PENN MANOR SCHOOL DISTRICT

FACILITIES MASTER PLAN STUDY November, 2010



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INTRODUCTION

- The goal of this report is to provide the Penn Manor School District with an overview and evaluation of school district facilities, as well as a review of facility options that can be developed to address both short term and long term identified facility needs within the school district. As such, this report is considered to be a Long Range Facilities Master Plan Study, developed to provide the School Board of Directors with information and resources to be able to implement a long range plan to guide facility renovations, additions, land purchase and possible new construction.
- As such, identified needs and deficiencies at each facility can be considered as baseline needs from which comparison of completing non-reimbursable capital improvements can be weighed against completing a PA Department of Education reimbursable PlanCon projects. A Long Range Facilities Master Plan Study, by design, includes a multitude of facility options, including supporting documentation regarding scope of work, costs estimates, reimbursement, as well as perceived advantages and disadvantages and preliminary concept sketches where appropriate.

Crabtree, Rohrbaugh & Associates Report Team

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Globalization and rapid technological advancements will continue to affect school design into the twenty-first century, as we transition from an information-based society to one based upon bio and nanotechnology. Technology will increasingly become the facilitator, requiring school facilities to be flexible and adjustable in their organization and use of space. As we expand our knowledge of how we learn, we must also expand our concept of what constitutes a stimulating and creative learning environment. The single most difficult task in this transformative process is that of altering the public's understanding and image of a current school facility. Expanding the planning and design process to involve all of the stakeholders and incorporate the societal issues of today makes sense.

At Crabtree, Rohrbaugh & Associates, we believe in a transparent educational facility design process, with a learner-centered focus and client driven, collaborative approach which builds and supports the community relationships, an important step in the transformation process.

FORWARD

Crabtree, Rohrbaugh & Associates is pleased to present this Long Range Facilities Master Plan Study to the Penn Manor School District. This report has been developed to assist the Penn Manor School District Board of Directors, staff and community in the decision making process regarding the future utilization and disposition of the educational facilities within the school district, as well as identify the possible need for additional facilities in the future. Additionally, the report will provide an update as to the current overall status of the school district, with respect to demographics, student enrollment and building capacity.

This report should be viewed as a starting point, or benchmark; providing the framework from which both a short term and long term facilities master plan can be implemented for desirable improvements within the school district. Any recommendations that result in new construction and/ or upgrades to the present facilities should be structured to align with the Penn Manor School District's Mission, Beliefs and Educational Programs.

Principles of the Report

In the Commonwealth of Pennsylvania, the Departments of Education, Environmental Protection and Labor & Industry have established guidelines for school programs, school sites, buildings and supporting facilities needed to provide a well-rounded, complete and safe educational experience for the students. These guidelines include:

- Curriculum regulations, including Chapter 4 academic standards that will continue to impact facilities.
- School sites must be of adequate size to provide for the safety of the students, provide outdoor play areas, bus loading and unloading and parking for staff and visitors.
- Learning environments should be learner-centered, developmentally and age appropriate, safe, comfortable, accessible, flexible, and equitable, in addition to being cost effective.
- School facilities should meet the educational, physical, intellectual, social and emotional needs of students and create an environment that will encourage students to learn.
- Flexibility, including spaces to provide for the various teaching and learning styles, is essential to educational facilities.
- With the ability to communicate globally and the information explosion that technology has facilitated, schools will need to remain flexible and adaptable to respond to twenty first century educational technology and teaching and learning styles.
- Cost of school construction, energy and ongoing maintenance and operation of school facilities will continue to be a major financial impact to school districts. It will become increasingly important to consider cost effective solutions to address these ongoing important issues.

Assumptions

General

- The citizens of the Penn Manor School District desire to provide an educational opportunity for all students and will support the limited funding required to maintain equitable, quality educational environments at all levels.
- The intent of this report is to provide the Penn Manor School District with appropriate level facility assessments of school district facilities, including an evaluation of the physical plant and educational related needs, as well as an overview of school district demographics, and a district-wide facilities building capacity update.
- Detailed educational programming and design is not part of the scope of a long range facilities master plan study. Any planning and design necessary for any project that the school district may undertake should be part of a comprehensive and integrated educational planning and design process, involving all stakeholders.

Demographic

- Between the 1998/99 school year and the 2009/09 school year, student enrollment in the Penn Manor School District decreased approximately 2.7% to the 2008/09 enrollment total of 5,287 total students.
- The Pennsylvania Department of Education enrollment projection data indicates an increase in the K-12 enrollment through 2018-19. Overall, an approximate 16% increase is projected over the next ten year period. The data indicates that:
 - The **K-6** Enrollment is projected to **increase 28.7%** through 2018-19, with a projected enrollment of **3,400** students.
 - The **7-8** Enrollment is projected to **increase 7.2%** through 2018-19, with a projected enrollment of **920** students.
 - The **9-12** Enrollment is projected to **increase 2.6%** through 2018-19, with a projected enrollment of **1,818** students.
- The **DeJong Healy** Demographic Report from December, 2007 indicates a 3.7% increase in the K-12 enrollment through 2017-18. The data indicates that:
 - The **K-6** Enrollment is projected to **increase 4.8%** through 2017-18, with a projected enrollment of **2,767** students.
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Assumptions, cont'd

- Enrollment projection models include basic limitations such as: internal school district policy changes, external factors, and other considerations such as emerging and changing housing and population trends, all of which can have an effect on the accuracy of the program. Although each of these factors will have an impact on future student enrollment, fluctuation in new housing will likely serve as the catalyst for increases or decreases in student population.
- Construction of new housing and annual live birth data will have a direct effect on the
 enrollment projections and should be monitored annually. Although it is apparent that
 while the population in the school district will likely continue to increase, there is no
 anticipated significant increase in overall district population expected in the near future.
 A review and analysis of housing and population trends suggests that long term, the
 school district could experience an increase in student enrollment.
- For planning purposes, reviewing and updating annual live birth and retention ratios, as well as monitoring census data, housing data and changes in local land development is important. Using recent historical averages as a planning tool is recommended.

Organization / Academic

- Providing space for special programming, social services, special education and "pullout" programs such as art, music, reading support and other resource activities will reduce the functional capacity of the school buildings.
- The class size guidelines of the Penn Manor School District will have an effect on the functional capacity of the facilities.
- The Penn Manor School District maintains a half day kindergarten program. Although not anticipated in the foreseeable future, the implementation of a full day kindergarten program would have a significant impact on the capacity of the current elementary school facilities.
- As teaching strategies change and programs are adjusted to meet the different learning styles of students, facilities are affected. Some students learn best in large groups, while others learn best in visual presentations or through written or spoken communications.
- Having a school environment that allows for these various types of learning and demonstration of competencies requires flexibility and adaptability of physical space.
- School Districts must accept the challenges of NCLB as a long-term, necessary investment of money, time, and focus in an effort to participate in a state-wide effort to in making a commitment to help all students succeed at the high levels envisioned in NCLB

Facilities

Schools should be safe and accessible to all students and adults, be adequately sized to
meet educational planning standards and criteria, and provide for a comfortable
environment to facilitate year-round use and the inclusion of technology as a teaching
tool.

· Assumptions, cont'd

- School facilities should include a variety of learning spaces such as instructional classrooms, small and large group learning areas, specialized instruction space and laboratories.
- School sites should be safe and accessible and provide for efficient and safe movement
 of vehicular and pedestrian traffic. Adequate parking and bus drop-off areas should be
 provided and ideally separated to insure safety and efficiency. Athletic fields and
 playgrounds should be provided to reinforce the educational program.
- Each school should be a permanent part of the community. The potential use of temporary classroom units should be considered as short-term solutions only.
- Elementary schools should provide opportunities for students to have hands-on experiences as part of the learning process, which requires adequate space.
- The Middle School experience is intended to provide a transition from the self-contained, nurturing environment of the elementary school to the departmental configuration of the high school. Students are introduced to departmental teaching, interdisciplinary teaching, flexible scheduling, collaborative learning, and flexible grouping. As an educational facility the Middle School should support and enhance the needs of young adolescent students such as, diversity in experiencing teaching, curriculum and scheduling, self exploration and self definition, meaningful participation in school and community, need for physical activity, positive social interaction with peers and adults, and the need for structure and clear limits.
- High schools are dedicated to the concept of group instruction, however must have the
 facilities to reinforce the emphasis on individualized learning that has emerged. New
 courses of study and expansion and development of educational curriculum offerings in
 the high school have created the need for more specialized rooms, often requiring
 larger, more flexible space. High school facilities should be efficiently designed, with
 clearly delineated paths of travel. High school buildings need to accommodate large
 numbers of students in an efficient and safe manner.
- The appearance of school buildings provides a first and lasting impression of the school system to both children and adults. The quality of the educational opportunities is inferred. Continuing efforts should be made to maintain the interior and exterior of all school facilities.

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

Vision and Mission Statements

Mission Statement

The Penn Manor School District shall strive for academic and personal excellence by fostering a democratic environment which motivates students, teachers, administrators and parents to work collaboratively to improve the instructional program.

Penn Manor Philosophy

The Penn Manor School District recognizes, develops, and nurtures the intelligence and sensitivities of its children and adults. It provides a positive and supportive atmosphere where staff and students work collaboratively to define and accomplish goals. A great school district emphasizes academic achievement, promotes cultural awareness, and offers opportunities for personal growth; it is a place where teachers enjoy teaching and students enjoy learning.

Penn Manor Vision

Our good Penn Manor schools will become great schools by fostering an environment which motivates students, teachers, administrators, and parents to accept responsibility for their own behavior and cooperate to improve the instructional program.

Belief Statements

- Every person has value.
- Students learn in different ways.
- Students must be prepared to meet the challenges of a changing world.
- Each individual has the potential and the responsibility to contribute to society.
- Education supports the intellectual, social, emotional, and physical needs of the student.
- Individuals must learn to be responsible for their actions.
- Individuals deserve to live and to learn in a safe and secure environment.
- Education should empower all persons to reach their full potential.
- Education is the shared responsibility of student, family, school, and community.
- A qualified and dedicated staff, sensitive to student needs, is essential to the learning process.
- The public school must operate in a fiscally prudent manner.
- Quality public education is essential for a democratic society.
- The appreciation of diversity enriches a community.
- Ethical conduct is the foundation of productive relationships.
- Communication promotes understanding.
- Learning is lifelong.

Introduction

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Demographic

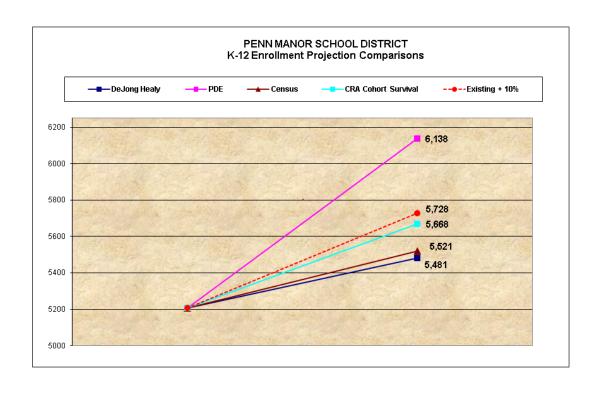
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Demographic

The following enrollment projection model projections are summarized in the chart below, explained within this section of the report and presented for consideration by the Penn Manor School District:

- PA Department of Education enrollment projection
- DeJong Healy enrollment projection report (December, 2007)
- Existing enrollment plus 10% (PDE allowable formula)
- CRA census based enrollment projection
- CRA cohort survival enrollment projection

GRADE LEVEL	CURRENT ENR	OLLMENT		PROJECTION	S (Highest Projec	ted Enrollment)	
	2008-09 PDE Current Enrollment		PDE (2018-19)	DeJong Healy (2017-18)	Existing + 10%	Census Based (2020)	CRA Cohort (2018-19)
K-6	2,623	2,663	3,400	2,767	2,885		2,965
7 - 8	700	000	000	045	000		007
1-8	790	860	920	915	869		927
9 - 12	1,794	1,772	1,818	1,799	1,973		1,776
TOTAL	5,207	5,295	6,138	5,481	5,728	5,521	5,668



Building Capacity

		EX	ISTING			372 53 314 36 350 0 408 -8 314 36 617 158 399 101 2,774 376 369 163 557 231 926 394 1,830 334 1,830 334		
school	PDE CAPACITY	FUNCTIONAL CAPACITY	CURRENT (May 2010)	+ / - (PDE)	+/- (FC)	PROJECTED	+ / - (PDE)	+ / - (FC)
ELEMENTARY K.6								
	405	404	250	69	40	272		22
Martic Elementary Letort Elementary	425 350	404 333	356 300	50	48 33			32 19
Eshleman Elementary	350	333	316	34	17			-18
Pequea Elementary	400	380	380	20	ő		_	-28
Conestoga Elementary	350	333	292	58	41			19
Central Manor Elementary	775	736	575	200	161		158	119
Hambright Elementary	500	475	446	54	29		101	76
	3,150	2,994	2,665	485	329	2,774	376	220
MIDDLE SCHOOL 7-8								
Marticville Middle	532	502	343	189	159		163	133
Manor Middle	788	745	506	282	<u>239</u>			188
	1,320	1,247	849	471	398	926	394	321
HIGH SCHOOL 9-12								
Penn Manor High School	2,164	1,803	1,769	395	361	1,830	334	-27
	2,164	1,803	1,769	395	34	1,830	334	-27
DISTRICT TOTAL	6,634	6,044	5,283	1,351	761	5,530	1,104	514

Notes:

- 1. The school district has sufficient capacity at the elementary and secondary level to meet the maximum projected enrollment figure through 2018-19.
- At the elementary level, most of the schools do not contain much additional capacity to accommodate future growth or changes in the educational program or educational delivery model. Realignment of attendance areas may need to be evaluated to accommodate and manage future growth.
- 3. The high school is below PDE rated capacity, and slightly below the calculated functional capacity. If the highest projected enrollment figures are realized over the next 10 year period, there would not be a shortage of space at the high school, although the building would remain at capacity, with no flexibility to support additional programs or changes to the educational delivery model.

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

EXECUTIVE SUMMARY

Building Capacity

Conclusion

Based upon continuance of the current educational program, the Penn Manor School District has adequate capacity in its schools for the foreseeable future, but will need to address the current and projected growth in the northern end of the school district and the effect on the enrollment at Central Manor as well as Eshleman Elementary Schools. The introduction of full-day Kindergarten district-wide will have a negative effect on building capacity and will need to be analyzed.

A review of the Delong Healy cohort survival projections indicates that the school district will continue with slight growth in K-6 enrollment through the projection period, with grades 7-8 remaining relatively level in enrollment with some slight fluctuations. In grades 9-12, their projections indicate a slight trend downward with an overall slight increase through the projection period.

Both Pa Department of Education and CRA cohort projections basically mirror the secondary projections with some slight differences; however project more significant growth in the K-6 grade levels. The School District will have to evaluate enrollment and live birth data on an annual basis to determine the accuracy of the enrollment projections and whether any emerging trends are having an influence on future projections. The 2010 Census data, when available, should be evaluated and analyzed to determine the effect on future student enrollment and demographic patterns.

As a planning tool, it is recommended that for planning purposes for any school construction project that the School District undertakes, the enrollment figure of the current enrollment, plus 10% be utilized, which the Department of Education will allow for reimbursement purposes.

FCI – Facility Condition Index

Facility Condition Index

The Facility Cost Index (FCI) is used throughout the facility condition assessment industry as a relative indicator of a buildings condition. Based on industry-wide standards, if the cost to repair exceeds 60% of the cost to replace, the facility should be looked at more closely as a possible candidate for replacement. As a rule of thumb, an FCI below 10% is considered good. An FCI above 60% would suggest that the building is a candidate for replacement.

Facility Condition Index (FCI) Summary

Facility Condition Index is a calculation based on the rated condition and replacement cost of a system or major building component. The table below displays the cost of a system relative to the other systems in a facility. For example, the replacement cost of roofing is approximately 4.9% of the total replacement cost of a school facility.

Summary of Facility Cost Index Ratings

Facility	FCI
Hambright Elementary School	60.87
Central Manor Elementary School	0
Eshleman Elementary School	8.15
Letort Elementary School	8.15
Conestoga Elementary School	23.88
Martic Elementary School	0.58
Pequea Elementary School	39.4
Marticvillle Middle School	0
Manor Middle School	15.05
Penn Manor High School	12.45

CEFPI Appraisal Summary of Existing Facilities

School District Facility Assessment Summary

The following chart reflects the overall Facility Appraisal of the Penn Manor School District educational facilities. The scores indicated represent a quantitative measure of assessment of the six main categories of assessment. The actual scoring spreadsheets for each category are included within this section of the report in each respective building assessment.

The intent of the quantitative assessment and score comparisons of each facility is to provide the School Board with an objective, qualitative instrument to support the facility evaluation information contained within the report.

		CEFP	I APPR	RAISAL	SUMN	//ARY						
		Penn Ma	nor Scl	hool Di	strict l	Faciliti	es					
					Eleme	ntary S	chools	3		M	S	HS
		Hambright ES	Pequea ES	Conestoga ES	Martic ES	Central Manor ES	etort ES	shleman ES	Marticville MS	Manor MS	Penn Manor HS	
	Appraisal Area	Possible Points	I	ď	Ö	Σ	Ö	Ľ	Ш	Σ	Σ	ď
1.00	School Site	100	60	87	79	92	87	99	96	97	96	65
2.00	Structural & Mechanical	200	148	159	154	192	189	188	183	190	176	156
3.00	Plant Maintainability	100	66	72	78	96	96	90	88	86	80	78
4.00	School Building Safety and Security	200	153	162	154	190	182	187	190	187	180	176
5.00	Educational Adequacy	200	133	153	156	182	160	176	170	179	164	158
6.00	Environment for Education	200	114	143	149	186	187	179	171	165	174	142
	Total	1000	674	776	770	938	901	919	898	904	870	775
	Percentage		0.674	0.776	0.77	0.938	0.901	0.919	0.898	0.904	0.87	0.775
	Rank		7	5	6	1	3	2	4	1	1	1

Short-Term Life-Cycle Renewal & Capital Improvements

The following pages contain cost estimates for short – term life cycle renewal renovations to the following facilities

- Hambright Elementary School
- Pequea Elementary School
- Conestoga Elementary School
- Letort Elementary School
- Eshleman Elementary school
- Manor Middle School
- Penn Manor High School

The short-term improvements are not intended to be 20 - 25 year comprehensive building upgrades or expansion projects, rather address the more urgent, or critical needs of a facility; typically driven by deferred maintenance, equipment failure, non-conformance with current building codes and changes in technology.

The following chart summarizes the total short-term capital facility renewal recommendations for the Penn Manor School District facilities:

	 DA / COD MPLIANO	_		SENERAL ROVEMEN	TS		ITERIOR INISHES	s	SPECIALTIES	HVAC	ı	PLUMBING	Е	ELECTRICAL	TOTAL
Hambright Elementary School	\$ 5,75	0.00	\$	51,960.	.00	\$	83,400.00	\$	34,500.00	\$ 251,000.00			\$	814,192.00	\$ 1,240,802.00
Pequea Elementary School	\$ 19,25	0.00	\$	2,500.	.00	\$	70,150.00	\$	27,600.00	\$ 128,000.00	\$	90,000.00	\$	546,914.00	\$ 884,414.00
Conestoga Elementary School	\$ 3,75	0.00	\$	37,500.	.00	\$	152,073.00	\$	18,400.00	\$ 150,000.00	\$	-	\$	442,714.00	\$ 804,437.00
Letort Elementary School	\$ 1,50	0.00	\$	60,500.	.00	\$	-	\$	16,100.00	\$ 30,000.00	\$	200,000.00	\$	274,412.00	\$ 582,512.00
Eshleman Elementary School	\$ 15,75	0.00	\$	-		\$	-	\$	16,100.00	\$ -	\$	-	\$	342,617.00	\$ 374,467.00
Manor Middle School	\$ 5,75	0.00	\$	303,250.	.00	\$	143,500.00	\$	69,500.00	\$ 300,000.00	\$	-	\$	919,000.00	\$ 1,741,000.00
Penn Manor High School	\$ 7,00	0.00	\$	317,500.	.00	\$	580,000.00	\$	110,000.00	\$ 500,000.00	\$	-	\$	919,000.00	\$ 2,433,500.00
	\$ 58,75	n nn	¢.	773.210.	nn	\$ 1	,029,123.00	\$	182,200.00	\$ 1,359,000.00	\$	290.000.00	¢	3,339,849.00	\$ 8,061,132.00

Long - Term Facility Renewal & Master Plan options

In researching the various options, the following planning assumptions have been made:

- The Penn Manor School District will maintain a half day Kindergarten program for the foreseeable future, however wishes to explore facility implications of implementing a full day Kindergarten program.
- 2. The Elementary School program will continue to include grades K-6.
- While the School District does not wish to realign attendance zones in order to address enrollment fluctuations and projected enrollment, the School Board will consider all reasonable alternatives in order to maximize the efficient use of the school districts facilities.
- 4. The Penn Manor School District, in response to the ongoing and emerging environmental and energy issues which affect all of us, desires to maintain facilities that are environmentally conscious and energy efficient. The goal is to create an educational environment that supports the teaching and awareness of sustainability and conservation concepts, educating students on the many aspects and importance of sustainable design, energy efficiency and environmental stewardship. Future construction projects in the school district may or may not be LEED certified, and shall be evaluated on a case by case basis.

Hambright Elementary School

The following long range facility options have been explored in order to address the identified needs at the current Hambright Elementary School, and in consideration of the long term needs of the school district:

- OPTION 1 Renovations to Existing Facility (Grades K-6)
- OPTION 2 Construction of New Elementary School (Grades K-6)
- OPTION 3 Conversion of portion of current High School facility into a Grade K-6 Elementary School

Pequea Elementary School

The following long range facility option has been explored in order to address the identified needs at the current Pequea Elementary School, and in consideration of the long term needs of the school district:

Comprehensive Renovations to Existing Facility (Grades K-6)

Conestoga Elementary School

The following long range facility option has been explored in order to address the identified needs at the current Conestoga Elementary Schooll, and in consideration of the long term needs of the school district:

Comprehensive Renovations to Existing Facility (Grades K-6)

Penn Manor High School

The following long range facility options have been explored in order to address the identified needs at the current Penn Manor High School ad in consideration of the long term needs of the school district:

- OPTION 1 Maintain Existing Facility, Minor Renovations & Additions
- OPTION 2 Maintain Existing Facility Comprehensive Renovations
- OPTION 3 Maintain Existing Facility Renovations & Additions
- OPTION 4 Construction of new High School
- **♣** OPTION 5 Convert Manor Middle School to a new High School

Penn Manor School District Football Stadium

The following long range facility options have been explored in order to address options related to the construction of a new athletic football stadium in consideration of the long term needs of the school district:

- OPTION 1 Maintain Existing Lease with Millersville University
- OPTION 2 Convert and expand existing Penn Manor High School football field into Comet Stadium.
- OPTION 3 Convert and expand existing turf field at Comet field into Football Stadium.
- **♣** OPTION 4 Construct new Comet Stadium.

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

EXECUTIVE SUMMARY

Building Condition Analysis

Planning Considerations

Facility evaluations include estimates of the needed improvements and recommended facility improvements which appear in this report. Key points to consider when planning renovations or new construction are:

- What are the educational goals of the School Division?
- □ How do the educational facilities fit into the overall short/long term plans of the School Division and Community?
- □ How big is "too big" in terms of school size for our Communities?
- □ Can the facility be effectively/efficiently renovated?
- □ What is the historical significance of the area?
- What is the financial support for the proposed project?
- □ Is it the goal of the School Division to provide equitable educational facilities at all levels?
- What is the most cost effective use of taxpayer financed improvements?
- □ What are the ramifications of doing nothing?

Geography / Overview

- The Penn Manor School District spans over 100 rural square miles to the east of the Susquehanna River, in Lancaster County, PA. Penn Manor School District encompasses five political entities: Millersville Borough, and Conestoga, Martic, Manor, and Pequea Townships with a total district population in the last census of 37,369.
- Penn Manor School District is recognized as one of the largest school districts in Lancaster County. Over the past 20 years, student enrollments have grown approximately 8.75%. However, this growth has occurred in the first 10 years of this 20 year period, with the past 10 years remaining relatively level in terms of student enrollment growth, even though the district population has continued to increase.

Population

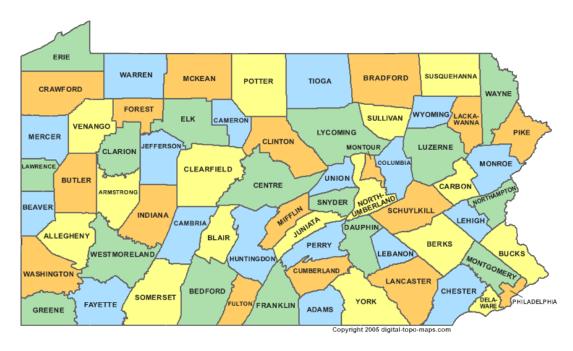
- Total population in the district has increased at a rate of 19.1% from 1980 to 1990 and at a rate of 8.1% from 1990 to 2000. The projected 2010 district population indicates an increase of 8.7% from the 2000 census population. The projected rate of growth in total district population is expected to increase through the year 2020; however the rate of increase is projected to decrease.
- Most of the development and growth has occurred in the north and eastern sections of the school district, within established Urban Growth boundaries in the borough of Millersville and Manor and Pequea Townships. Urban growth and development outside the established urban growth boundaries are strongly discouraged due to costly sprawl and loss of prime farmland.
- According to 1990 Census data, 55-62% of the population in the Townships have continued to reside within the Penn Manor School District. From 7-12% have moved into the district from outside of the County, and 31 – 34% have moved into the district from another location within the County.
- Statistics for Millersville Borough are impacted by the number of students attending Millersville University. Only 33% of those reported as residents in the 1990 Census data have continued to live in the Borough. The largest percentage, 46%, arrives from another County or State, with an additional 20% coming from other locations within Lancaster County.

Wealth

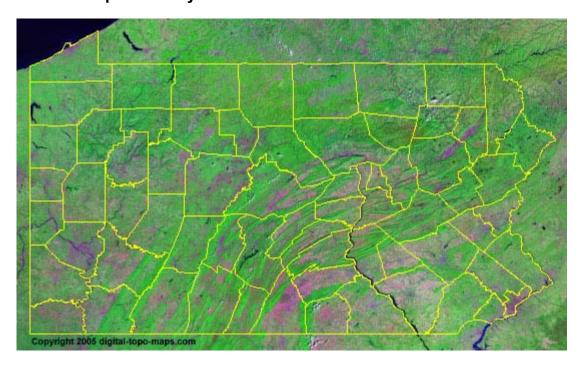
- All townships in the Penn Manor School District were reported in the 1990 Census data
 as having median household income that exceeded both the County and State median
 household income levels. In Millersville Borough, the median household income
 exceeded the State median level, but was beneath the County median income level.
- The 1990 census data indicated that all of the townships reported a percentage of residents living below the poverty level that was less than both the County and State percentages. The percentage of citizens living below the poverty level in Millersville Borough was greater than both the County and State percentages.

Map of Pennsylvania showing relationship of Lancaster County to surrounding Counties.

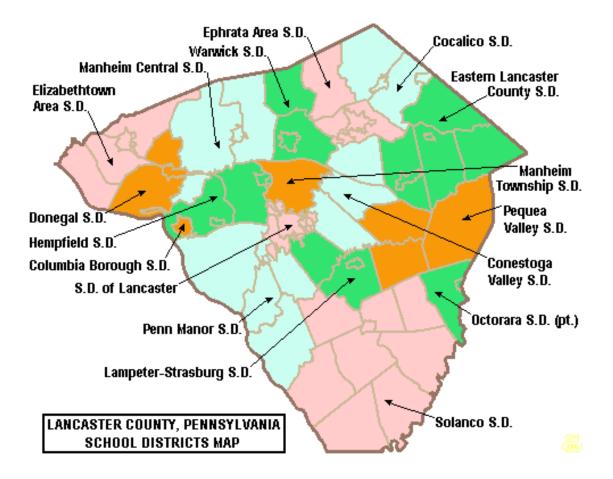
Pennsylvania County Map



Satellite Map of Pennsylvania Counties



Map of Lancaster County showing relationship of Penn Manor School District to surrounding School Districts



Map of Lancaster County Municipalities showing the relationship of the political entities of the Penn Manor School District: Millersville Borough, and Conestoga, Martic, Pequea and Manor Townships, in relationship to other municipalities in the County.

(Penn Manor School District Outlined in Red)



State Financial Aid

• The current Market Value Aid Ratio (MVAR) for the Penn Manor School District, as determined by the Pennsylvania Department of Education is .4771.

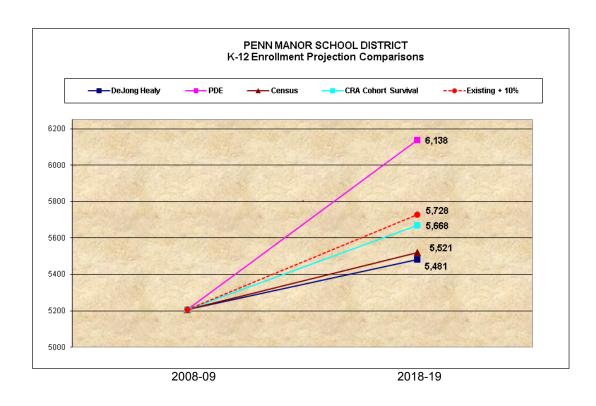
School Facilities

- With a current student population of approximately 5,287 in 2009-10, Penn Manor School
 District is recognized as one of the largest school districts in Lancaster County. Penn
 Manor School District occupies seven elementary buildings, two middle schools, and one
 high school. Nestled in Millersville Borough, Penn Manor High School is located beside
 the campus of Millersville University. The corporate headquarters of both Armstrong
 World Industries and Turkey Hill Dairy are located within Penn Manor School District's
 boundaries.
- Penn Manor School District is a three-layer district with instruction organized into an elementary division, middle level division, and high school division. Curricular design has been aligned with a K-3, 4-6, 7-8, and 9-12 configurations. All seven elementary schools house Grades K-6. The two middle schools serve Grades 7 and 8 and utilize a team approach designed around a team of core teachers for math, English, reading, social studies, and science. The high school initiated a program of intensive or "block" scheduling in the 1995-1996 school year and serves students in Grades 9-12.
- The school district currently employs approximately 375 teachers and 200 non-instructional support staff. PMSD students have consistently scored above both the state and federal averages on the SAT exam. Over the past 5 years 72% of PMSD seniors have pursued post secondary education.
- The School District total population has increased since 1970 and is expected to continue to increase, however the rate of increase is expected to decrease.
- Birth rate in the school district has increased since 2005 and is projected to continue to increase over the next 5 years. The birth rate will fluctuate if planned developments continue to flourish in the district.
- Total student population increased from 4,788 to 5,320, an increase of 11.1% over the year period from 1990-2000. From 2000 through the 2008-09 school year the district student population has decreased from 5,320 to 5,207, a decrease of 2.12%.
- The 2009-10 school district enrollment reported by the Penn Manor School District was 5,287 students, an increase of 1.5% over the 2008-09 enrollment of 5,207 students.

