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A Proposal for a Comprehensive High School for the Stanwood School District

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A PROPOSAL FOR A COMPREHENSIVE HIGH SCHOOL FOR THE STANWOOD SCHOOL DISTRICT

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THE PROBLEM AND DEFINITION OF TERMS

For more than a decade, the possibility of improving educational programs in public schools through a planned building program has been recognized by responsible authorities in the field of education. Progress has been made throughout the nation in planning buildings that will improve the educational program; however, schools are still being built without the necessary planning to help insure an adequate educational program for the students.

The move of industry to the Pacific Northwest has been astonishing. Many companies are finding the natural advantages of cheap electrical power and easy access to the ocean difficult to resist. The Boeing Company and its subsidiaries have expanded tremendously in the past four years. The 747 jet and the supersonic transport have contributed greatly toward this expansion.

Recently the migration of people from the city to urban and rural areas has caused a shift in the population and some stratification. Many city people want to group-up in the middle class urban communities and others want acreage in the rural areas.

This movement of people, attempting to escape the problems of the city, has caused school districts in

suburban and rural areas to take a careful look at the future and place a greater emphasis on long term planning of school buildings and educational programs.

Stanwood is an ideal community for people who wish to leave the cities. In the area, there are lakes for fishing, water skiing and swimming and Puget Sound for salt water activities, such as, salmon fishing, clamming, smelting, boating, crabbing and bottom fishing of all kinds. This area is becoming more attractive to the commuter to Seattle or Everett, as the driving time is decreased by the completion of new freeways.

A factor in the growth of Stanwood is the beginning of industry in this area. One subsidiary of The Boeing Company has already located in Stanwood. The Richfield Refinery Company is planning to build a one-hundred-million dollar oil refinery in the southwest corner of the district (see Figure 3, page 30). These factors are causing Stanwood to feel "growing" pains and to realize the need for additional school space in the near future.

I. THE PROBLEM

Purpose of the Study

The purpose of this study is to propose a plan for a new comprehensive high school for the increasing population in the Stanwood School District.

Procedure

To determine the building needs of Stanwood:

1. Current articles and books were examined to determine the position of the comprehensive high school today.
2. Recommendations by the administration and the faculty were reviewed pertaining to the educational program and its improvement.
3. Studies made by the Citizen's Advisory Committee were examined.
   a. Population trends
   b. Site selection
   c. Building needs
4. Current school building costs were obtained from the Office of the State Superintendent of Public Instruction.
5. The financial ability of the Stanwood District was checked by estimating the amount available for bonding in the next ten years.

Limitations of the Study

The needs of the community and the district are unique, therefore, this study applies only to Stanwood.

II. DEFINITION OF TERMS USED

Comprehensive High School

A comprehensive high school is interpreted as meaning a four year secondary school, grades nine through twelve, including both general education courses and specialized courses for all students.

James B. Conant, foremost authority on the comprehensive high school, summarized the aims of the comprehensive system by stating, "A high school whose programs correspond to the educational needs of all the youth of the community" (8:7).

Educational Program

Throughout the study, the term educational program, or the program, is interpreted as meaning the subjects and activities in the high school.

Educational Specifications

Educational specifications are statements describing the educational program, the space needed, equipment housed, and how these are to be utilized.

III. OVERVIEW OF REMAINDER OF THESIS

Chapter II of this study presents the current information on the pro's and con's of establishing a comprehensive high school. Also, presented are the qualifications of a

successful comprehensive high school, including information on its organization, curriculum, costs and building program.

Chapter III presents the needs of the Stanwood School District, as shown in studies made by the lay committee, the faculty and the administration. The present program, facilities and revenues are reviewed as the framework for the new program.

Chapter IV presents a proposal for a new comprehensive high school in Stanwood, bringing together recent ideas and information on educational programs and facilities, and taking into consideration the ability of the district to finance the project.

CHAPTER II

REVIEW OF THE LITERATURE

The position of the comprehensive high school in our country is that of wide acceptance, but, at the same time, continued attack. Chapter II presents a review of literature stating the basis of this acceptance and the ammunition used for the attack. This information presents the necessary background for the problem of building a school. Literature is then reviewed dealing with the planning and costs involved in building a new school.

I. COMPREHENSIVE HIGH SCHOOL

Literature Supporting the Concept of the Comprehensive High School

Educational philosophy and educational programs are interpreted and explained by Conant in a book entitled, The Comprehensive High School: A Second Report. Here Conant presented his thoughts on the comprehensive high school and its development in the United States. Conant quoted from John Gardner, President of the Carnegie Corporation of New York:

> It is called comprehensive because it offers, under one administration and under one roof (or series of roofs), secondary education for almost all the high school age children of one town or neighborhood. It is responsible for educating the boy who will be

> an atomic scientist and the girl who will marry at eighteen; the prospective captain of a ship and the future captain of industry. It is responsible for educating the bright and the not so bright children with different vocational and professional ambitions and with various motivations. It is responsible, in sum, for providing good and appropriate education, both academic and vocational, for all young people within a democratic environment which the American people believe serves the principles they cherish (10:95).

Advocates of the comprehensive concept believe it to be a democratic educational system. Equal opportunity for an education, both academic and social, for all is the goal. The American tradition of fair play seems to be fulfilled. Because of the American citizen's desire to keep society from stratifying, the comprehensive high school emerged. Keller's high opinion of the comprehensive high school was expressed when he said:

> The development of the truly comprehensive high school is thus at once one of the great achievements and one of the great challenges of American public education. Because it takes youth from all segments of American life it contributes to the social integration so badly needed (22:22).

The high value the past generation attached to the idea of the comprehensive school was not easily arrived at. Between 1890 and 1930 the goal of a universal public education through the high school was extended. The comprehensive high school emerged as the instrument of education most likely to reach out to all American youth, especially the low status students. This becomes a major consideration especially in big city high schools. The democratic system with its freedom of movement

often creates a stratified community. The schools must counteract the stratified housing patterns by reinovating the goal and practice of the comprehensive school.

Levine clarified some of the major problems of the high school, especially in the big city school systems when he stated:

> Educators generally recognize that unless youngsters of various social classes and backgrounds attend school together, favored schools would constitute the training ground for a privileged economic and political elite class on the European pattern. The existence of many such privileged institutions, whether officially sanctioned or not, would lead youngsters in the depressed urban slums to believe that they could not realistically aim for the very highest position of leadership in a democratic society. More important still the comprehensive school would play an indispensable role in socializing low income youngsters, many of them barely separated from the peasant schools of Europe, in the attitudes and behaviors which are prerequisite for success in an advanced industrial society (26:62).

Bush and Allen agreed with this opinion on the value of the comprehensive high school in America. They elaborated by mentioning that there has been recent criticism of the system and that the critics believed that to revert to the European pattern of the rigid test systems and systems of separate schools (vocational, college preparatory, etc.) would be an improvement. Bush and Allen felt that this alternative was not acceptable. They confirmed: "The basic idea of a comprehensive secondary school remains sound for this country" (2:22).

Proponents of the comprehensive high school system believe that this system works for the betterment of general education. An early advocate of the comprehensive school, John Dewey, opposed the dual system of high schools. Dewey believed the scheme of a split system tended to paralyze one of the most vital movements operating for the improvement of general education (46:228).

The comprehensive high school system offers a student a wide variety of areas of study. The sytem provides a well rounded curriculum available to all. Conant, in one of his earlier books, Education and Liberty, endorsed the comprehensive system and pointed out the areas in the system that needed special attention. He suggested making far more effort to identify the gifted youth and to give him or her more rigorous academic training in languages and mathematics. He summarized with:

> Our schools have served all creeds and all economic groups within a given geographic area. I believe it to be of utmost importance that this pattern be continued. To this end the comprehensive high school deserves the enthusiastic support of the American taxpayer (7:57).

The New York Department of Education in 1949-50 presented some definite conclusions concerning separate vocational schools and comprehensive schools. The Department concurred that the comprehensive high school is the place for vocational education. These conclusions were supported with the following arguments:

1. The school does not have to build a separate reputation for itself. It already is an accepted American institution.

2. A comprehensive high school with separate but adjacent vocational buildings has many advantages similar to the separate vocational school.

3. The guidance service of the feeder schools tends to take the vocational work into account more readily than with separate vocational schools.

4. All students, academic and vocational, meet together in the same clubs, physical activities, etc., and thus the program tends to be more democratic.

5. More elective offerings in academic subjects, clubs, etc., are available.

6. The prestige of the vocational department may be higher in the eyes of the community (22:242).

Finally, Robert S. Gilchrist summed up the opinions of the writers who support the comprehensive school system by stating:

> America desperately needs the developed abilities of all its youth. Citizens and educators have in the comprehensive high school, an exciting and valuable tool to fulfill America's needs for the future (17:33).

Literature Questioning the Concept of the Comprehensive High School

The concept of the comprehensive high school is to a large extent controversial. It has been under fire since inception and especially since World War II. The main criticism leveled at the system has been its inability to provide specialization in all courses that are deemed necessary to be in a competitive position in the world progress race.

The dissenters have become more vociferous since the appearance of Sputnik.

Conant endorses the comprehensive high school, but only under conditions met by earlier statements. The reason for these conditions was explained by Conant in the NEA Journal of May, 1962:

> We cannot ignore the unpleasant fact that the Soviet Union is outproducing the United States in the training of engineers and scientists at the rate of between two and three to one. The bright boy who fails to take mathematics beyond geometry is unlikely to become an engineer or scientist. The girl who takes only two years of French is not likely to become a foreign-language teacher (9:29).

The foremost critic of the comprehensive high school, as well as many other phases of education in the United States, is the well-known Admiral Rickover. He believed that the comprehensive high school stifled the talented and commented:

> Our high schools may excel in turning out pleasant and attractive youngsters, but their heterogeneous character makes them poor institutions for teaching the talented. This inelasticity of our school system is the direct result of the sentimental attachment we hold for the concept of a comprehensive high school in which all children--stupid, average, talented, and bright--march sedately up to the eighteenth year, absorbing so little real education that it takes another four years at college before the professional stage of education is completed (29:334).

