than 29 teaching stations; count of English, SS, Math, Language, health, and general science classrooms)

*Denotes classrooms under state minimum recommended square footage

CLASSROOM USE	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
LANGUAGE ARTS 7	208	798	30	30
LANGUAGE ARTS 7	209	798	30	30
LANGUAGE ARTS 7	304	798	30	30
LANGUAGE ARTS 7	305	798	30	30
SS 7	210	798	30	30
SS 7	211	798	30	30
SS 8	308	798	30	30
SS 8	309	798	30	30
MATH 7	206	798	30	30
MATH 7	207	798	30	30
MATH 8	306	798	30	30
MATH 8	307	798	30	30

CLASSROOM USE	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
SCIENCE 7	202	1008	30	30
SCIENCE 7	203	1008	30	30
SCIENCE 8	302	1008	30	30
SCIENCE 8	303	1008	30	30
SPANISH	104	801	30	30
SPANISH	109	800	30	30
SPANISH	110	800	30	30
FRENCH	415	698	30	30
HEALTH	310	798	30	30
TEACHING STATION CAPACITY			**630**	**630**
ART		1176		
FAMILY/CONSUMER SCIENCE	419	952		
CHORUS		962		
BAND		1848		
TECHNOLOGY		2176		
PHYS ED		6566		
PHYS ED		3600		

GRADES 6-8 INSTRUCTIONAL SUPPORT SPACE				
SUPPORT SERVICE/PROGRAM	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
READING	108	800		
READING	204	392		
READING	312	380		
ESL	213	304		
SPECIAL ED SUPPORT	113	537		
SPECIAL ED SUPPORT	115	338		
SPECIAL ED SUPPORT	212	333		
SPECIAL ED SUPPORT	215	399		
SPECIAL ED SUPPORT	311	612		
GUIDANCE		216		
SOCIAL WORKER	LC1	214		
NURSE		243		

SUPPORT SERVICE/PROGRAM	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
FACULTY/STAFF WORKROOM		1176		
COPY ROOM		181		
COMPUTER LAB		988		
STUDENT SUPPORT/ISS	416	698		
LIBRARY		2728		
CAFETERIA		3780		
CONFERENCE ROOM		297		
TOTAL GRADES 6-8				**0**

ICHABOD CRANE MIDDLE SCHOOL SPECIAL EDUCATION INSTRUCTIONAL CLASSROOMS				
CLASS	**ROOM NUMBER**	**SQUARE FEET**	**OPERATING CAPACITY**	**BUILDING AID UNITS**
BOCES 8:1:1	205	1169	8	8
TOTAL SPECIAL EDUCATION			**8**	**8**

ICHABOD CRANE HIGH SCHOOL

Total Enrollment as of October, 2009	
• Secondary grades 9-12 and Special Needs Self-contained	
Total enrollment 9-12	**737**

BUILDING CAPACITY ANALYSIS:
'OPERATING' BASED ON LOCAL INSTRUCTIONAL DELIVERY STANDARDS;
'RATED' BASED ON CURRENT SED GUIDELINES AS OF 10/1/09

ICHABOD CRANE HIGH SCHOOL BUILDING OPERATING CAPACITY BENCHMARKED TO HOW SPACE IS CURRENTLY ASSIGNED TO MEET THE EXPECTED INSTRUCTIONAL PROGRAM FOR 2009-2010:

OPERATING CAPACITY	
PUPIL STATION METHODOLOGY	
SECONDARY 9-12 CLASSROOMS	(1064-200)/1.16 =744
SPECIAL EDUCATION (Ichabod Crane CSD)	0
ESTIMATED TOTAL OPERATING CAPACITY GRADES 9-12	**744**
SED 'RATED' CAPACITY (BUILDING AID UNITS) FOR ESTIMATED BUILDING AID CEILING CALCULATIONS	
GRADES 9 – 12 CLASSROOMS	(1136-200)/1.16 =806
SPECIAL EDUCATION BOCES rental	6
ESTIMATED TOTAL BUILDING AID UNITS 9-12	**812**