The following enrollment projection model projections are summarized in the chart below, explained within this section of the report and presented for consideration by the Penn Manor School District:

- PA Department of Education enrollment projection
- DeJong Healy enrollment projection report (December, 2007)
- Existing enrollment plus 10% (PDE allowable formula)
- CRA census based enrollment projection
- CRA cohort survival enrollment projection

GRADE	LEVEL	CURRENT ENR	OLLMENT		PROJECTION	IS (Highest Projec	ted Enrollment)	
		2008-09 PDE Current	April 1, 2010	PDE	DeJong Healy		Census	CRA Cohort
	Enrollment		Enrollment	(2018-19)	(2017-18)	Existing + 10%	Based (2020)	(2018-19)
K-	-6	2,623	2,663	3,400	2,767	2,885		2,965
	_							
7 -	.8	790	860	920	915	869		927
	10	4704	4.770	4.040	4.700	4.070		4.770
9 -	12	1,794	1,772	1,818	1,799	1,973		1,776
тот	ΓAL	5,207	5,295	6,138	5,481	5,728	5,521	5,668



- ELEMENTARY SCHOOL The 2000 K-6 district total elementary population of 2,795 students decreased approximately 8.47% between 2000 and 2005 to 2,558 students. Between 2005 and the 2008-09 school year, the K-6 population has increased at a rate of 2.54% to a total of 2,623 students.
 - The decrease in the southern portion of the school district has exceeded the rate of decrease in the other portions of the school district.
 - Elementary enrollments district-wide are projected to increase slightly over the next ten year period. DeJong Healy projects an approximate 5.48% rate of growth, while CRA cohort projections indicate an approximate 12.7% increase. PA Department of Education projections indicate an increase of 29.6% during the next ten year period. Elementary Schools in the Northern end of the School District are expected to continue a steady growth.
 - Birth rates and retention ratios should be analyzed annually, as well as reviewing current and planned housing starts in order to recognize changing enrollment patterns within the school district.
- MIDDLE SCHOOL The 2000 middle school population of 873 students increased slightly by approximately 3.78% between 2000 and 2005, to 906 students. Between 2005 and the 2008-09 school year, the population decreased at a rate of 12.8% to a total of 790 students.
 - Middle School enrollment district-wide is projected to increase over the next ten year period. DeJong Healy projects 915 students in 2017-18 school year, while the CRA cohort projections indicate 927 students in 2018-19. PA Department of Enrollment projections indicate 920 students in 2018-19.
 - Birth rates and retention ratios should be analyzed annually, as well as reviewing current and planned housing starts in order to recognize changing enrollment patterns within the school district.
- HIGH SCHOOL The 2000 high school population of 1,654 students increased by approximately 15.9% between 2000 and 2005, to 1,917 students. Between 2005 and the 2008-09 school year, the population decreased at a rate of 6.41% to a total of 1,794 students.
 - High School projections indicate a relatively level high school enrollment through the year 2018-19. DeJong Healy projects a total of 1,799 students in 2017-18, CRA cohort projections indicate a total of 1,776 students in 2018-19, and PA Department of Education projections indicate 1,818 students in 2018-19.
 - Birth rates and retention ratios should be analyzed annually, as well as reviewing current and planned housing starts in order to recognize changing enrollment patterns within the school district.

Projection Assumptions

Student projections, like any population projections, are based upon certain beliefs about how an area will grow or decline. A basic fact of projection methodology is that future trends in community development may be derived from past development, or in other words; the community will develop the way in the future that it has developed in the immediate past. The Cohort Survival based projection methods assume that past trends are an indicator and indicate development trends of the future. The DeJong Healy study included Cohort methodology as well as housing build-out and land saturation analysis methodologies.

<u>Demographic and Enrollment Projection methods reviewed include:</u>

1. DeJong Healy Demographic Study – December 2007

A combination of methodologies was used in this report, including the cohort survival, housing, and land saturation analysis incorporating the GIS. While the District has experienced a somewhat declining pattern of enrollment, it also has a large amount of land in various stages of planning and development that need to be considered.

2. Census Based Enrollment Projection

This method of projection is based upon the assumption that an observable ratio between total population and school enrollments has existed in the past and will continue in future populations. There are definable historic trends, however if indeed the school district is in a transitional trend period, these historical averages and percentages may not be the most accurate for planning purposes.

3. CRA Cohort Survival Projection

CRA reviewed the birth rate and cohort survival ratios for the most recent five year reporting period between 2003-04 and 2008-09. CRA calculated 3 year, 4 year and 5 year mean averages for the retention and birth rates. CRA then projected enrollment through the 2018-19 school year utilizing the 5 year mean average for the first five years of projection and the 3 year mean average for the second five year projection period.

4. PA. Department of Education Enrollment Projections

The enrollment projection model used by the Pennsylvania Department of Education (PDE) is patterned after projection models variously called educational progression or school retention. Projection models of this nature are based on the concept that students progress routinely from one grade to another and that any internal policies and external factors that influenced grade progression in the past will continue to influence the progression of students from grade to grade in the future.

5. Current Enrollment Plus 10% or 15%

The PA Department of Education reimbursement process is based upon school district enrollment and capacity calculations. The department will reimburse a school district based upon the higher of; 1) PDE enrollment projections, 2) School District enrollment projections, or 3) Current enrollment plus 10%, (15% for districts with a total enrollment of under 1,500).

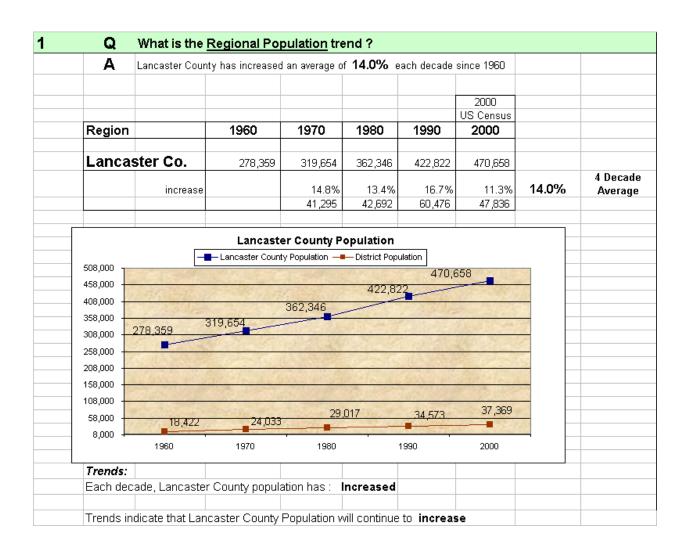
Summary

- ❖ The DeJong Healy analysis projects an overall 5.3% increase in K-12 enrollment from the 2007-08 school year enrollment of 5,286 students through the 2017-18 school year projection of 5,481 students as follows:
 - The K-6 Elementary School population is projected to increase from 2,572 students to 2,767 students, or an overall **increase of 7.6%**.
 - ➤ The 7-8 Middle School population is projected to **increase 12.3%** from its current population of 815 to 915 students.
 - ➤ The 9-12 High School population is projected to **decrease 5.3%** from its current enrollment of 1,899 students to 1,799 students.

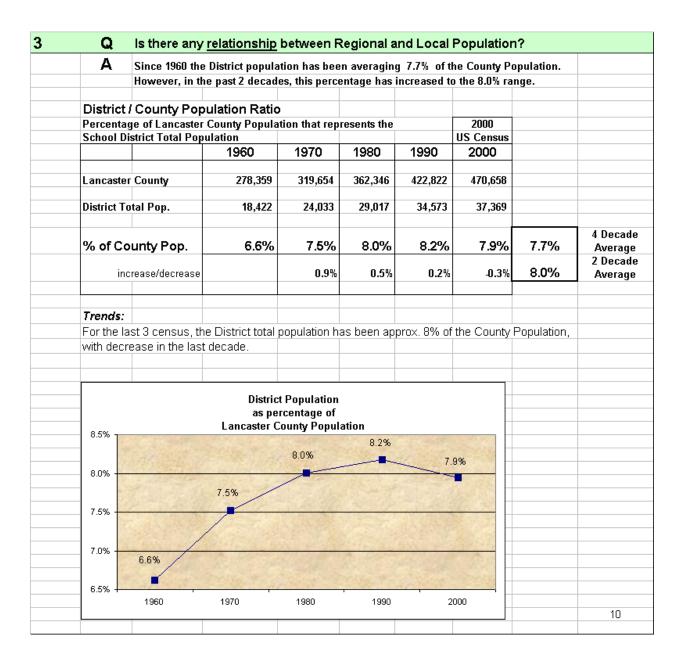
Based on the expected development patterns, schools projected to experience the most growth over the next 10 years include Central Manor ES and Manor Middle School. The High School enrollment is projected to decline slightly over the next 10 years.

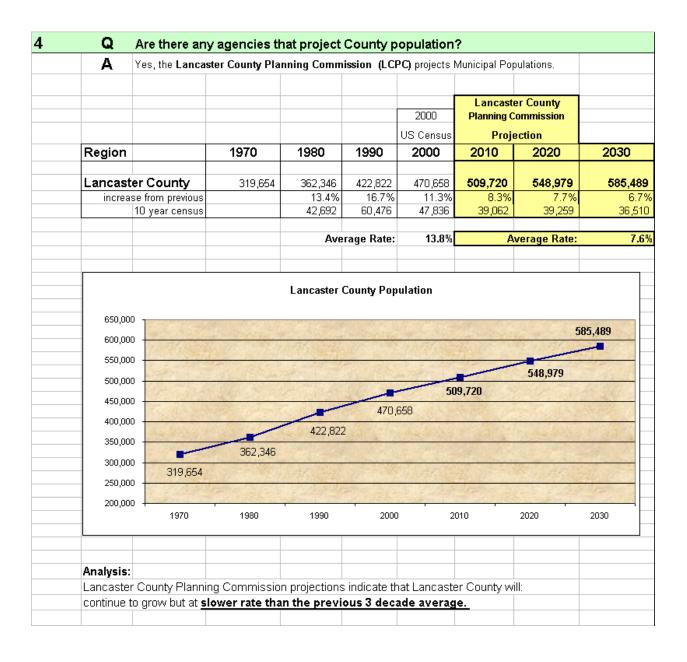
- ❖ The PA Department of Education enrollment projections indicate an overall 17.88% increase in the K-12 enrollment from the 2008-09 school year enrollment of 5,207 students through the 2018-19 school year projection of 6,138 students, based upon the Cohort Survival method of projection as follows:
 - ➤ The K-6 Elementary School population is projected to increase from 2,623 students to 3,400 students, or an overall **increase of 29.6%**.
 - ➤ The 7-8 Middle School population is projected to **increase 16.4%** from its current population of 790 students to 920 students.
 - ➤ The 9-12 High School population is projected to **increase 1.3%** from its current enrollment of 1,794 students, to 1,818 students.
- ❖ The CRA enrollment projections indicate an overall 10.2% increase in the K-12 enrollment from the 2008-09 school year enrollment of 5,207 students through the 2018-19 school year projection of 5,740 students, based upon the Cohort Survival method of projection as follows:
 - ➤ The K-6 Elementary School population is projected to increase from 2,623 students to 2,957 students, or an overall **increase of 12.7%**.
 - ➤ The 7-8 Middle School population is projected to **increase 17.3%** from its current population of 790 students, to 927 students.
 - ➤ The 9-12 High School population is projected to remain relatively level, with a slight projected **decrease of 0.95%** from its current enrollment of 1,794 students,

to 1,776 students in 2018-19, with a peak enrollment within the projection period of 1,790 students.



			tion trend			
Α	The Local Pop	ulation (School Dis	strict) has inc	reased each	decade sind	ce 1960.
	(School District)		1970	1980	1990	2000
Conestog	ja Township	2,230	2,447	3,032	3,470	3,749
Martic To	wnehin	2,485	2,419	3,286	4,362	4,990
ward re	ovensinp	2,403	2,410	3,200	4,302	4,000
Pequea ⁻	Township	2,435	3,002	3,557	4,512	4,358
W T		7,389	0.700	11 171	14 100	40.400
Manor To	ownsnip	7,369	9,769	11,474	14,130	16,498
Millersvil	lle Borough	3,883	6,396	7,668	8,099	7,774
		·				
District	Total Pop.	18,422	24,033	29,017	34,573	37,369
	rate of increase		30%	21%	19%	8%
	increase	!	5,611	4,984	5,556	2,796
		School Distri	ct Total Poi	nulation	1	
		School Bisti	cc rotarr o _l	pulation		
	Control of the Contro	// // // //		-//		1000
				34,57		The second second
36,000 -		0.84	A 28 1 1 1 1 1	1000		
·	6.78	0 - 26	29,017	-		37,369
31,000 -		24,033	29,017			37,369
31,000 - 26,000 -	18.422	AND DESCRIPTION OF THE PERSON	29,017			37,369
31,000 -	18,422	AND DESCRIPTION OF THE PERSON	29,017			37,369
31,000 - 26,000 -	18,422	AND DESCRIPTION OF THE PERSON	29,017			37,369
31,000 - 26,000 - 21,000 -	18,422	AND DESCRIPTION OF THE PERSON	29,017			37,369
31,000 - 26,000 - 21,000 - 16,000 -	18,422	AND DESCRIPTION OF THE PERSON	29,017			37,369
31,000 - 26,000 - 21,000 - 16,000 -	18,422	AND DESCRIPTION OF THE PERSON	1980	1990		37,369
31,000 - 26,000 - 21,000 - 16,000 -		24,033				
31,000 - 26,000 - 21,000 - 16,000 - 11,000 - 6,000 -	1960	24,033				
31,000 - 26,000 - 21,000 - 16,000 - 6,000 -	1960	1970	1980	1990		
31,000 - 26,000 - 21,000 - 16,000 - 6,000 - Trends:	1960 cade, the Scho	1970 Dol District's To	1980	1990	reased.	
31,000 - 26,000 - 21,000 - 16,000 - 6,000 - Trends:	1960	1970 Dol District's To	1980	1990 tion has inc	reased.	
31,000 - 26,000 - 21,000 - 16,000 - 6,000 - Trends:	1960 cade, the Scho	1970 1970 ool District's To 1960 to 1970 1970 to 1980	1980	1990 tion has inc accelerate decelerated	reased.	
31,000 - 26,000 - 21,000 - 16,000 - 6,000 - Trends:	1960 cade, the Scho	1970 Dol District's To	1980	1990 tion has inc	reased.	

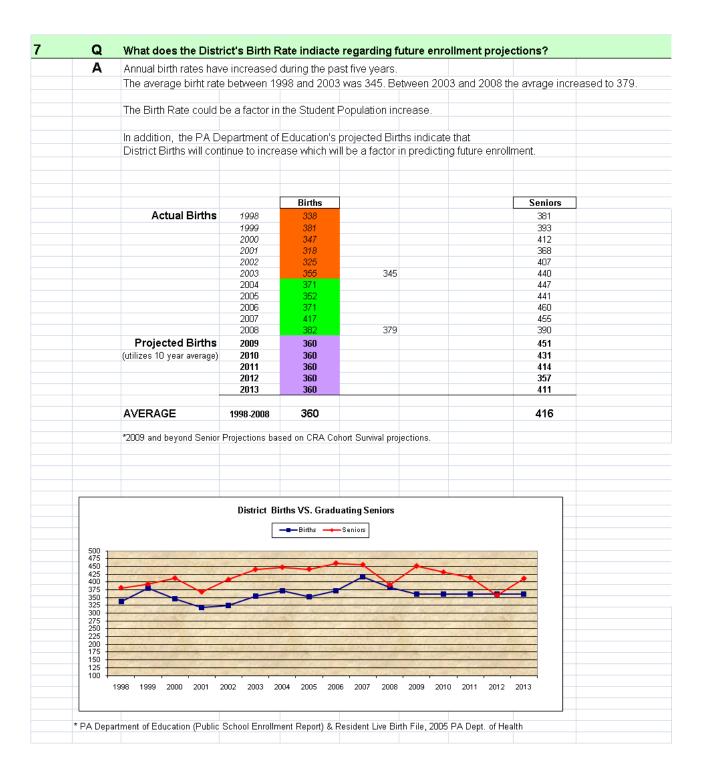




Q	Does any ag	jency project Municipal	Population?		
Α	Yes, the Lancas	ter County Planning Commi	ssion (LCPC) projects	Municipal Pop	ulations.
		Lancaster County	5 Year	Lancaste	
		Planning Commission Projection	Linear Projection	Planning Co Proje	
Local	(School District)	2010	2020	20:	
	ga Township	4,047	4,339		4,598
	Township	5,671	6,373		7,054
Pequea	Township	4,668	4,967		5,230
	Fownship .	18,229	19,942		21,514
Millersv	ille Borough	7,992	8,195		8,345
Total [District Pop.	40,607	43,816		46,741
	increase	8.7%	7.9%	,	6.7%
% of Co	unty Pop. Projection	8.0%	8.0%		8.0%
			Λ.	verage Rate:	8.0%
Analysi	s:			rerage reace.	0.0 //
		ng Commission indicates tl	hat the District will Co	ntinue to grov	/
	htly decreasing ra				
The 20		cted rate of District popul	ation growth:		15.10%
		20 year rate of District po		28.78%	

	Q	What is the	Student Pop	oulation His	story?				
	Α	419	student INCR	EASE in stude	ents since 199	0			
Per	ın Man	or Area Schoo	District		1981	1990	2000	2008-09	1990-20
Dis	strict's	s Total Stude	nts		4,215	4,788	5,320	5,207	
		ecrease from pre			4,210	573	532	(113)	
						13.6%	11.1%	-2.1%	
					per year:	1.51%	1.11%	-0.42%	C
Be	tween	1990 and 20	00 student po	pulation in	creased ap	prox. 11.19	% or <u>1.11</u> 9	% per year	
Po	twoon	2000 and 20	00 etudopt pa	opulation de	aronned at	pprov 2.19	or 4204 r		
De	rween	2000 and 20	oo stadent po	opulation de	creased a	JPIOX. 2.1%	0 UI <u>.4270 F</u>	<u>Jer year</u>	
		opulation ncr				vever expe	rienced a s	light	
de	crease	e between 200							
50,000		Histo	orical District	Population	Compared	to Student	Population		-0.50
45,000			—■— Distric	t Total Popula	tion 💶 Dist	rict K-12 Stu	dents	·	HVS
45,000							431	46 816	6,741
40,000				13-47-5/47		40,607			
35,000					37,369	40,007			
33,000			34,573						是信
30,000								S. Cont.	
25,000	72	29,017		N. W.		S PAR W	- 18	25 2 2	
25,556									1885
20,000		TO STATE						- (0) - (0)	
15,000	73	U.S. STORY						ULA AND	
									EL S
10,000			118			5 252	- 100		in the same of
5,000	1/4	4,215	4,788	5,3	320	5,259	5,52	21	5,609
3,500									
-		1981	1990	2000	30 61 61	2010	2020	20	30
<u></u>		1301	1550	2000			2020		

7	Q	Are there any Student P	opulation T	rends ?						
	Α	Yes, the student population	n has fluctuat	ed betwee	n 13.8% ar	nd 14.5% o	f the			
		District Population for the I	ast 20 years	20 years, averaging approximately 14.2%.						
	HISTOR	ICAL TREND - PROJECT	ION METHO	DD			Projections			
			1981	1990	2000	2010	2020	2030		
	District	Total <u>Population</u>	29,017	34,573	37,369	40,607	43,816	46,741		
		increase from previous decade		19.1%	8.1%	8.7%	7.9%	6.7%		
	District	Total K-12 <u>Students</u>	4,215	4,788	5,320	5,259	5,521	5,609		
	incr	ease/decrease from prev. decade		13.6%	11.1%	-1.2%	5.0%	1.6%		
	% Stud	ents <i>per</i> Population	14.5%	13.8%	14.2%	13.0%	12.6%	12.0%		
			20 yea	ar average	14.2%		12.5%			
	Trends:		<u> </u>							
	From 19	81 to 2000 the district pop.	trend fluctuat	ed from 13	3.8% to 14	.5% of stud	ents per pop	ulation.		
	Utilizing	2010 actual enrollment and	comparing th	ne percent	age of stud	lents to pop	ulation yield:	s 13%.		
	This tren	ding decline from 14.2% in	2000 to 13%	in 2010 is	utilized to	project futu	ire student er	rollment		
	as a per	centage of district populatio	n into the futu	ıre. 2010 (Census dat	ta should be	e verified whe	en available.		



Q A	What does the coh					· IIIII VIIVI		
Α	Detweett 2003/04 att	a zoooroa, a	istrict enrollm	ent decrease	30 Z.5%			
	The cohort survival ra	tions indicate	e positive gro	wth in grade:	s 1 through	9.		
	K-12 Enrollment Hi	story 2003 <i>i</i> 0	4 - 2008/09					
Year	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09		
K	2003-04	350	321	303	2007-00	324		
1	345	320	376	340	337	324		
2	357	367	328	385	367	354		
3	333	369	367	349	414	393		
4	401	343	378	387	362	429		
5	407	414	359	395	395	384		
6	443	436	429	356	410	402		
7	459	451	441	433	372	419		
8	477	477	465	436	446	371		
9	472	491	517	500	480	457		
10	462	480	499	493	485	470		
11	459	461	458	493	490	470		
12	440	447	430	460	490 455	477 390		
Total	5342	5406	5381	5300	5306	5207		
TOTAL	3342	5406	2301	5300	5306	5207		
	Cohort Survival Ra	tios (%)						
						Mean last 5	Mean Last 4	Mean Last 3
Year	2004-05	2005-06	2006-07	2007-08	2008-09	vears	years	vears
B-K	91.86%	92.51%	95.28%	90.15%	91.27%	92.22%	92.30%	-
K to 1	111.50%	107.43%	105.92%	111.22%	115.02%	110.22%	109.90%	110.72%
1 to 2	106.38%	102.50%	102.39%	107.94%	105.04%	104.85%	104.47%	105.13%
2 to 3	103.36%	100.00%	106.40%	107.53%	107.08%	104.88%	105.25%	107.01%
3 to 4	103.00%	102.44%	105.45%	103.72%	103.62%	103.65%	103.81%	104.27%
4 to 5	103.24%	104.66%	104.50%	102.07%	106.08%	104.11%	104.33%	104.21%
5 to 6	107.13%	103.62%	99.16%	103.80%	101.77%	103.10%	102.09%	101.58%
6 to 7	101.81%	101.15%	100.93%	104.49%	102.20%	102.11%	102.19%	102.54%
7 to 8	103.92%	103.10%	98.87%	103.00%	99.73%	101.73%	101.18%	100.53%
8 to 9	102.94%	108.39%	107.53%	110.09%	102.47%	106.28%	107.12%	106.69%
9 to 10	101.69%	101.63%	95.36%	97.00%	97.92%	98.72%	97.98%	96.769
10 to 11	99.78%	95.42%	92.18%	99.39%	98.35%	97.03%	96.34%	96.64%
11 to 12	97.39%	96.10%	101.09%	98.91%	79.59%	94.62%	93.92%	93.20%

DEMOGRAPHICS

1	9	Q	What does the cohort survival rate tell us about future K-12 enrollment?
		Α	In the next five years, enrollment will increase from 5,207 to 5,500 students
			In the next 10 years the enrollment is expected to be 5,660 students

<u>(Utilizing 5 ye</u>	ar mean for 2009-10 thr	ough 2013-14 ai	<u>nd 3 year mean</u>	for 2014-15 thr	ough 2018-19)
Year	2009-10	2010-11	2011-12	2012-13	2013-14
K Y ear	342	325	342	385	352
1	357	377	358	377	442
2	353	374	395	375	395
3	371	374	393	415	393
4	407	385	384	407	430
5	447	424	401	400	424
6	396	460	437	413	412
7	411	404	470	446	422
8	426	418	411	478	454
9	394	453	444	437	508
10	451	389	447	438	431
11	456	438	378	434	425
12	451	431	414	357	411
Total	5,263	5,249	5,274	5,362	5,500
	5,200	0,210	2,2.1		2,222
Year	2014-15	2015-16	2016-17	2017-18	2018-19
K	332	332	332	332	332
1	390	368	368	368	368
2	465	410	386	386	386
3	423	498	439	414	414
4	410	441	519	457	431
5	448	427	460	541	477
6	430	455	434	467	549
7	423	441	467	445	479
8	424	425	444	469	448
9	485	452	453	473	500
10	492	469	438	439	458
11	417	475	453	423	424
12	396	389	443	422	394
Total	5,535	5,582	5,635	5,636	5,660
Note: Anvio	ohort survival forcas	st longer than	five vears wil	l he hased n	n children not
-	, it is not recommen		•		
	hort survival method		22.00 101000001	C.II CIII I I I I	oyona nyo you
_					
Trend:					

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

DEMOGRAPHICS

Conclusion

A review of the population and housing trends as an indicator of future growth, indicate that long term, the School District will experience an increase in enrollment, and that the enrollment increase will be generated in the northern end of the school district. The annual birth rate and retention rates should be monitored so that the school district can stay ahead of any changing enrollment trends.

The Penn Manor School District has adequate capacity in its schools for the foreseeable future, but will need to address the current, projected and possible future growth in the northern end of the school district and the possible effect on the enrollment at Central Manor Elementary School as well as Eshleman Elementary School. A review of the cohort survival projections indicates that the school district will continue a slight pattern of increase for the immediate future, with the trend continuing into the projection period. The School District will have to evaluate future enrollment trends to determine whether or not the school district experiences a decline, as PDE suggests, or long term growth, as certain other indicators suggest.

As a planning tool, it is recommended that for planning purposes for any school construction project that the School District undertakes, the enrollment figure of the current enrollment, plus 10% be utilized, which the Department of Education will allow for reimbursement purposes.

BUILDING CAPACITY

Capacities of the Schools

The educational programs offered in schools today require flexible and varied spaces. Depending on the program usage, spaces may have different capacities even though they may be similar in size.

The capacity for each space is determined by:

- Maximum class size guidelines or policies from the School Board or recommendations of the Pennsylvania Department of education.
- Specialized programs such as kindergarten and special education.
- Spaces which are used for all students for specialized instruction, such as art or music
 on the elementary level; or specialized services such as reading support or instructional
 support team (IST), are not counted as part of the instructional capacity of a building.
- Spaces which fall below the PDE recommended classroom size of 660 square feet are not counted as part of the instructional capacity of the facility.
- Current space utilization

Historically school districts throughout North America have determined the capacity of school by counting the number of classrooms in a building and multiplying by an average class size. In facility planning terminology we have used the term, "design capacity", to describe this methodology. Even though at first glance this seems only to be common sense, this methodology does not take into account the programmatic implications of school facilities.

- In an elementary school there is a need for libraries/media centers, administrative areas, special education classrooms, and specialized spaces for specific program areas such as science, art and music.
- In a secondary school, in theory it may be possible to use every classroom every period of every day, but from a practical perspective it is not likely. In facility planning terminology, taking program issues into consideration, we use the term, "functional capacity".
- PDE applies a 90% utilization factor to the rated Full Time Equivalent (FTE) for secondary schools and allows for no utilization factor at the elementary level. This calculation is, in large part, related to financial reimbursement calculations rather than educational programming.
- CEFPI (Council of Educational Facilities Planners International) recommends a 95% utilization factor for elementary schools, an 85% utilization factor for middle schools and a utilization factor of 80% for high school facilities.

Capacities of the Schools

Public schools use space in school buildings for special purposes such as community activities or district-wide special education programs when space is available in a building. The location of this type of program impacts the number of students the building can accommodate. For planning purposes, functional capacity assumes these special programs could be moved to another location. Therefore functional capacity is defined as the number of students the building can accommodate assuming a "traditional" educational program. The formula used for determining capacity should reflect the programs of the public schools yet should be kept simple for planning purposes. The method for determining functional capacity is different for elementary, middle and high schools.

 For long range planning purposes CRA recommends that the elementary utilization factor be calculated at 95% of the PDE capacity and 85% of the PDE capacity at the Middle School Level. Due to the use of block scheduling at the High School, CRA recommends an 85% utilization factor be applied to the PDE Capacity

Capacities analyzed specific to the study:

School	PDE Capacity	Utilization	Functional Capacity
Martic Elementary School	425	95%	404
Letort Elementary School	350	95%	333
Eshleman Elementary School	350	95%	333
Pequea Elementary School	400	95%	380
Conestoga Elementary School	350	95%	333
Central Manor Elementary Scho	ool 775	95%	736
Hambright Elementary School	500	95%	475
Elementary Sub-total	3,150		2,994
Marticville Middle School	532	85%	502
Manor Middle School	788	85%	745
Penn Manor High School	2,164	75%	1,803
Secondary Sub-total	3,484		3,050
DISTRICT TOTAL	6,634		6,044

CAPACITY / ENROLLMENT BASED UPON EXISTING CONDITIONS

		EXI	ISTING				PROJE	CTED	
school	PDE CAPACITY	FUNCTIONAL CAPACITY	CURRENT (May 2010)	+ / - (PDE)	+1- (FC)		HIGHEST PROJECTED ENROLLMENT THROUGH 2017-18**	+ / - (PDE)	+ / - (FC)
ELEMENTARY K.6									
						L			
Martic Elementary	425	404	356	69	48		372	53	32
Letort Elementary	350	333	300	50	33	L	314	36	19
Eshleman Elementary	350	333	316	34	17		350	0	-18
Pequea Elementary	400	380	380	20	0		408	-8	-28
Conestoga Elementary	350	333	292	58	41	L	314	36	19
Central Manor Elementary	775	736	575	200	161		617	158	119
Hambright Elementary	500	475	446	54	29		399	101	76
MIDDLE SCHOOL 78	3,150	2,994	2,665	485	329		2,774	376	220
Marticville Middle	532	502	343	189	159		369	163	133
Manor Middle	788	745	506	282	239		557	231	188
Wallot Wildale	1,320	1,247	849	471	398		926	394	321
HIGH SCHOOL 9-12									
Penn Manor High School	2,164	1,803	1,769	395	361		1,830	334	-27
	2,164	1,803	1,769	395	34		1,830	334	-27
DISTRICT TOTAL	6,634	6,044	5,283	1,351	761		5,530	1,104	514

Notes:

- 1. The school district has sufficient capacity at the elementary and secondary level to meet the maximum projected enrollment figure through 2018-19.
- At the elementary level, most of the schools do not contain much additional capacity to accommodate future growth or changes in the educational program or educational delivery model. Realignment of attendance areas may need to be evaluated to accommodate and manage future growth.
- 3. The high school is below PDE rated capacity, and slightly below the calculated functional capacity. If the highest projected enrollment figures are realized over the next 10 year period, there would not be a shortage of space at the high school, although the building would remain at capacity, with no flexibility to support additional programs or changes to the educational delivery model.