After a trip through the United States viewing comprehensive high schools, Russian educator Zoya Malkova concluded:

> We have our doubts about some of the aspects in the comprehensive high school's work and, first and foremost, about the principle on which pupils are distributed for the different profiles and nature of teaching therein (27:263).

In the New York State Department of Education survey of 1949-50, there were listed some disadvantages of having the vocational program within the comprehensive high school system:

1. Sometimes the academic school day is less than six hours in length, and compromises in schedule are needed. Schedule making is more complicated.
2. To be really comprehensive, the school should offer all the vocational activities of the city in one school. This may be impracticable.
3. Specialization in large occupational fields is hardly practicable.
4. Sometimes there is found the practice of shoving vocational students into classes designed for academic-minded students.
5. The administration is often more interested in the academic work than in the vocational.
6. When vocational work is housed in a general high school building, the physical plant may not be suitable (22:242).

Current Trends

Present circumstances in the nation, with long-term armament programs and the demand upon youth for military service, seem to defer indefinitely any of vocational education to post-high school years. Therefore, most comprehensive schools are attempting to meet the present and future needs of the students.

There are many successful comprehensive high schools throughout the United States. Franklin J. Keller described several along with the unique aspects of their program. Keller found that most successful comprehensive high schools have several characteristics in common:

1. It serves all children, all races, colors, and religions.
2. The principal is interested in vocational education.
3. The director of vocational education must be highly skilled.
4. Pupils desiring shop work must work other programs around vocational work.
5. All pupils must intermingle in academic classes and extracurricular activities.
6. The director of guidance must be interested in vocotional education.
7. One-half of the counselors must be vocational educators.
8. There must be a strong industrial arts program for all pupils.
9. There must be a homeroom program.
10. The school must operate on a single session.
11. The school must promote democratic thinking under democratic living.
12. The vocational education must be good.
13. The school must provide special opportunities within their chosen field or vocation for the gifted and the slow learners.
14. An advisory board on vocational education must be available.
15. There must be a strong parent organization.

16. There must be help for pupils learning the functions of the local, state and federal communities.

17. Rejects and discards from academic classes must not be dumped in the vocational program.

18. Shop work should be unrestrictive of age.

19. The program should be open to overage pupils (22:33).

Malkova, in his study of America's comprehensive high school, also emphasized two points mentioned in the previous list. First, he said:

> Modern secondary schools must not limit their work to training only specially selected groups of students on a high theoretical level. All the young people attending this school must be trained on that level (27:263).

Second, he mentioned his interest in Trump's ideas of flexibility, when he stated:

> We were quite interested in the Trump Plan. It was interesting as an attempt at finding more flexible organizational forms of teaching, at raising the role of the pupils independent studies in school, and at making the teacher's work more productive and effective (27:263).

Conant made a thorough study of the high schools of the United States which was reported in his book The American High School Today. Malkova commented on this by saying:

> Intensive work has been lately started to improve the comprehensive high school. With an efficiency so characteristic of Americans, numerous scientific groups have set up to deal with specific education problems (27:265).

Malkova pointed out that the study made by Conant served as a model for this type of research into education problems. Although, Malkova did not agree with him, Conant concluded

that there was no need for any radical change in the work of the school and that the only shortcoming of the comprehensive high school was that the academically talented student, as a rule did not work hard enough and that his program did not have sufficient range.

In 1967, Conant wrote The Comprehensive High School, in which he inventoried course offerings in two thousand comprehensive schools. The results of that survey can be found in the appendix, Table III.

II. SCHOOL BUILDING

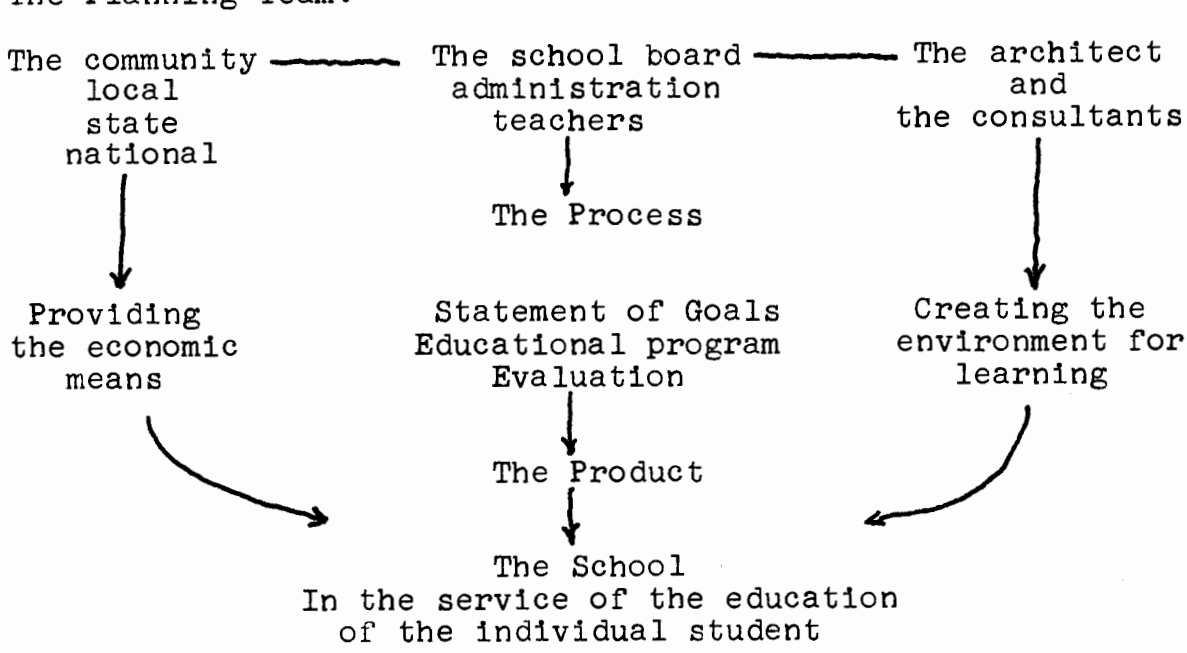
For the purpose of this study the literature reviewed on school building will be divided into two areas, planning and cost.

Planning

The procedure for planning school buildings varies with the community. There are as many plans as there are communities building schools. But planning is an important basic tool for translating the idea and the need of a school, into blueprints and educational specifications. Planning should be a process of people working together as a team, communicating ideas and making decisions. The school that results, will be no better than the planning that precedes it. Tonigon concurred with this theory and emphasized the dangers involved in careless planning:

> For some reason, we have not been able to educate the vast majority of Americans that good buildings are planned and built through careful and intelligent planning, and that the way to keep schools and colleges from becoming educational slums or communities from becoming slums, is to have facilities that are well developed and well managed (42:60).

The planning process begins with the planning team. This is the group of individuals responsible for putting the ideas, goals, and needs of the community together to arrive at specific plans for a school building. Amo DeBernardis (13:7) further outlined the planning team with the following diagram:



The primary goals of effective planning are to establish objectives and to organize educational specification. Shapiro stated, "Plans should be based on what the schools stated objectives are and knowledge of the community" (36:41). Stickle elaborated, by stating, "Any successful high school building program demands that the adminsitration make a clear concise statement of what they wish to obtain" (38:28).

The Report of the Commission on Schoolhouse Planning, sponsored by the NEA in 1925, described schoolhouse planning as follows, "a. adaption to education need, b. safety, c. healthfulness, d. expansibility, e. flexibility, f. convenience, g. durability, h. aesthetic fitness, and i. economy" (11:14).

Educational specifications. Many school building planners emphasized the importance of good educational specifications. These educational specifications should not be too detailed, to the point of restricting, but should be specific enough to inform the architect. There are some rules or guides to action that can be quite helpful in educational planning and in the writing of educational specifications. Boles presented these:

> Start with program; first a comprehensive curriculum study and a school plant needs survey.
>
> Look at the whole; encompasses the entire educational program for a school district.
>
> Consider welfare; the health, safety, and comfort of the occupants.

Consider function; the educational function.

Consider economy; for each building project.

Determine essentials; all the information about program that will be of help to the architect, and no more.

Communicate; all persons involved should know what others are doing at all times.

Continue planning; through the remaining procedural steps.

Distinguish; educational planning must be clearly distinguished from architectural planning.

Instruct; promote proper use of any building finished.

Use sound procedures; technically sound (3:114).

Once this procedure for arriving at educational specifications has been put into action the actual specifications are produced. The following is an outline of the contents of a suggested set of educational specifications:

A. General information
   1. Philosophy and objectives of the school
   2. Community characteristics
   3. Pupils to be housed
   4. Provision for community use
   5. Site and site development
   6. General design of the building
   7. General arrangement of interior spaces
   8. Policy concerning multiple use of space
   9. Funds available
   10. Nature of any likely future expansion

B. Complete listing of the facilities to be provided

C. Detailed description of each room and space to be provided
   1. General description of the space
   2. Activities to be carried on in each space
   3. Location and traffic operation
   4. Furniture and equipment
   5. Storage

6. Audio-visual requirements
7. Utility requirements
8. Other special considerations

D. Miscellaneous requirements (30:15).

A more thorough outline of educational specifications was presented by McClurkin in, School Building Planning. McClurkin included consideration of the community personality traits, special school system features and characteristics. The requirements of each department in the school were taken into consideration, also. The activities to take place in each department, taking into account the furnishings and space needed, were of importance. General area requirements, which included the gymnasium, offices, halls and storage, must be specified. An outline of these educational specifications can be found in Appendix B.

Cameron summarized the planning processin his thesis, The Approach to School Building Planning, with four major parts:

1. Recognition and evaluation of school district needs.
2. Declaration of educational policy.
3. Statement of problem or of architectural requirements.
4. Long range financial plan (4:21).

Cost

Along with the general economy, the cost of constructing school buildings is constantly rising. For this reason, many educators encourage school planners to build as soon as

possible if additional space is going to be necessary in the near future. The Boeckh Index in Appendix C illustrates the costs per square foot of all comparable construction including school buildings. Average costs per square foot for school construction was compared with the general construction figures. The school construction was cooperatively financed for state, local school district and federal funds.