UNDER OR OVER TOTAL BUILDING PUPIL CAPACITY	**CURRENT GRADES 9-12 ENROLLMENT COMPARED TO THE PUPIL CAPACITY OF THE HIGH SCHOOL BENCHMARKED TO THE IMPLEMENTATION OF THE 2009-2010 PROGRAM**
OPERATING CAPACITY	*UNDER BY 7 PUPILS OR BY .9%*
INCORPORATING GENERALLY ACCEPTED OPERATING PRACTICE OF 10% UNASSSIGNED CAPACITY FACTOR TO ALLOW PROGRAM FELEXIBIITY	***OVER BY 67 PUPILS OR BY 10%***

CAPACITY ANALYSIS ICHABOD CRANE HIGH SCHOOL

CLASSROOM USE	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY BENCHMARKED TO DISTRICT POLICY AND TECHER CONTRACT	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
Art	100	994	20	22
Art	102	770	17	17
Art	203	999	20	22
Family and Consumer Science	112	838	16	16
Family and Consumer Science	113	667	13	13
Technology	104	882	11	11
Technology	105	1699	20	22
Technology	107	830	11	11
Band	502	1646	26	26
Chorus	502	1000	20	20
LOTE	225	650	25	25
LOTE	226	539	20	20
LOTE	228	552	21	21
Physics	406	1234	24	24
Chemistry	403	1186	23	23
Biology	401	989	19	19
Biology	409	989	19	19
Earth Science	410	1011	25	30
Earth Science	411	989	25	30
General Science	412	849	25	28
General Science	402	892	25	29
Health	413	831	25	30
SS	218	645	24	24
SS	224	648	24	24
SS	227	650	24	24
SS	302	949	25	30
SS	313	798	25	30
SS	314	798	25	30
English	223	650	25	25
English	305	768	25	29
English	307	768	25	29
English	309	768	25	29
English	311	768	25	29
English	312	768	25	29
Math	106	761	25	29

CLASSROOM USE	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
Math	108	656	25	25
Math	215	842	25	30
Math	219	645	24	24
Math	221	652	25	25
Math	222	644	24	24
Math	110	672	25	25
Seminar Classroom	213	756	29	29
Business	230	828	23	23
Library-reading area		800	32	32
Phys Ed	Gymnasium	3826	30	30
Phys Ed	Gymnasium	3826	30	30
RAW TOTALS 9-12			**1064**	**1136**

ICHABOD CRANE HIGH SCHOOL GRADES 9-12 INSTRUCTIONAL SUPPORT SPACE				
SUPPORT SERVICE/PROGRAM	ROOM NUMBER	SQUARE FEET	OPERATING CAPACITY	RATED CAPACITY SED GUIDELINES AND EST. BUILDING AID UNITS
Weight Room	103	658		
In-School Suspension	109	710		
Cafeteria	114	X		
Nurse	202	680		
Guidance	204	936		
Faculty Work Room	205	672		
Copy room	211	X		
Auditorium	211	6635		
Music Practice	216	626		
Computer Lab	217	691		
Resource	306	386		
Resource	308	549		
Resource	310	768		
Instructional Technology Work Room	229	759		
TOTALS GRADES 9-12				**0**

ICHABOD CRANE HIGH SCHOOL SPECIAL EDUCATION INSTRUCTIONAL CLASSROOMS				
CLASS	**ROOM NUMBER**	**SQUARE FEET**	**OPERATING CAPACITY**	**BUILDING AID UNITS**
BOCES 6:1:1	220	644	6	6
TOTAL SPECIAL EDUCATION			**6**	**6**

APPENDIX C:

A WELL THOUGHT-OUT PLAN FOR FACILITY PROJECTS

Defining a Vision; the Role of an Architect and Construction Management Firm; Maximizing New York State Building Aid Reimbursement

A. Introductory Discussion:

Ichabod Crane like most school districts in New York State desires to receive the maximum state building aid allowable to help pay for the facilities necessary to support the locally defined educational plan.

Defining the educational program is the first priority by the school board, district leadership, and faculty. The educational plan accommodates statewide curriculum/assessment standards, and the vision and aspirations the Ichabod Crane community has for all the children of the district, present and future. Planning for a facility project is first a curriculum visioning/improvement endeavor before it is a 'brick and mortar' designing/construction endeavor.

Commissioner's Regulations 155.1 requires a school district to plan for the future of its facilities by: assessing enrollment projections, evaluating the district's grade organization, reviewing the use of existing buildings, evaluating the need for replacing obsolete and/or aging facilities, and determining the needs for additional facilities.