Hambright Elementary School

PDE ELEMENTARY ROOM SCHEDULE FOR PROJECT BUILDING											
District/AVTS: Penn Manor School District			Project N Hambr	_{lame:} ight Elen	nentary	School				Grades:	<u> </u>
				CURRE	NT BUI	LDING	UTILIZ	ATION C.	APACITY		
			EXI S	TING		NEW				TOTAL	
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
	UNIT	UNIT AREA	NUMBE R OF	TOTAL AREA	TOTAL	UNIT	NUMBE R OF	TOTAL AREA	TOTAL	TOTAL AREA	TOTAL
NAME OF SPACE	CAP	SQ FT	UNITS	SQ FT	FTE	SQ FT	UNITS	SQ FT	FTE	SQ FT	FTE
LIBRARY	xxx		1.0								
HALF-TIME KINDRGRTN	50		1.0		50						50
HALF-TIME KINDRGRTN	50										
HALF-TIME KINDRGRTN	50										
FULL-TIME KINDRGRTN	25										
FULL-TIME KINDRGRTN	25		1.0		25						25
FULL-TIME KINDRGRTN	25										
REG CLSRM 660+ SQ FT	25		17.0		425						425
	**										
YWCA WRAP PROGRAM CR	**		1.0								
SPECIAL EDUCATION RESOURCE RM	**										
SPECIAL EDUCATION CLASSROOM	**		2.0								
SCIENCE LAB / CLASSROOM	**										
READING											
SMALL GROUP INSTRUCTION	**		1.0								
MATH RESOURCE	**										
ART ROOM	**		1.0								
MUSIC ROOM	**		1.0								
COMPUTER LAB	**										
FACULTY ROOM	**										
PROFESSIONAL DEV. TRAINING	**										
GYMNASIUM	**		1.0								
MULTI-PURPOSE ROOM	**										
CAFETERIA	**		1.0								
TOTAL PDE RATED BUILDING CAPACIT	Y (1)										500
RECOMMENDED MS/SEC UTILIZATION (BLDG TOTAL X .95) 4										475	

Central Manor Elementary School

PDE ELE	MENT.	ARY RO	om sc	HEDULE	FOR E	ROJEC	r buii	.DING			
District/AVTS: Penn Manor School District			Project N Centra	_{Jame:} I Manor E	Element	tary Sch	iool			Grades:	<u> </u>
			•	CURRE	NT BUI	LDING	UTILIZ	ATION C	APACI	ΓΥ	
			EXI	EXISTING		NEW				TO	TAL
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
		UNIT AREA	NUMBE R OF	TOTAL AREA	TOTAL	UNIT	NUMBE	TOTAL AREA	mom	TOTAL AREA	mom
NAME OF SPACE	UNIT	SQ FT	UNITS	SQ FT	FTE	SQ FT	R OF UNITS	SQ FT	TOTAL FTE	SQ FT	TOTAL FTE
LIBRARY	xxx		1.0		xxxx				xxxx		xxxxx
HALF-TIME KINDRGRTN	50										
HALF-TIME KINDRGRTN	50										
HALF-TIME KINDRGRTN	50										
FULL-TIME KINDRGRTN	25										
HALF-TIME KINDRGRTN	50		2.0								100
FULL-TIME KINDRGRTN	25										
REG CLSRM 660+ SQ FT	25		27.0								675
READING RESOURCE ROOM	**		1.0								
MATH RESOURCE ROOM	**										
TITLE ONE CLASSROOM	**										
SPECIAL EDUCATION CLASSROOM	**		3.0								
SPEECH	**		1.0								
SMALL GROUP INSTRUCTION	**		3.0								
ART ROOM	**		1.0								
MUSIC ROOM	**		1.0								
COMPUTER ROOM	**		1.0								
FACULTY ROOM	**		1.0								
GYMNASIUM	**										
MULTI-PURPOSE ROOM	**		1.0								
CAFETERIA	**										
SPECIAL EDUCATION RESOURCE RM											
TOTAL PDE RATED BUILDING CAPACIT	Y (1)										775
RECOMMENDED MS/SEC UTILIZATION (BLDG TOTAL X .95) 73										736	

Martic Elementary School

PDE ELE	MENT	ARY RO	OM SC	HEDULE	FOR E	ROJEC:	r buii	.DING			
District/AVTS: Penn Manor School District			Project N Martic	_{Jame:} Element	ary Sch	nool				Grades:K6	
			<u> </u>	CURRE	NT RIII	II DING	HTH 17	ATION C	ΔΡΔΟΙ	TY	
			EXIS	TING		NEW				TOTAL	
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
		UNIT	NUMBE	TOTAL		UNIT	NUMBE	TOTAL		TOTAL	
NAME OF SPACE	UNIT	AREA SQ FT	R OF UNITS	AREA SQ FT	TOTAL	AREA SQ FT	R OF UNITS	AREA SQ FT	TOTAL	AREA SQ FT	TOTAL FTE
LIBRARY	XXX	54 11	1.0		1112	54 11	0	54 11	1112	54 11	112
HALF-TIME KINDRGRTN	50										
HALF-TIME KINDRGRTN	50										
HALF-TIME KINDRGRTN	50		1.0								50
FULL-TIME KINDRGRTN	25										
FULL-TIME KINDRGRTN	25		1.0								25
FULL-TIME KINDRGRTN	25										
REG CLSRM 660+ SQ FT	25		14.0								350
	**										
PRE-SCHOOL CLASSROOM	**										
SPECIAL EDUCATION RESOURCE RM	**										
SPECIAL EDUCATION CLASSROOM	**		1.0								
SCIENCE LAB / CLASSROOM	**										
READING			1.0								
SMALL GROUP INSTRUCTION	**		1.0								
CONFERENCE ROOM	**		1.0								
ART ROOM	**		1.0								
MUSIC ROOM	**		1.0								
COMPUTER LAB	**										
FACULTY ROOM	**		1.0								
FACULTY WORK ROOM	**		1.0								
GYMNASIUM	**										
MULTI-PURPOSE ROOM	**		1.0								
CAFETERIA	**										
TOTAL PDE RATED BUILDING CAPACIT	Y (1)										425
RECOMMENDED MS/SEC UTILIZATION	(BLDG	TOTAL >	(.95)								404

Conestoga Elementary School

PDE ELEMENTARY ROOM SCHEDULE FOR PROJECT BUILDING												
District/AVTS: Penn Manor School District			Project N Cones	_{Jame:} toga Eler	mentary	School				Grades:	<u> - 6</u>	
				CURRE	NT BUI	LDING	UTILIZA	ATION C	APACIT	CITY		
			EXISTING			NEW				TOTAL		
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	
		UNIT	NUMBE	TOTAL		UNIT	NUMBE	TOTAL		TOTAL		
NAME OF SPACE	UNIT	AREA SQ FT	R OF UNITS	AREA SQ FT	TOTAL FTE	AREA SQ FT	R OF UNITS	AREA SQ FT	TOTAL FTE	AREA SQ FT	TOTAL FTE	
LIBRARY	xxx		1.0									
HALF-TIME KINDRGRTN	50											
HALF-TIME KINDRGRTN	50											
HALF-TIME KINDRGRTN	50		1.0								50	
FULL-TIME KINDRGRTN	25											
FULL-TIME KINDRGRTN	25											
FULL-TIME KINDRGRTN	25											
REG CLSRM 660+ SQ FT	25		12.0								300	
	**											
PRE-SCHOOL CLASSROOM	**											
SPECIAL EDUCATION RESOURCE RM	**		1.0									
SPECIAL EDUCATION CLASSROOM	**		1.0									
SCIENCE LAB / CLASSROOM	**											
READING			1.0									
SMALL GROUP INSTRUCTION	**		2.0									
RESOURCE ROOM	**											
ART ROOM	**											
MUSIC / ART ROOM	**		1.0									
COMPUTER LAB	**		1.0									
FACULTY ROOM	**		1.0									
FACULTY WORK ROOM	**		1.0									
GYMNASIUM	**		1.0									
MULTI-PURPOSE ROOM	**											
CAFETERIA	**		1.0									
TOTAL PDE RATED BUILDING CAPACIT	Y (1)										350	
RECOMMENDED MS/SEC UTILIZATION (BLDG TOTAL X .95) 33										333		

Pequea Elementary School

PDE ELE	MENT	ARY RO	OM SC	HEDULE	FOR E	ROJEC:	T BUII	.DING				
District/AVTS: Penn Manor School District			Project N Peque	_{Jame:} a Elemer	ntary So	hool				Grades:	< <u>6</u>	
			l	CURRE	NT RIII	LDING	HTH 17	ATION C	ΔΡΔΓΙΊ	TY		
			EXISTING				ILDING UTILIZATION CAPACI NEW				TOTAL	
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	
		UNIT	NUMBE	TOTAL		UNIT	NUMBE	TOTAL		TOTAL		
	UNIT	AREA SQ FT	R OF UNITS	AREA SQ FT	TOTAL	AREA SQ FT	R OF UNITS	AREA SQ FT	TOTAL	AREA SQ FT	TOTAL FTE	
NAME OF SPACE	XXX	SQ FI	1.0	SQ FI	111	SQ FI	OMITS	SQ FI	1 11 1	SQ FI	112	
HALF-TIME KINDRGRTN	50		1.0									
HALF-TIME KINDRGRTN	50		1.0								50	
I.U KINDERGARTEN	**		1.0									
FULL-TIME KINDRGRTN	25											
FULL-TIME KINDRGRTN	25											
FULL-TIME KINDRGRTN	25											
REG CLSRM 660+ SQ FT	25		14.0								350	
YWCA WRAP PROGRAM CR	**		1.0									
SMALL GROUP LEARNING CR	**		2.0									
SPECIAL EDUCATION RESOURCE RM	**											
SPECIAL EDUCATION CLASSROOM	**		3.0									
SCIENCE LAB / CLASSROOM	**											
READING			1.0									
SMALL GROUP INSTRUCTION	**		1.0									
SPEECH	**		1.0									
ART ROOM	**		1.0									
MUSIC ROOM	**		1.0									
COMPUTER LAB	**											
FACULTY ROOM	**		1.0									
PROFESSIONAL DEV. TRAINING	**											
GYMNASIUM	**		1.0									
MULTI-PURPOSE ROOM	**											
CAFETERIA	**		1.0									
TOTAL PDE RATED BUILDING CAPACIT	Y (1)										400	
RECOMMENDED MS/SEC UTILIZATION (BLDG TOTAL X .95) 38										380		

Letort Elementary School

PDE ELEMENTARY ROOM SCHEDULE FOR PROJECT BUILDING											
District/AYTS: Penn Manor School District			Project N Letort	_{Jame:} Elementa	ary Sch	ool				Grades:K6	
				CURRE	NT BUI	LDING	UTILIZ	ATION C	APACI	TY	
			EXI S	TING		NEW				TOTAL	
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
	UNIT	UNIT AREA	NUMBE R OF	TOTAL AREA	TOTAL	UNIT AREA	NUMBE R OF	TOTAL AREA	TOTAL	TOTAL	TOTAL
NAME OF SPACE	CAP	SQ FT	UNITS	SQ FT	FTE	SQ FT	UNITS	SQ FT	FTE	SQ FT	FTE
LIBRARY	xxx		1.0								
HALF-TIME KINDRGRTN	50										
HALF-TIME KINDRGRTN	50		1.0								50
HALF-TIME KINDRGRTN	50										
FULL-TIME KINDRGRTN	25										
FULL-TIME KINDRGRTN	25										
FULL-TIME KINDRGRTN	25										
REG CLSRM 660+ SQ FT	25		12.0								300
	**										
PRE-SCHOOL CLASSROOM	**										
SPECIAL EDUCATION RESOURCE RM	**										
SPECIAL EDUCATION CLASSROOM	**		1.0								
SCIENCE LAB / CLASSROOM	**										
TITLE 1 READING											
SMALL GROUP INSTRUCTION	**		2.0								
SPEECH	**		1.0								
ART / MUSIC ROOM	**		1.0								
MUSIC ROOM	**										
COMPUTER LAB	**										
FACULTY ROOM	**		1.0								
PROFESSIONAL DEV. TRAINING	**										
GYMNASIUM	**										
MULTI-PURPOSE ROOM	**		1.0								
CAFETERIA	**										
TOTAL PDE RATED BUILDING CAPACIT	Y (1)										350
RECOMMENDED MS/SEC UTILIZATION (BLDG TOTAL X .95) 33										333	

Eshleman Elementary School

PDE ELEMENTARY ROOM SCHEDULE FOR PROJECT BUILDING												
District/AVTS: Penn Manor School District			Project N Eshler	_{Jame:} nan Elem	entary	School				Grades:	<u> </u>	
				CURRE	NT BUI	LDING	UTILIZA	ATION C	APACI	ITY		
			EXI	TING		NEW				TOTAL		
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	
		UNIT	NUMBE	TOTAL	mom.,	UNIT	NUMBE	TOTAL	mom 2.7	TOTAL	mom. 1	
NAME OF SPACE	UNIT	AREA SQ FT	R OF UNITS	AREA SQ FT	TOTAL FTE	AREA SQ FT	R OF UNITS	AREA SQ FT	TOTAL FTE	AREA SQ FT	TOTAL FTE	
LIBRARY	xxx		1.0									
HALF-TIME KINDRGRTN	50											
HALF-TIME KINDRGRTN	50											
HALF-TIME KINDRGRTN	50		1.0								50	
FULL-TIME KINDRGRTN	25											
FULL-TIME KINDRGRTN	25											
FULL-TIME KINDRGRTN	25											
REG CLSRM 660+ SQ FT	25		12.0								300	
	**											
PRE-SCHOOL CLASSROOM	**											
SPECIAL EDUCATION RESOURCE RM	**		2.0									
SPECIAL EDUCATION CLASSROOM	**		1.0									
SCIENCE LAB / CLASSROOM	**											
TITLE 1 READING			1.0									
SMALL GROUP INSTRUCTION	**		2.0									
SPEECH	**		1.0									
ART / MUSIC ROOM	**		1.0									
MUSIC ROOM	**											
COMPUTER LAB	**											
FACULTY ROOM	**		1.0									
	**											
GYMNASIUM	**											
MULTI-PURPOSE ROOM	**		1.0									
CAFETERIA	**											
TOTAL PDE RATED BUILDING CAPACIT	Y (1)										350	
RECOMMENDED MS/SEC UTILIZATION (BLDG TOTAL X .95) 33									333			

Manor Middle School

PDE SECONDARY	ROOM	SCHEDULE	FOR PROJE	CT BUILD	ING	
District/AVTS:			Project Name:	I- O-bI		Grades:
Penn Manor School District			Manor Middl			<u>7 - 8</u>
		SCHOOL: Manor Middle School				
#1	#2	#3	PRI #4			
# <u>1</u>	UNIT	NO. OF	TOTAL			
NAME OF SPACE	CAP	UNITS	FTE			
LIBRARY	XXX	1				
REG CLSRM 660+ SQ FT	25	20	500			
SPECIAL EDUCATION CLSRM 660+ SQ FT	XXX	2				
SPECIAL EDUCATION CLSRM - 660 SQ FT	XXX					
SMALL GROUP INSTRUCTION	XXX					
SCIENCE CLASSROOM	25	4	100			
SCIENCE LAB	20					
BUSINESS LAB	20					
COMPUTER LAB	20	2	40			No Capacity - Undersized
TV STUDIO	XXX					
FACULTY ROOM	XXX	1				
ART CLASSROOM	20	2	40			
MUSIC CLASSROOM	25	1	25			
BAND ROOM / STAGE	25	1	25			
ORCHESTRA ROOM	25					
CHORAL ROOM	25					
AUDITORIUM / STAGE	XXX	1				
FAMILY/CONSMR SCIENCE	20	2	40			
IA/SHOP 1800+ SQ FT	20					
TECH ED 1800+ SQ FT	20	2	40			
GYM 6500-7500 SQ FT	66	1	66			
LOCKER ROOMS	XXX	2				
TEAM ROOM	XXX					
OTHER:						
BUILDING TOTAL	XXX	XXXXXX	876	XXXXXX		
MS/SEC UTILIZATION (BLDG TOTAL X .9)	XXX	XXXXXX	788	xxxxxx		
RECOMMENDED MS/SEC UTILIZATION (BLDG TOTAL X .85)	XXX	XXXXXX	745	XXXXXX		

Marticville Middle School

PDE SECONDARY	ROOM	SCHEDULE	FOR PROJE	CT BUILD	ING	
District/AVTS:			Project Name:			Grades:
Penn Manor School District			Marticville M	liddle Schoo) 	<u>7</u> - <u>8</u>
SCHOOL: Marticville Middle School			l			
		PRESENT				
#1	#2 UNIT	#3 NO. OF	#4 TOTAL			
NAME OF SPACE	CAP	UNITS	FTE			
LIBRARY	XXX	1				
REG CLSRM 660+ SQ FT	25	13	325			
SPECIAL EDUCATION CLSRM 660+ SQ FT	XXX	3				
SPECIAL EDUCATION RESOURCE ROOM	xxx	1				
SMALL GROUP INSTRUCTION	XXX	3				
SCIENCE CLASSROOM	25	3	75			
SCIENCE LAB	20					
AST CLASSROOM	XXX	1				
COMPUTER LAB	20	2	40			
TV STUDIO	XXX	1				
FACULTY ROOM	XXX	1				
FACULTY WORKROOM	XXX	1				
ART CLASSROOM	20	1	20			
MUSIC CLASSROOM	25	1	25			
ORCHESTRA ROOM	XXX	1				
STAGE / BAND	XXX	1				
CHORAL ROOM	25					
AUDITORIUM / STAGE	XXX	1				
FAMILY/CONSMR SCIENCE	20	1	20			
IA/SHOP 1800+ SQ FT	20					
TECH ED 1800+ SQ FT	20	1	20			
GYM 6500-7500 SQ FT	66	1	66			
WEIGHT ROOM	XXX	1				
LOCKER ROOMS	XXX	2				
TEAM ROOM	XXX					
OTHER:						
BUILDING TOTAL	XXX	xxxxxx	591	xxxxxx		
MS/SEC UTILIZATION (BLDG TOTAL X .9)	XXX	XXXXXX	532	XXXXXX		
RECOMMENDED MS/SEC UTILIZATION (BLDG TOTAL X .85)	XXX	XXXXXX	502	XXXXXX		

Penn Manor High School

PDE SECONDARY R	DOM S	CHEDULE F	OR PROJECT	r BUILDIN	r G			
District/AVTS: Project Name:						10		
Penn Manor School District			Penn Manor High School			<u>9</u>	- 12	
		SCHOOL: Penn Manor High School						
#1	#2	PRESENT #3 #4						
#±	UNIT	NO. OF	TOTAL			1		
NAME OF SPACE	CAP	UNITS	FTE					
LIBRARY	xxx	1						
REG CLSRM 660+ SQ FT	25	60	1,500					
SCHOOL TO WORK CLASSROOM	xxx	1						
SPECIAL EDUCATION CLSRM	xxx	3						
SPECIAL EDUCATION RESOURCE RM	xxx							
SCIENCE CLSRM 660+ SQ FT	25	13	325					
SCIENCE LAB	20	6	120					
PLANETARIUM W/CLSRM	20							
BUSINESS CLSRM 660+	25					1		
BUSINESS LAB	20					1		
COMPUTER LAB	20	3	60			1		
TV INSTRUCTIONAL STUDIO	20	1	20			1		
ART CLASSROOM	20	4	80			1		
MUSIC CLASSROOM	25					1		
BAND ROOM	25	1	25			1		
ORCHESTRA ROOM	25	1	25			1		
CHORAL ROOM	25	1	25			1		
FAMILY/CONSMR SCIENCE	20	2	40			1		
TECH ED CR	25					1		
TECH ED 1800+ SQ FT	20	2	40			1		
VO-AG SHOP	20	1	20			1		
VO-AG CLASSROOM	25	1	25			1		
INSTRUCTIONAL PLANNING CENTER	xxx	2				1		
FACULTY ROOM	xxx	2				1		
FACULTY DINING	xxx	1				1		
AUDITORIUM/STAGE	xxx	1				1		
GYM 6500-7500 SQ FT	66	1	66			1		
2500 SQ FT AUX GYM	33	1	33			1		
CAFETERIA / KITCHEN	xxx	1				1		
WEIGHT ROOM	xxx	1				1		
WRESTLING ROOM	xxx	1				1		
ADAPTIVE GYM	xxx	1				1		
OTHER:						1		
BUILDING TOTAL	XXX	xxxxxx	2,404	xxxxxx		1		
MS/SEC UTILIZATION (BLDG TOTAL X .9)	XXX	XXXXXX	2,164	XXXXXX		1		
RECOMMENDED MS/SEC UTILIZATION (BLDG TOTAL X .75	XXX	xxxxxx	1,803	xxxxxx				

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

BUILDING CAPACITY & ENROLLMENT

Conclusion

Based upon continuance of the current educational program, the Penn Manor School District has adequate capacity in its schools for the foreseeable future, but will need to address the current and projected growth in the northern end of the school district and the effect on the enrollment at Central Manor as well as Eshleman Elementary Schools. The introduction of full-day Kindergarten district-wide will have a negative effect on building capacity and will need to be analyzed.

A review of the Delong Healy cohort survival projections indicates that the school district will continue with slight growth in K-6 enrollment through the projection period, with grades 7-8 remaining relatively level in enrollment with some slight fluctuations. In grades 9-12, their projections indicate a slight trend downward with an overall slight increase through the projection period.

Both Pa Department of Education and CRA cohort projections basically mirror the secondary projections with some slight differences; however project more significant growth in the K-6 grade levels. The School District will have to evaluate enrollment and live birth data on an annual basis to determine the accuracy of the enrollment projections and whether any emerging trends are having an influence on future projections. The 2010 Census data, when available, should be evaluated and analyzed to determine the effect on future student enrollment and demographic patterns.

As a planning tool, it is recommended that for planning purposes for any school construction project that the School District undertakes, the enrollment figure of the current enrollment, plus 10% be utilized, which the Department of Education will allow for reimbursement purposes.

Methodology and Approach

In order to adequately assess the educational facilities it is imperative that a baseline, or benchmark be established, from which evaluations and any subsequent recommendations are based upon. In completing the facilities assessment and evaluation, Crabtree, Rohrbaugh & Associates, working with School District staff, developed and utilized several tools to assist in the process. They include the following:

- Building surveys and documentation
- Meetings with staff
- Use of an Evaluation Criteria as a benchmarking tool
- Analysis of the typical Lifespan of Building Components

Evaluation Criteria

The criteria is based on the educational program needs as well as life cycle costs and life span expectations, maintenance needs, energy efficiency, and current applicable accessibility, life safety and building code considerations.

The following building codes are applicable:

- PA Uniform Construction Code (UCC)
- ADAAG (Americans with Disabilities Accessibility Guidelines)
- National Electrical Code
- ASHRAE Standards
- BOCA Plumbing Code

<u>NOTE:</u> Existing facilities meet codes applicable at the time of their construction. Code issues identified in this report are those that would be required to meet current codes. Several of the code required upgrades are considered safety issues and should be addressed by the school district.

The evaluative criteria for the review of the educational facilities are organized into the following categories:

- ADA AND BUILDING CODE CRITERIA
- EDUCATIONAL PROGRAM CRITERIA
- PHYSICAL PLANT CRITERIA

Construction Budget Figures

The estimated scope of work and costs identified are preliminary based on visual observation of the condition present during the site inspections and general knowledge of the facilities. In general, the costs are allowances for all work associated with the improvement. A detailed scope of work and cost estimates should be updated and provided for any construction project undertaken as a result of this feasibility study. Depending on when the school district undertakes a project and what the current construction market conditions are at that time, costs may need to be adjusted for inflation.

I. ADA, SAFETY AND BUILDING CODE CRITERIA

A. ADA Compliance

Recommendations in this report regarding upgrades related to the Americans with Disabilities Act are made when buildings or areas of a building can be made accessible without "undue burden". "Section 35.150 requires that each service, program, or activity conducted by a public entity, when viewed in its entirety, be readily accessible to and usable by individuals with disabilities."

ADA Regulation for Title II, as printed in the Federal Register (7/26/91).

1. Exterior Routes At least one accessible route shall be provided within the boundary of the site from accessible parking spaces, passenger loading areas and public streets and walks to an accessible building entrance. At least one accessible route shall connect accessible buildings, accessible facilities, accessible elements and accessible spaces that are on the same site. Handicapped access to grade (accessible entrances) shall be provided at a minimum of 50% of all public entrances.

2. Parking

Property configured and marked accessible parking spaces shall be provided per code requirements.

Total	
Parking in	Required Minimum Number of Accessible Spaces
Lot	

3. Exterior Signage Proper signage shall be provided on-site to designate handicapped accessible route(s) to the building and related facilities. If a particular entrance is not made accessible, appropriate accessible signage indicating the location of the nearest accessible entrance(s) shall be installed at or near the inaccessible

entrance, such that a person with disabilities will not be required to retrace the approach route from the inaccessible entrance.

4. Interior Routes

At least one accessible route shall connect accessible building or facility entrances with available programs within the building. The path of travel to an altered area and the restrooms, telephones, and drinking fountains serving the altered area, shall be readily accessible to and usable by individuals with disabilities.

5. Railings

Handrails and railings on stairs and/or ramps shall be designed to meet code requirements. Ramps shall have a maximum slope of 1 to 12.

6. Elevator

One passenger elevator shall serve each level providing programs to the public including mezzanines, in all multi-story buildings.

7. Doors

At each accessible entrance to a building, at least one door shall meet code width and maneuvering clearances. Door openings are to be a minimum clear width of 32" and a minimum clearance of 4'-0" shall exist between pairs of entrance doors in vestibules. Each door that is an element of an accessible route or means of egress shall meet the width and maneuvering clearances per code requirements.

8. Rescue Assist.

Areas of Rescue Assistance shall be provided where there is no direct egress to grade. The total number of areas per story shall be not less than 1 for every 200 persons of calculated occupant load served by the area of rescue assistance. Area of Rescue Assistance may not be required if the building is fully sprinklered.

9. Interior Signage Proper signage shall be placed throughout the building to adequately identify accessible routes and areas of rescue assistance. Room identification signs throughout the building shall be in compliance with ADA.

10. Hardware

Door locksets to all accessible spaces should be lever-type accessible units. Door closers should meet pull load requirements.

11. Restrooms

Existing toilet room facilities on each level of a building shall be accessible or an accessible toilet room shall be provided near the existing facilities. Additional toilet facilities shall be accessible when required by the program or service provided.

12. Fountains

At least one accessible drinking fountain should be provided on each level of a building and 50% of the total number of drinking fountains provided shall be accessible. Two drinking fountains mounted side by side or on a single post, are usable by people with disabilities and people who find it difficult to bend over. Knee clearances shall not be required at units used primarily by children ages 12 and younger where clear floor space for a parallel approach is provided and where the spout is no higher than 30 in, measured from the floor or ground surface to the spout outlet.

13. Fire Alarm

Visual strobe alarms are to be provided in toilet rooms and other general use areas. (Meeting rooms, lobbies, corridors and common use areas.) Visual strobes are also required in instructional and staff spaces used by hearing impaired students or staff members. Typically, visual strobes are provided in all occupied spaces at the time a new fire system is installed. One or more audible devises are also installed in nearly all spaces to assure that the minimum sound level required by the codes is achieved under all conditions.

14. Telephone

If public pay telephones are provided, they are to be accessible. An accessible telephone shall meet the maneuvering clearances per ADA requirements and be mounted at the proper height. TDD or equally effective telecommunication systems shall be available to communicate with individuals with impaired hearing or speech.

15. Seating

In places of assembly with fixed seating, accessible wheelchair locations shall be provided. At least one companion fixed seat shall be provided next to each wheelchair seating area. When the seating capacity exceeds 300, wheelchair spaces shall be provided in more than one location.

Capacity of Seating in Assembly Area	Number of Required Wheelchair Locations		
4 to 25	1		
26 to 50	2		
51 to 300	4		
301 to 500	6		
over 500	6 plus 1 additional space for each total seating capacity increase of 100		

16. Workstations

Accessible workstations in core spaces in the elementary school level such as art rooms, the library/media center, computer labs and other core subject spaces in the secondary level should be provided.

17. Performance Areas

An accessible route shall connect wheelchair-seating locations with performing areas, including stages and spaces used by the performers such as dressing rooms or locker rooms. An Assistive Listening System (ALS) should be provided and located within 50 feet viewing distance of the stage or performing area and shall have a complete view of the stage.

B. Site Code Compliance

Vehicular routes and pedestrian paths should be clear in terms of field of view. 1. Security

Pedestrian paths shall be well lighted.

2. Vehicular Circulation

Safe drop-off facilities should be provided for each bus, automobile, and service vehicle traffic. Cross traffic between vehicles and pedestrians should be

eliminated or minimized.

3. Parking Vehicular parking shall be designed to meet local municipal authority

> requirements. An adequate amount of parking should be available for

students, staff and visitors.

4. Fencing Fences should have properly functioning gates and contain no rust or loose

posts or fabric.

5. Drainage Storm water management shall be designed to meet local municipal authority

requirements. Wet and dry ponds shall be properly marked and separated from student activities. Walks and drives shall be properly drained to prevent icy

conditions in winter.

C. Building Code Compliance

1. Security Entries shall be observable and promote scrutiny of visitors. Access to roof and

other high areas shall be secured.

2. Means of Egress Interior elements comprising means of egress shall be continuous and

unobstructed from any space within the building to the exit discharge in

accordance with local building codes.

3. Fire Alarm Fire Alarm System should meet the current requirements of NFPA72 and be

> connected to an alarm monitoring station. Spare parts and trained personnel to maintain the system should be available in the District or by a contracted

company.

4. Annunciator There should be an NFPA72 remote panel at an entrance designated by the

Fire Department, well protected, with available parts and maintenance service.

5. Sprinkler

An automatic fire suppression system shall be installed throughout all buildings System

in accordance with local building codes.

6.	Fire
	Extinguishers

Fire extinguishers shall be an approved type to meet local building code criteria for number and spacing and shall be mounted at the proper height. Fire extinguishers shall be annually serviced by licensed personnel and inspected monthly by building operations employees.

7. Hazardous Materials

Properly vented and grounded hazardous materials cabinets should be provided for all dangerous chemicals and materials. Multiple cabinets are required to separate reactive chemicals. Cabinets should be locked and isolated from the student population.

8. Ventilation & Exhaust

Ventilation and exhaust systems shall be designed to meet current ASHRAE and building code standards and requirements.