It is interesting to note in the Boeckh Index that cost per square foot of school building construction for 1952 to 1965 remained from $1.00 to $2.00 a square foot cheaper than the cost of all comparable construction including school building. However, in the later part of 1965 a sharp increase, to an all time high, occurred in the cost of building. This increase made school building cost $1.00 a square foot more than the comparable construction costs. This period was followed by a slight decline in costs and then in 1966 the gradual rise in costs began that carried on into 1967.

During the period of January 1, 1966 to June 30, 1967, nine authorized contracts were awarded for new high schools in the State of Washington. The comparative cost data, as shown in Table I, included cost of acquiring and preparing the site, the cost of constructing the building or of acquiring a building and preparing for school use, the cost of necessary equipment, taxes chargeable to the project,

TABLE I

COMPARATIVE COST DATA, COOPERATIVELY FINANCED SCHOOL BUILDING PROJECTS FOR WHICH CONTRACT AWARDS AUTHORIZED DURING PERIOD 1/1/66 TO 6/30/67

	ESTIMATED COST		TOTAL COST		
DISTRICT	Total	Sq. Ft.	Total	Sq. Ft.	BID DATE
Cheney 360	$1,026,087.96	$16.37	$1,166,478.02	$18.49	1-66
Bellevue 405	2,642,871.01	16.37	4,322,058.33	26.22	4-66
Winlock 232	625,030.16	15.48	681,717.04	16.90	5-66
Edmonds 15	2,629,019.36	16.63	3,117,676.85	19.60	7-66
Federal Way 210	2,531,743.56	16.44	3,336,451.57	21.24	11-66
Hoquiam 28	1,956,412.60	15.94	3,331,399.11	24.39	10-66
Renton 403	4,992,702.47	19.50	6,018,777.97	23.61	2-67
Monroe 103	901,436.00	16.72	1,102,111.30	19.45	3-67
Kent	2,616,478.60	16.56	3,704,656.21	23.00	4-67

(37:1,2,3,4).

necessary architect's fees, and a reasonable amount for contingencies for these cooperatively financed school buildings.

The figures represent costs of school facilities prior to the increase caused by The Boeing Company expansion in the State of Washington.

CHAPTER III

EDUCATIONAL FRAMEWORK AND NEEDS OF THE SCHOOL

The educational framework and needs of the school provide the background and the foundation upon which the new building program is based.

I. EDUCATIONAL FRAMEWORK

The School's Background

Stanwood Public School District 401, Stanwood, Washington, serving a city of 1,235 population as listed in 1966 and a large rural population, follows the 6-3-3 pattern of organization. Stanwood High School is the only high school in the district. The student population in grades nine through twelve is 295 and the total school population is 1,362. The students represent families of predominately middle and lower-middle socio-economic levels with incomes from semi-professional, clerical, skilled and unskilled occupations.

The Stanwood area, before 1943, contained two school districts. School District 333 was in the town of Stanwood. School District 317 was in the town of East Stanwood. Each district had its own high school. In the school year 1943-44 the above mentioned school districts consolidated to make Twin City Joint Consolidated School District 401. At this time Stanwood High School was named Twin City High School and housed

the high school students of the district. East Stanwood High School was renamed Lincoln Junior High School and converted into a junior high building. Finally in 1960 the two towns of Stanwood and East Stanwood joined to make the town of Stanwood. When this occurred, Twin City High School was renamed Stanwood High School.

Stanwood High School, shown in Figure 1, is housed in a two-story structure built in 1938. Additional music and band facilities, a wood shop, machine shop and an agricultural room were incorporated into the structure at a later date. Construction of a physical education station and two classrooms is scheduled for the fall of 1968.

Lincoln Junior High School, shown in Figure 2, is also housed in a two story building constructed in 1929. A gymnasium and classrooms were added in 1935. This building has failed to meet accreditation standards since 1962 because of deficiencies in facilities and the educational program. The staff ratio to students is inadequate. The State Department in 1967 declared the 638 Lincoln Junior High School students unhoused.

The primary building and the intermediate elementary building were built within the last ten years and have plenty of room for expansion. Rooms can be added to these structures when necessary.

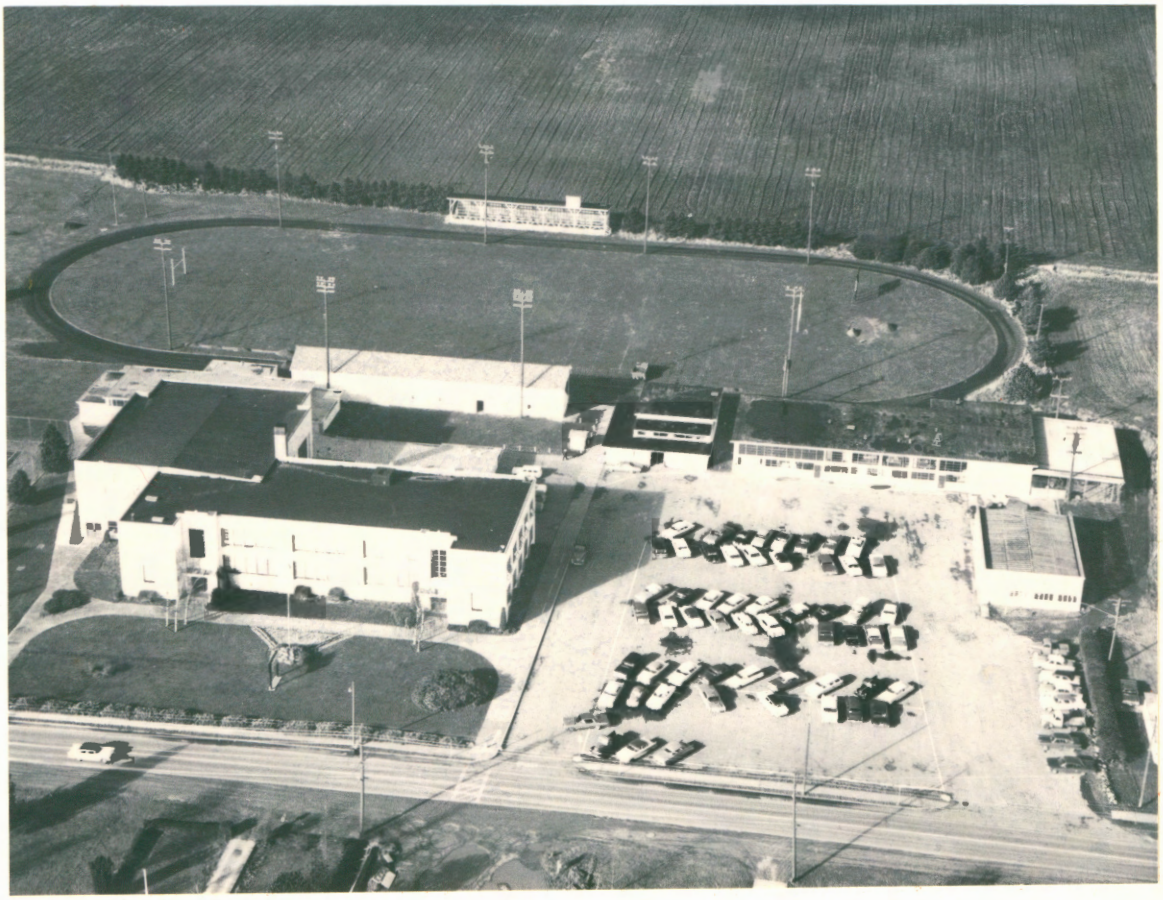


FIGURE 1

STANWOOD HIGH SCHOOL 1967

FIGURE 2

LINCOLN JUNIOR HIGH SCHOOL 1967

The School Organization

Stanwood High School offers a comprehensive program of instruction with the departments of mathematics, foreign languages, industrial arts, health and physical education, science, music, business education, language arts, home economics, social studies and agriculture. There are seventeen teachers in these eleven departments. The three service areas are made up of one full-time counselor, one full-time librarian and one part-time audio-visual aids coordinator. The school activities consist of boys' and girls' athletics, musical productions and various clubs. There is one principal. This makes a total of twenty-one certified staff members.

At present Stanwood High School is operating under a rotating schedule instituted in 1959. This organization requires that:

1. Each student carries six subjects.
2. Each student attends five classes a day.
3. The class periods, with one exception, rotate.
4. Two periods be one hour and twenty minutes long, the others be fifty-five minutes long.
5. Two ten minute breaks precede the one hour and twenty minute periods.

A weeks' schedule includes four meetings of each class, two with one hour and twenty minute periods, and two with fifty-five minute periods. This schedule satifies the time required for a Carnegie Unit. A weeks' schedule is as follows:

	8:55 to 10:20	10:30 to 11:26	11:30 to 12:26	12:26 to 1:04	1:04 to 2:20	2:34 to 3:30
Mon.	1	2	3	Noon	4	5
Tues.	2	4	3		5	6
Wed.	4	5	3		6	1
Thurs.	5	6	3		1	2
Fri.	6	1	3		2	4

The purpose of this organization, as stated by Stanwood High School principal, Harold Shelton, the initiator of this program, is that it:

1. Gives extra long periods for laboratory classes such as science, home economics, industrial arts, agriculture, biology and art.

2. Permits a greater range of experiences while in high school.

3. Creates an enrollment in some classes, such as agriculture, band and chorus, large enough to make these financially feasible in Stanwood High School.

4. Provides for supervised study within the classroom, as there are no study halls in Stanwood High School (6:2).

II. NEEDS OF THE SCHOOL

In determining the needs of the Stanwood School District, the Citizens' Advisory Committe Report is analyzed, and the educational program, building and facilities, and revenue needs are presented.