A key ingredient to determine what facilities are needed to implement the educational plan is an enrollment projection. The defining of facilities necessary to implement the plan is with a future vision of the K-6 enrollment to be served five years from now, the 7-8 enrollment to be served eight years from now, and the 9-12 enrollment to be served ten years from now. The district vision for pre-kindergarten education is an *additional* documentation for facilities necessary to implement program.

Once the educational program plan is defined and future enrollment estimates are calculated, an architect can help a school board answer:

- How do the present facilities help or hinder the educational plan?
- Can the current facilities be renovated to meet the space needs of the educational plan?
- Can the current facilities be renovated with the addition of new space to meet the needs of the educational plan?
- Should a current building be abandoned and a new building constructed to meet the space needs of the educational plan?

Form follows function. The educational program plan/expectations to serve the estimated future student population must first be defined. Then, and only then can design specialists help define facility options to achieve the educational plan. It is also at this time that the various facility options are analyzed to calculate the maximum State of New York building aid represented by each respective option to achieve the defined educational program specifications.

B. Goals

1. DEVELOP AFFORDABLE OPTIONS TO MEET THE EDUCATIONAL SPECIFICATIONS

A simultaneous overlay in reviewing facility options that can meet the needs of the educational plan is economics. What can the school district afford? What facility options are within the means of the school district? After planned

input from the community, the school board/administrative team can judge and estimate what the local taxpayer can afford to implement the educational plan and the necessary facilities. Estimates of capital fund collections based on various facility options are provided by the architect and construction management consultants so estimates on school district taxes can be calculated.

2. CHOOSE DESIGN OPTIONS THAT QUALIFY FOR MAXIMUM BUILDING AID FROM THE STATE OF NEW YORK

Commissioner's Regulations have been developed to help secure equity and fairness in determining the maximum amount the State will pay to support facilities in all school districts, rich and poor. Districts that are wealthy may spend much more than what the State will aid 'up to'. For Ichabod Crane and most school districts, the reality of economics is that they must try and satisfy the facility needs of their educational plans at no more than the maximum allowable expense the State will aid 'up to'. This worthy goal is not always attainable. The real work of an architect/engineer is the skill to design a form that will satisfy the function of the district's educational plan ***within*** the maximum cost allowance that the State will aid 'up to' unless the school board decides to spend above the aidable ceiling. Therefore, it is important to support the work of the architect and the program decision-making of the district by having available on-going estimates of maximum aid ceiling calculations of design schematics. In this way, the major work necessary to submit a project for State Education Department review is not wasted. The Ichabod Crane and the architect design team will know the estimated qualifying aid ceiling of a plan before submittal to the State Education Department.

3. UNDERSTAND THE 'MAXIMUM AID CEILING ALLOWANCE'

Any dollars spent over the assigned maximum cost allowance as defined by the State Education Department are all '100 penny dollars' directly from local tax dollars with no State support. Careful planning is necessary to keep as close to the maximum aid ceiling as possible. Sometimes the maximum aid ceiling may not be sufficient for major work in very old, sub-standard buildings. Or, a district may wish to provide more space than the estimated enrollments can justify as per the SED school facility program guidelines. In these cases, the school will need to decide what it can afford over the state aidable ceiling for the facility project.

C. Strategic Approach

1. **Assure that all design features can be directly related to the educational vision, instructional goals, and mission of the Ichabod Crane School District. Communicate this vision with clarity to the community. For example, every item of a proposed project should have a direct and clear answer to the question "What will this do for kids?" short term and or long term.**

2. Follow Commissioner's guidelines that are used to determine maximum cost allowance for building aid for each building.

3. Keep a district-wide perspective. The total of the rated capacities of **all** the buildings in Ichabod Crane must relate and be congruous with the total projected K-6 and 7-12 student enrollments to be served in programs offered by the school district. The district cannot receive aid on space that supersedes the enrollment estimated to be served in the future.

4. Follow carefully what makes up a maximum aid ceiling assignment. Maximum aid ceilings are building specific and cannot be allocated for other buildings. Maximum aid ceilings include two parts: one is for construction or reconstruction and the other is for related incidental expenses. Both aid ceiling maximums cannot be interchanged.

5. Put in place accurate record keeping for each project. This is to ensure that Ichabod Crane can file accurate final cost reports to the State Education Department such that there are no deducts in aid for unapproved items or for work that was not in the original scope of the project and not substantiated by an approved change order.