9. Fuel Oil Storage Tank

Fuel Oil Tank storage shall meet the requirements of the U.S. Department of Environmental Protection for spills, overfills and corrosion.

10. Roof

Roofs shall be designed to accommodate the code required dead and live loads as well as meet code required drainage requirements to insure proper roof drainage and compliance with storm water regulations.

11. Lightning Protection

Lighting risk should be evaluated using the current NFPA Manual and a lightning protection system installed where there is an assessed risk level.

12. Automatic Lighting Controls

Automatic lighting controls to provide energy savings as required by the Pennsylvania Uniform Construction Code shall be provided

13. Lock Box

Provide a lock box containing keys and an access card for the building where the local Fire Department or Municipality require lock boxes.

II. PROGRAM RELATED CRITERIA

Educational

Program revisions should meet the intent of the educational specifications, the long range or strategic plan and the district technology plan within the framework of a limited budget.

Technology should be incorporated into all areas of the curriculum within the parameters of the PASD technology plan.

The media center should be equipped with current technology to allow for online searching and centralized media distribution.

Public use facilities should be easily accessible and located near building entrances, adjacent to vehicular parking.

A. Elementary School

1. Site

The elementary schools should be located on a site adequately sized to provide for safe student pick-up and drop-off, visitor and staff parking, and athletic fields for student and community use. In addition, adequate and safe play structures should be provided for student use.

Student loading areas should be separated from other vehicular traffic and pedestrian walkways.

Playgrounds should be separated from streets and parking areas with fencing, or other permanent material.

Playgrounds should be well equipped and appropriate for age levels. Playground equipment should be accessible to students with disabilities and equipment should be free of sharp edges, be of sound construction and in good condition.

2. Layout

According to the Planning guidelines, an elementary school site should contain a minimum of 10 acres, plus one additional acre for each 100 students. The elementary schools should support the educational programs and contain sufficient space to accommodate specialized support programs and services.

3. Core Spaces

Core spaces for special subjects and support spaces should be centrally located and easily accessible. Core spaces shall meet or exceed Pennsylvania Department of Education guidelines.

All schools should have a room designed for separate art and music instruction. Schools with a student capacity of 500 or more students should have a separate room for each art and music.

All schools should have a space suitable for physical education. Schools with a capacity in excess of 500 students should have a separate room suitable for physical education, or have a multi-purpose room large enough to allow for simultaneous use of each side of the multi-purpose room.

4. Instructional Classrooms

Size of instructional classrooms is large enough to allow for alternative room arrangements to facilitate curricular objectives.

Size of Pre-kindergarten and kindergarten space is large enough to accommodate developmental range and needs of young children.

5. Small Group Instruction

Adequate space is available for small group instruction to support curricular objectives and to provide spaces for pull-out, specialized instruction, tutoring, and itinerate type activities

6. Large Group Instruction

Adequate space is available for large group instruction activities.

7. Faculty Areas

Adequate space is available for faculty planning and work areas, as well as appropriate and separate space for faculty dining, meetings and socializing.

8. Equipment & Furniture

Equipment and furniture are the appropriate size for the buildings student population and is in good condition

9. Storage

Adequate space is provided throughout the building for the storage of educational materials and building maintenance supplies.

B. Middle School

1. Layout

The middle school should support the educational programs and contain sufficient space to accommodate specialized support programming and services.

2. Site

The middle school should be located on a site adequately sized to provide for safe student pick-up and drop-off, visitor and staff parking and athletic fields for students and community use.

According to the Pennsylvania Department of Education guidelines, a middle school site should contain a minimum of 20 acres, plus one additional acre for each 100 students.

3. Core Spaces Core spaces for special subjects and support spaces should be centrally

located and easily accessible. Core spaces shall meet or exceed Pennsylvania Department of Education guidelines.

C. High School

1. Layout The high school should facilitate specialization by students to achieve their

future educational career goals. The senior high school should support the educational program and contain sufficient space to accommodate specialized

support programming and services.

2. Site The senior high school should be located on a site adequately sized to provide

for safe student pick-up and drop-off; visitor, staff and student parking and

athletic fields for student and community use.

According to the Pennsylvania Department of Education guidelines, a high

school site should contain a minimum of 30 acres plus one additional acre for

each 100 students.

3. Core Spaces Core spaces for the special subjects and supporting spaces used by all

students should be centrally located and easily accessible. Core spaces shall

meet or exceed Pennsylvania Department of Education guidelines.

III. PHYSICAL PLANT CRITERIA

A. Site

1. Paving Asphalt paving should be in good condition, showing no signs of deterioration

or cracking. Storm water should be diverted to drainage inlets with no ponding.

2. Walkways Concrete sidewalks should be in good condition, showing no signs of

deterioration, major cracks or tripping hazards.

3. Site Furnishings Play equipment should be located in a safe area of the site with no broken or

rusted equipment. It should be age appropriate.

4. Service Area The service area should be properly located near food services, mechanical

rooms and receiving/ storage areas. The service area should be separate from pedestrian and play areas, with trash and recycling containers away from the

building and properly screened.

5. Student Loading

Adequate space should be provided for bus loading, as well as staff and visitor

parking. Vehicular and pedestrian traffic are to be separated as much as

possible.

6. Parking Asphalt paving in parking lots should be in good condition, showing no signs of

deterioration or cracking. Storm water should be diverted to drainage inlets

with no ponding.

7. Landscaping Landscaping should be attractive, conducive to activity and well-maintained.

trees and shrubbery should be pruned back, where located adjacent to

buildings to disallow access to the roof.

8. Utilities Utilities shall be adequate for the current use and occupancy load of the

> building and shall have reserve capacity and/or provisions for expansion. Utilities shall be properly maintained and located away from students when

they present a danger.

9. Playground /

Physical Education, Playground and Athletic Facilities should be provided to Athletic Facilities support the physical education and athletic programs. Playground facilities, compliant with all consumer safety requirements, the Americans with Americans with Disabilities Act guidelines, and grade level appropriate, should be provided.

B. Building

1. Foundations All footings shall bear on suitable soil; concrete slabs on compact grade.

2. Structural **System**

Structural systems should be intact with no uncertified modifications. There

should be no evidence of cracking or settling of structural components.

3. Energy Buildings should meet or exceed ASHRAE 90.1 Standards.

4. Roofing System Roofing systems should be in maintainable condition with adequate slope to

roof drains or gutters and no ponding, roof leaks or visible damage.

5. Envelope Exterior walls should be masonry cavity wall on masonry backup with adequate

insulation or masonry cavity wall on metal stud and reinforced gypsum drywall

with adequate insulation.

6. Exterior Trim Exterior trim should be heavy gauge metal or wood with no rotted areas,

completely painted and properly fastened.

7. Windows Windows should be clear or tinted glass units, in thermally broken aluminum

frames, or aluminum clad wood with undamaged finish. Windows should be

easily operable and have proper caulking.

8. Exterior Doors Exterior doors and frames should be galvanized hollow metal or finished

aluminum. In addition, they must swing in the direction of egress travel, and be

accessible.

9. Interior Walls Interior partitions should be structurally sound, free of finish defects and have

adequate acoustical properties.

10. Interior Doors Interior doors should be solid core wood in painted metal frames. Doors should

have undamaged finish and swing in the direction of egress.

11. Interior Glass Interior glass should be 1/4' tempered or safety glass, or wire glass where

required.

C. Interior Finishes

Flooring

Flooring

1. Terrazzo Floors should contain no large cracks and have smooth transition to adjacent

floor surfaces with no stains or deteriorated areas.

2. Resilient Resilient floor surfaces should be free of defects, with no cracks, open seams

or missing tiles. Asbestos containing floor tiles should be identified and be

included in the School District's operation and maintenance plan.

3. Carpeting Carpet should have tight seams, with no unraveling or exposed/frayed ends.

They should have anti microbial treatment and be stain resistant where

applicable. Area rugs should be non-slip type with no tripping hazards.

4. Tile Ceramic tile should be free of cracked, loose, missing or broken tiles with

adequate waterproof grout.

5. Resinous Resinous, seamless flooring applications are appropriate for toilet rooms,

kitchens, industrial and maintenance areas and wet areas. Resinous flooring

should be free of defects, with no visible cracks or open seams.

6. Wood Flooring Wood floors should have appropriate finish and smooth transition to adjacent

floor surfaces. They must allow for movement without buckling or spreading.

There should be no squeaky or soft spots.

7. Ceiling Tile Ceilings should contain no stained, broken or warped tiles, and the grid should

be adequately tied to structure.

8. Gyp. Board Wallboard should have smooth, clean surface with no damage or stains and

appropriate transition to adjacent ceiling materials. Wallboard should not be

used in areas subject to high student use or abuse.

9. Paint Painted surfaces should have a smooth finish, with no peeling or stains.

Appropriate colors should be chosen for reduction of glare, for light reflectivity and overall compatibility with use of space. Lead based paint should not be

present.

D. Specialties

1. Casework Cabinets should have a solid wood or particleboard core with a high-density

plastic laminate finish. Chemical resistant countertops should be provided in science labs where appropriate. Surfaces should be undamaged with properly

functioning hardware.

2. Chalkboards Chalkboards should be porcelain on steel, solid construction with no surface cracks or brittle areas. Liquid chalk surface boards are to be provided in

computer classrooms and areas with computer and technology equipment.

3. Toilet Partitions Partitions should be painted, galvanized metal or solid phenolic construction.

Partitions should be floor supported or overhead braced. Panel surfaces should not be dented, bent or rusted and all hardware should be present and in

good working condition.

4. Lockers Lockers should be heavy gauge metal with painted finish. Athletic lockers

should be extra-heavy duty or all welded construction, property vented. Lockers should be in good physical condition with no dents or rust and all

hardware should be present and in good operating condition.

5. Operable Walls Partitions should be secured properly to the building structure. They should be

easy and safe to operate. The sound transmission rating is to be suitable for it's

intended use.

6. Acoustics Acoustic separation should be provided between assembly spaces and

instructional areas. Large assembly areas, such as gymnasiums, multi-purpose rooms, cafeterias, music rooms and library's should be designed to properly

attenuate and distribute sound in order to reinforce the program use.

7. Fixed Seating Fixed seating units should be structurally sound and in working and operable

condition. The appropriate number of accessible wheelchair locations and companion seats should be provided to comply with the Americans with Disabilities Act requirements. The finish material should be in good condition

and free from major flaws and defects.

8. Kitchen Equipt. Equipment should be properly located to accommodate both safety and traffic.

Equipment should be stainless steel in good working condition and in

compliance with all applicable codes.

9. Athletic Equipt. Athletic equipment and bleachers should be in good working condition and meet the minimum code safety requirements. Basketball backstops and related equipment should be in good working condition with appropriate safety measures for operation.

10 Stage Equipment

Provide a sound system commensurate with the level and types of theatrical and musical programs provided in the building. Provide a theatrical lighting system commensurate with the level and types of theatrical and musical programs provided in the building. Provide adequately sized projection screen and LCD projector.

E. HVAC

1. System Design

HVAC System installed should be one that is the most ideal and current for the type of building.

Equipment and air distribution should contain fire protection devices such as fire dampers and duct smoke detectors to meet current local code and life safety requirements.

2. Ventilation

Outside air quantities should be designed per local code requirements.

3. Exhaust

Proper quantities of exhaust air should be provided in toilet rooms, science rooms, mechanical rooms, kitchen, maintenance closets, storage rooms and copy rooms.

4. Distribution

HVAC piping and ductwork should be in good condition

5. Equipment

HVAC equipment should be well maintained and in good working condition to operate within the system design. Equipment should be designed to meet local building code requirements.

6. Energy Management Automatic temperature control systems should be current and have energy management capabilities.

F. Plumbing

1. **Distribution** Sanitary drainage, domestic water and gas piping should be in good condition

and operating within system design. Hot water supply shall be provided to

every hand sink within classrooms and restrooms.

2. Fixtures Plumbing fixtures should be well maintained and in good working condition to

operate within the system design. They shall accommodate the adult or child

dimensions and anthropometrics, respectively for their users.

3. **Equipment** Plumbing equipment should be well maintained and in good working condition

to operate within the system design.

G. Electrical

1. Interior Lights

Luminaires should have energy efficient long life lamps with non-PCB ballasts. Fixtures should have undamaged finishes and lens with not cracked or discolored items.

Illumination levels should meet the minimum criteria based on foot-candle (fc) levels established by the Illuminating Engineers Society (IES). Applicable parameters are as follows:

Classrooms 50-100 fc 20-50 fc Libraries Offices 20-50 fc Office task 50-100 fc Toilets 10-20 fc Corridors 10-20 fc Cafeterias 10-20 fc Kitchens 50-100 fc Laboratories 50-100 fc M.P. rooms 30 fc 1-2 fc Parking

2. Exterior Lights

There should be LED wall mounted lights around the perimeter of building and the lights should be photocell or time clock controlled.

There should be 400 watts high-pressure sodium and LED lights mounted on 25' or less high light poles providing not less than .5 foot candles of illumination to all parking areas. All luminaires should be dark sky compliant full cut-off types and controlled by photo cells and time clocks.

3. Power Supply

Power supply should be 480/277 volts, 3 phase, 4 wire or 120/208 volts, 3 phase 4 wire as appropriate for the size of the building and the mechanical systems provided from power company. The transformer should be located in a safe isolated area.

4. Electrical Service

The electrical service switchboard should be located in an area not accessible to students and have available replacement branch devices and expansion capacity.

5. Distribution

Equipment should have functional panel covers. For LEED certified buildings, separate distribution systems and metering shall be provided for lighting, HVAC and general electrical loads.

6. Transformers

There should be 480 by 120/208 volts, 3 phase step-down transformers for power to receptacles and other small 120 volt equipment. Transformers should be located in mechanical spaces and electric rooms and be provided with adequate ventilation.

7. Wiring

There should be no signs of deteriorating insulation or loose connections.

8. Receptacles

Receptacles should be grounded type with no broken covers. They should be appropriately located for program needs. Shutter type safety receptacles should be provided in kindergarten play areas and child care rooms; Ground fault interrupters are required at wet areas.

9. Emergency

Emergency generators should be properly located and sized to meet desired emergency load requirements.

At a minimum, provide emergency power for the following optional loads: Telephone system, paging and intercom system, walk-in freezer, walk-in refrigerator, water pressure pump, data network, security system, access control system and building management system.

Provide emergency power for 60% of classroom lighting in buildings which experience frequent or extended power outages. Provide emergency power for the well pump in buildings where the water storage tank does not have storage capacity for half a day's use.

10. P.A System

System should be fully automatic; main panel should control all speakers and receive signals from the bell system class changes. Speakers should be provided in every classroom instructional space, office, corridor gang toilet, and exterior assembly or play space for safety

11. Remote Sound System

d System The system should provide two-way communications and be zoned.

12. Clocks/Bells

Analog or digital clocks should be installed in each instructional space and should also be connected to the master clock system. Clocks and bells should be on the automatic system.

13. Telephone

A telephone system should be provided with phones in every office and instructional space. Specific functioning and use of the system should be programmed from the central control unit. Provide dedicated copper pair wiring to fax machines, the elevator control and alarm panels.

14. Television AV/CATV

Provide a video signal distribution system capable of providing locally originated, recorded and commercial broadcast signals to all instructional spaces. Coordinate the video distribution system with the classroom technology.

Provide an MDF room of adequate size to house racks for file server, data network, video signal distribution, master clock, closed circuit television and telephone systems. Provide uninterruptible power supplies for all rack mounted equipment. Provide adequate cooling of the space and rack space for future expansion.

Provide access to the internet from all data outlets in the building and wide are network connections to all buildings with-in the District.

Provide IDF rooms within 175 feet of all data jacks in the building. The MDF may act as an IDF if it has adequate space.

Provide IDF rooms on each level of the building and avoid connecting jacks on one floor to equipment on a different floor.

15. Data

Data systems should be implemented to meet the educational needs of the facilities and a long-range technology plan. Systems should be flexible and adaptable for future technological changes.

A building-wide cable distribution system should be provided for installation of present and future low voltage special systems cable. Provide racks for LAN distribution equipment at designated network hub location.

16. Classroom Technology

Provide jacks at one or more teacher's desk locations for data network, telephone, video signal and LCD projector connections. Provide data jacks for student terminals and printers in accordance with the Technology Plan.

Provide a smart board and an LCD projector in each instructional space with connections to each teacher's desk location.

17. Surge Protection

Provide surge protection devices in the power distribution system to protect equipment in the MDF and IDF rooms. Provide surge protection receptacles at computer station locations.

18. Lighting Controls

Provide three levels of lighting in the corridors including night lighting, 50% illumination and full illumination. Provide automatic control of corridor and stair lighting during occupied periods and manual control by way of wall switches during unoccupied periods.

Provide three zones of lighting in classrooms. Two zones shall be switchable to provide 50% and full illumination in seating and activity areas. The third zone shall comprise the row of luminaires closest to the teaching wall. Control classroom lighting by switches at the door and teaching wall. Turn one zone of lighting on by way of a motion sensor. Turn all lighting off by way of a motion sensor.

Provide dimming ballasts controlled by a daylight sensor for all luminaires within 12 feed of windows.

Provide wall switch, motion sensor and daylight harvesting or luminaires in offices.

Provide wall switch, and dimmer control of lighting in SG1 spaces and offices without windows.

Provide zoned lighting in gym, cafeteria and multi-purpose rooms. Provide a walk-through zone with switches at all entrances. Provide at least two additional zones with switch control at a single location and motion sensor control of all luminaires.

In libraries, provide separate zones for check-out, stacks, reading areas, instructional areas and computer classroom areas. Provide walk-through lighting with switches at all entrances. Provide zone control by way of wall switches and motion sensors. Provide daylight harvesting.

Provide monitoring of the status of lighting at the exterior of the building and in the corridors, stairs, cafeteria, gym, library, auditorium (house only) and other large spaces by way of the Building Automation System. Provide override of the lighting controls in the cafeteria, gym, library, auditorium, and other large spaces by way of the Building Automation System.

Provide load shedding of at least 20% of the interior and exterior lighting load by way of an interface to the Building Automation System.

19. Security

Provide a card access system to manage access to each building. The same system or compatible systems should be used in all buildings to permit District

supervisory personnel to access all facilities with a single credential. Provide access readers and keypads only at doors which need to be used regularly for access.

Provide an intrusion detection system consisting of door contacts at all exterior doors and motion sensors in all corridors. Activation of the intrusion detection system shall be reported to a monitoring station. An interface to the Building Automation System shall allow building floor plans to be viewed and the status of all active detection devices to be displayed.

Provide a closed circuit television system (CCTV) to provide surveillance of selected areas of the building. Cameras should view parking lots, play areas, assembly areas, drop-off areas, loading docks and areas not readily visible from the street on the exterior of the building. Cameras should be placed to view activity at all exterior doors in the building. Cameras should also be placed to view all corridors and places of assembly such as gyms and cafeterias. The CCTV system should be interfaced with the Building Management System so that authorized personnel can view any camera in any building and control PT2 cameras. Monitors should be provided at the reception area of each building office and in the head custodian's office. Provide a panic button in the building office.

FACILITY COST INDEX

Facility Condition Index

The Facility Cost Index (FCI) is used throughout the facility condition assessment industry as a relative indicator of a buildings condition. Based on industry-wide standards, if the cost to repair exceeds 60% of the cost to replace, the facility should be looked at as a possible candidate for replacement. As a rule of thumb, an FCI below 10% is considered good. An FCI above 60% would suggest that the building is a candidate for replacement.

Facility Condition Index (FCI) Summary

Facility Condition Index is a calculation based on replacement cost of a system. The table below displays the cost of a system relative to the other systems in a facility. For example, the replacement cost of roofing is approximately 4.9% of the total replacement cost of a school facility.

FACILITY CONDITION INDEX (FCI) SUMMARY

Facility Condition Index is a calculation based on replacement cost of a system. The table below displays the cost of a system relative to the other systems in a facility.

No.	Componenet / System	Percent of
110.	Componence / System	total
1	Roofing	4.9%
2	Exterior Walls	5.4%
3	Exterior Windows	2.4%
4	Exterior - Doors	0.6%
5	Interior Floors	7.6%
6	Interior Walls	4.0%
7	Interior Ceilings	5.4%
8	Interior - Other	3.3%
9	HVAC	20.7%
10	Electrical Lighting	10.0%
11	Electrical Distrib.	1.3%
12	Electrical Other	0.5%
13	Plumbing	5.5%
14	Fire / Life Safety	2.3%
15	Specialties	0.8%
16	Structural	19.3%
17	Technology	3.5%
18	Accessibility	2.5%

FACILITY COST INDEX

Penn Manor School District Facilities Condition Index Summary

Facility	FCI
Hambright Elementary School	60.87
Central Manor Elementary School	0
Eshleman Elementary School	8.15
Letort Elementary School	8.15
Conestoga Elementary School	23.88
Martic Elementary School	0.58
Pequea Elementary School	39.4
Marticville Middle School	0
Manor Middle School	15.05
Penn Manor High School	12.45

CEFPI FACILITY APPRAISAL

A facility assessment is as survey of the physical condition and educational adequacy of a school. Information generated by the assessment enables the school district to make data-driven decisions that ultimately justify the need for a facility renewal program, capital improvements or the possible need for new facilities. As such, facility assessments are critical to the process of creating a comprehensive facility master plan and can help identify and evaluate proposed building alternatives to meet educational and programmatic goals, and to formulate specific recommendations.

The Council of Educational Facilities Planners, international (CEFPI), has developed a school facility assessment format that can be utilized as a planning tool in objective school facility assessments and assist the school district in identifying and prioritizing educational facility needs.

The appraisal criteria are categorized into the following six areas and buildings are assessed as to how they currently function as opposed to the potential and/or feasibility to make improvements:

- 1) School Site, 2) Structural and Mechanical, 3) Plant Maintainability,
- 4) School Building Safety & Security, 5) Educational Adequacy, 6) Environment for Education
- A School Site is more than merely a building location, rather an integral part of the school facility
 and one of the basic tools in the educational process. The planned educational experiences as
 well as man community functions will be enhanced or limited by the adequacy of the school site.
 The School Site is appraised with respect to how well it accommodates the physical spaces
 required to support the curriculum of the school.
- Structural and Mechanical features are basic to all functions of a school project and impact
 future maintenance costs and the school district's ability to accommodate changes in the
 educational program. Assessment in this area includes such features as the roof, the building
 envelope, the HVAC system, and the plumbing.
- 3. **Plant Maintainability** refers to those aspects of a building which make possible the extended life of the building at a reasonable cost. The characteristics of the building that relate to maintainability are design, construction materials, durability of fixed equipment, floor coverings, interior wall and ceiling materials, hardware and fixtures.
- 4. The **Safety and Security** of the students, staff, and visitors to the school is vital to a positive and successful educational experience. Assessment in this area includes safety issues such as glass, flooring, stairs and ramps, corridors, exits and fire safety methods and precautions. Security issues also address how the landscape and design of the building is able to provide students with a secure environment, as well as vehicular and pedestrian site circulation and traffic.
- 5. Schools exist primarily to serve the educational needs of a community and school district. The Educational Adequacy of a school building represents the purpose of the overall appraisal process. The determination of how adequate the facility is must be derived from the relationships between the educational program and the physical structure.
- 6. The **Educational Environment** should welcome students and visitors, and facilitate teaching and learning. Building environment is the sum total of the factors that affect an individuals feelings about the facility, both interior and exterior conditions. The environmental characteristics include lighting, ventilation; and accessibility, as well as signage and communication systems.

CEFPI FACILITY APPRAISAL

School District Facility Assessment Summary

The following chart reflects the overall Facility Appraisal of the Penn Manor School District educational facilities. The scores indicated represent a quantitative measure of assessment of the six main categories of assessment. The actual scoring spreadsheets for each category are included within this section of the report in each respective building assessment.

The intent of the quantitative assessment and score comparisons of each facility is to provide the School Board with an objective, qualitative instrument to support the facility evaluation information contained within the report.

	CEFPI APPRAISAL SUMMARY													
		Penn Ma	nor Sc	hool Di	strict l	Faciliti	es							
					Eleme	ntary S	chools	;			M	S		HS
	Accession	Possible Points	Hambright ES	Pequea ES	onestoga ES	Martic ES	Central Manor ES	etort ES	Eshleman ES		Marticville MS	Manor MS		Penn Manor HS
	Appraisal Area	<u> </u>	エ	۵	Ö	2	၁		Ш		2	2		۵
1.00	School Site	100	60	87	79	92	87	99	96		97	96		65
2.00	Structural & Mechanical	200	148	159	154	192	189	188	183		190	176		156
3.00	Plant Maintainability	100	66	72	78	96	96	90	88		86	80		78
4.00	School Building Safety and Security	200	153	162	154	190	182	187	190		187	180		176
5.00	Educational Adequacy	200	133	153	156	182	160	176	170		179	164		158
6.00	Environment for Education	200	114	143	149	186	187	179	171		165	174		142
	Total	1000	674	776	770	938	901	919	898		904	870		775
	Percentage		0.674	0.776	0.77	0.938	0.901	0.919	0.898		0.904	0.87		0.775
	Rank		7	5	6	1	3	2	4		1	1		1

FACILITY COST INDEX

Facility Condition Index

The Facility Cost Index (FCI) is used throughout the facility condition assessment industry as a relative indicator of a buildings condition. Based on industry-wide standards, if the cost to repair exceeds 60% of the cost to replace, the facility should be looked at more closely as a possible candidate for replacement. As a rule of thumb, an FCI below 10% is considered good. An FCI above 60% would suggest that the building is a candidate for replacement.

Facility Condition Index (FCI) Summary

Facility Condition Index is a calculation based on the rated condition and replacement cost of a system or major building component. The table below displays the cost of a system relative to the other systems in a facility. For example, the replacement cost of roofing is approximately 4.9% of the total replacement cost of a school facility.

Summary of Facility Cost Index Ratings

Facility	FCI
Hambright Elementary School	60.87
Central Manor Elementary School	0
Eshleman Elementary School	8.15
Letort Elementary School	8.15
Conestoga Elementary School	23.88
Martic Elementary School	0.58
Pequea Elementary School	39.4
Marticvillle Middle School	0
Manor Middle School	15.05
Penn Manor High School	12.45

Building	Construction Date	<u>Size</u>	Grade Level		
Hambright Elementary School	(1936) 1959, 1958, 1963, 1987	53,920 SF	K-6		
Location	2121 Temple Aven Lancaster, PA 176				
Site Size	Approximately 6 ac	cres			
Municipal Jurisdiction	Manor Township, Lancaster County				
Occupancy Group	Group 'B' Educatio	nal			

Construction Type

Applicable Building Code

• PA Uniform Construction Code (UCC):

International Existing Building Code / 2009

International Building Code / 2009

ICC Electrical Code 2009 (utilizes National Electric Code-

2002 standards)

Non-Combustible

International Energy Conservation Code 2009

International Existing Building Code 2009

International Fire Code 2009
International Fuel Gas Code 2009
International Mechanical Code 2009
International Plumbing Code 2009
International Residential Code 2009

International Urban-Wildland Interface Code 2009

- ADAAG (Americans with Disabilities Accessibility Guidelines)
- ASHRAE Standards

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

FACILITY OVERVIEW

Site:

The Hambright Elementary School is located in Lancaster, PA, west of the city of Lancaster in a residential area. The School is bordered on the north by commercial property and is otherwise surrounded by residences. The School is located on Temple Avenue, which is accessed from Route 741, in Lancaster Township. Bus Drop off, as well as visitor access and parking is located on the south side of the building. Parent drop-off and additional vehicular parking is located on the north side of the building.

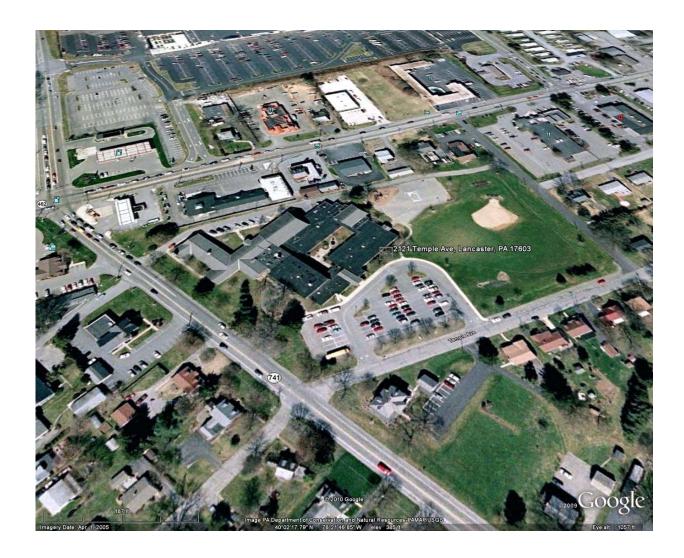
The site slopes gently from the northwest to the south east, with the original section of the building at a higher elevation than the 1987 addition. Hard and soft surface play areas are located on the east side of the building. Play fields are located on the southeast portion of the site and border Temple Avenue. Access to all play areas from the building is good and requires no conflicts with vehicular traffic.

Building:

The Hambright Elementary School was originally constructed in 1936. The last renovation project at the school occurred in 1987. Recent Capital Improvements include upgrades to the building security system in 2008. The School is a multi story building, with the structural system being masonry load bearing, with some steel framing roof joist structure. The original section of the building has a wooden roof deck. The structure of the building is in good condition.

The Hambright Elementary School, having undergone the last major renovation project in 1987, is overall in fair to good condition. The lifespan of the major building components and operational systems is in the 25 – 30 year range and as such, the building should continue to serve the Penn Manor School District for the foreseeable future., however as annual capital maintenance expenses can be expected to increase as the building systems and major components begin to age, there may be a point in the next 5–7 years that the school district will want to consider a renovation project at the school. Inasmuch as a building is a static, non-dynamic entity, subject to the forces of nature and the aging and deterioration process, it is recommended that annual visual inspections of the building, including the interior, exterior and the roof, be completed as part of a proactive and on-going maintenance program.

Aerial Photograph



Floor Plans



I. ADA, SAFETY & BUILDING CODE

A. ADA / Accessibility

- Accessible parking spaces, including proper ADA signage should be provided.
- Walkways/paths to playgrounds and field should be provided to address ADA deficiencies.
- Accessible water coolers shall be provided in all locations where water coolers exist.
- ADA door hardware should be installed throughout the building.
- In order to meet accessibility requirements and guidelines, ADA compliant building and interior room identification signage should be installed throughout the school.
- Restrooms throughout the building need to be renovated to comply with accessibility requirements and guidelines.
- The existing stage should be accessible, either through installation of a ramp, permanent wheelchair lift, or use of a portable wheelchair lift device.
- The existing elevator controls are not in conformance with current ADA requirements and modifications should be made to address these deficiencies.
- Areas of rescue assistance shall be provided at the top of all stair towers, unless the building is equipped with a fire sprinkler system.
- It is recommended that the wall mounted hand railings in the stair towers should be replaced with new railings with the proper extensions at the top and bottom risers.