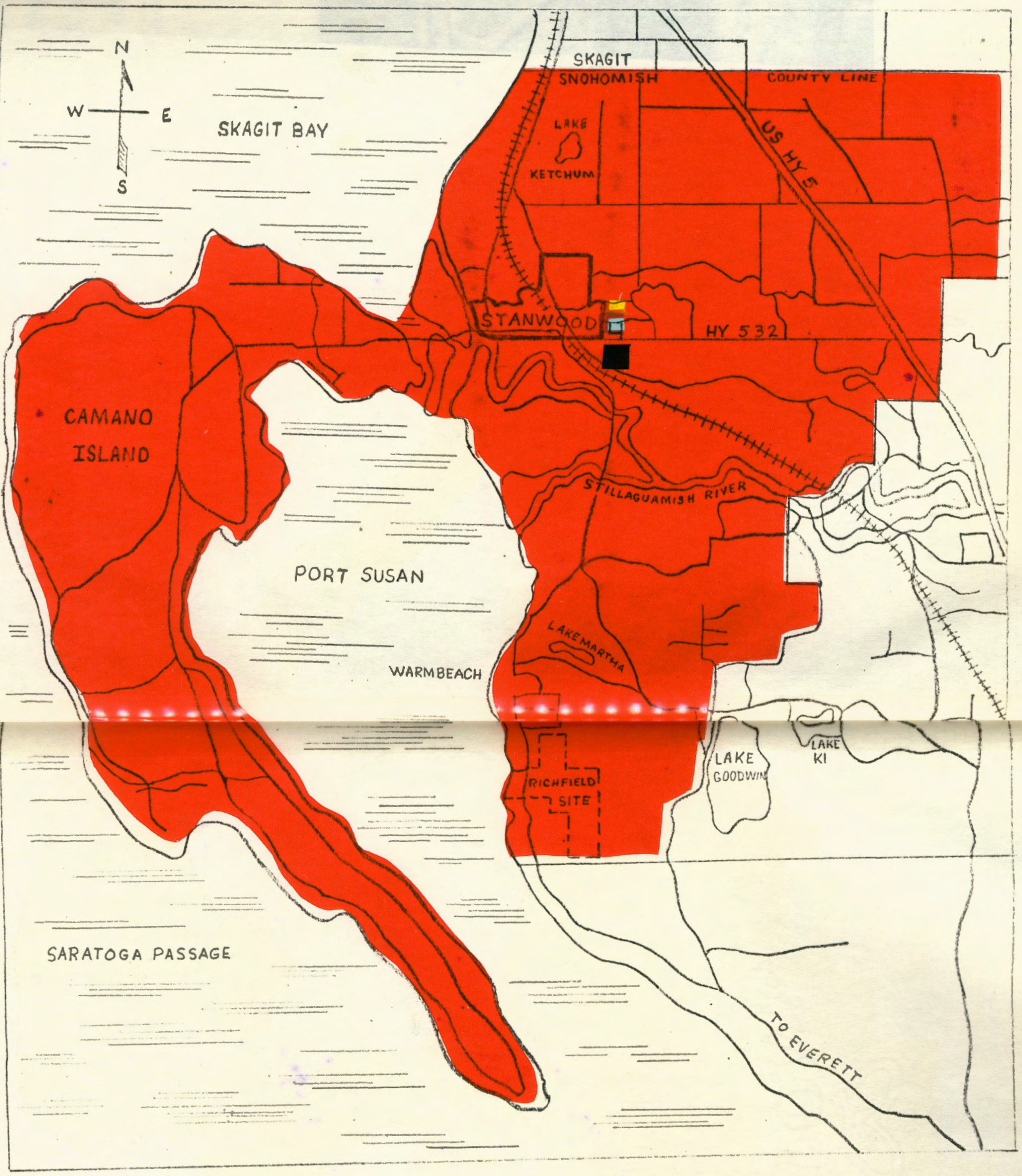
Citizens' Advisory Committee Report

As diagramed by DeBernardis, the community plays an important part on the planning team. The administrators of Stanwood, anticipating housing problem for an expanding student population, chose to establish ad hoc Citizens' Advisory Committee to investigate, in depth, the needs of the district.

The members of the Citizens' Advisory Committee were selected by the superintendent and the school board and represented a wide variety of occupations. They met for the first time on October 25, 1966.

The committee's main objective was to determine the needs of the schools in Stanwood for the next ten years in relation to buildings and facilities, with the idea that the educational program and population increases would influence their decisions. The first order of business was to establish: (1) the site sub-committee and (2) the population trends sub-committee.

The Site Sub-committee, working with architects Mallis and Dehart inspected several potential sites earmarked for future school use. A minimum of forty acres was desired. There were three possible sites all within one mile of the city limits. These were listed in order of desirability: (1) Fox Hill, (2) Husby, and (3) Walseth (see Figure 3). The Fox Hill site was unavailable, so the Husby property adjacent to the Stanwood Elementary School as shown in Figure 4 was selected.



STANWOOD & CAMANO ISLAND

STANWOOD SCHOOL DISTRICT

HUSBY PROPERTY

FOX HILL PROPERTY

WALSETH PROPERTY

FIGURE 3

STANWOOD-CAMANO ISLAND AREA,

STANWOOD SCHOOL DISTRICT AND SITES FOR FUTURE HIGH SCHOOL

FIGURE 4

THE HUSBY PROPERTY 1967

The Population Trends Sub-committee of the Citizens' Advisory Committee obtained information from the following sources; 1. Snohomish County Planning Department study of 1965, 2. West Coast Telephone Company studies of 1966 and 1967 (see Appendix, Table IV), and 3. the Public Utility District No. 1 study of 1967 (see Appendix, Table III).

The West Coast Telephone Company figures showed that established percentage gains in the telephones from year to year are 6.5 to 8.5 percent and concluded that a 3 to 5 percent increase because of the Boeing Company expansion for the Stanwood-Camano exchanges. Combined this would give an anticipated annual growth of 9.5 to 13.5 percent (6:3).

The PUD study of 1967 was based on information provided by the Bonneville Power Administration (see Appendix, Table V). The Citizens' Advisory Committee reported on the PUD findings by stating, "Mr. Hurlbert of the PUD said that the Power Administration expects a growth of 40 percent the next five years, and an additional 40 percent the next five years. He emphasized that this was a general picture and that all areas would be equally effected" (6:3).

The West Coast Telephone and PUD figures pointed to a population growth in the Stanwood area of approximately 100 percent over the next ten years. The Sub-committee felt the school population would be equally affected. Since the influx of families to the area appears to be younger, this may increase the average of school age children per family unit.

As stated by the committee:

> The marked increase in school enrollment in the 66-67 school year of 78 students over the school year of 64-65 tends to firm up these predictions. Applying the percentage to present enrollment would give an increase of 100 to 120 students per year (6:4).

The Population Trends Sub-committee arrived at a prediction of anticipated annual growth of between 9.5 and 13.5 percent. This is a drastic increase when compared with a growth rate of one tenth of one percent for this area between 1950 and 1960 (6:7). The committee concluded that student population will grow at the rate of 100 to 130 per year, which would cause a need for four to five new classrooms each year for the next ten years. These studies were made without consideration of the Boeing Company industrial expansion in Snohomish County; therefore, the prediction figures are minimum figures. In fact, projections shown in Table II indicate that the high school enrollment will approach 700 students during the 1971-72 school year.

The next problem that challenged the Citizens' Advisory Committee was to decide whether to remodel the high school and build a new junior high, or build a new high school and move the junior high to a remodeled high school building.

A building program or master plan had never been formulated for the district. So the members of the committee reviewed the philosophy of the district, toured buildings involved, and invited Mr. Vern Leidle, Consultant for facilities and Organization, Office of State Superintendent of

TABLE II

PROJECTED ENROLLMENTS GRADES 1 THROUGH 12
BASED ON AN ANTICIPATED GROWTH OF 9 PERCENT PER YEAR

1966-67	1967-68	1968-69	1969-70	1970-71	1971-72
1-110	1-120	1-132	1-144	1-157	1-171
2-98	2-120	2-132	2-144	2-157	2-171
3-99	3-107	3-132	3-144	3-157	3-171
4-86	4-109	4-117	4-144	4-157	4-171
5-116	5-94	5-119	5-128	5-140	5-153
6-112	6-126	6-103	6-130	6-142	6-155
7-122	7-122	7-138	7-112	7-121	7-132
8-105	8-133	8-134	8-150	8-164	8-179
9-115	9-115	9-145	9-146	9-159	9-173
10-95	10-125	10-125	10-158	10-172	10-188
11-85	11-105	11-136	11-136	11-143	11-161
12-88	12-96	12-114	12-148	12-161	12-176
1-6 621	1-6 676	1-6 735	1-6 818	1-6 910	1-6 992
7-9 342	7-8 255	7-8 272	7-8 262	7-8 285	7-8 311
10-12 268	9-12 441	9-12 520	9-12 588	9-12 640	9-12 698
1231	1372	1527	1714	1835	2001

Public Instruction, to review the situation. After invistigating, Leidle recommended that: 1. Little money should be invested in Lincoln Junior High. The age and present condition of the building rules out extensive additions. 2. The high school plant will have to be enlarged to a capacity of six hundred students in grades 9-10-11-12 by 1970. The deficiencies of the high school plant are in the areas of physical education, home economics, commercial, science and the library. Stanwood's library is about 1,500 square feet, libraries are now built with between 9,500 and 22,000 square feet (6:2). The libraries are called Instructional Materials Centers and include listening rooms, audio-visual facilities and other electronic equipment. The vocational programs are to be expanded to include instruction in plastics, electronics, welding and machine shops. The field of occupational education must be expanded. 3. Leidle pointed out that a new building should be built to house either a junior high or a senior high.

The committee accepted information on the estimated assessed evaluation and bonding capacity from Superintendent of Stanwood Schools, Darrell Smith. This information can be found in the appendix, Table VI.

The Citizens' Advisory Committee, after considering all information and recommendations, presented the following suggestions to the Stanwood School Board:

1. That the remaining funds from the bond issue of 1966 be used to acquire the Husby property for school building.

2. Expand the high school in the areas of library, home economics, physical education and locker room. Added space for the ninth grade, so to conduct a four year high school until the bonding capacity would allow a new school.

3. Expand the high school with the idea that it will revert to a junior high when the new high school is built.

4. Build a new high school as soon as possible, which will include space for team teaching, large group instruction, greater use of audio-visual aids and provide an expanded library complex (6:5).