B. Site

- Additional sidewalks, curbing and ramping will be required to meet Manor Township Urban Growth Boundary planning requirements.
- The development of a separate student drop-off and pick-up area is recommended in order to separate vehicular and bus traffic to improve site circulation and safety.
- Installation of fencing on the east side of the play area on the eastern portion of the site is recommended as a safety feature.
- Installation of fencing along the northern border of the site is recommended for safety and aesthetic purposes.
- Consideration should be given providing directional signage, for parents and visitors.

- Additional parking spaces should be provided to meet Manor Township Planning and Zoning requirements.
- Playground equipment should be evaluated against currents safety standards, and non-compliant equipment removed, deteriorated equipment replaced and ADA accessible equipment incorporated. Expansion of the soft play surfacing around the equipment should be included to provide proper fall clearances.
- Verification of the wood fiber surfacing for proper depth, drainage and resiliency should be verified for safe fall heights from play equipment.

C. Building

- The main entrance was modified with electronic hardware, camera and an installation
 of a window to allow for some controlled supervision and access at the main entrance.
 As part of a major renovation project, the exploration of ideas to develop a fully
 controlled main entrance should be explored.
- The existing 1990 fire alarm system is functional but is not fully ADA and Code compliant. Provide a new ADA Compliant fire alarm system including an annunciator at the front entrance.
- Pending a building code analysis and review with the local third-party building inspector, the preliminary determination in a major renovation project will assume a building-wide fire sprinkler system. In lieu of a sprinkler system, the building would need to be separated into appropriately sized fire separation areas, meeting the code required fire ratings, which is not always feasible.
- Any planned building additions should include provisions for additional fire extinguisher cabinets, in compliance with building code requirements.
- Exterior building mounted security lighting is currently provided only on the north side of the building except for one luminaire on the west side. These luminaires utilize HID (high intensity discharge) lamps. LED lighting should be provided around the entire perimeter of the building for added security and reduced energy consumption.
- Any existing hazardous materials, including asbestos containing materials, lamps and ballasts, insulation, caulking, etc., should be removed as part of a renovation project.
- Classrooms have 2 wall switches arranged to switch one half of the lamps in each luminaire. This provides two levels of lighting but does not darken the teaching wall during the use of projectors. No automatic controls are currently provided. Provide motion sensors, daylight sensors, multiple switches and a load shedding relay to reduce energy consumption in classrooms. Provide switches on the teaching wall to allow the teacher to adjust light levels without leaving the front of the room.
- Provide two levels of lighting in corridors. Provide full lighting during normally occupied times and reduced lighting levels for those periods of time when the building has

minimum occupancy. Provide time based control of corridor and stair lighting to insure that lights are turned off during unoccupied times and to reduce the amount of staff time needed to turn lights on at the beginning of the day and off at the end of the day. Provide corridor and stairway nightlights for security and safety.

 Provide motion sensor and daylight sensor control of lighting in offices, cafeteria, library and miscellaneous spaces. For safety do not provide automatic control of lighting in the kitchen.

II. EDUCATIONAL PROGRAM

A. Program Needs

- The administration office is undersized and not located for adequate visible control of the main entrance. Consideration should be given to relocate the office area to provide increased security, control and more effective work space.
- The Music room is undersized to meet band and choral program needs. Storage for the room is minimal. Expansion or relocation of the room is recommended.
- There is a need for small group instruction and pull-out spaces for academic support, as well as properly sized office spaces for itinerates. A small classroom addition would allow for the provision of the needed academic support spaces.
- The existing stage I the multi-purpose room is undersized and not permanent construction. Expansion / renovation of the stage is recommended.
- The library office is undersized, due the original library office being utilized by academic support (reading team). A small classroom addition would allow for the original office space to be used by the library.
- The teacher workroom is not properly located and is undersized. Relocation and expansion of the work room is recommended.

III. PHYSICAL PLANT

A. Site

- The asphalt areas should receive an overlay as part of a renovation project.
- Minor repairs to concrete walkways are needed.
- A new exterior learning area is recommended in order to provide additional exterior site space and expand learning opportunities for the students.
- A new play area on the east side of the building is recommended as part of the creating
 of the separate parent drop-off loop. And expansion of the play area is recommended
 on the west side of the building.
- New landscaping and seeding as well as erosion and sedimentation control is recommended along the north property line.
- Moving the above ground stormwater detention basin to an underground system is recommended in order to be able to develop recommended site improvements and maintain the current baseball field and maximize green space for play.
- New basketball backboards and repair of existing fencing is recommended.
- Backfilling of soil around some areas of the building to restore the grade even with walks, and provide positive drainage away from the building.

B. Building

- The majority of the roof is sloped gable style with fiberglass roofing shingles. The small amount of the flat roofing area is a relatively new built-up roofing system. The fiberglass roofing shingles are nearing the end of their rated lifespan; however appear to be in good condition. Some patching and repair of the flat roof areas may be necessary as part of a renovation project. The sloped roofing should be considered for replacement as part of a major renovation project.
- The exterior windows are in need of replacement. New thermally broken, insulated windows should be installed, with proper glazing based upon the solar orientation.
- Exterior caulking and miscellaneous joint repair is necessary in several areas around the perimeter of the building.
- The exterior doors are in need of replacement, including exterior doors, frames and hardware. New, insulated aluminum doors and frames, with code compliant panic hardware are recommended.
- Interior classroom doors should be scheduled for replacement, addressing the need to replace the hardware with ADA compliant hardware, and remove the wireglass, which is a safety issue.

C. Interior Finishes

- The existing wood gym floor should be refinished as part of a major renovation project.
- The ceiling tiles throughout the building should be replaced in conjunction with the replacement of the interior building lighting and possible installation of a fire sprinkler system.
- As part of ongoing maintenance and facility improvements, interior finishes should be upgraded, restored or replaced, including floor finishes, painting and wall coverings.

D. Specialties

- The plastic laminate faced educational storage casework in the classrooms and instructional areas is in need of replacement.
- New Promethean white boards and tackboards should be provided in all classrooms
- As part of the renovations and upgrades to the restroom facilities, new solid plastic toilet partitions should be provided.
- Acoustic treatment is recommended for the music room.
- The stage curtains in the Multi-purpose Room are in need of replacement.
- New basketball backstop padding and new wall pads should be provided as part of a major renovation project.
- New stage curtains are recommended.

E. <u>HVAC</u>

System

- The HVAC System for this building utilizes unit ventilators with 2 pipe hot water heating
 for the classroom areas, air handlers with hot water heating for the Multi-Purpose
 Room and Cafeteria, split system air conditioners with hot water heating for the Office
 Areas and hot water cabinet heaters, convectors and unit heaters for corridors, toilets,
 storage areas, etc.
- The systems in this building were installed in various phases. A major addition was constructed in 1989. The equipment in these areas is well maintained and is still functioning even though it is approaching the end of its expected life (20-25 years).
 Some unit vents and wall fin radiation were re-used in the original building since this equipment had been recently installed.
- At this time, the only areas that are air conditioned are the Office Areas, Cafeteria and Faculty Workroom.
- In order to provide air conditioning for the entire building, a majority of the existing equipment would have to be replaced.
- To provide air conditioning, we would recommend the installation of a Geothermal Heat Pump System consistent with the systems recently installed at other buildings in the District. An alternative similar system would be a water source heat pump system utilizing hot water boilers and an evaporative cooler.

Ventilation

- Currently, ventilation air is provided through wall louvers and roof caps associated with the unit ventilators and air handlers. Each space is set-up to provide 100% fresh air to the space with an associated ducted relief air system. Exhaust air from toilets is removed by rooftop exhaust fans.
- The current amount of ventilation air is not adequate to meet the requirements of the current IMC 2009 Code.
- If a new HVAC System is provided for the building utilizing Geothermal Heat Pumps or Water Source Heat Pumps, ventilation air would be provided through central rooftop heat recovery units.
- Under any renovation project, we would also recommend replacement of all of the existing rooftop exhaust fans.

Air Conditioning

 Presently, only a few areas of the building are air conditioned. Installation of a Geothermal Heat Pump System would provide air conditioning for the entire building with the exception of toilets, mechanical rooms, storage rooms and corridor areas.

Ductwork

 With the existing unit ventilator type of system, minimal ductwork is installed in the building. If any ductwork is re-used (i.e. in the Gymnasium or Office Areas) as part of a renovation project, it should be cleaned.

Hot Water System

- The building is currently heated with (2) gas/oil-fired flex tube boilers. Water is circulated by (4) base mounted centrifugal pumps. This equipment was installed in 1987 and is failing. Conversion of the building to a Geothermal Heat Pump System would make this equipment obsolete. The existing boilers are failing. The District is attempting to obtain parts for a temporary repair. If the boilers can't be repaired and new boilers are required now, in order to use these boilers in the future, a water source heat pump system could be used.
- The hot water piping and insulation system is in good condition. It is possible that some of this piping could be used as part of the distribution system for the Geothermal Heat Pump System.

Automatic Temperature Control

- The existing temperature control system is pneumatic with some DDC zone control, a mixture of various manufacturers and it is near the end of its expected life.
- We would recommend that this system should be replaced with a new Direct Digital Control (DDC) System as part of any renovation project.

Special Exhaust Systems

• The kitchen hood was installed as part of the 1980's project and appears to be in good condition.

F. Plumbing

Plumbing Fixtures

- Most plumbing fixtures in the building were replaced in 1989. Plumbing fixtures in the 1958 addition are original and are in need of replacement. While some handicapped provisions exist, the installation probably does not comply with current ADA requirements.
- Due to age, we would recommend replacement of the fixtures in the 1958 addition. Automatic sensors would be provided for urinals consistent with District policy.

Domestic Water Service

The existing water service is public.

Domestic Hot Water

• (2) gas fired water heaters were installed in the last ten years and are in good condition. The associated circulating pumps are in need of replacement.

Domestic Water Distribution

 Domestic water is distributed through copper piping with fiberglass insulation. Piping in approximately one third of the building is original and is in need of replacement. The piping in the 1989 addition should still be in good condition, however, samples should be taken to verify this.

Sanitary Sewer Service

• The sanitary sewer system is connected to the public system.

Storm Sewer

 Roof drains in the flat roof areas are piped to an offsite drainage system. The system is in good condition. Roof drains should be replaced as part of any roof replacement project.

Fire Sprinklers

 The building is not currently sprinklered. A sprinkler system could be required under the new IBC 2009 Code depending on the extent of any renovation project. Connection could be made to the public system.

G. Electrical

Lighting

- Luminaires throughout the building were replaced in the 1990 renovation and are generally in useable condition. However most luminaires utilize 4 lamps in a lensed troffer luminaire. These luminaires should be replaced with 2 lamp open reflector troffers with electronic ballasts for reduced energy consumption.
- Gym luminaires are equipped with metal halide lamps. These lamps have a long warm-up time and are therefore turned on in the morning and left on until late at night. Gym lighting should be replaced with linear high bay fluorescent lighting controlled by motion sensors. Fluorescent lighting can be adjusted to multiple levels depending upon activities and the motion sensors will turn all but a minimum amount of lighting off when the gym is unoccupied.
- Lighting in the cafeteria, library, office and miscellaneous spaces also uses 4 lamp lensed troffer style luminaires and should be replaced with open reflector troffers for increased energy efficiency.
- Demolished lamps and ballasts should be disposed of in accordance with regulations for hazardous materials.
- Existing parking and walkway areas are illuminated by pole mounted HID shoebox style luminaire. Existing luminaires are adequate for most parking areas but some are in need of repair. Driveways are not illuminated.

Electrical Service

- The incoming electrical service is rated 800 amps at 120/208 volts. The main service equipment is a floor mounted switchboard which was installed during the 1990 renovation. The service equipment can be used for another 20 years but may prove to be undersized if air conditioning or additional space is added to the building.
- The existing utility company transformers are pole mounted. The addition of loads for air conditioning or additional space is likely to require the installation of a ground mounted transformer.

Electrical Distribution

 All of the circuit breaker panels in the building were installed in 1990 or added at a later date. These panels are acceptable for use for another 20 years. Some panels have space for added loads and some are full or nearly full.

Receptacles

 Receptacle locations are generally adequate. Renovations which change room layouts will necessitate providing or relocating receptacles. A dedicated circuit should be provided for the teacher's computer and LCD projector. At least two other circuits should be provided in each classroom.

Emergency Power and Lighting

- The existing emergency power source is a 7.5 kW natural gas fueled generator located in the basement of the building. This generator was installed in 1990 and is acceptable for at least 10 more years of service unless load is added to it. The generator currently powers emergency lighting and the UPS for the card access, intrusion detection and CCTV Camera Systems.
- In a general renovation of the building it will be necessary to increase the level and area of coverage of emergency lighting. In accordance with the evaluation criteria the telephone, data and paging systems should be added to the generator. It may also be desirable to power the walk-in refrigerator and freezer from the generator. Adding these loads to the emergency power system will require the generator to be replaced with a larger unit.
- For code compliance, stored materials need to be removed from the generator room and a fire rated door and hardware added.

Intercom and Sound System

• An intercom system which allows two way communications between the office and each classroom by way of telephone handsets exists and is in operable condition. This

system is approaching the end of its useful life and will need replaced in the next few years to avoid expensive repairs. The system does not allow general paging in corridors and restrooms. This system should be replaced as a part of any general renovation.

Public Address System

• The existing gym does not have a public address system. Provide a public address system to meet program needs.

Clock System

Presently most classrooms have synchronized clocks. Other instructional spaces have
no clocks or battery operated clocks. Provision of a wireless master clock system for
this building would be consistent with other elementary schools in the District and would
assist in maintaining coordination for activities which occur outside of the classroom.

Telephone System

 Each classroom is provided with a telephone which operates as Voice Over the Internet (VOIP). The system is in good condition. The electronics for this system should be provided with emergency power.

Video Distribution

Provide the distribution of all local cable channels to all instructional spaces and the
office, gym, library and cafeteria. Design the system with the ability to distribute
message board, locally originated programming and recorded programming.

Data Networking

• The building is equipped with a data network which meets most of the buildings present needs. Network patch panels and switches are located near the library and a cafeteria storage area. The network station cabling is Category 5. The wide area network connection is by way of a T1 line. Provide dedicated closets for patch panels and switches. Provide a headend room for the wide area network electronics. Provide a dedicated network cable pathway (cable tray) in corridor ceilings and re-cable the network with Category 6 cable and materials. Provide additional network jacks to accommodate program needs and to make rooms more versatile. Provide a dedicated parking area for mobile computer carts.

Security System

 The building presently has a two closed circuit TV cameras, a recorder and a monitor which view activity in the main lobby. The monitor is located in the School Office and the recorder is on a shelf in the Custodians area. The Building has an intrusion detection system with motion sensors in some corridors.

- Additional cameras should be provided in the gym lobby, playground, corridors and exterior of the building. The recorder and a small monitor should be placed in the headend room. Access to live and recorded images via the wide area network should be provided.
- Door contacts on exterior doors have been provided to ensure that all doors are closed when the last person leaves the building.
- An access control system is in place at several exterior doors.
- Installation of additional motion detectors in corridors, computer equipment rooms and offices containing sensitive records would reduce the potential for vandalism and unauthorized access to records.

Theatrical Lighting

• There is no theatrical lighting installed at the stage area in this building. Some lighting for events is provided by track lights. Provision of a small dimming system and minimal theatrical lighting would be consistent with other elementary buildings in the District.

Classroom Presentation Equipment

 One classroom was found to have a smart board. LCD projectors were not observed in any classrooms. Provide smart boards and LCD projectors in classrooms, instructional spaces, conference rooms and the library in accordance with the District Technology Plan. Provide a media transport system to deliver images from the teacher's computer, sound and video programming to the projector. Provide an amplifier and speakers to enhance the audio from the LCD. Provide a wireless microphone for use by the teacher in classrooms and large instructional spaces.

Facility Condition Index

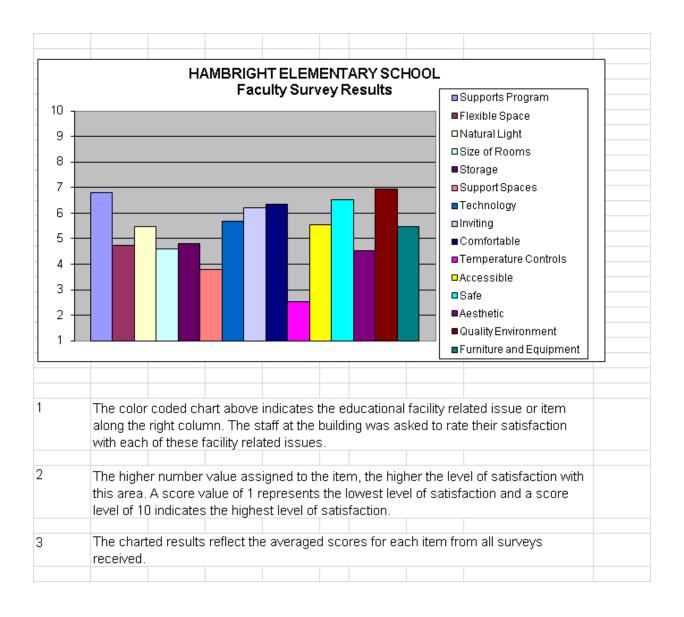
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FCI RATINGS								
1	0	General Maintenance						
2	10	Minor						
3	50	Moderate						
4	75	Major						
5	100	Replace						

	Hambi	right Elementary	School		
No.	Componenet / System	Percent of total	Rating (1 - 5)	Rating %	Adj %
1	Roofing	4.9%	3	0.5	2.45%
2	Exterior Walls	5.4%	2	0.1	0.54%
3	Exterior Windows	2.4%	5	1	2.40%
4	Exterior - Doors	0.6%	5	1	0.60%
5	Interior Floors	7.6%	5	1	7.60%
6	Interior Walls	4.0%	2	0.1	0.40%
7	Interior Ceilings	5.4%	5	1	5.40%
8	Interior - Other	3.3%	3	0.5	1.65%
9	HVAC	20.7%	5	1	20.70%
10	Electrical Lighting	10.0%	5	1	10.00%
11	Electrical Distrib.	1.3%	2	0.1	0.13%
12	Electrical Other	0.5%	3	0.5	0.25%
13	Plumbing	5.5%	3	0.5	2.75%
14	Fire / Life Safety	2.3%	4	0.75	1.73%
15	Specialties	0.8%	3	0.5	0.40%
16	Structural	19.3%	1	0	0.00%
17	Technology	3.5%	4	0.75	2.63%
18	Accessibility	2.5%	3	0.5	1.25%
					60.87%

Faculty Survey:

The average score reported by the staff for these building characteristics is 5,33, which is a below average score. While not a technical survey or evaluation, school facility staff that spend considerable time in a school building have an innate understanding and perception of these identifiable building characteristics. The response from teaching staff generally is indicative of the overall existing conditions, quality and adequacy of the educational environment. Refer to the detailed building assessments for a detailed qualitative facility assessment.



CEFPI Appraisal

PE	NN MANOR SCHOOL DISTRICT			
	MBRIGHT ELEMENTARY SCHOOL APPRAISA	AL .		
	Criteria	Maximum Points Allowed	Assessed Poin Value	Commentary
1	The School Site	Politis Allowed	value	Commentary
	Site is large enough to meet educational needs as			
	defined by state and local requirements	25	10	Ideal site size would be 15 acres. Current site size is approximately 6.6 acres
1.2	Site is easily accessible and conveniently located for the			
	present and future population.	20	12	
1.3	Location is removed from undesirable business, industry,		_	
1.4	and traffic.	10 5	2	
	Site is large enough for future expansion, if needed. Topography is varied enough to provide desired	5	2	
1.5	appearance but without steep inclines.	5	4	
1.6	Site is well landscaped.	5	5	
1.7	Site has stable, well drained soil free of erosion.	5	5	
1.8	Site is suitable for special instructional needs, e.g.			
	outdoor learning.	5	4	
1.9	Pedestrian services include adequate sidewalks with	_	4	
1 10	designated crosswalks, curb cuts, and correct slopes Sufficient on-site, solid surface parking for faculty and	5	4	
1.10	staff is provided.	5	4	
1.11	Playgrounds are separated from streets and parking	_	•	
	areas.	5	3	
1.12	Playgrounds are well equipped and appropriate for the			
	age levels.	5	3	
	Total - The School Site	100	60	
	Total - The School Site	100	- 60	
		Maximum	Assessed Poin	
	Criteria	Points Allowed	Value	Commentary
2	Structural and Mechanical Features			
2.1	Structure meets all barrier-free requirements both			
	externally and internally.	15	9	Some ADA improvements needed
2.2	Roofs appear sound, have positive drainage, and are			
	weather tight.	15	12	
2.3	Foundations are strong and stable with no observable	40	40	
2 /	cracks. Exterior and interior walls have sufficient expansion joints	10	10	
2.7	and are free of deterioration.	10	10	
2.5	Entrances and exits are located so as to permit efficient			
	student traffic flow.	10	8	
2.6	Building "envelope" generally provides for energy			
	conservation (See criteria)	10	6	Orignial section inadequate, roof insul, non insulated windows, doors
	Structure is free of friable asbestos and toxic materials.	10	8	
2.8	Interior walls permit sufficient flexibility for a variety of	_	_	
2.0	class sizes.	5	2	
	Well maintained ceilings adequately retard sound.	5	4	
∠.10	Adequate light sources, well maintained, and properly placed are provided.	15	9	Borderline due to older technology lamps and ballasts
2.11	Electrical controls are safely protected with disconnect	10	9	Dordonnio due to order techniology familips and ballasts
	switches easily accessible.	10	8	
2.12	Labeled electrical system is not subject to over-heating.	10	8	
	Drinking fountains are adequate in number and			
	placement, and are properly maintained including			
	provisions for the disabled.	10	6	
	Number and size of restrooms meet requirements. Internal water supply is adequate with sufficent pressure	10	6	
∠. 15	to meet health and safety requirements.	10	8	
2.16	Drainage systems are properly maintained and meet		Ŭ	
	requirements.	10	8	
2.17	Fire alarms, smoke detectors, and sprinkler systems are			
	properly maintained and meet requirements.	10	6	Fire alarm system not fully ADA and Code compliant
2.18	Intercommunication system consists of a central unit that			Control of and of and life Donard III
	allows dependable two-way communication between the	40	_	System at end of useful life, Does not allow general paging in corridors and
	office and instructional areas.	10	6	restrooms.
2 10	Hadasan ad alastidad assistant to see the d	_		
	Undergound electrical service is provided.	5	5	
	Exterior water supply is sufficient and available for normal			
2.20		5	5	
2.20	Exterior water supply is sufficient and available for normal usage.			Generally adequate, with some improvements needed

CEFPI Appraisal

		Maximum Points		
2	Criteria	Allowed	Value	Commentary
3	Plant Maintainability Windows, doors, and walls are of material and finish			
0.1	requiring minimum attendance.	10	6	
3.2	Outdoor light fixtures, electric outlets, equipment, and other	40	0	
3.3	fixtures are accessible for repair and replacement. Floor coverings throughout the building require minimum	10	8	
0.0	care.	10	8	
3.4	Ceilings and walls throughout the building, including service			
3.5	areas, are easily cleaned and resistant to stain. Built-in equipment is designed and constructed for ease of	10	6	
	maintenance.	10	6	
3.6	Floors in restrooms, kitchen, cafeterias, and corridors		_	
3.7	require a minimum of maintenance. Hardware and finishes are of durable quality.	10 10	6	Do not meet ADA requirements
	Restroom fixtures are wall mounted and of quality finish.	10	0	DO HOL HIER ADA TEQUITETICAIS
	. ,	10	6	
3.9	Adequate custodial storage space with water and drain is	10	8	
3.10	accessible throughout the building. Adequate electrical outlets and power are available in every	10	0	
	area to permit routine cleaning.	10	6	
	Total Plant Maintainability	100	66	
		Maximum Points	Assessed Point	nt
	Criteria	Allowed	Value	Commentary
	Building Safety and Security			
	Security			
4.1	Student loading areas are segregated from other vehicular traffic and pedestrian walkways.	15	6	Bus and parent drop off are at the same location
4.2	Access streets have sufficient signals and signs to permit		, and the second	Sub-diffe paroni, drop on are at the earne received
4.0	safe entrance to and exit from school area.	5	4	
4.3	Off-site sidewalks are available for safety of pedestrians.	5	0	
4.4	On-site sidewalks and steps are designed and maintained	•	Ů	
	for safety.	5	4	
4.5	Vehicular entrances and exits permit safe traffic flow. Locations and types of playground equipement are free	5	4	
4.0	from hazard.	5	3	
	ling Safety The heating unit(s) is located away from student occupied			
7.7	areas.	20	16	
	Multi-story buildings have at least two stairways.	15	15	
4.9	Exterior doors open outward and are equipped with panic hardware.	10	10	
4.10	Emergency lighting is provided throughout the building with	10	10	
	exit signs on separate electrical circuit.	10	8	
	Classroom doors are recessed and open outward. Building security systems are provided to assure	10	10	
4.12	uninterrupted operation of the educational program.	10	8	
4.13	Flooring (including ramps and stairways) is maintained in a			
4 14	nonslip condition. Stair risers (interior and exterior) do not exceed 6 1/2	5	5	
4.14	inches and range in number from 3-16.	5	3	
4.15	Glass is properly located and protected with wire or safety	_	_	
1 16	material to prevent accidental student injury. Fixed projections in the traffic areas do not extend more	5	3	Older sections of building no safety glass
4.10	than eight inches form the corridor wall.	5	3	Some projections, including drinking fountains
4.17	Traffic areas terminate at an exit or a stairway leading to an			
	egress.	5	4	A few areas where ciculation is a little dis-jointed
Eme	gency Safety			
4.18	Adequate fire safety equipment is properly located.	15	12	
4.19	There are at least two independent exits from any point in the building.	10	10	
4.20	Stairways and exits are of noncombustible material.	10	8	
	Fire-resistant materials are used throughout the structure.			
4.00	Automatic and manual emergency clarm evotem with a	10	6	Original 1936 roof structure is wood
4.22	Automatic and manual emergency alarm system with a distinctive sound and flashing light is provided.	10	6	
4.23	Ample space is provided in corridors or protected areas for			
	student safety in the event of natural disasters.	5	5	
	Total Building Safety and Security	200	153	

CEFPI Appraisal

		Maximum	Assessed Point	
	Criteria	Points Allowed	Value	Commentary
5	Educational Adequacy			
	demic Learning Space			
	Size of academic learning areas meet desirable standards.	25	20	Music Room undersized, as well as some academic support spaces
	Classroom space permits arrangements for small group activity.	15	9	
5.3	Location of academic learning areas is near related educational activities and away from disruptive noises.	10	8	
5.4	Personal space in the classroom away from group instruction allows privacy time for individual students.	10	6	
5.5	Storage for student materials is adequate.	10	6	
	Storage for teacher materials is adequate.	10	6	
	cial Learning Space			
	Size of special learning area(s) meets standards.	15	9	
	Design of special learning area(s) is compatible with instructional need.	10	6	
5.9	Library/Resource/Media Center provides appropriate and attractive space.	10	8	
5.10	Gymnasium (or covered P.E. area) adequately serves physical education instruction.	5	5	
5.11	Pre-kindergarten and kindergarten space is appropriate for age of students and nature of instruction.	10	6	
5.12	Music Program is provided with adequate sound-treated space.	5	1	
5.13	Space for art is appropriate for special instruction, supplies, and equipment.	5	4	
5.14	Space for technology education, including computer labs, permits use of state-of-the-art equipment.	5	3	
5.15	Space adjacent to classrooms is provided for small groups and remedial instruction.	5	2	
5.16	Storage for student and teacher material is adequate.	5	4	
Suni	port Space			
	Teachers' lounge and work areas reflect teachers as	40		
5.18	professionals. Cafeteria/cafetorium is attractive with sufficient space for delivery, storage, and food preparation.	10	6 8	
5.19	Administrative offices provide an appearance consistent with the maturity of the students served.	5	4	
5 20	Counselor's office insures privacy and sufficient storage.	5	4	
	Clinic is near administrative offices and is equipped to meet requirements.	5	4	
5.22	Suitable reception space is available for students, teachers, and visitors.	5	2	
5.23	Administrative personnel are provided sufficient work space and privacy.	5	2	
	Total Educational Adequacy	200	133	

		Max	ximur	n	Asse	ssed Po	oint												
	Criteria	Points	Allo	wed		Value								Comn	nenta	iry			
6	Environment for Education																		
Exte	rior Environment																		
	Overall design is aesthetically pleasing to age of																		
	students.		15			9													
6.2	Site and building are well landscaped.		10			8													
6.3	Exterior noise and poor environment do not disrupt learning.		10			8		Facul	ty ha	ive not	t indic	ated	any is	sues	in this	area	a		
6.4	Entrances and walkways are sheltered from sun and inclement weather.		10			6		Limite	ed co	verage	e at m	ain e	ntranc	e					
6.5	Building materials provide attractive color and texture.		5			3													
Inter	ior Environment															+			-
	Color schemes, building materials, and decor provide an																		
	impetus to learning.		20			9													
6.7	Year around comfortable temperature is provided					_													
0.0	throughout the building.		15			6	_												
6.8	Ventilating system provides adequate circulation of clean air.		15			6													
6.9	Lighting system provides proper intensity, diffusion, and distribution of illumination.		15			6													
6.10	Drinking fountains and restrooms facilities are conveniently located.		15			9		Recor	mme	nd ad	ding s	evera	I addit	tional	water	cool	ers		
6.11	Communication among students is enhance by commons area(s) for socialization.		10			4													
6.12	Traffic flow is aided by appropriate foyers and corridors.		10			8													
	Areas for students to interact are suitable to the age group.		10			6													
6.14	Large group areas are designed for effective management of students.		10			8													
6.15	Acoustical treatment of ceilings, walls, and floors provides effective sound control.		10			6													
6.16	Window design contributes to a pleasant environment.		10			6													
	Furniture and equipment provide a pleasing atmosphere.		10			6													
	Total Environment for Education		200			114													

Building	Construction Date	<u>Size</u>	Grade Level
Central Manor Elementary School	(1936) 1961, 1988, 2011	64,300 SF	K-6

Location 3717 Blue Rock Road

Washington Boro, PA 17582

Site Size Approximately 10 acres

Municipal Jurisdiction Manor Township

Occupancy Group Group 'B' Educational

Construction Type Non-Combustible / Ordinary

Applicable Building Code

PA Uniform Construction Code (UCC):

International Existing Building Code / 2009 International Building Code / 20069

ICC Electrical Code 2009 (utilizes National Electric

Code- 2002 standards)

International Energy Conservation Code 2009 International Existing Building Code 2009

International Existing Building Code 200 International Fire Code 2009

International Fuel Gas Code 2009 International Mechanical Code 2009 International Plumbing Code 2009 International Residential Code 2009

International Urban-Wildland Interface Code 209

 ADAAG (Americans with Disabilities Accessibility Guidelines)

ASHRAE Standards

Site

The Elementary School is located in a rural area in Manor Township, Lancaster County, on an approximatel 10 acre site. Set amidst rolling farmland, the school is sited with attractive views to the south and west. The school fronts on Blue Rock Road to the north. Three driveway entrances from Blue Rock Road provide access to the school. Site distance for cars exiting from the site appears adequate and meets safety requirements. The drive running in front of the school serves bus drop off as well as a small amount of parking for visitors and some staff during the day. There is a designated parent drop off on the east side of the building.

The main parking area for staff is located on the east side of the building. Service access runs along the west side of the building and opens into a staff parking area to the south. In general the current arrangement of drives and parking serves the needs of the school. Parking capacity meets the he local Township regulatory requirements for parking.

The main exterior play areas are located on south side of the school. Play areas consist of both soft and hard play surfaces, with a wide range of play equipment intermingled in wood fiber area. There is a small hard and soft play area located on the southwest corner of the building, located adjacent to and serving the Kindergarten population of the school.

Building:

The Elementary School was originally constructed in 1936, with subsequent renovation and addition projects, and a major building addition and renovation occurring in 1988. The Central Manor Elementary School is currently in the middle of a building addition and renovation project which began in the spring of 2010 and is scheduled for completion in 2011. At the completion of the project, the student capacity of the school will have been increased and Life-Safety and Building Code, Educational program related and Physical Plant needs and deficiencies addressed. A major component and feature of the project will be the addition of a geo-thermal heating and cooling system, which will increase the efficiency of the operating systems. The current construction project is scheduled to receive a LEED Silver rating, per the United States Green Building Council (USGBC).

The Central Manor Elementary School is a two story building with exterior brick veneer on most of the building; with some "dryvit" accents at the main entrance and the upper multipurpose room exterior. The majority of the roofing is sloped and finished with fiberglass shingles. The remaining low slop roof areas are an asphalt-based built-up roofing system. The building structural system is a combination of masonry load bearing and structural steel, with both non-combustible and ordinary construction. Construction Classification under the IBC is 3B.

At the completion of the current construction project, the lifespan of the major building components and operational systems will have been renewed and extended an additional 25-30 years. As such, the Central Manor Elementary School should serve the school district well into the forseeable future.

PENN MANOR SCHOOL DISTRICT

Long Range Facilities Master Plan Study

FACILITY OVERVIEW

LEED:

The Central Manor Elementary School is the first school construction project in the school district to seek a United States Green building Council (USGBC), Leadership in Energy and Environmental Design (LEED) rating. As such, the Penn Manor School District has reinforced the importance and concepts of sustainability and environmental stewardship within the school district. The Central Manor example can be looked at as a model for future construction projects within the school district.

Electrical Service and Lighting:

Central Manor Elementary School is currently being renovated. The design criteria for the Central Manor building have been used as the evaluation criteria for the remainder of the buildings in this evaluation. Central Manor is the first building to use LED exterior lighting and daylight harvesting to reduce energy consumption. No work is needed at this time.

Technology:

Renovations to other buildings in the District over the past 10 years have included provisions for ceiling mounted LCD projectors. Projectors were actually installed at Marticville Middle School and Martic Elementary School. At Central Manor, ceiling mounted LCD projectors and smart boards were originally planned as part of the construction process, however as technology continues to evolve, this approach was abandoned for a more flexible, wireless solution of Mimio projectors with whiteboards. Additionally, Central Manor is the first elementary school to have an extensive security system based upon multiple closed circuit television cameras and network accessible recorders. No work is needed at this time.

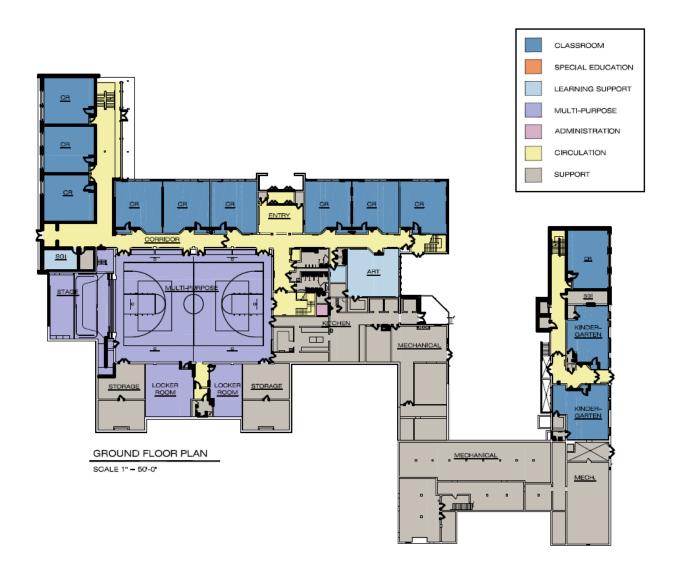
AERIAL PHOTO

Photo taken prior to current construction project.



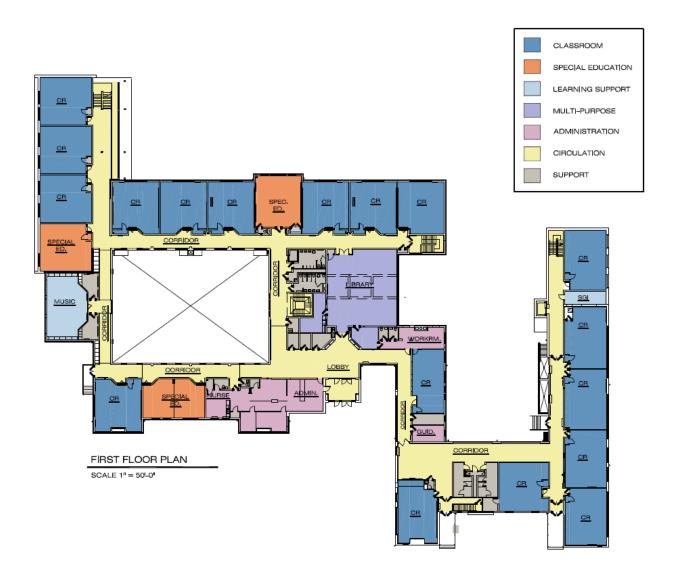
EXISTING BUILDING FLOOR PLAN

Ground Floor



EXISTING BUILDING FLOOR PLAN

Upper / Main Floor



FACILITY ASSESSMENT SUMMARY

Facility Condition Index

- The Facility Cost Index (FCI) is used throughout the facility condition assessment industry as a relative indicator of a buildings condition. Based on industry-wide standards, if the cost to repair exceeds 60% of the cost to replace, the facility should be looked at more closely as a possible candidate for replacement. As a rule of thumb, an FCI below 10% is considered good. An FCI above 60% would suggest that the building is a candidate for replacement.
- Inasmuch as Central Manor Elementary School is in the midst of a comprehensive renovation, the Facility Cost Index for this building, as indicated below, he been essentially re-set to zero (0).

	F	CIRATINGS
1	0	General Maintenance
2	10	Minor
3	50	Moderate
4	75	Major
5	100	Replace

No.	Componenet / System	Manor Elementa Percent of total	Rating (1 - 5)	Rating %	Adj %
1	Roofing	4.9%	1	0	0.00%
2	Exterior Walls	5.4%	1	0	0.00%
3	Exterior Windows	2.4%	1	0	0.00%
4	Exterior - Doors	0.6%	1	0	0.00%
5	Interior Floors	7.6%	1	0	0.00%
6	Interior Walls	4.0%	1	0	0.00%
7	Interior Ceilings	5.4%	1	0	0.00%
8	Interior - Other	3.3%	1	0	0.00%
9	HVAC	20.7%	1	0	0.00%
10	Electrical Lighting	10.0%	1	0	0.00%
11	Electrical Distrib.	1.3%	1	0	0.00%
12	Electrical Other	0.5%	1	0	0.00%
13	Plumbing	5.5%	1	0	0.00%
14	Fire / Life Safety	2.3%	1	0	0.00%
15	Specialties	0.8%	1	0	0.00%
16	Structural	19.3%	1	0	0.00%
17	Technology	3.5%	1	0	0.00%
18	Accessibility	2.5%	1	0	0.00%
					0.00%

CEFPI APPRAISAL

PEN	N MANOR SCHOOL DISTRICT																				
	TRAL MANOR ELEMENTARY SCHOOL APPRA	ISAL																			
					ļ																
	Criteria	Maxim	um F Iowe		Asse	ssed Value							,	Comm	ontar	.,					
1	The School Site		IOWE	<u>u</u>		value								-	Ciitai	<u>, </u>					
1.1	Site is large enough to meet educational needs as defined															l					
	by state and local requirements Site is easily accessible and conveniently located for the		25			20		Ideal	site si	ize wo	uld be	16-1	7 acres	s. Cur	rent si	ite size	e is ap	proxir	nately	10 ac	res.
	present and future population.		20			16															
1.3	Location is removed from undesirable business, industry,																				
F	and traffic.		10			10															
	Site is large enough for future expansion, if needed.		5			2		Site pretty much maxed out													
	Topography is varied enough to provide desired appearance but without steep inclines.		5			5															
1.6	Site is well landscaped.	5			5																
	Site has stable, well drained soil free of erosion.		5			5															
	Site is suitable for special instructional needs, e.g. outdoor learning.		5			5															
	Pedestrian services include adequate sidewalks with																				
	designated crosswalks, curb cuts, and correct slopes		5			4		<u> </u>													
	Sufficient on-site, solid surface parking for faculty and staff is provided.		5			5		1													
1.11	•				1																
	Playgrounds are separated from streets and parking areas.		5		1	5															
	Playgrounds are well equipped and appropriate for the age levels.		5			5															
	Total - The School Site		100			87															
		Maxim	um E	Ointe	Λεεσ	eeod l	Point	ı													
	Criteria		lowe		7,000	Value							c	Comm	entar	у					
	Structural and Mechanical Features																				
	Structure meets all barrier-free requirements both					4-															
	externally and internally. Roofs appear sound, have positive drainage, and are		15			15															
	weather tight.		15			15															
	Foundations are strong and stable with no observable		4.0			40															
	cracks. Exterior and interior walls have sufficient expansion joints		10			10															
	and are free of deterioration.		10			10															
	Entrances and exits are located so as to permit efficient					40															
	student traffic flow. Building "envelope" generally provides for energy		10			10															
	conservation (See criteria)		10			8															
	Structure is free of friable asbestos and toxic materials.		10			10															
	Interior walls permit sufficient flexibility for a variety of class					2															
	sizes. Well maintained ceilings adequately retard sound.		5 5		1	3 5		 													
	Adequate light sources, well maintained, and properly		<u> </u>		1	3		1													
	placed are provided.		15			15															
	Electrical controls are safely protected with disconnect switches easily accessible.		10			10															
	Labeled electrical system is not subject to over-heating.		10		1	10		l													
2.13	Drinking fountains are adequate in number and placement,																				
	and are properly maintained including provisions for the disabled.		10			8															
	Number and size of restrooms meet requirements.		10		1	8		1													
	Internal water supply is adequate with sufficent pressure to																				
2 16	meet health and safety requirements. Drainage systems are properly maintained and meet		10		1	8															
	requirements.		10			10															
2.17	Fire alarms, smoke detectors, and sprinkler systems are				1																
	properly maintained and meet requirements. Intercommunication system consists of a central unit that		10			10															
	allows dependable two-way communication between the																				
	office and instructional areas.		10			10															
	Undergound electrical service is provided. Exterior water supply is sufficient and available for normal		5		1	5		ļ													
	Exterior water supply is sufficient and available for normal usage.		5			4		1													
2.21	Each teaching/learning area has four or more convenient				1			1													
\sqcup	wall outlets.		5			5															
			200		1	189		ĺ													

CEFPI APPRAISAL

3 Plant Maintainability			
3.1 Windows, doors, and walls are of material and finish			
requiring minimum attendance.	10	10	
3.2 Outdoor light fixtures, electric outlets, equipment, and			
other fixtures are accessible for repair and replacement.	10	10	
3.3 Floor coverings throughout the building require minimum			
care.	10	10	
3.4 Ceilings and walls throughout the building, including			
service areas, are easily cleaned and resistant to stain.	10	10	
3.5 Built-in equipment is designed and constructed for ease			
of maintenance.	10	8	
3.6 Floors in restrooms, kitchen, cafeterias, and corridors			
require a minimum of maintenance.	10	10	
3.7 Hardware and finishes are of durable quality.	10	10	
3.8			
Restroom fixtures are wall mounted and of quality finish.	10	10	
3.9 Adequate custodial storage space with water and drain is			
accessible throughout the building.	10	8	
3.10 Adequate electrical outlets and power are available in			
every area to permit routine cleaning.	10	10	
Total Plant Maintainability	100	96	

		Maximum	Assessed Point													
	Criteria	Points Allowed	Value	Commentary												
4	Building Safety and Security															
Site	Security															
4.1	Student loading areas are segregated from other vehicular															
	traffic and pedestrian walkways.	15	9													
4.2	Access streets have sufficient signals and signs to permit															
	safe entrance to and exit from school area.	5	4													
4.3																
	Off-site sidewalks are available for safety of pedestrians.	5	0													
4.4	On-site sidewalks and steps are designed and															
	maintained for safety.	5	4													
4.5	Vehicular entrances and exits permit safe traffic flow.	5	4													
4.6	Locations and types of playground equipement are free															
	from hazard.	5	5													
Buil	ding Safety															
4.7	The heating unit(s) is located away from student occupied															
	areas.	20	20													
4.8	Multi-story buildings have at least two stairways.	15	15													
4.9	Exterior doors open outward and are equipped with panic															
	hardware.	10	10													
4.10	Emergency lighting is provided throughout the building															
	with exit signs on separate electrical circuit.	10	10													
4.11	Classroom doors are recessed and open outward.	10	10													
4.12	Building security systems are provided to assure															
	uninterrupted operation of the educational program.	10	8													
4.13	Flooring (including ramps and stairways) is maintained in															
	a nonslip condition.	5	5													
4.14	Stair risers (interior and exterior) do not exceed 6 1/2															
	inches and range in number from 3-16.	5	5													
4.15	Glass is properly located and protected with wire or															
	safety material to prevent accidental student injury.	5	5													
4.16	Fixed projections in the traffic areas do not extend more															
	than eight inches form the corridor wall.	5	5													
4.17	Traffic areas terminate at an exit or a stairway leading to															
	an egress.	5	5													
	rgency Safety															
	Adequate fire safety equipment is properly located.	15	15													
4.19	There are at least two independent exits from any point in															
	the building.	10	10													
	Stairways and exits are of noncombustible material.	10	10													
4.21	Fire-resistant materials are used throughout the structure.	10	8													
4 22	Automatic and manual emergency alarm system with a	IU	0													
7.22	distinctive sound and flashing light is provided.	10	10													
1 22	Ample space is provided in corridors or protected areas	10	10													
4.23	for student safety in the event of natural disasters.	5	5													
	· · · · · · · · · · · · · · · · · · ·	200	182													
	Total Building Safety and Security	200	78∠													

CEFPI APPRAISAL

		Maximum Points		
-	Criteria	Allowed	Value	Commentary
	Educational Adequacy emic Learning Space			
5.1	eniic Learning Space			
	Size of academic learning areas meet desirable standards.	25	20	
5.2	Classroom space permits arrangements for small group			
E 2	activity. Location of academic learning areas is near related	15	12	
5.5	educational activities and away from disruptive noises.	10	8	
5.4	Personal space in the classroom away from group			
	instruction allows privacy time for individual students.	10	6	
	Storage for student materials is adequate.	10	8	
	Storage for teacher materials is adequate. ial Learning Space	10	8	
	Size of special learning area(s) meets standards.	15	12	
	Design of special learning area(s) is compatible with			
	instructional need.	10	8	
5.9	Library/Resource/Media Center provides appropriate and	40	0	
5.10	attractive space. Gymnasium (or covered P.E. area) adequately serves	10	8	
5.10	physical education instruction.	5	5	
5.11	Pre-kindergarten and kindergarten space is appropriate for			
	age of students and nature of instruction.	10	8	
5.12	Music Program is provided with adequate sound-treated			
E 40	space. Space for art is appropriate for special instruction, supplies,	5	4	
5.13	and equipment.	5	4	
5.14	Space for technology education, including computer labs,	, ,	7	
	permits use of state-of-the-art equipment.	5	4	
5.15	Space adjacent to classrooms is provided for small groups			
E 15	and remedial instruction.	5	3	
5.16	Storage for student and teacher material is adequate.	5	4	
Supp	l ort Space			
	Teachers' lounge and work areas reflect teachers as			
	professionals.	10	8	
5.18	Cafeteria/cafetorium is attractive with sufficient space for			
F 40	delivery, storage, and food preparation.	10	8	
5.19	Administrative offices provide an appearance consistent with the maturity of the students served.	5	5	
5.20	Counselor's office insures privacy and sufficient storage.	5	4	
	Clinic is near administrative offices and is equipped to meet			
	requirements.	5	5	
5.22	Suitable reception space is available for students, teachers,			
F 00	and visitors.	5	4	
5.23	Administrative personnel are provided sufficient work space and privacy.	5	4	
	and privacy.		1 7	
	Total Educational Adequacy	200	160	
		1		
		Maximum Points		
L_	Criteria	Allowed	Value	Commentary
	Environment for Education			
Exter	ior Environment			
61				
	Overall design is aesthetically pleasing to age of students	15	15	
	Overall design is aesthetically pleasing to age of students. Site and building are well landscaped.	15 10	15	
	Overall design is aesthetically pleasing to age of students. Site and building are well landscaped. Exterior noise and poor environment do not disrupt	10	10	
6.2	Site and building are well landscaped. Exterior noise and poor environment do not disrupt learning.			
6.2	Site and building are well landscaped. Exterior noise and poor environment do not disrupt learning. Entrances and walkways are sheltered from sun and	10	10	
6.2 6.3	Site and building are well landscaped. Exterior noise and poor environment do not disrupt learning. Entrances and walkways are sheltered from sun and inclement weather.	10 10	10 10 6	
6.2 6.3	Site and building are well landscaped. Exterior noise and poor environment do not disrupt learning. Entrances and walkways are sheltered from sun and	10	10	
6.2 6.3 6.4 6.5	Site and building are well landscaped. Exterior noise and poor environment do not disrupt learning. Entrances and walkways are sheltered from sun and inclement weather. Building materials provide attractive color and texture. or Environment	10 10	10 10 6	
6.2 6.3 6.4 6.5	Site and building are well landscaped. Exterior noise and poor environment do not disrupt learning. Entrances and walkways are sheltered from sun and inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an	10 10 10 5	10 10 6 5	
6.2 6.3 6.4 6.5 Interi	Site and building are well landscaped. Exterior noise and poor environment do not disrupt learning. Entrances and walkways are sheltered from sun and inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an impetus to learning.	10 10	10 10 6	
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6.2 6.3 6.4 6.5 Interi 6.6 6.7 6.8	Site and building are well landscaped. Exterior noise and poor environment do not disrupt learning. Entrances and walkways are sheltered from sun and inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an impetus to learning. Year around comfortable temperature is provided throughout the building. Ventilating system provides adequate circulation of clean air. Lighting system provides proper intensity, diffusion, and distribution of illumination.	10 10 10 5 5 20	10 10 6 5 20	
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6.2 6.3 6.4 6.5 Interi 6.6 6.7 6.8 6.9 6.10 6.11 6.12 6.13 6.14 6.15	Site and building are well landscaped. Exterior noise and poor environment do not disrupt learning. Entrances and walkways are sheltered from sun and inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an impetus to learning. Year around comfortable temperature is provided throughout the building. Ventilating system provides adequate circulation of clean air. Lighting system provides proper intensity, diffusion, and distribution of illumination. Drinking fountains and restrooms facilities are conveniently located. Communication among students is enhance by commons area(s) for socialization. Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age group. Large group areas are designed for effective management of students.	10 10 10 10 5 20 15 15 15 10 10 10 10 10	10 10 6 5 5 20 15 15 15 12 8 10 8	

Building	Construction Date	<u>Size</u>	Grade Level
Eshleman Elementary School	(1958) 1966,1986,2003	42,614 SF	K-6

Location 545 Leaman Avenue

Millersville, PA 17551

Site Size Approximately 12 acres

Municipal Jurisdiction Millersville Borough, Lancaster County

Occupancy Group Group 'B' Educational

Construction Type Non-Combustible

Applicable Building Code

✓ PA Uniform Construction Code (UCC):

International Existing Building Code / 2009

International Building Code / 2009

ICC Electrical Code 2006 (utilizes National Electric Code-

2002 standards)

International Energy Conservation Code 2009

International Existing Building Code 2009

International Fire Code 2009
International Fuel Gas Code 2009
International Mechanical Code 2009
International Plumbing Code 2009

International Residential Code 2009
International Urban-Wildland Interface Code 2009

ADAAG (Americans with Disabilities Accessibility

Guidelines)

ASHRAE Standards

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

FACILITY OVERVIEW

Site:

The Eshleman Elementary School is located in the Borough of Millersville, in a residential and light commercial area on a 12 acre site. The School is bordered on the north by residential properties, the south by John Herr's market, the west by farmland and on the east by light commercial properties. The School is located on Leaman Avenue, which is accessed from Manor Avenue (route 999), in the borough of Millersville. Site access for bus and parent drop off, as well as vehicular parking, is located on the south side of the building.

The existing site is relatively level but does have varying degrees of gentle slope, allowing for adequate and positive drainage. Hard surface play areas are located on the south side of the building, as are soft play and kindergarten play areas. Play fields are located on the southwest portion of the site and border the John Herr's market property. Access to all play areas from the building is good and requires no conflicts with vehicular traffic.

The building is simple in plan, with intersecting main corridors running in the north-south and east-west directions, with all program spaces accessed from these corridors. Future expansion of the building is possible, but limited due to the site size and configuration.

Building:

The Eshleman Elementary School underwent a comprehensive renovation and construction project, having been completed in 2003. Recent Capital Improvements include upgrades to the building security system in 2008. The School is a one story building with exterior stone, masonry and steel siding veneer. The building structural system is masonry load bearing with a steel framing and metal joist roof structure. The 2003 renovation project addressed the identified life-safety, physical plant and educational program needs in order to effectively extend the life span of the building and its operational systems, and should serve the Penn Manor School District well into the future. Inasmuch as a building is a static, non-dynamic entity, subject to the forces of nature and the aging and deterioration process, it is recommended that annual visual inspections of the building, including the interior, exterior and the roof, be completed as part of a the annual school district maintenance program.

Aerial Photograph



Floor Plan



I. ADA, SAFETY & BUILDING CODE

Accessibility

- Accessible paved routes through the site need to be added to address accessibility to the playgrounds, play equipment and the lower playing fields. Exterior doors in the rear lacks an exterior pad at the door level. ADA compliant walks should also be added to several exterior doors in the rear.
- The number of accessible parking spaces is adequate based on approximately 50 marked parking spaces.
- One (1) damaged sign post should be replaced.
- The exterior railings appear to be acceptable.

Code Compliance

- Adequate exterior lighting appears to be in place in the front of the building.
- The front drop-off is adequate in size and configuration for the buses. A Parent drop-off and pick-up is designated within the front parking lot. A pedestrian island and/or designated parent parking spaces should be added in this front lot to better facilitate parent pick-up. The vehicular circulation turning onto the south exit driveway appears confusing in bringing together three intersections onto the driveway in very close proximity, a potential safety issue. This area should be reconfigured and two of the intersections combined into one. The service area, located in the rear, has adequate area and turn-around space.
- Parking is adequate for daytime use; there are approximately 50 marked parking spaces. There are some limited areas for parking expansion in the front of the school. If desired, additional parking would better accommodate special events such as concerts and open houses. There are bike racks on grass inside a curbed island in the parking lot. Relocating the bike racks and providing a pad under them is recommended.
- The existing wood fence screening the trash area is deteriorated and should be replaced with a lower maintenance material such as plastic or wood composite.
- The pavement areas appear to be well drained. There are areas of erosion in the detention basin which should be repaired and vegetation established. There are also area within the woodcarpet play areas that appear to have springs or to be poorly drained. A sub-drain system is recommended to address drainage within the play grounds

II. EDUCATIONAL PROGRAM / FUNCTIONAL

Eshleman Elementary is located on an approximately 12.70 acre site, which is slightly less than the PDE planning standard of 13.5 acres (10 acres PLUS one additional acre per every 100 students). It's noted that most of the nearly 13 acres is usable and has been developed effectively. There appears to be

potential to acquire additional land, as there is open space to the north of the site, should expansion of the school become desirable.

III. PHYSICAL PLANT

A. Site

- The asphalt paved areas are currently in good condition.
- The concrete curbs appear to be in good condition. The outside edge of the walk running along south driveway has not been properly backfilled, creating a tripping hazard at the edge of the walk. This area should be addressed with the addition of soil and reseeding to bring the lawn even with the walk. The walk along the Leaman Avenue heading to Manor Avenue is too narrow for pedestrians walking to and from the school. Widening of this walk should be investigated as a potential cooperative venture with the Borough.
- Play equipment appears to be in good condition. The overall size of the play equipment areas are larger and more extensive than at most of the other Penn Manor Elementary Schools. It's recommended that the paved play areas be color coated for appropriate games and to restore the basketball courts. Rubber pads should be installed under the swing wear areas (similar to the Martic Elementary renovation) to reduce maintenance and enhance safety on the swings. Edge restraints or curb between the lawn areas and woodcarpet is recommended to contain the wood chips and better define the fall areas around equipment. The flagpole is showing signs of corrosion and wear and is recommended for replacement
- There are a few trees in decline that should be removed. Overgrown trees and shrubs along the north property line should be thinned out if they are on the school's property.
- There appears to be some poorly drained grass field areas toward the rear of the site that are showing wear and compaction. Renovation of the fields and installation of sub-drainage is recommended.
- The building is connected to public water and sewer; no problems reported.
- The backstop fencing at the north softball field is rusted and has wood boards which are splintering and could injure someone. Replacement of the backstop is recommended.

B. Building

- The building underwent comprehensive renovations in 2003 and all major building components and systems were either replaced or upgraded. The following educational program related observations / recommendations have been identified:
 - Eshleman Elementary School is one of two elementary schools in the school district (Letort ES), that has a multipurpose room and not a separate

gymnasium and cafeteria. A separate gymnasium would be preferred over a multi-purpose room, as the space is unable to be used during lunch hours, however for a school of this size, a multi-purpose is considered acceptable. Additionally, there is limited site area to have a separate gymnasium.

- Additional tackable space for display of educational materials and student work is recommended for the classrooms.
- The art and music program share an instructional space. The space is undersized to adequately support both programs and lacks sufficient storage.
- The school has inadequate amount of space to house support staff.
- The school has an inadequate amount of small group, or pull-out type academic support spaces.
- The gifted instructional room is undersized to support the current class size.

C. Interior Finishes

Interior finishes are in very good condition with no immediate recommendations.
 Routine maintenance will maintain the finishes in good condition for the foreseeable future.

D. Specialties

 Interior specialties are in very good condition with no immediate recommendations. Routine maintenance will maintain the specialties in good condition for the foreseeable future.

E. HVAC

The HVAC System was replaced in 2003. A ground source heat pump system was installed consisting of a 2-pipe loop water system connected to heat pump units throughout the building. The loop is connected to an underground closed loop, geothermal bore field for the purpose of extracting heat from the ground during the heating season and rejecting heat during the cooling season. Ventilation air is provided through central energy recovery units. An electronic DDC system is installed to provide automatic temperature control.

F. Plumbing

In general, domestic water piping was upgraded as part of the 2003 project. Storm water and sanitary piping was generally re-used. Domestic hot water is provided by a gas-fired water heater. The building is served by a public sanitary system. Public water is available.

Fire Protection

A sprinkler system is installed for this building.

G. Electrical

Electrical Service

- The incoming electrical service is rated 1600 amps at 120/208 volts. The main service equipment is a floor mounted switchboard which was installed during the 2003 renovation. The service equipment can be used for another 35 years but may prove to be undersized if a large amount of additional space is added to the building.
- The existing utility company transformer is pad mounted and located at the south side of the building.

Electrical Distribution

All of the circuit breaker panels in the building were installed in 2003 or added at a later date. These panels are acceptable for use for another 35 years. Some panels have space for added loads and some are full or nearly full.

Emergency Power & Lighting

- The existing emergency power source is a 35 kW natural gas fueled generator located in the basement of the building. This generator was installed in 2003 and is acceptable for at least 20 more years of service unless load is added to it. The generator currently powers emergency lighting and the UPS for the card access, intrusion detection and CCTV Camera Systems.
- The level and area of coverage of emergency lighting appear to be adequate. In accordance with the evaluation criteria the telephone, data and paging systems should be added to the generator. It may also be desirable to power the walk-in refrigerator and freezer from the generator. Adding refrigeration loads to the emergency power system may require the generator to be replaced with a larger unit.
- Luminaires throughout the building were replaced in the 2003 renovation and are in useable condition. Most luminaires utilize T8 and compact fluorescent lamps. These luminaires can be used for the next 15 years.
- Gym luminaires are equipped with compact fluorescent lamps. Gym lighting should be equipped with motion sensors to reduce power consumption.
- Lighting in the cafeteria, library, office and miscellaneous spaces also use 4 lamp lensed troffer and deep cell parabolic troffer style luminaires. Replacing the deep cell parabolic luminaires with open reflector troffers will increase energy efficiency and lighting levels.
- Exterior building mounted security lighting is currently provided on all sides of the building. These luminaires utilize HID (high intensity discharge) and compact fluorescent lamps. LED lighting should be provided around the entire perimeter of the building to reduce energy consumption.

- Demolished lamps and ballasts should be disposed of in accordance with regulations for hazardous materials.
- Existing parking and walkway areas are illuminated by pole mounted HID shoebox style luminaire. Existing luminaires are adequate for most parking areas.

Lighting Controls

- Classrooms have 2 wall switches arranged to switch the front and back of the rooms separately. This provides two levels of lighting and darkens the teaching wall during the use of projectors. No automatic controls are currently provided. Provide motion sensors to reduce energy consumption in classrooms. Provide switches on the teaching wall to allow the teacher to adjust light levels without leaving the front of the room. Classrooms with soffits along one wall have an additional switch and row of lights to illuminate the area under the soffit.
- Provide two levels of lighting in corridors. Provide full lighting during normally occupied times and reduced lighting levels for those periods of time when the building has minimum occupancy. Provide time based control of corridor and stair lighting to insure that lights are turned off during unoccupied times and to reduce the amount of staff time needed to turn lights on at the beginning of the day and off at the end of the day. Provide corridor and stairway nightlights for security and safety.
- Provide motion sensor control of lighting in offices, multi-purpose room, library and miscellaneous spaces. For safety do not provide automatic control of lighting in the kitchen.
- Daylight sensors could also be provided but their operation would require a ballast replacement in the luminaires located within 15 feet of the windows. At current costs for electricity daylight sensors will not be paid for by energy savings before this building is renovated.
- If the District purchases electrical power from a company which offers a rate reduction for load shedding, it will be necessary to provide load shedding controls for lighting (and HVAC equipment).