The Educational Program

Upon evaluating the Stanwood High School educational program, deficiencies were discovered in the vocational training area and the program for academically talented students. A greater number of Stanwood graduates become skilled and semi-skilled workers than professional people, therefore, the vocational program warrants expansion. To remedy the deficiency in the vocational department, the ultimate program in the new high school should include: 1. electronics, 2. radio and television systems, 3. auto mechanics, 4. carpentry, 5. cabinet making, 6. metal shop, 7. basic plastics, 8. consumer education, 9. tailoring, 10. machine drawing, 11. welding, and 12. basic commercial cooking.

To remedy the deficiency in the program for academically talented students, a method is needed which will allow them to develop to their full potential. One method used to fulfill

this need is the independent study technique. Trump stated, "It will permit study in depth" (45:26). This is a technique which is adaptable to a small school. Another method used to aid the academically talented students is advanced placement courses, but this is not financially feasible in a school the size of Stanwood High School.

The School Building and Facilities

The high school building and facilities of Stanwood are inadequate for housing the needed educational program. This is the conclusion reached by the lay committee, as mentioned earlier. To avoid such inadequacies in the new high school, the present deficiencies are here recorded:

1. The library is too small for the size of the school. There is inadequate shelving, storage and seating space. There is a limited number of volumes and periodicals.
2. The home economics area needs remodeling and enlarging.
3. The shower rooms and dressing room facilities in the physical education department need expanding.
4. The gymnasium and physical education facilities are inadequate.
5. The industrial arts and business education departments need added space.

6. The furniture is insufficient and outdated in approximately one-quarter of the building.
7. The biology area facilities (water, gas and other equipment for laboratory experiments) are inadequate.
8. The blackboard and bulletin board space in the classrooms is too limited.

Revenue

The revenue needed for Stanwood School District to build a new high school can only be estimated. In 1966, Cheney School District built a new high school to house, initially, 600 students. Eventually the building would house 1,000 students. The cost of this building was $1,166,478.02 or $18.49 per square foot (37:1). In 1967, Monroe School District, which is in the same area as and of comparable size to Stanwood School District, built a new high school to house approximately the same number as Cheney. The cost of this building was $1,102,111.30 or $19.45 a square foot (37:3). This figure excludes the cost of the previously built science wing, which cost $100,000. This brings the total cost of building in Monroe to $1,202,111.30.

To estimate the cost of a new high school for the Stanwood area, it is necessary to figure an annual increase in cost of 3 percent, (40:57) as predicted in the School Management article, "Cost of Building Index". With this figure

included, the financial need of the district to build a new school would be $1,300,000.00 by 1970, at a cost of approximately $20.00 per square foot. As emphasized in the July 1966, "Cost of Building Index," "Every year you delay in building a new school, that school is going to cost you more--much more" (39:62).

CHAPTER IV

A PROPOSAL FOR A COMPREHENSIVE HIGH SCHOOL IN STANWOOD

Chapter IV will present the thesis, a proposal for a plan, including the philosophy educational specifications and revenues, necessary to direct the building of a comprehensive high school in Stanwood, Washington. The philosophy is to provide direction, the educational specifications are to suggest an educational program and facilities needed to house this program, and the revenues are necessary in order to turn these specifications into a reality.

I. PHILOSOPHY

The philosophy of the school district and of the individual schools needs to be established first. Using the community and evaluations, the philosophy of Stanwood School District should read:

> The Stanwood School District 401 advocates the development of the individual to the maximum of his capabilities, and the stimulation of every member of the district's schools toward an active role as a conscientious citizen working for the preservation of our democratic society.

The district philosophy is general enough to allow a more specific statement to be presented by each school. The statement of philosophy for each school is developed by the

administration and faculty. Keeping in mind the needs of the students involved, the philosophy of the Stanwood High School should read:

> It is the task of Stanwood High School to encourage the student to develop academic, vocational, and social skills to prepare him for his role in society as a responsible citizen.

II. EDUCATIONAL SPECIFICATIONS

Many educators believe the school building should be the architectural expression of the educational programs it is designed to serve. With this in mind, planners of educational facilities should consider the emerging changes in the educational programs. When building a new school, the planners will consider many new programs or concepts and decide whether, or not, they will put any into use, or as Leu states:

> One of three alternatives must be selected: (1) reject or ignore the new concepts, (2) accept and utilize the new concepts in planning future school building, or (3) plan the building so they may be easily modified to permit implementation of a new concept at some later date (25:67).

This proposal intends to incorporate many new concepts of educational programming. Some of the new concepts which will be incorporated are: new media of instruction, such as, television and other mechanical aids, provisions for lecture halls for large groups, small and medium sized rooms for small group

activities, and shops and laboratories where students can work with many kinds of tools and materials on a group or individual problem.

Two important concepts that should be included in developing these educational specifications are flexibility and expansion. Flexibility can be provided for by having interior walls that are not fixed, so the classrooms can be adjusted to various sizes. This can be accomplished by having the wiring, plumbing and heating system in the floor or ceiling. The exterior walls can be designed to provide for expansion.

In the planning process it is important that the architect keep in mind the extended use of the school building and facilities by members of the community.

For the purposes of this proposal, the educational specifications are divided into two areas, the general specifications and the specifications according to subject area. Following are the general specifications:

A. Scope

1. Stanwood High School a four year high school
2. Projected enrollment
   a. Initial enrollment - 750
   b. Ultimate enrollment - 1,000
3. Facilities
   a. Ninth through twelfth grades, including boys and girls ages 14 to 18.

b. Administrative functions--offices for principal, vice principal and general office for secretaries.

c. Special education classroom--half day core, half day vocational training.

4. Scheduling

a. Rotation of classes and block of time schedule for two subject areas for large group and small group instruction.

b. Initial schedule--rotating schedule, sample as shown in Chapter III, page 28.

c. Ultimate schedule--rotating schedule

Mon.	1	2	3	4	5
Tues.	2	3	4	5	6
Wed.	3	4	5	6	1
Thurs.	4	5	6	1	2
Fri.	5	6	1	2	3

d. Percent of building use--90 percent

5. Utilization

a. School hours--8:30 a.m. to 4:00 p.m. to 5:30 p.m.

b. Monthly use--September to June--full-time
Summer school--June to August--part-time

c. Evening hours--6:30 p.m. to 10:00 p.m. for meetings, ball games, and practices

d. Summer use--10:00 a.m. to 12:00 and 1:00 p.m. to 3:00 p.m. for summer school.

6. List of proposed rooms, other than the subject area classrooms:

a. Instructional materials center--for the purpose of reading, listening, discussing and viewing. All types of new media and audio-visual aids available for group or independent use. Center of the school, to be planned first.

b. Gymnasium--seating capacity for three thousand spectators, facilities for portable stage, one main basketball court running lengthwise and two auxiliary courts running the width.

c. Teachers' workroom--contains mimeograph, typewriters, supplies and other reproduction equipment. Near instructional material center.

d. Seminar rooms--four small conference type rooms adjoining the instructional material center.

e. Offices

(1) General reception for secretaries

(2) Principal

(3) Vice-principal

(4) Counselors--girls' and boys'

f. Faculty room--lounge facilities, bookcase and magazine rack, men's and women's restrooms adjacent.

g. Lecture hall and theater room--must hold all the members of the largest class in the school. Tiered seating arrangement.

h. Toilet facilities--two sets of toilet facilities, one set near the auditorium and the gymnasium and one set in the classroom area.

i. Storage rooms

(1) for office records

(2) for school supplies

(3) for janitorial supplies

B. Other Requirements

1. All classrooms with blackout shades

2. All classrooms with projection screen

3. Teacher's desk and podium in each classroom

4. Television jack and closed-circuit wiring in each room.

C. General Systems

1. Service

a. Custodial room and heating plant area

b. Area for deliveries

c. Parking--faculty and student

d. Bus loading area

e. Walks for pedistrians

2. Communication
    a. Clock and bell system
    b. Fire alarm
    c. Intercom--to each major room
    d. Public telephone near office area
    e. Television
    f. Electronic teaching aids in the instructional materials center

D. Special Requirements
1. Lockers--one per student in the halls
2. Outdoor lights
3. Laundry facilities near gymnasium shower rooms
4. Entry hall incorporating a student lounge with trophy cases

The educational specifications are here listed according to subject area. The standard classrooms are to be of an adaptable nature. The moveable walls allow for large group and small group study. In each subject area the course offerings are divided into initial, for 750 students, and ultimate, for 1,000 students. The approximate percentage of the total student population who will be taking each course is then listed. Following are the subject area educational specifications:

A. SUBJECT AREA: LANGUAGE ARTS

General Objectives

The general objectives of the language arts subject area are to teach a student to speak and listen well, to write correctly, to read effectively, and to refine the student's creative ability and leadership qualities.

Curriculum

Initial Course Offerings	School Population Percentage	Class	Sex	Age Group
English 9	28%	F	M,F	14-15
Composition/Literature 10	28%	So	M,F	15-16
Composition/Literature 11	25%	Jr	M,F	16-17
Composition/Literature 12	10%	Sr	M,F	17-18
College Prep English	7%	Sr	M,F	17-18
Speech/Drama	3%	Jr,Sr	M,F	16-18
Ultimate Course Offerings				
Creative Writing	2%	Jr,Sr	M,F	16-18
Public Speaking	2%	Jr,Sr	M,F	16-18
Advanced Placement English (college)	2%	Sr	M,F	17-18
Journalism	3%	Jr,Sr	M,F	16-18
Debate	3%	Jr,Sr	M,F	16-18

Trends

The current trends are toward an emphasis on writing, in depth study, independent study, large group and small group techniques, and the use of closed circuit television.

Activities

The activities should include reading, writing, listening, and speaking.

Space Organization

A standard classroom is needed which can be divided into small group activities by moving the furniture and the walls. There should be adequate bookcases, a podium and several tables.

Relationships

This area should be close to the instructional materials center with easy access to the large group area.

B. SUBJECT AREA: MATHEMATICS

General Objectives

The general objectives of the mathematics subject area is to give all students the skill and understanding to meet quantitative situations in everyday life, to develop methods of logical thinking and correct reasoning. Advanced mathematics are to prepare the students for mathematics in college.