Fire Alarm System

The existing 2003 fire alarm system is functional but is not fully ADA and Code compliant. The existing system is usable for another 10 to 15 years.

Clock System

Presently all classrooms have battery powered clocks which are not synchronized. Most other instructional spaces have clocks. Provision of a wireless master clock system for this building would be consistent with other elementary schools in the District and would assist in maintaining coordination for activities which occur outside of the classroom.

Intercom & Sound System

• An intercom system which allows two way communications between the office and each classroom by way of telephone handsets exists and is in operable condition. This system is usable for 10 more years. The system does not allow general paging in restrooms, corridors, library or multi-purpose room. Extend paging into restrooms and other spaces to increase the coverage for emergency announcements.

Telephone System

Each classroom is provided with a telephone which operates as Voice Over the Internet (VOIP). The system is in good condition. The electronics for this system should be provided with emergency power.

Data Networking

- The building is equipped with a data network which is no longer capable of meeting all of the building's needs. Network patch panels and switches are located behind the music room near the center of the building. The network station cabling is Category 5e. Connection to the District file servers in the High School is by way of leased fiber optic lines. Provide a dedicated parking area for mobile computer carts.
- In order to maintain reasonable parity with recently remodeled buildings, Category 6 Cable should be provided to the ceiling cavity and teacher's desk in each classroom to support classroom technology upgrades.

Security System

- The building presently has a two closed circuit TV cameras, a recorder and a monitor which view activity in the main lobby. The monitor is located in the School Office and the recorder is in the Custodians area. The Building has an intrusion detection system with motion sensors in some corridors.
- Additional cameras should be provided in the multi-purpose room, lobby, playground, corridors and exterior of the building. The recorder and a small monitor should be placed in the headend room. Access to live and recorded images via the wide area network should be provided.
- Door contacts on exterior doors have been provided to ensure that all doors are closed when the last person leaves the building.
- An access control system is in place at several exterior doors.
- Installation of additional motion detectors in corridors, computer equipment rooms and offices containing sensitive records would reduce the potential for vandalism and unauthorized access to records.

Theatrical Lighting

 A limited amount of theatrical lighting is installed in the gym and is consistent with other elementary buildings in the District.

Public Address System

• The existing multi-purpose room has a public address system which meets program needs.

Classroom Presentation Equipment

A few classrooms have portable smart boards. A few portable LCD projectors are available. Each classroom was provided with a receptacle and two data ports at the ceiling level. Existing surface raceway is available to house a projector port and associated cabling. Provide smart boards or Mimeo (computer-marker board interface device) and LCD projectors in classrooms, instructional spaces, conference rooms and the library in accordance with the District Technology Plan. Provide a media transport system to deliver images from the teacher's computer, sound and video programming to the projector. Provide an amplifier and speakers to enhance the audio from the LCD. Provide a wireless microphone for use by the teacher in classrooms and large instructional spaces.

Video Distribution

This building does not have a video distribution system. The District IT Department does not feel that a traditional dedicated video distribution system is necessary because equivalent content is available over the internet.

Receptacles

Receptacle locations are generally adequate. Renovations which change room layouts will necessitate providing or relocating receptacles. A dedicated circuit should be provided for the teacher's computer and LCD projector. At least three other circuits should be provided in each classroom.

Facility Condition Index

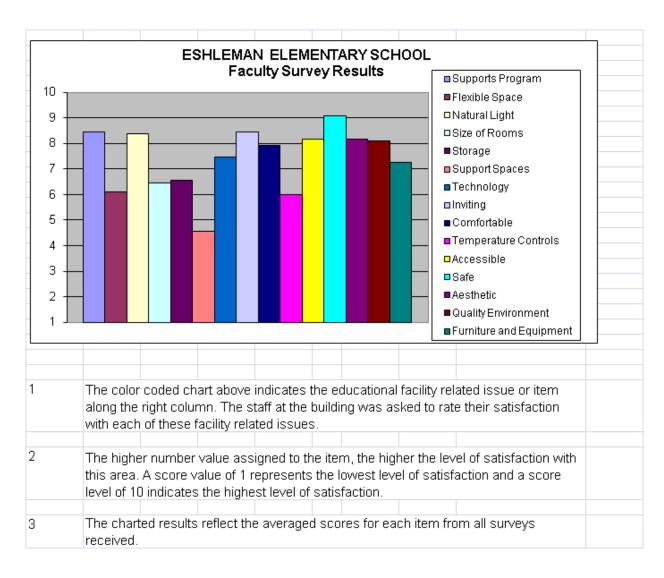
The Facility Cost Index (FCI) is used throughout the facility condition assessment industry as a relative indicator of a buildings condition. Based on industry-wide standards, if the cost to repair exceeds 60% of the cost to replace, the facility should be looked at more closely as a possible candidate for replacement. As a rule of thumb, an FCI below 10% is considered good. An FCI above 60% would suggest that the building is a candidate for replacement.

	FCI RATINGS											
1	0	General Maintenance										
2	10	Minor										
3	50	Moderate										
4	75	Major										
5	100	Replace										

	Eshleman Elementary School										
No.	Componenet / System	Percent of total	Rating (1 - 5)	Rating %	Adj %						
1	Roofing	4.9%	1	0	0.00%						
2	Exterior Walls	5.4%	1	0	0.00%						
3	Exterior Windows	2.4%	1	0	0.00%						
4	Exterior - Doors	0.6%	1	0	0.00%						
5	Interior Floors	7.6%	1	0	0.00%						
6	Interior Walls	4.0%	1	0	0.00%						
7	Interior Ceilings	5.4%	1	0	0.00%						
8	Interior - Other	3.3%	1	0	0.00%						
9	HVAC	20.7%	1	0	0.00%						
10	Electrical Lighting	10.0%	3	0.5	5.00%						
11	Electrical Distrib.	1.3%	1	0	0.00%						
12	Electrical Other	0.5%	3	0.5	0.25%						
13	Plumbing	5.5%	1	0	0.00%						
14	Fire / Life Safety	2.3%	3	0.5	1.15%						
15	Specialties	0.8%	1	0	0.00%						
16	Structural	19.3%	1	0	0.00%						
17	Technology	3.5%	3	0.5	1.75%						
18	Accessibility	2.5%	1	0	0.00%						
					8.15%						

Faculty Survey:

The average score reported by the staff for these building characteristics is 7.41, which is an above average score and reflects the good condition of the facility as a result of the renovation project in 2003. While not a technical survey or evaluation, school facility staff that spend considerable time in a school building have an innate understanding and perception of these identifiable building characteristics. The response from teaching staff generally is indicative of the overall existing conditions, quality and adequacy of the educational environment. Refer to the detailed building assessments for a detailed qualitative facility assessment.



PENN MANOR SCHOOL DISTRICT											
ESHLEMAN ELEMENTARY SCHOOL APPRAISAL	,										

_				
	Criteria	Maximum Points Allowed	Assessed Point Value	Commentary
1	The School Site			
1.1	Site is large enough to meet educational needs as defined by state and local requirements	25	25	Ideal site size would be 13-14 acres. Current site size is approximately 12 acres.
1.2	Site is easily accessible and conveniently located for the present and future population.	20	20	
1.3	Location is removed from undesirable business, industry, and traffic.	10	10	
1.4	Site is large enough for future expansion, if needed.	5	2	Configuration does not allow for expansion
1.5	Topography is varied enough to provide desired appearance but without steep inclines.	5	5	
1.6	Site is well landscaped.	5	5	
1.7	Site has stable, well drained soil free of erosion.	5	5	
1.8	Site is suitable for special instructional needs, e.g. outdoor learning.	5	4	
1.9	Pedestrian services include adequate sidewalks with designated crosswalks, curb cuts, and correct slopes	5	5	
1.10	Sufficient on-site, solid surface parking for faculty and staff is provided.	5	5	
1.11	Playgrounds are separated from streets and parking areas.	5	5	
1.12	Playgrounds are well equipped and appropriate for the age levels.	5	5	
	Total - The School Site	100	96	

		Maximum	Assessed Point	_
	Criteria	Points Allowed	Value	Commentary
2	Structural and Mechanical Features			
	Structure meets all barrier-free requirements both externally and internally.	15	15	
2.2	Roofs appear sound, have positive drainage, and are weather tight.	15	12	
2.3	Foundations are strong and stable with no observable cracks.	10	10	
	Exterior and interior walls have sufficient expansion joints and are free of deterioration.	10	10	
	Entrances and exits are located so as to permit efficient student traffic flow.	10	10	
	Building "envelope" generally provides for energy conservation (See criteria)	10	8	A lot of curtain wall, but inherent in original design (opportunities maximized)
2.7	Structure is free of friable asbestos and toxic materials.	10	10	
2.8	Interior walls permit sufficient flexibility for a variety of class sizes.	5	2	
2.9	Well maintained ceilings adequately retard sound.	5	4	
	Adequate light sources, well maintained, and properly placed are provided.	15	15	
	Electrical controls are safely protected with disconnect switches easily accessible.	10	10	
	Labeled electrical system is not subject to over-heating.	10	8	
	Drinking fountains are adequate in number and placement, and are properly maintained including provisions for the disabled.	10	10	
	Number and size of restrooms meet requirements.	10	10	
	Internal water supply is adequate with sufficent pressure to meet health and safety requirements.	10	8	
	Drainage systems are properly maintained and meet requirements.	10	8	
	Fire alarms, smoke detectors, and sprinkler systems are properly maintained and meet requirements.	10	10	
2.18	Intercommunication system consists of a central unit that allows dependable two-way communication between the office and instructional areas.	10	8	System does not allow for general paging in restrooms, library, corridors or multi- purpose room
2 19	Undergound electrical service is provided.	5	5	
	Exterior water supply is sufficient and available for normal usage.	5	5	
2.21	Each teaching/learning area has four or more convenient wall outlets.	5	5	
		200	183	

CEFPI Appraisal

Т		Maximum Points	Assessed Point										
	Criteria	Allowed	Value				Com	mentai	ry				
3	Plant Maintainability												
	Windows, doors, and walls are of material and finish												
	requiring minimum attendance.	10	8										
	Outdoor light fixtures, electric outlets, equipment, and other fixtures are accessible for repair and replacement.	10	8										
	Floor coverings throughout the building require minimum	10	· ·										
	care.	10	8										
	Ceilings and walls throughout the building, including service		l _										
	areas, are easily cleaned and resistant to stain. Built-in equipment is designed and constructed for ease of	10	8										
	maintenance.	10	8										
	Floors in restrooms, kitchen, cafeterias, and corridors												
	require a minimum of maintenance.	10	8										
	Hardware and finishes are of durable quality.	10	10										
3.8	Restroom fixtures are wall mounted and of quality finish.	10	10										
3.9	Adequate custodial storage space with water and drain is	10	10										
	accessible throughout the building.	10	10										
	Adequate electrical outlets and power are available in every												
	area to permit routine cleaning.	10	10 88										
	Total Plant Maintainability	100	88	J									
		Maximum Points	Assessed Point										_
.	Criteria	Allowed	Value				Com	mentai	ry				
4	Building Safety and Security												
	ecurity												
	Student loading areas are segregated from other vehicular		40	_ .									
	traffic and pedestrian walkways. Access streets have sufficient signals and signs to permit	15	12	There are som	e issue	es, but they a	are dic	tated by	the site	•			
	safe entrance to and exit from school area.	5	4										
	Off-site sidewalks are available for safety of pedestrians.	-											
		5	5										
	On-site sidewalks and steps are designed and maintained	_		0									
	for safety.	5	4	Could be impre	ovea sc	mewnat							
	Vehicular entrances and exits permit safe traffic flow. Locations and types of playground equipement are free	5	4										
	from hazard.	5	5										
		-											
	ng Safety												
	The heating unit(s) is located away from student occupied areas.	20	20										
	Multi-story buildings have at least two stairways.	15	15										
	Exterior doors open outward and are equipped with panic												
	hardware.	10	10										
	Emergency lighting is provided throughout the building with	40	40										
	exit signs on separate electrical circuit. Classroom doors are recessed and open outward.	10 10	10 10										
	Building security systems are provided to assure	10	10										
	uninterrupted operation of the educational program.	10	8	Recommend a	ddition	al motion se	nsors	and car	neras				
	Flooring (including ramps and stairways) is maintained in a	_			_	·	_	_	_		_	_	
	nonslip condition. Stair risers (interior and exterior) do not exceed 6 1/2	5	5										
	inches and range in number from 3-16.	5	5										
4.15	Glass is properly located and protected with wire or safety												
	material to prevent accidental student injury.	5	5										
	Fixed projections in the traffic areas do not extend more than eight inches form the corridor wall.	5	5										
	Traffic areas terminate at an exit or a stairway leading to an	5	5										
	egress.	5	5										
	gency Safety												
	Adequate fire safety equipment is properly located. There are at least two independent exits from any point in	15	15										
	the building.	10	10										
4.20	Stairways and exits are of noncombustible material.	10	10										
4.21	Fire-resistant materials are used throughout the structure.												
	Automotic and manual amorganay alarm ayatam with a	10	8										
4.00			I	ı									
	Automatic and manual emergency alarm system with a distinctive sound and flashing light is provided.	10	10										
	distinctive sound and flashing light is provided. Ample space is provided in corridors or protected areas for	10	10										
4.23	distinctive sound and flashing light is provided.	5 200	10 5 190										

	Criteria		um Po	Assesse Vali								Comi	ment	arv					
5	Educational Adequacy		OHCU	vuii	10							001111							
	emic Learning Space																		
5.1																			
	Size of academic learning areas meet desirable standards. Classroom space permits arrangements for small group		25	25	1														
	activity.		15	12															
	Location of academic learning areas is near related																		
	educational activities and away from disruptive noises.		10	10	1														
	Personal space in the classroom away from group instruction allows privacy time for individual students.		10	6															
	Storage for student materials is adequate.		10	8															
	Storage for teacher materials is adequate.		10	8															
	al Learning Space Size of special learning area(s) meets standards.		15	12															
	Design of special learning area(s) in eets standards.		15	12															
	instructional need.		10	8															
	Library/Resource/Media Center provides appropriate and																		
	attractive space. Gymnasium (or covered P.E. area) adequately serves		10	10															
	physical education instruction.		5	5															
	Pre-kindergarten and kindergarten space is appropriate for																		
	age of students and nature of instruction. Music Program is provided with adequate sound-treated		10	10															
	space.		5	2															
	Space for art is appropriate for special instruction, supplies,																		
	and equipment.		5	4															
	Space for technology education, including computer labs, permits use of state-of-the-art equipment.		5	4															
	Space adjacent to classrooms is provided for small groups		J	4															
	and remedial instruction.		5	3		Niche i	in hal	lway,	outide	of cl	assro	oms do	ors v	orks	well fo	r one 1	o one	•	
5.16	Storage for student and teacher material is adequate.		5	4															
Sunn	ort Space	-																	
	Teachers' lounge and work areas reflect teachers as																		
	professionals.		10	10	1														
	Cafeteria/cafetorium is attractive with sufficient space for																		
	delivery, storage, and food preparation. Administrative offices provide an appearance consistent	ļ	10	6															
	with the maturity of the students served.		5	5															
5.20	Counselor's office insures privacy and sufficient storage.		5	5															
	Clinic is near administrative offices and is equipped to meet		_	_															
	requirements. Suitable reception space is available for students, teachers,		5	5															
	and visitors.		5	4															
	Administrative personnel are provided sufficient work space																		
\vdash	and privacy.	ļ	5	4	1														
	Total Educational Adequacy	 	200	17	n														
						•													
Ь—			_																
	Criteria		um Po owed	Assesse Valu								Comi							
6	Environment for Education	All	oweu	Vali	ie							COIIII	nenta	ai y					
	ior Environment																		
	Overall design is aesthetically pleasing to age of students.		15	12															
	Site and building are well landscaped. Exterior noise and poor environment do not disrupt		10	8															
	learning.		10	8															
	Entrances and walkways are sheltered from sun and																		
	inclement weather.		10	6		Some	cover	rage a	t mai	n entr	ance								
6.5	Building materials provide attractive color and texture.	 	5	5	1	 					1	1			1		ı —	1	1
Interi	or Environment					\vdash					1				+			\vdash	+
6.6	Color schemes, building materials, and decor provide an				'	T '					-							'	'
	impetus to learning.		20	16	i														
	Year around comfortable temperature is provided throughout the building.		15	15															
	Ventilating system provides adequate circulation of clean		10	18															
	air.		15	15	i														
	Lighting system provides proper intensity, diffusion, and		45	,.															
	distribution of illumination. Drinking fountains and restrooms facilities are conveniently		15	15	1														
	located.		15	15	i														
	Communication among students is enhance by commons																		
	area(s) for socialization.		10	6															
6.12	Traffic flow is aided by appropriate foyers and corridors.		10	10	1														
	Areas for students to interact are suitable to the age group.		10	6															
6.14	Large group areas are designed for effective management																		
	of students.		10	8															
				l		I													
6.15	Acoustical treatment of ceilings, walls, and floors provides		10	0		l													
6.15	Acoustical treatment of ceilings, walls, and floors provides effective sound control.		10	8															
6.15 6.16	Acoustical treatment of ceilings, walls, and floors provides		10	10															
6.15 6.16 6.17	Acoustical treatment of ceilings, walls, and floors provides effective sound control. Window design contributes to a pleasant environment.				l														

Building	Construction Date	Size	Grade Level
Conestoga Elementary School	(1952) 1957, 1986, 1994	42,458 SF	K-6

Location 100 Hill Street

Conestoga, PA 17516

Site Size Approximately 11 acres

Municipal Jurisdiction Conestoga Township, Lancaster County

Occupancy Group Group 'B' Educational

Construction Type Non-Combustible

Applicable Building Code

PA Uniform Construction Code (UCC):

International Existing Building Code / 2009

International Building Code / 2009

ICC Electrical Code 2006 (utilizes National Electric Code-

2002 standards)

International Energy Conservation Code 2009

International Existing Building Code 2009

International Fire Code 2009
International Fuel Gas Code 2009
International Mechanical Code 2009
International Plumbing Code 2009
International Residential Code 2009

International Urban-Wildland Interface Code 2009

- ADAAG (Americans with Disabilities Accessibility Guidelines)
- ASHRAE Standards

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

FACILITY OVERVIEW

Site:

The Conestoga Elementary School is located in Conestoga, PA, a small town of about 3,500 residents in the Penn Manor School District. The school is located in a residential area and is accessed from Main Street in Conestoga. Bus Drop off, as well as visitor access and parking is located on the east side of the building. Parent drop-off and additional vehicular parking is located on the north side of the building.

The school site is relatively level. Hard and soft surface play areas are located on the north side of the building. Play fields are located on the east side of the building. ion of the site and border Nissley Lane. Access to all play areas from the building is good and requires no conflicts with vehicular traffic.

The building is "U" shaped in plan with a main corridor and two perpendicular intersecting wings. Future expansion of the building is possible and will be dictated by existing site conditions.

Building:

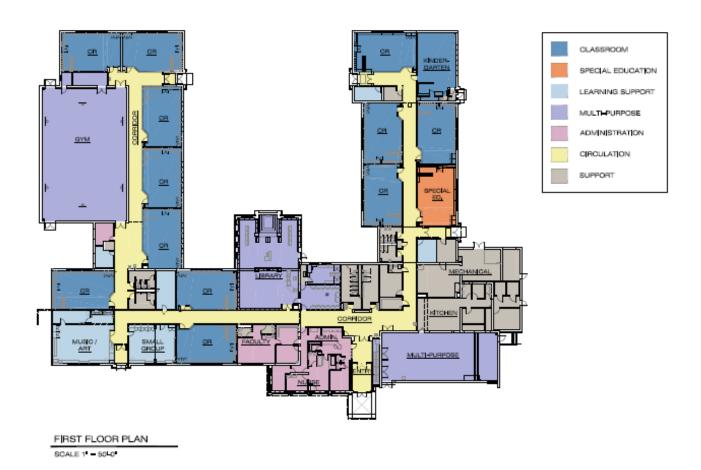
The Conestoga Elementary School was originally constructed in 1952, with subsequent renovation and construction projects in 1957, 1966 and 1994. Recent Capital Improvements include upgrades to the building security system in 2008. The School is a one story building with exterior brick veneer. The building structural system is masonry load bearing, with some steel framing roof joist structure.

The Conestoga Elementary School, having undergone a major renovation project in 1994, is in good condition. The lifespan of the major building components operational systems is in the 25 – 30 year range and as such, the building should continue to serve the Penn Manor School District for the foreseeable future. Annual Capital Maintenance expenses can be expected to increase as the building systems and major components begin to age. Inasmuch as a building is a static, non-dynamic entity, subject to the forces of nature and the aging and deterioration process, it is recommended that annual visual inspections of the building, including the interior, exterior and the roof, be completed as part of a proactive and on-going maintenance program.

Aerial Photograph



Floor Plan



I. ADA, SAFETY & BUILDING CODE

Accessibility

- Accessible routes within the site for parking, walks and building entrances are generally near to compliance. Some minor items should be addressed: The wood carpet play equipment areas should be made accessible by modifying the existing bituminous curb. Sidewalk curb ramps (i.e.. the front entrance) should have detectable warning panels added where ramps meet the vehicular way.
- The number of accessible parking spaces is adequate based on approximately 70 marked parking spaces. A van accessible parking space should be added. It's recommended that consideration should be given to aligning the handicapped parking aisle with the front entry doors and existing curb ramp to provide a closer, more direct access to the main building entrance.
- A sign indicating a handicapped, van accessible parking space should be added.
- The railings on the exterior steps, which lead off the property and connects Elm Street to the north, should be upgraded to current IBC standards for handrail extensions at top and bottom of the stairs.
- There are several locations in the student toilet rooms, at the accessible sinks, where the exposed metal piping needs wrapped or replaced with pvc piping.
- The kitchen toilet room does not meet ADA requirements.
- The Kindergarten toilet room is not ADA accessible.

Code Compliance / Safety

- The off-site walkway that leads from the front parking lot to Elm Avenue does not appear to have any lighting. Walkway lighting should be considered if permissible by the landowner.
- The front drop -off is adequate in size and configuration for the buses. A small, separate parent drop-off appears to be in place on the north side of the building.
- Service vehicle for trash and deliveries also utilize the same north driveway as is designated for parents. Trash dumpster screening or enclosure should be considered in this area. The service area appears to be undersized; consider reconfiguring this area for ease of truck access and maneuvering. Cross-walk pavement markings should be added to clearly mark the pedestrian area that cross parking and driveways.
- Parking is adequate for daytime use. There are areas for parking expansion in front of the school. If desired, additional parking would better accommodate special events such as concerts and open houses.
- The existing chain link fencing is in need of replacement and/or repair in several areas, notably the fence along the top of the retaining wall on the western end of

the paved play area. Along the south property line, near the front of the school, a wood fence enclosure around bags of recycling materials should be replaced or relocated. Barbed wire fencing at the top of the chain link fencing in this area should be considered for removal for safety purposes.

• The lawns and pavements appear to be well drained.

II. EDUCATIONAL PROGRAM / FUNCTIONAL

- Conestoga Elementary is located on an approximately 10 acre site, which is less than the PDE planning standard of 10 acres PLUS one additional acre per every 100 students. However, the Conestoga site benefits from additional open space to the north which is part of a local park/historical society. It appears that this local park and the school could share grass playing fields as needed, and benefit from the compatible recreation uses.
- The stage is a small performance area, further compromised by the fact that it is also used for storage.
- The music practice room is also being used as a storage room, reducing the amount of available program space.
- The school has an inadequate amount of small group, or pull-out type academic support spaces.
- A larger faculty copy / workroom is desirable.
- The faculty dining room is not of an adequate size to accommodate faculty and support staff.
- The Art and Music share a room and the storage is inadequate to support both programs.
- Additional storage is needed for educational materials and supplies.

III. PHYSICAL PLANT

A. Site

- The parking lots and drives are scheduled for repair and overlay in 2010.
- Concrete sidewalks are it good condition. There several areas where the concrete
 has settled and there is a minor tripping hazard. These areas should be
 monitored and repaired of the condition worsens.
- Play equipment appears to be in good condition. The overall size of the play equipment area is smaller than at most of the other Penn Manor Elementary Schools.

Several worn or damaged benches should be repaired or replaced.

 Areas of overgrown or declining trees and shrubs should be removed. The shrubs overhanging the walks on the northeast corner of the building are recommended for removal. Selective removal of overgrown shrubs in the rear courtyard is recommended.

The addition of a landscape border along the north property line is recommended to define the property border, and provide visual and physical screening to the adjoining properties.

- There are grassed drainage ways that are eroded, and losing topsoil, notably in the detention basin and on the slope leading down to Kendig Road. The eroded areas should be stabilized and repaired.
- No reported sewer or water issues.
- Junior sized baseball and soccer fields are on the Conestoga property. The
 infield appears to be well drained and maintained. It's recommended that the
 sideline fences have bottom rails added for better stability of the fence fabric.

B. Building

- The weatherstripping in the exterior doors is wearing out and should be considered for replacement.
- The exterior "dryvit" material fascia and trim is stained and should be cleaned, have the cracks patched and recoated and sealed.
- There is an outside exit from the multi-purpose room that has exterior concrete steps to grade. The bottom step, where the vertical handrail post is embedded in the concrete, has a section of concrete missing and should be patched.
- In the gymnasium, the basketball backstop padding should be replaced.
- In the gymnasium one of the exterior exit doors sticks and does not automatically close. This condition should be corrected.

C. Interior Finishes

- There are miscellaneous water stained ceiling tiles that should be replaced.
- There are areas of ceiling tile where the tile is sagging. This should be monitored and if sagging gets much worse, should be replaced with new ceiling tile.
- The sheet vinyl flooring, used In some areas, is showing signs of age and should be considered for replacement.
- There is miscellaneous interior painting of metal doors and frames needed.
- There is a crack in the drywall in one of the student restrooms that needs repaired and painted.

There are some areas of carpet where the seams are beginning to unravel.
 These areas should be repaired if possible in the short term and considered for replacement

D. Specialties

 TV wall brackets are installed in classrooms but are no longer used and should be considered for removal.

E. HVAC

System

- The HVAC System for this building utilizes unit ventilators with 2 pipe hot water heating for the classroom areas, air handlers with hot water heating for the Multi-Purpose Room and Cafeteria, split system air conditioners with hot water heating for the Office Areas and hot water cabinet heaters, convectors and unit heaters for corridors, toilets, storage areas, etc.
- The systems in this building were installed in various phases. A major addition was constructed in 1993. The equipment in these areas is well maintained and is still functioning even though it will soon approach the end of its expected life (20-25 years). Some unit vents and wall fin radiation were re-used in the original building since this equipment had been recently installed.
- At this time, the areas that are air conditioned are the Office Areas, Computer Room, Lounge and SGI Room. In addition, split system ductless air conditioners/heat pumps were recently installed (within the last 5 years) in each classroom.
- In order to provide air conditioning for the entire building, a majority of the existing equipment would have to be replaced.
- To provide air conditioning, we would recommend the installation of a Geothermal Heat Pump System consistent with the systems recently installed at other buildings in the District. Since split system ductless air conditioners/heat pumps were recently installed, consideration could be given to leaving these air conditioners in place and then replacing the existing heating system, replacing air conditioners that were installed in 1993 and adding air conditioning to the major spaces (Cafeteria, MP Room and Library).
- If a major renovation project is not planned for the near future, there are several Capital Improvement Plan items that should be considered for implementation as follows:
 - Energy Conservation Upgrades
 - Replace Building Energy Management Controls
 - Replace ATC Control Valves

 A new 10,000 gallon underground fuel oil tank system was installed as part of the 1993 project.

VENTILATION

- Currently, ventilation air is provided through wall louvers and roof caps associated with the unit ventilators and air handlers. Each space is set-up to provide 100% fresh air to the space with an associated ducted relief air system. Exhaust air from toilets is removed by rooftop exhaust fans.
- The current amount of ventilation air is not adequate to meet the requirements of the current IMC 2009 Code.
- If a new HVAC System is provided for the building utilizing Geothermal Heat Pumps, ventilation air would be provided through central rooftop heat recovery units.
- Under any renovation project, we would also recommend replacement of all of the existing rooftop exhaust fans.

Air Conditioning

 Presently, a majority of the building is air conditioned. Installation of a Geothermal Heat Pump System would provide air conditioning for the entire building with the exception of toilets, mechanical rooms, storage rooms and corridor areas.

Ductwork

 With the existing unit ventilator type of system, minimal ductwork is installed in the building. If any ductwork is re-used as part of a renovation project, it should be cleaned.

Hot Water System

- The building is currently heated with (2) oil-fired cast iron boilers. Water is circulated by (2) base mounted centrifugal pumps. This equipment was installed in 1993 and is in good condition. Conversion of the building to a Geothermal Heat Pump System would make this equipment obsolete.
- The hot water piping and insulation system is in good condition. It is possible that some of this piping could be used as part of the distribution system for the Geothermal Heat Pump System.

<u>Automatic Temperature Control</u>

The existing temperature control system is DDC. It is possible to re-use parts of this system as part of any renovation project, however modifications would be required to integrate into a District wide central system.

Special Exhaust Systems

 The kitchen hood was installed as part of the 1993s project and appears to be in good condition.

F. Plumbing

Plumbing Fixtures

- Most plumbing fixtures in the building were replaced in 1993. Plumbing fixtures in earlier additions are original and are in need of replacement. While some handicapped provisions exist, the installation probably does not comply with current ADA requirements.
- Due to age, we would recommend replacement of the fixtures in earlier additions.
 Automatic sensors would be provided for urinals consistent with District policy.
- The kitchen grease interceptor is in need of replacement.

Domestic Water Service

- The existing water service is private from a well with an underground hydropneumatic storage tank. Chlorination and ph adjustment systems are installed. Domestic hot water is softened.
- An oil fired water heater system with storage tank was installed in the 1993 project. The water heater has since been replaced and appears to be in good condition. The tank appears to be in good condition. The associated circulating pumps are in need of replacement.
- Domestic water is distributed through copper piping with fiberglass insulation. Piping in approximately one third of the building is original and is in need of replacement. The piping in the 1993 addition should still be in good condition, however, samples should be taken to verify this.

Sanitary Sewer

The sanitary sewer system is connected to an on-site septic system.

Storm Sewer

 Roof drains in the flat roof areas are piped to an offsite drainage system. The system is in good condition. Roof drains should be replaced as part of any roof replacement project.