Curriculum

Initial Course Offerings	School Population Percentage	Class	Sex	Age Group
General Mathematics	5%	F	M,F	14-15
Algebra	20%	F	M,F	14-15
Advanced Algebra and Trigonometry	10%	Jr	M,F	16-17
Geometry	20%	So	M,F	15-16
Math Analysis	5%	Sr	M,F	17-18
Terminal Mathematics	5%	Jr,Sr	M,F	17-18
Ultimate Course Offerings				
Analytic Geometry and Calculus	4%	Sr	M,F	17-18
College Mathematics	3%	Sr	M,F	17-18

Trends

The current trends are toward greater use of independent study for depth, advanced placement courses, and use of programmed materials.

Activities

The activities should include listening, calculating, and reasoning.

Space Organization

All inside walls should have chalk boards or bulletin boards. A standard classroom can be used. Desks with graphs on top, and space for the overhead projector should be included.

Relationships

This area should be near the instructional materials center.

C. SUBJECT AREA: AGRICULTURE

General Objectives

The general objectives of the agriculture subject area is to explore agriculture and its related areas for use as a leisure time activity, or to gain insight into possible areas of vocations. It is also to gain factual information about agriculture and elementary instruction in farm equipment handling.

Curriculum

Initial Course Offerings	School Population Percentage	Class	Sex	Age Group
Agriculture 9	10%	F	M	14-15
Agriculture 10	10%	So	M	15-16
Agriculture 11 & 12	7%	Jr,Sr	M	16-18
Farm Shop	10%	Jr,Sr	M	16-18
Metal Shop	5%	Jr,Sr	M	16-18
Ultimate Course Offerings				
Welding	5%	Jr,Sr	M	16-18
Forestry	5%	Sr	M,F	17-18
Auto Mechanics	8%	Jr,Sr	M	16-18

Trends

The current trend in the agriculture department is the emphasis upon this as a vocation.

Activities

The activities should include welding, machine shop equipment use, forging and listening and observing.

Space Organization

In a workshop situation there needs to be room for welding, machine work and demonstrations. There needs to be a tool room, storage area and work tables, as well as, room for power equipment used.

Relationships

This should be located near the industrial arts complex, but away from the instructional material center. This is an area with a high noise factor.

D. SUBJECT AREA: ART

General Objectives

The general objectives are to encourage creative growth by emphasizing the exploratory design and to develop skills and techniques which will open the way to further creative expression. The objective is also to develop an understanding and appreciation of the principles of art as applied to our culture and industry.

Curriculum

Initial Course Offerings	School Population Percentage	Class	Sex	Age Group
Arts and Crafts	10%	F,So	M,F	14-18
Ultimate Course Offerings				
Ceramics	5%	Jr,Sr	M,F	16-18
Drawing and Sketching	5%	F,So	M,F	14-16
Commercial Art	3%	Jr,Sr	M,F	16-18

Trends

The trends are toward an esthetic appreciation of the art forms. Also, a new emphasis is being put on working with modern materials, such as plastic. The field of commercial art is of growing interest.

Activities

The activities should include drawing, painting, sculpturing and making crafts.

Space Organization

A standard classroom is needed with easels, movable tables, display areas, running water and sinks, storage areas for supplies and finished products, and work benches. Long flat drawers for the storage of paper products are needed, also.

Relationships

This department should be located close to the industrial arts area for the multiple use in handicrafts, plastics, and leather.

E. SUBJECT AREA: PHYSICAL EDUCATION AND HEALTH

General Objectives

The general objectives are to help to develop a level of physical fitness adequate for effective, every day living, and to develop physical and sports skills that will promote healthful leisure time recreational activities for the present and in adult life. The objective is also to develop an appreciation for the human body, knowledge of its functions and good health practices.

Curriculum

Initial Course Offerings	School Population Percentage	Class	Sex	Age Group
Physical Education and Health 9-Boys	12%	F	M	14-15
Physical Education and Health 9-Girls	13%	F	F	14-15
Physical Education and Health 10-Boys	12%	So	M	15-16
Physical Education and Health 10-Girls	13%	So	F	15-16
Advanced Physical Education Boys	10%	Jr,Sr	M	16-18
Advanced Physical Education Girls	10%	Jr,Sr	F	16-18
Ultimate Course Offerings				
Remedial Physical Education	5%	F,So Jr,Sr	M,F	14-18

Trends

The trends are toward an emphasis on physical fitness and leisure time sport activities.

Activities

Activities should include indoor sports of all types that involve running, jumping, throwing, lifting, kicking, etc.

Space Organization

A gymnasium is required with locker and shower room facilities, one for boys and one for girls. A dressing room with toilet facilities is needed. There needs to be adequate storage space for all athletic equipment. The instructors' office needs to be located in a position to allow adequate supervision of the locker room and shower facilities. There should be a drying room.

Relationships

This department should be located in the high noise level area of the building away from the instructional material center.

F. SUBJECT AREA: INDUSTRIAL ARTS

General Objectives

The general objectives are to develop an elementary skill in the handling of hand and power tools, to gain factual

knowledge in this area, to acquire a basis for an enjoyable leisure time activity, and to gain insight into a possible area of employment.

Curriculum

Initial Course Offerings	School Population Percentage	Class	Sex	Age Group
Industrial Arts 9 (General Woodworking)	15%	F	M	14-15
Industrial Arts 10 (Basic Vocations)	15%	So	M	15-16
Industrial Arts 11 (Basic Electronics)	13%	Jr	M	16-17
Industrial Arts 12 (Basic Plastics, Leather)	10%	Sr	M	17-18
Mechanical Drawing	8%	So,Jr,Sr	M,F	15-18
Advanced Mechanical Drawing	5%	Jr, Sr	M,F	16-18
Upholstery	5%	Jr, Sr	M,F	16-18
Ultimate Course Offerings				
Architectural Drawing	5%	Jr, Sr	M,F	16-18
Electronics	5%	Jr, Sr	M,F	16-18
Basic Plastics	5%	So, Jr	M,F	14-16
Radio & Television	3%	Jr, Sr	M,F	16-18
Leathers	3%	So, Jr	M,F	14-16
Machine Drawing	4%	Jr, Sr	M	16-18
Cabinet & Detailed Millwork	3%	Jr, Sr	M	16-18
Carpentry	3%	Jr, Sr	M	16-18

Trends

The trend in industrial arts is towards a wider choice of vocational courses.

Activities

The activities include working with hand and power tools of all kinds, observing demonstrations and studying related written material.

Space Organization

The large workroom area should have work benches, vacuum and air filter systems, a painting area with exhausts, storage space for wood, tools, etc., and a classroom with drawing tables.

Relationships

This department should be located away from the academic areas and in the high noise level area of the building.

G. SUBJECT AREA: SOCIAL STUDIES

General Objectives

The general objectives are to develop intelligent citizens with the ability to appreciate and understand our democratic ideals, to learn of the history of the world, and to understand and be able to participate in our government.

Curriculum

Initial Course Offerings	School Population Percentage	Class	Sex	Age Group
Washington History	25%	F	M,F	14-15
World Geography	25%	Jr	M,F	16-17
U. S. History	23%	Jr	M,F	16-17
World History	10%	So,Jr,Sr	M,F	14-18
Economics	5%	Jr,Sr	M,F	16-18
U. S. Government & Current Problems	23%	Sr	M,F	17-18
Ultimate Course Offerings				
Northwest History	5%	Jr,Sr	M,F	16-18
Geography of the Eastern Hemisphere	3%	Sr	M,F	17-18

Trends

The trends in social studies are toward team teaching, or block of time teaching for a large group, the small group and individual study techniques. There is greater use of the instructional material center, television and closed circuit television.

Activities

The activities include listening, discussing, reading, field trips, observing and demonstrating.

Space Organization

The standard classroom needs movable tables, maps, graphs, charts, space for audio-visual aids and a podium. Movable walls to adapt from a large group situtation to a small group situation are needed.

Relationships

This department should be near the instructional material center for independent study.

H. SUBJECT AREA: HOME ECONOMICS

General Objectives

The general objectives is to provide an education in home and family living, which includes budgeting of time, money and resources, and learing nutrition, meal planning, basic child care and clothing construction.

Curriculum

Initial Course Offerings	School Population Percentage	Class	Sex	Age Group
Home Economics 9	15%	F	F	14-15
Home Economics 10	15%	So	F	15-16
Boys' Home Economics	5%	Jr,Sr	M	16-18
Home Management	10%	Jr,Sr	F	16-18
Advanced Clothing	10%	Jr,Sr	F	16-18
Child Care & Development	10%	Jr,Sr	F	16-18
Family Relations	10%	Jr,Sr	F	16-18
Upholstering	5%	Jr,Sr	M,F	16-18

Ultimate Course Offerings	School Population Percentage	Class	Sex	Age Group
Advanced Tailoring	3%	Sr	M,F	17-18
Commercial Cooking	3%	Jr,Sr	M,F	16-18

Trends

Family relations and management are of current interest. Also, the development of certain subject areas as preparation for a vocation is receiving attention.

Activities

The activities include cooking, sewing, discussing, listening, domonstrations, and reading.

Space Organization

A large room is necessary with space and facilities for cooking and sewing, such as, large movable tables, sewing machines, stoves, sinks, water, cabinets and classroom desks.

Relationships

The home economics department should be located near the cafeteria.

I. SUBJECT AREA: SCIENCE

General Objectives

The general objectives are to develop the problem-solving approach to a situation in which a student learns the basic concepts through his own efforts, to learn factual

knowledge of the scientific world, and to gain an awareness of the world and its wonders.

Curriculum

Initial Course Offerings	School Population Percentage	Class	Sex	Age Group
Biology	18%	F,So	M,F	14-16
Chemistry	15%	So,Jr,Sr	M,F	15-18
Physics	15%	Jr,Sr	M,F	16-18
Physical Science	7%	So,Jr,Sr	M,F	15-18
Advanced Biology	10%	Jr,Sr	M,F	16-18
Ultimate Course Offerings				
Botany	5%	Jr,Sr	M,F	16-18
Photography	5%	Jr,Sr	M,F	16-18
Earth Science	5%	Jr,Sr	M,F	16-18
Zoology-Physiology	3%	Jr,Sr	M,F	16-18
Ocean Science	2%	Jr,Sr	M,F	16-18

Trends

The trend in the science area is towards an emphasis on the problem-solving approach.

Activities

The activities include listening, reading, writing, observing demonstrations, experimenting and doing original research.

Space Organization

The classroom needs to be equiped with laboratory experiment counters, which contain a sink, water, gas, and storage space. These counters should provide working space for two or four students. The teacher will need an experiment demonstration table. There should be a separate storage room for chemicals and equipment. And a dark room which is equiped for processing film is needed for the photography work.

Relationships

This should be located in a science complex near the instructional materials center.

J. SUBJECT AREA: MUSIC

General Objectives

The general objectives are to develop vocal and instrumental skills and to develop an interest in and appreciation for fine music.

Curriculum

Initial Course Offerings	School Population Percentage	Class	Sex	Age Group
Chorus I	17%	F	M,F	14-15
Chorus II	15%	So,Jr,Sr	M,F	14-15
Band I	17%	F	M,F	15-18
Band II	15%	So,Jr,Sr	M,F	15-18

Ultimate Course Offerings	School Population Percentage	Class	Sex	Age Group
Glee Club	2%	Jr,Sr	M,F	16-18
General Music	5%	F,So	M,F	14-16
Music Survey & Theory	2%	Jr,Sr	M,F	16-18

Trends

The trends in music today is to include the production of stage musicals in the program.

Activities

The activities include singing, in a group and individually, playing musical instruments, conducting, listening and performing.

Space Organization

The music room needs to be a large room, with chairs for the band class and risers for the chorus class. There needs to be a storage room for the piano, the musical instruments, the band uniforms, the chorus robes and the music. A director's platform and provisions for proper acoustics are included.

Relationships

The music room should be a multi-purpose room and located near the stage and auditorium.

K. SUBJECT AREA: FOREIGN LANGUAGES

General Objectives

The general objectives are to develop skills in listening to, speaking, reading and writing foreign languages. It is also to gain an appreciation for the history, culture and literature of foreign lands.

Curriculum

Initial Course Offerings	School Population Percentage	Class	Sex	Age Group
Swedish I & II	20%	F,So	M,F	14-16
Swedish III & IV	15%	So,Jr	M,F	15-17
Spanish I & II	22%	F,So	M,F	14-16
Spanish III & IV	20%	So,Jr	M,F	15-17
Ultimate Course Offerings				
Spanish V & VI	1%	Jr,Sr	M,F	16-18
French I & II	22%	Fr,So	M,F	14-16
French III & IV	20%	So,Jr	M,F	15-17

Trends

The trends are toward large group instruction, small group discussion, audio-linguistics and programmed texts.

Activities

The activities include listening, speaking, discussing, writing and independent study.

Space Organization

The language laboratory needs to be equiped with listening booths and recording equipment. This area should be adjacent to a classroom, where movable tables can be used for large group or small group activities.

Relationships

The classroom needs to be adaptable and the laboratory a fixed station. It needs to be close to the instructional materials center.

L. SUBJECT AREA: BUSINESS EDUCATION

General Objectives

The general objectives are to develop the necessary skills to prepare for a vocation in the business community, to acquire skills necessary to manage a home, and to prepare for college work.

Curriculum

Initial Course Offerings	School Population Percentage	Class	Sex	Age Group
Typing I	30%	So	M,F	15-16
Typing II	20%	Jr	M,F	16-17
Business Machines & Office Procedures	4%	Sr	M,F	17-18
Shorthand I	4%	Jr	M,F	16-17

Initial Course Offerings	School Population Percentage	Class	Sex	Age Group
Shorthand II	4%	Sr	M,F	17-18
Office Practice	1%	Jr,Sr	M,F	16-18
Ultimate Course Offerings				
Distributive Education	2%	Jr,Sr	M,F	16-18
Consumer Education	2%	Jr,Sr	M,F	16-18

Trends

The trends in this area are toward distributive and consummer education.

Activities

The activities include typing, calculating, writing shorthand, listening and operating office machines.

Space Organization

The typing stations and office machines are permanent fixed facilities in the classroom. The classroom for shorthand and office procedures should be adjacent.

Relationships

This department should be at a distance from the instructional material center and in the semi-noisy area.

III. REVENUE

To turn these plans into a reality approximately $1,300,000 must be made available to Stanwood School District, as suggested in Chapter III. This money may be made available by bonding, by a levy on the taxpayers of the district, and with the aid of state and/or federal funds.

The proposal here is to use a combination of bonding, a levy on the taxpayers and aid from the state. The state aid available to Stanwood is substantially increased by two factors: (1) A greater percentage of State aid is allowed for unhoused students, such as at Lincoln Junior High; and (2) State aid is available to districts which have an increase in student population of over 20 percent in three years. Stanwood qualifies for this. But there are several state requirements to meet in order to receive this aid. The local taxpayers must make what is considered a maximum contribution, which means: (1) The district must be indebted to 10 percent of its assessed valuation, and (2) A ten mill levy for the building fund must be voted by the local taxpayers.

The first step to obtain financing for Stanwood School District is to vote in November, 1968, for bonds up to 10 percent of its assessed valuation. Ten percent of the assessed valuation in 1968 is $1,233,498, see appendix, Table IV. Bonds outstanding are $727,000, so the taxpayers will have to vote bonds of $506,498 plus a 10 mill levy for the building

fund. This money will be used to remodel the existing high school. This would make the district eligible for state aid according to the requirements of the state.

State aid to school districts to finance school buildings is designated as the "State Matching Ratio" of the district. It is the result of three computations: (1) basic or computed percentage, (2) additional percentage for prior net increases in percentage of attendance, and (3) additional percentage for estimated projected growth. There is also a special provision for unhoused students, which places Stanwood in an emergency situation. All of these situations combinded will place Stanwood in approximately an 80 to 90 percent state matching ratio. In order for Stanwood to build a new comprehensive high school at 80 percent matching ratio, the local share will amount to $260,000. If this is figured at a 90 percent matching ratio, $130,000 will be needed.

While the bond election is in progress and the above mentioned computations are made, the Office of the State Superintendent of Public Instruction should be kept informed of the progress. Then an application should be presented to the State Board of Education, who in turn will present the application to the School Emergency Construction Commission. This commission will approve or deny the request.

The request for matching funds should be completed before July, 1969, the beginning of the fiscal year, in order

to insure inclusion in the State funds appropriated by the 1969 legislature. Upon approval, the Stanwood School District can proceed with the architectural planning, and follow the regular procedure for application to the State Superintendent of Public Instruction.

Construction could begin in 1970, after all of the above mentioned procedures have been completed and finances have been obtained. In 1971 the school could be in operation.

In summary, the plan for financing the new Stanwood High School is to vote the bond for 10 percent indebtedness and 10 mills building fund levy in November of 1968, apply for state aid before July of 1969, complete detailed plans with the architect and start building early in 1970, and have the school completed by the fall of 1971.

BIBLIOGRAPHY

BIBLIOGRAPHY

1. Brown, Frank B. "Building School in a Changing Society," American School and University, 38:41-2, November, 1965.

2. Bush, Robert N., and Dwight W. Allen. A New Design for High School Education, New York: McGraw Hill Book Company, Inc., 1964.

3. Boles, Harold W. Step by Step to Better School Facilities, New York: Holt Rinehart and Winston, 1965.

4. Cameron, A. Leroy. "The Approach to School Building Planning." Unpublished Master's thesis, Central Washington College, Ellensburg, 1953.

5. Comeron, John L. "Forces Behind Buildings for the New Age," American School and University, 39:46-47, February, 1967.

6. Citizens' Advisory Committee. Reports on Needs of School, May, 1967.

7. Conant, James B. Education and Liberty, Cambridge: Harvard University Press, 1953.

8. _____. The American High School Today, New York: McGraw Hill Book Company, Inc., 1959.

9. _____. "The Comprehensive High School." NEA Journal, 51:29-30, May 1962.

10. _____. The Comprehensive High School, New York: McGraw Hill Book Company, Inc., 1967.

11. Cooper, Frank I. Report of Committee in Schoolhouse Planning, Washington: National Education Association, 1925.

12. Cornell, Francis G., and Francis J. Lodato. "An Independent Honors Program for the Academically Talented," The Journal of Educational Research, 58:200-04, January, 1965.

13. DeBarnardis, Amo. Planning Schools for New Media, United States Office of Education, Department of Health, Education and Welfare, Washington: Government Printing Office, 1961.

14. Department of Rural Education, Developing Community Schools, Atlantic City Reports, February 15-18, National Education Association, Washington: National Education Association, 1954.

15. Educational Facilities Laboratories, The Cost of a Schoolhouse, New York, 1960.

16. Engelhardt, N. L., and N. L. Engelhardt, Jr. Planning the Community School, New York: American Book Company, 1940.

17. Gilchrist, Robert L. "What is a Comprehensive High School," NEA Journal, 51:32-33, November, 1962.

18. Good, Carter. Dictionary of Education, San Francisco: McGraw-Hill Book Company, Inc., 1959.

19. Havinghurst, Robert J. "Lost Innocence: Modern Junior High School Youth," The Bulletin of the NASSP, 49:10-16, April, 1965.

20. Holmes, Maurice. The Comprehensive School in Action, Plymouth, Great Britain: The Bowering Press, 1967.

21. Ianni, Francis A. J. "Appraisal of Changes in Education," North Central Association Quarterly, 40:180-7, Fall, 1965.

22. Keller, Franklin Jefferson. The Comprehensive High School, New York: Harper Brothers, 1955.

23. Kittell, John. "Changing Patterns of Education: The 'Middle School' Years," The College of Educational Record, 33:62-68, March, 1967.

24. Krug, Edward A. The Shaping of the American High School, New York: Harper and Row, 1964.

25. Leu, Donald J. Planning Educational Facilities, New York: The Center for Applied Research in Education, Inc., 1965.

26. Levine, Daniel U. "Whatever Happened to the Ideal of the Comprehensive School?," Phi Delta Kappa, 48:62-64, October, 1966.

27. Malkova, Zoya. "The American Comprehensive High School Today," International Review of Education, 11:257-66, 1965.

28. McClurkin, W. D. School Building Planning. New York: The Macmillan Company, 1964.

29. Miller, Richard I. "Admiral Rickover on American Education," The Journal of Teacher Education, 10:332-334, September, 1959.

30. _____. NCSC Guide for Planning School Plants. Washington, D.C.: National Council on Schoolhouse Construction, 1965.

31. _____. "New High School," Overview, 3:33-48, March, 1962.

32. Page, Ray. "Plant Responsibilities of the State Department of Education," American School and University, 39:48-49, February, 1967.

33. _____. SCSD, An Interim Report: School Construction System Development. Washington, D.C.: Educational Facilities Laboratory, New York, 1965.

34. _____. "SCSD Spurs Money-Saver Component Schemes," American School and University, 38:35-37, December, 1965.

35. Schmilt, Dr. Marshall. "The Marcus Community High School," American School Board Journal, 14:21-23, March, 1963.

36. Shapiro, Jacob W. "How Can I Decide If A Building Plan is Good?" American School Board Journal, 144:41-42, May, 1962.

37. State of Washington, State Board of Education. "Comparative Cost Data," as of June 30, 1967.

38. Stickle, Robert W. "How to Plan a High School," American School Board Journal, 143:28-31, September, 1961.

39. _____. "The Cost of Building Index," School Management, 1:56-63, July, 1966.

40. _____. "The Cost of Building Index," School Management, 2:56-63, July, 1967.

41. _____. The Things of Education. New York: Educational Facilities Laboratory, Inc., 1961.

42. Tonigon, Richard F. "Emphasis on the Educational Environment," American School and University, 39: 60-61, February, 1967.

43. Trump, Lloyd J. "School Buildings for Modern Programs," The High School Journal, 50:79-86, November, 1966.

44. _____. "Secondary Education Tomorrow--Four Imperatives for Improvement," The Bulletin of the NASSP, 50:87-95, April, 1966.

45. _____ and Dorsey Baynham. Guide to Better Schools, Chicago: Rand McNally and Company, 1961.

46. Waite, L. L. "Educational Specifications--Key to Good Building," American School and University, 38:32-33-, March, 1966.

47. Wilson, Russell E. "Educational Specifications," Nation's Schools, 56:4, October, 1955.

48. Wirth, Arthur G. John Dewey as Educator. Chicago: John Wiley and Son, Inc., 1966.

APPENDIX A

STUDIES OF RELATED INFORMATION FOR STANWOOD HIGH SCHOOL

TABLE III

CONANT'S SUMMARY OF FINDINGS ON THE COURSE OFFERINGS OF COMPREHENSIVE HIGH SCHOOLS, 1967

Criteria			Percentage of 2,000 schools
A.	Individual Criteria and Certain Combinations		
1.	Instruction in calculus		40.0%
2.	Four years of one modern foreign language		65.0
3.	School so organized that five academic subjects plus art or music and physical education may be studied in one day		74.2
4.	Courses in the Advanced Placement program available.		30.2
5.	Ratio of English teachers to students studying English, 1 to 120 or less		25.8
	Per cent of schools meeting all five of the above criteria.	10.8	
	Schools meeting first four of above criteria	13.2	
	Schools meeting criteria 1, 2, 3, and 5	21.4	
	Schools meeting first two criteria	31.8	
6.	Three years of social studies required.		43.4
7.	Course in auto mechanics or building trades		52.2
	Per cent of schools meeting criteria 1, 2, 6, and 7	15.3	
	Per cent of schools meeting criteria 1, 2, and 7	21.7	

TABLE III (continued)

Criteria	Percentage of 2,000 Schools
Per cent of schools meeting criteria 1 and 7	27.9
B. Summary of Other Findings	
8. Ratio of certified professional staff to students of 1 to 20.4 or less	51.2
*9. Ratio of counselors to students of 1 to 349 or less	31.5
10. New physics, chemistry, or biology	64.9
11. Instruction in advanced mathematics other than calculus	22.6
12. Course in problems of democracy with heterogeneous classes	62.5
13. Course in distributive education	53.6
14. Summer school	80.1
15. Course for slow learners	91.9
16. Students grouped by ability in at least one course	96.5
17. Course in business education	92.4
18. Course in home economics	88.8
19. Instruction in music	98.8
20. Instruction in art	94.3

*These criteria represent a somewhat different standard from the set by the recommendations in The American High School Today.

TABLE IV

INCREASE IN NUMBER OF TELEPHONES SERVED
BY WEST COAST TELEPHONE COMPANY, 1964-1967

	1964		1965		1966		1967 (half year	
	Gained	Total	Gained	Total	Gained	Total	Gained	Total
Stanwood	60	1,555	48	1,603	57	1,660	35	1,695
Camano	59	785	70	855	84	939	48	987

TABLE V

INCREASE IN NUMBER OF HOMES SERVED BY
BONNEVILLE POWER COMPANY, 1965-1976

	1965	1968	1970	1976
Arlington-Stanwood	5,650	6,861	7,773	11,527
Marysville-Camano	10,215	13,065	14,804	21,088

TABLE VI

ESTIMATED ASSESSED EVALUATION
AND BONDING CAPACITY
10-YEAR PERIOD, 1967-1976

Year	Estimate of Assessed Evaluation Based on Yearly Increase of 10 percent	Estimated Bonding Capacity	Bonds Outstanding	Estimated Amount Available for Bonding
1967	*$11,213,620	$1,121,362	$767,000	$ 354,362
1968	12,334,982	1,233,498	727,000	506,498
1969	13,568,480	1,356,848	676,000	680,848
1970	14,925,328	1,492,532	623,000	869,532
1971	16,417,860	1,641,786	569,000	1,072,786
1972	18,059,646	1,805,964	514,000	1,291,964
1973	19,865,610	1,986,561	453,000	1,533,561
1974	21,852,171	2,185,217	390,000	1,795,217
1975	24,037,388	2,403,738	326,000	2,077,738
1976	26,411,126	2,641,112	294,000	2,350,112

*Actual amount for 1967

APPENDIX B

OUTLINE OF EDUCATIONAL SPECIFICATIONS BY MCCLURKIN FROM THE BOOK SCHOOL BUILDING PLANNING, 1964

OUTLINE OF EDUCATIONAL SPECIFICATIONS

I. Community Personality Traits

- A. Public conception of educational program
- B. Related community programs
  1. Health; libraries; playground; welfare
  2. Relationships with public schools
- C. Population characteristics
  1. Census data and trends
  2. Educational characteristics
  3. Trends in school-age population

II. School System Features

- A. Status and future of the school district
  1. Relation to adjacent administrative units
  2. Relation to other governmental subdivisions
- B. Educational philosophy and goals
- C. School board policies
  1. School organization--size, travel times, grade grouping, school term, etc.
  2. Personnel policies- certificated employees, teacher load, noncertificated employees, staff ratios, off-duty hours
  3. Instructional policies--attendance, promotion, rate of survival trends, curriculum goals, standardized practices
  4. Holding power; follow-up studies; job permit policies

III. Local School Characteristics

- A. Attendance area to be served
  1. School location, size, summary of rooms
  2. Age and grade groups to be accommodated
  3. Scope of services to be provided
  4. Enrollments anticipated by age/grade
- B. Organization plans
  1. Subject offerings, required and elective
  2. Sectioning practices; group election patterns
  3. Zoning separation of groups
  4. Graduation requirements
  5. Tentative daily/weekly schedule

C. Utilization plans
   1. Night--Adult--Summer uses
   2. Stipulations regarding gross structure
      a. Height, layout, materials, special features

IV. Departmental Requirements

A. Purposes, discernible trends, courses offered

B. Number, age, grade level, sex of occupants by classes

C. Activities in each area by class or subject
   1. Learner activities
   2. Teacher activities
   3. Traffic; internal movement; groupings

D. Area of space requirements and layout
   1. For activities
   2. For furniture, equipment, supplies
   3. Preferred location and arrangements
      a. Orientation to other areas
      b. Internal arrangement and work areas
      c. Shared or multiple use capability

E. List of room furnishings needed
   1. Quantities, dimensions, particular specifications

F. Special utilities and service facilities needed
   1. Unique environmental features (heating, ventilating, lighting, humidity control, acoustical, color, electrical, plumbing)

G. Storage requirements
   1. Items to be stored regularly and occasionally
   2. Area locations, quantity and dimensions, space arrangement, design suggestions

V. General Area Requirements (for each area--purpose, activities, occupant, location, equipment, space layout, utilities, storage, and special needs)

A. Administration
B. Assembly
C. Food Service
D. Gymnasium
E. Multipurpose combination areas
F. Recreation and outdoor
G. Resources center
H. Stores and books

VI. Service system stipulations

A. Custodial and housekeeping
B. Delivery
C. Mechanical systems
D. Parking service
E. Sanitation
F. Utilities

VII. Specific considerations for all

A. Acoustical
B. Bus loading
C. Ceiling materials
D. Clock system
E. Cleaning systems
F. Clothing storage
G. Colors, signal code, etc.
H. Display
I. Exits
J. Fencing
K. Fire protection
L. Floor Markings
M. Floor surfaces
N. Hardware
O. Intercom
P. Outdoor facilities, lighting, paving, etc.
Q. Plantings and landscaping
R. Plumbing
S. Program signals
T. Public conveniences
U. Safety
V. Security
W. Storage
X. Traffic
Y. Wall surfaces
Z. Zone controls

APPENDIX C

TRENDS IN COSTS PER SQUARE FOOT OF CONSTRUCTION IN THE STATE OF WASHINGTON FROM SEPTEMBER, 1951 THROUGH JUNE, 1966

TABLE VII

TRENDS IN COSTS PER SQUARE FOOT OF CONSTRUCTION IN THE STATE OF WASHINGTON

FROM SEPTEMBER, 1951 THROUGH JUNE, 1966

BY CALENDAR QUARTER