Fire Sprinklers

The building is not currently sprinklered. A sprinkler system could be required under the new IBC 2009 Code depending on the extent of any renovation project. If a sprinkler system is required, a storage tank and fire pump would be required.

G. Electrical

Electrical Service

The incoming electrical service is rated 1200 amps at 120/208 volts. The main service equipment is a wall mounted panel which was installed during the 1994 renovation. The service equipment can be used for another 20 years but may prove to be undersized if air conditioning or additional space is added to the building.

The existing utility company transformers are pole mounted. The addition of loads for air conditioning or additional space is likely to require the installation of a ground mounted transformer.

Electrical Distribution

• All of the circuit breaker panels in the building were installed in 1994 or added at a later date. These panels are acceptable for use for another 20 years. Some panels have space for added loads and some are full or nearly full. Panels which were recently installed to accommodate room air conditioners will be available for other loads if central air conditioning is added.

Emergency Power & Lighting

- The existing emergency power source is a 20 kW diesel fueled generator located in the boiler room. This generator was installed in 1994 and is acceptable for at least 15 more years of service unless load is added to it. The generator currently powers emergency lighting and the UPS for the card access, intrusion detection and CCTV Camera Systems. It also powers the paging system and fire alarm system.
- In a general renovation of the building it will be necessary to increase the level and area of coverage of emergency lighting. In accordance with the evaluation criteria the telephone and data systems should be added to the generator. It may also be desirable to power the walk-in refrigerator and freezer from the generator. Adding the refrigeration loads to the emergency power system may require the generator to be replaced with a larger unit.
- For code compliance, the generator should be enclosed in a dedicated room.

Lighting

- Luminaires throughout the building were replaced in the 1994 renovation and are generally in useable condition. However most luminaires utilize 4 lamps in a lensed troffer luminaire. These luminaires should be replaced with 2 lamp open reflector troffers with electronic ballasts for reduced energy consumption.
- Gym luminaires are equipped with metal halide lamps. These lamps have a long warm-up time and are therefore turned on in the morning and left on until late at night. Gym lighting should be replaced with linear high bay fluorescent lighting controlled by motion sensors. Fluorescent lighting can be adjusted to multiple levels depending upon activities and the motion sensors will turn all but a minimum amount of lighting off when the gym is unoccupied.
- Lighting in the cafeteria, library, office and miscellaneous spaces also uses 4 lamp lensed troffer style luminaires and should be replaced with open reflector troffers for increased energy efficiency.
- Exterior building mounted security lighting is provided on all sides of the building.
 These luminaires utilize HID (high intensity discharge) lamps. LED lighting should

be provided around the entire perimeter of the building to reduce energy consumption. Lenses on existing luminaires are discolored and one luminaire is damaged.

- Demolished lamps and ballasts should be disposed of in accordance with regulations for hazardous materials.
- Existing parking and walkway areas are illuminated by pole mounted HID shoebox style luminaire. Existing luminaires are adequate for most parking areas.

Lighting Controls

- Classrooms have 2 wall switches arranged to switch one half of the lamps in each luminaire. This provides two levels of lighting but does not darken the teaching wall during the use of projectors. No automatic controls are currently provided. Provide motion sensors, daylight sensors, multiple switches and a load shedding relay to reduce energy consumption in classrooms. Provide switches on the teaching wall to allow the teacher to adjust light levels without leaving the front of the room.
- Provide two levels of lighting in corridors. Provide full lighting during normally occupied times and reduced lighting levels for those periods of time when the building has minimum occupancy. Provide time based control of corridor and stair lighting to insure that lights are turned off during unoccupied times and to reduce the amount of staff time needed to turn lights on at the beginning of the day and off at the end of the day. Provide corridor and stairway nightlights for security and safety.
- Provide motion sensor and daylight sensor control of lighting in offices, cafeteria, library and miscellaneous spaces. For safety do not provide automatic control of lighting in the kitchen.

Fire Alarm System

The existing 1994 fire alarm system is functional but is not fully ADA and Code compliant. The existing system has a remaining life of about 5 years until service parts become difficult to obtain.

Clock System

Presently classrooms have "atomic" clocks which are synchronized by an off site time standard. Other instructional spaces have no clocks or battery operated clocks. This system should be expanded to provide synchronized clocks in all instructional, office, and work spaces or replaced by a new synchronized clock system with a local time base.

Intercom & Sound System

 An intercom system which allows two way communications between the office and each classroom by way of telephone handsets exists and is in marginally operable condition. This system is at the end of its useful life and will need

replaced soon to avoid expensive repairs. The system allows general paging in corridors but not in restrooms. This system should be replaced as a part of any general renovation and may need to be replaced sooner.

Telephone System

Each classroom is provided with a telephone which operates as Voice Over the Internet (VOIP). The system is in good condition. The electronics for this system should be provided with emergency power.

Data Networking

- The building is equipped with a data network which is no longer able to meet all of the building's present needs. Network patch panels and switches are located near the library. The network station cabling is Category 5.
- At the next renovation provide a dedicated network cable pathway (cable tray) in corridor ceilings and re-cable the network with Category 6 cable and materials. Provide additional network jacks to accommodate program needs and to make rooms more versatile. Provide a dedicated parking area for mobile computer carts.
- In order to maintain reasonable parity with recently remodeled buildings, Category 6 Cable should be provided to the ceiling cavity and teacher's desk in each classroom to support classroom technology upgrades.

Security System

- The building presently has a two closed circuit TV cameras, a recorder and a monitor which view activity in the main lobby. The monitor is located in the School Office and the recorder is on a shelf in the Custodians area. The Building has an intrusion detection system with motion sensors in some corridors.
- Additional cameras should be provided in the gym, lobby, playground, corridors, multi-purpose room, and exterior of the building. The recorder and a small monitor should be placed in the headend room. Access to live and recorded images via the wide area network should be provided.
- Door contacts on exterior doors have been provided to ensure that all doors are closed when the last person leaves the building.
- An access control system is in place at several exterior doors.
- Installation of additional motion detectors in corridors, computer equipment rooms and offices containing sensitive records would reduce the potential for vandalism and unauthorized access to records.

Theatrical Lighting

 There is no theatrical lighting installed at the stage area in this building. Some lighting for events is provided by track lights. Provision of a small dimming

system and minimal theatrical lighting would be consistent with other elementary buildings in the District.

Public Address System

The existing gym does not have a public address system. Provide a public address system to meet program needs.

Classroom Presentation Equipment

The library has a smart board and an LCD projector. A portable smart board and a mimeo board are shared by several classrooms. Provide smart boards or MIMIO (computer-marker board interactive device) and LCD projectors in classrooms, instructional spaces, conference rooms and the library in accordance with the District Technology Plan. Provide a media transport system to deliver images from the teacher's computer, sound and video programming to the projector. Provide an amplifier and speakers to enhance the audio from the LCD. Provide a wireless microphone for use by the teacher in classrooms and large instructional spaces.

Video Distribution

This building does not have an existing video distribution system. The District IT
Department does not feel that a traditional dedicated video distribution system is
necessary because equivalent content is available over the internet.

Receptacles

- Receptacle locations are generally adequate. Renovations which change room layouts will necessitate providing or relocating receptacles. A dedicated circuit should be provided for the teacher's computer and LCD projector. At least three other circuits should be provided in each classroom.
- If new technology upgrades are incorporated in the classrooms before the next renovation, receptacles to serve the LCD projector and wireless network hub will need to be provided in the ceiling cavity.

Facility Condition Index

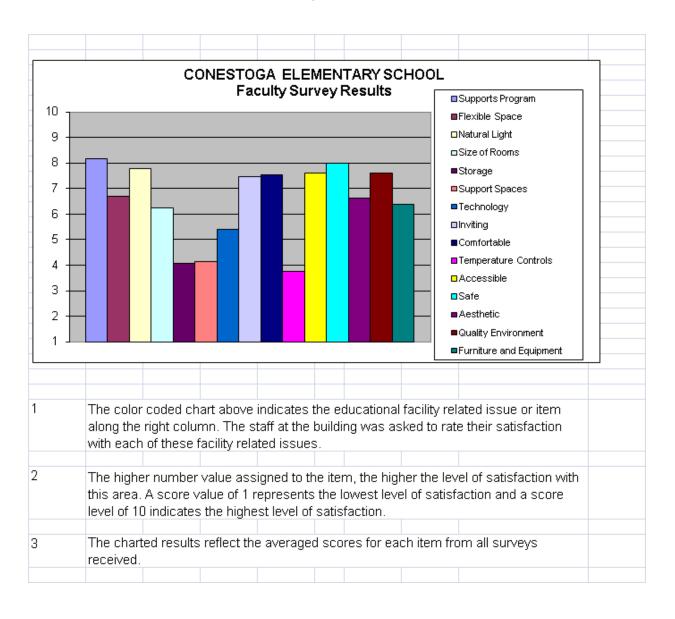
The Facility Cost Index (FCI) is used throughout the facility condition assessment industry as a relative indicator of a buildings condition. Based on industry-wide standards, if the cost to repair exceeds 60% of the cost to replace, the facility should be looked at more closely as a possible candidate for replacement. As a rule of thumb, an FCI below 10% is considered good. An FCI above 60% would suggest that the building is a candidate for replacement.

	FCI RATINGS											
1	0	General Maintenance										
2	10	Minor										
3	50	Moderate										
4	75	Major										
5	100	Replace										

	Cones	stoga Elementan			
No.	Componenet / System	Percent of total	Rating (1 - 5)	Rating %	Adj %
1	Roofing	4.9%	1	0	0.00%
2	Exterior Walls	5.4%	2	0.1	0.54%
3	Exterior Windows	2.4%	1	0	0.00%
4	Exterior - Doors	0.6%	2	0.1	0.06%
5	Interior Floors	7.6%	2	0.1	0.76%
6	Interior Walls	4.0%	2	0.1	0.40%
7	Interior Ceilings	5.4%	2	0.1	0.54%
8	Interior - Other	3.3%	1	0	0.00%
9	HVAC	20.7%	3	0.5	10.35%
10	Electrical Lighting	10.0%	3	0.5	5.00%
11	Electrical Distrib.	1.3%	1	0	0.00%
12	Electrical Other	0.5%	3	0.5	0.25%
13	Plumbing	5.5%	3	0.5	2.75%
14	Fire / Life Safety	2.3%	3	0.5	1.15%
15	Specialties	0.8%	2	0.1	0.08%
16	Structural	19.3%	1	0	0.00%
17	Technology	3.5%	3	0.5	1.75%
18	Accessibility	2.5%	2	0.1	0.25%
	_				23.88%

Faculty Survey:

The average score reported by the staff for these building characteristics is 6.50, which is an above average score, however lower than scores at more recently renovated facilities such as Letort and Eshleman. This reflects the overall good condition of the facility as a result of the renovation project in 1994, but indicates increasing conditions as the facility ages. While not a technical survey or evaluation, school facility staff that spend considerable time in a school building have an innate understanding and perception of these identifiable building characteristics. The response from teaching staff generally is indicative of the overall existing conditions, quality and adequacy of the educational environment. Refer to the detailed building assessments for a detailed qualitative facility assessment.



	Criteria	Maximum Points Allowed	Assessed Point Value					Comm	nentar	v					
1	The School Site														
1.1	Site is large enough to meet educational needs as defined by state and local requirements	25	20	Ideal site s	ize woul	ld be '	13 acres	. Curre	ent site	size i	s app	roxim	nately	11 ac	res.
1.2	Site is easily accessible and conveniently located for the present and future population.	20	16												
1.3	Location is removed from undesirable business, industry, and traffic.	10	8												
1.4	Site is large enough for future expansion, if needed.	5	3												
1.5	Topography is varied enough to provide desired appearance but without steep inclines.	5	4												
1.6	Site is well landscaped.	5	4												
1.7	Site has stable, well drained soil free of erosion.	5	4												
1.8	Site is suitable for special instructional needs, e.g. outdoor learning.	5	4												
1.9	Pedestrian services include adequate sidewalks with designated crosswalks, curb cuts, and correct slopes	5	4												
1.10	Sufficient on-site, solid surface parking for faculty and staff is provided.	5	4												
1.11	Playgrounds are separated from streets and parking areas.	5	4												
1.12	Playgrounds are well equipped and appropriate for the age levels.	5	4												
	Total - The School Site	100	79												

		Maximum	Assessed Point	
ш	Criteria	Points Allowed	Value	Commentary
2	Structural and Mechanical Features			
	Structure meets all barrier-free requirements both externally and internally.	15	12	
	Roofs appear sound, have positive drainage, and are weather tight.	15	12	
	Foundations are strong and stable with no observable cracks.	10	8	
	Exterior and interior walls have sufficient expansion joints and are free of deterioration.	10	10	
	Entrances and exits are located so as to permit efficient student traffic flow.	10	8	
	Building "envelope" generally provides for energy conservation (See criteria)	10	8	
2.7	Structure is free of friable asbestos and toxic materials.	10	10	
2.8	Interior walls permit sufficient flexibility for a variety of class sizes.	5	2	
2.9	Well maintained ceilings adequately retard sound.	5	4	
2.10	Adequate light sources, well maintained, and properly placed are provided.	15	12	
2.11	Electrical controls are safely protected with disconnect switches easily accessible.	10	8	
2 12	Labeled electrical system is not subject to over-heating.	10	8	
	Drinking fountains are adequate in number and placement, and are properly maintained including provisions for the disabled.	10	6	
2.14	Number and size of restrooms meet requirements.	10	6	
2.15	Internal water supply is adequate with sufficent pressure to meet health and safety requirements.	10	8	
2.16	Drainage systems are properly maintained and meet requirements.	10	8	
	Fire alarms, smoke detectors, and sprinkler systems are properly maintained and meet requirements.	10	6	
2.18	Intercommunication system consists of a central unit that allows dependable two-way communication between the office and instructional areas.	10	6	
2.19	Undergound electrical service is provided.	5	4	
	Exterior water supply is sufficient and available for normal usage.	5	4	
2.21	Each teaching/learning area has four or more convenient wall outlets.	5	4	
_	wall outlets.	200	154	

	Criteria	Maximum Points Allowed	Assessed Point Value	Commentary
3	Plant Maintainability	Allowed	Value	Commentary
	Windows, doors, and walls are of material and finish			
	requiring minimum attendance.	10	8	
	Outdoor light fixtures, electric outlets, equipment, and other		_	
	fixtures are accessible for repair and replacement. Floor coverings throughout the building require minimum	10	8	
3.3	care.	10	8	
3.4	Ceilings and walls throughout the building, including service		-	
	areas, are easily cleaned and resistant to stain.	10	8	
3.5	Built-in equipment is designed and constructed for ease of	40	0	
3.6	maintenance. Floors in restrooms, kitchen, cafeterias, and corridors	10	8	
0.0	require a minimum of maintenance.	10	8	
3.7	Hardware and finishes are of durable quality.	10	8	
3.8	Destroom fixtures are well mounted and of quality finish	40	6	
	Restroom fixtures are wall mounted and of quality finish. Adequate custodial storage space with water and drain is	10	6	
	accessible throughout the building.	10	8	
	Adequate electrical outlets and power are available in every			
	area to permit routine cleaning.	10	8	
	Total Plant Maintainability	100	78	
1				
		Maximum Points	Assessed Point	
	Criteria	Allowed	Value	Commentary
4	Building Safety and Security			
	Security			
	Student loading areas are segregated from other vehicular			
	traffic and pedestrian walkways. Access streets have sufficient signals and signs to permit	15	9	
4.2	safe entrance to and exit from school area.	5	3	
4.3	date criticalise to and exit from soliton area.		ŭ	
	Off-site sidewalks are available for safety of pedestrians.	5	0	
	On-site sidewalks and steps are designed and maintained	_		
	for safety. Vehicular entrances and exits permit safe traffic flow.	5 5	3	
	Locations and types of playground equipement are free		3	
	from hazard.	5	4	
	ing Safety The heating unit(s) is located away from student occupied			
	areas.	20	16	
4.8	Multi-story buildings have at least two stairways.	15	12	
	Exterior doors open outward and are equipped with panic			
	hardware. Emergency lighting is provided throughout the building with	10	10	
4.10	exit signs on separate electrical circuit.	10	6	
4.11	Classroom doors are recessed and open outward.	10	10	
4.12	Building security systems are provided to assure		_	
4 12	uninterrupted operation of the educational program. Flooring (including ramps and stairways) is maintained in a	10	6	
	nonslip condition.	5	4	
4.14	Stair risers (interior and exterior) do not exceed 6 1/2		·	
	inches and range in number from 3-16.	5	4	
	Glass is properly located and protected with wire or safety material to prevent accidental student injury.	5	4	
	Fixed projections in the traffic areas do not extend more		7	
	than eight inches form the corridor wall.	5	5	
	Traffic areas terminate at an exit or a stairway leading to an		_	
	egress.	5	4	
Emer	gency Safety	 		
4.18	Adequate fire safety equipment is properly located.	15	12	
	There are at least two independent exits from any point in	4-	40	
	the building. Stairways and exits are of noncombustible material.	10 10	10 10	
	Fire-resistant materials are used throughout the structure.	10	10	
	-	10	8	
	Automatic and manual emergency alarm system with a			
	distinctive sound and flashing light is provided.	10	6	
	Ample space is provided in corridors or protected areas for student safety in the event of natural disasters.	5	4	
	Total Building Safety and Security	200	154	
	• • • •			

		Maximum	Assessed Point							
	Criteria	Points Allowed	Value	Commentary						
5	Educational Adequacy									
	demic Learning Space									
	Size of academic learning areas meet desirable									
	standards.	25	20							
5.2	Classroom space permits arrangements for small group									
	activity.	15	12							
5.3	Location of academic learning areas is near related									
	educational activities and away from disruptive noises.	10	8							
5.4	Personal space in the classroom away from group									
	instruction allows privacy time for individual students.	10	8							
5.5	Storage for student materials is adequate.	10	8							
5.6	Storage for teacher materials is adequate.	10	8							
pe	cial Learning Space									
5.7	Size of special learning area(s) meets standards.	15	12							
5.8	Design of special learning area(s) is compatible with									
	instructional need.	10	8							
5.9	Library/Resource/Media Center provides appropriate and									
	attractive space.	10	8							
.10	Gymnasium (or covered P.E. area) adequately serves									
	physical education instruction.	5	5							
.11	Pre-kindergarten and kindergarten space is appropriate									
	for age of students and nature of instruction.	10	8							
.12	Music Program is provided with adequate sound-treated									
	space.	5	3							
.13	Space for art is appropriate for special instruction,									
	supplies, and equipment.	5	3							
.14	Space for technology education, including computer labs,									
	permits use of state-of-the-art equipment.	5	3							
.15	Space adjacent to classrooms is provided for small									
	groups and remedial instruction.	5	4							
.16	Storage for student and teacher material is adequate.	5	4							
	port Space									
.17	Teachers' lounge and work areas reflect teachers as									
	professionals.	10	8							
.18	Cafeteria/cafetorium is attractive with sufficient space for									
	delivery, storage, and food preparation.	10	6							
.19	Administrative offices provide an appearance consistent									
	with the maturity of the students served.	5	4							
	Counselor's office insures privacy and sufficient storage.	5	4							
.21	Clinic is near administrative offices and is equipped to									
	meet requirements.	5	4							
.22	Suitable reception space is available for students,									
	teachers, and visitors.	5	4							
.23	Administrative personnel are provided sufficient work									
	space and privacy.	5	4							
	Total Educational Adequacy	200	156							

		Maximum	Assessed Point	
	Criteria	Points Allowed		Commentary
6	Environment for Education			
Exte	rior Environment			
	Overall design is aesthetically pleasing to age of			
6.1	students.	15	12	
6.2	Site and building are well landscaped.	10	8	
	Exterior noise and poor environment do not disrupt			
6.3	leaming.	10	8	
	Entrances and walkways are sheltered from sun and			
6.4	inclement weather.	10	8	
6.5	Building materials provide attractive color and texture.	5	4	
Inte	rior Environment			
6.6	Color schemes, building materials, and decor provide an			
	impetus to learning.	20	16	
6.7	Year around comfortable temperature is provided			
	throughout the building.	15	9	
6.8	Ventilating system provides adequate circulation of clean			
	air.	15	9	
6.9	Lighting system provides proper intensity, diffusion, and			
	distribution of illumination.	15	9	
6.10	Drinking fountains and restrooms facilities are			
	conveniently located.	15	12	
6.11	Communication among students is enhance by commons			
	area(s) for socialization.	10	6	
6.12	Traffic flow is aided by appropriate foyers and corridors.	10	8	
6.13	Areas for students to interact are suitable to the age			
	group.	10	8	
6.14	Large group areas are designed for effective management			
	of students.	10	8	
6.15	Acoustical treatment of ceilings, walls, and floors			
	provides effective sound control.	10	8	
6.16	Window design contributes to a pleasant environment.	10	8	
6.17				
	Furniture and equipment provide a pleasing atmosphere.	10	8	
	Total Environment for Education	200	149	

Building	Construction Date	<u>Size</u>	Grade Level
Martic Elementary School	(1952) 1966, 1986, 1988, 2009	50,522 SF	K-6

Location 266 Martic Heights Drive

Holtwood, PA 17532

Site Size Approximately 9.5 acres

Municipal Jurisdiction Martic Township, Lancaster County

Occupancy Group Group 'B' Educational

Construction Type Non-Combustible

Applicable Building Code

PA Uniform Construction Code (UCC):

International Existing Building Code / 2009

International Building Code / 2009

ICC Electrical Code 2009 (utilizes National Electric Code-

2002 standards)

International Energy Conservation Code 2009

International Existing Building Code 2009

International Fire Code 2009
International Fuel Gas Code 2009
International Mechanical Code 2009
International Plumbing Code 2009
International Residential Code 2009

International Urban-Wildland Interface Code 2009

ADAAG (Americans with Disabilities Accessibility

Guidelines)

ASHRAE Standards

Site:

The Martic Elementary School is located in Hotlwood, PA and although the area is rural, there are some adjacent and nearby residences. The School is bordered on the north by residential properties, the south and west by open farm land and on the east by Nissley Lane. The School is located on Martic Heights Drive, at the intersection with Red Hill Road, in Martic Township. Bus Drop off, as well as visitor access and parking is located on the north side of the building. Parent drop-off and additional vehicular parking is located on the west side of the building.

The school is sited on the northwest portion of the site, which is relatively level and the site slopes gradually to the east where it adjoins Nissley Drive. Hard surface play areas are located on the south and southeast sides of the building, and the soft play and kindergarten play areas are located on the south side of the building. Play fields are located on the southeast portion of the site and border Nissley Lane. Access to all play areas from the building is good and requires no conflicts with vehicular traffic.

The original building was a single linear one-story classroom wing, anchored by the multipurpose room. After several building additions, the building is rectangular in plan, with a connected interior circulation loop around an open courtyard. Future expansion of the building is possible and will be dictated by existing site conditions.

Building:

The Martic Elementary School was originally constructed in 1952, with a small library and Kindergarten room addition in 1966 and a large classroom and gymnasium addition in 1988. The School is a one story building with exterior brick veneer. The building structural system is masonry load bearing, with some steel framing roof joist structure. The original section of the building has a wooden roof deck.

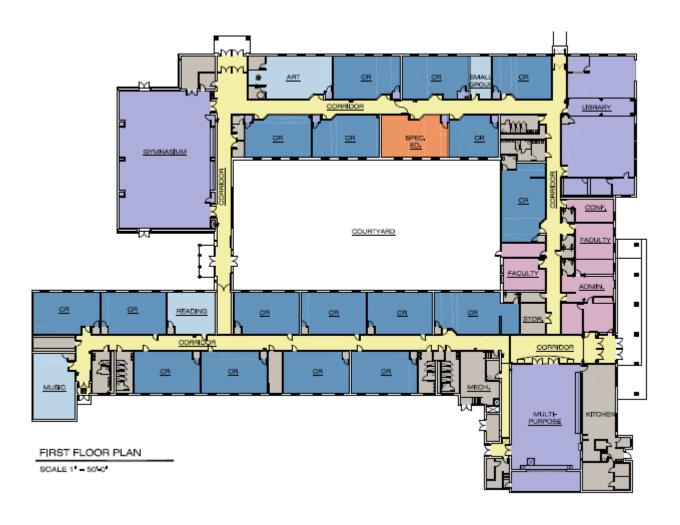
The Martic Elementary School is currently in the midst of a comprehensive building renovation project, targeted to address life-safety and building code issues, as well physical plant needs and educational program upgrades. The expected completion date is August, 2009 and the building is expected to be fully operational for the 2009-10 school year.

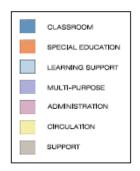
At the completion of the renovation project, it is to be expected that the Martic Elementary School will serve the community and school district well into the future and that maintenance and operational expenses will be reduced. Inasmuch as a building is a static, non-dynamic entity, subject to the forces of nature and the aging and deterioration process, it is recommended that annual visual inspections of the building, including the interior, exterior and the roof, be completed as part of a proactive and on-going maintenance program.

Aerial Photograph



First Floor Plan





I. ADA, SAFETY & BUILDING CODE

No recommendations

II. EDUCATIONAL PROGRAM / FUNCTIONAL

No recommendations

III. PHYSICAL PLANT

A. Site

No recommendations

B. Building

No recommendations

C. Interior Finishes

No recommendations

D. Specialties

No recommendations

E. HVAC

• The HVAC System was replaced in 2009. A ground source heat pump system was installed consisting of a 2-pipe loop water system connected to heat pump units throughout the building. The loop is connected to an underground closed loop, geothermal bore field for the purpose of extracting heat from the ground during the heating season and rejecting heat during the cooling season. Ventilation air is provided through central energy recovery units. An electronic DDC system is installed to provide automatic temperature control.

F. Plumbing

In general, domestic water piping was upgraded as part of the 2009 project and an earlier project several years ago. Storm water and sanitary piping was generally re-used. Domestic hot water is provided by a propane water heater connected to underground propane tank(s). The building is served by an on-site sewage treatment plant. Public water is not available. A well feeds an underground water storage tank. A booster pump system draws water from the tank and feeds the building.

Fire Protection

 There is no sprinkler system installed for this building except for a few selected areas connected to the domestic water system.

G. Electrical

Electrical Service

• Renovations to the Martic Elementary School building were completed in 2009. The electrical power distribution system is new and can be expected to serve the facility for the next 35 years. The lighting system is new and expected to serve the building for the next 20 years unless new technologies in lighting are released for commercial use in the next few years and demonstrate a reasonable payback. The addition of motion sensors in the gym and multi-purpose room should be considered and are expected to provide a reasonable payback.

Technology

- The technology systems installed at Martic Elementary School generally meet the
 criteria used to evaluate the facilities described in this report. LCD projectors
 were installed as a part of this renovation but smart boards were not included.
 Consideration should be given to providing smart boards or MIMIO (computermarker board interface device) as an independent project since this building is
 unlikely to be renovated again for 19 years.
- A web accessible closed circuit television system with cameras covering a
 majority of interior and exterior spaces was not included in the Martic Elementary
 School project but is now a part of the evaluation criteria. Due to the length of
 time until the next renovation, consideration should be given to installing this
 security upgrade as a stand alone project.
- With the pending conversion of some cable TV channels to digital format, install
 three digital converters to permit continued access to three of the higher
 numbered channels. Three converters are provided at not cost by the cable TV
 service provider. Additional converters can be leased or purchased.

Facility Condition Index

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14	Fire / Life Safety	2.3%	2	0.1	0.23%
15	Specialties	0.8%	1	0	0.00%
16	Structural	19.3%	1	0	0.00%
17	Technology	3.5%	2	0.1	0.35%
18	Accessibility	2.5%	1	0	0.00%
					0.58%

	IN MANOR SCHOOL DISTRICT																			
MAF	RTIC ELEMENTARY SCHOOL APPRAISAL																		+	
	Criteria	Maxin A	num Po		ssed I Value							Com	ment	tary		•				
	The School Site																			
	Site is large enough to meet educational needs as defined by state and local requirements		25		20	Ideal	site si	ze wo	uld be	e 14-1	5 acre	s. Cur	rent :	site siz	e is ap	proxi	mat	tely 9.5	acre	es.
	Site is easily accessible and conveniently located for the present and future population.		20		20															
	Location is removed from undesirable business, industry, and traffic.		10		10															
	Site is large enough for future expansion, if needed. Topography is varied enough to provide desired		5		3	Limit	ed due	to sit	e con	figura	ion									
	appearance but without steep inclines. Site is well landscaped.		5 5		5															
	Site has stable, well drained soil free of erosion.		5		5															
1.8	Site is suitable for special instructional needs, e.g. outdoor learning.		5		4															
1.9	Pedestrian services include adequate sidewalks with designated crosswalks, curb cuts, and correct slopes		5		5															
1.10	Sufficient on-site, solid surface parking for faculty and staff is provided.		5		5															
1.11	Playgrounds are separated from streets and parking areas.		5		5															
1.12	Playgrounds are well equipped and appropriate for the age levels.		5		5															
	Total - The School Site		100		92															
	Criteria		num Po	Asses	ssed I Value							Com	ment	tary						
	Structural and Mechanical Features																			
2.1	Structure meets all barrier-free requirements both externally and internally.		15		15															
2.2	Roofs appear sound, have positive drainage, and are weather tight.		15		15															
2.3	Foundations are strong and stable with no observable cracks.		10		10															
2.4	Exterior and interior walls have sufficient expansion joints and are free of deterioration.		10		10															
2.5	Entrances and exits are located so as to permit efficient student traffic flow.		10		10															
2.6	Building "envelope" generally provides for energy conservation (See criteria)		10		8															_
2.7	Structure is free of friable asbestos and toxic materials.		10		10															
	Interior walls permit sufficient flexibility for a variety of class sizes.		5		2															
2.9	Well maintained ceilings adequately retard sound.		5		5															
2.10	Adequate light sources, well maintained, and properly placed are provided.		15		15															
2.11	Electrical controls are safely protected with disconnect switches easily accessible.		10		10															
	Labeled electrical system is not subject to over-heating.		10		10															
2.13	Drinking fountains are adequate in number and placement, and are properly maintained including provisions for the																			
211	disabled. Number and size of restrooms meet requirements.		10 10		10	-														
	Internal water supply is adequate with sufficent pressure to		10		8															
2.16	meet health and safety requirements. Drainage systems are properly maintained and meet requirements.																			
2.17	Fire alarms, smoke detectors, and sprinkler systems are		10		10															
2.18	properly maintained and meet requirements. Intercommunication system consists of a central unit that allows dependable two-way communication between the		10		10															
	office and instructional areas.	<u> </u>	10		10	L														
	Undergound electrical service is provided. Exterior water supply is sufficient and available for normal		5		5	<u> </u>														
	usage. Each teaching/learning area has four or more convenient		5		4	Well	is loca	ted of	f-site											
۱ ک.ک	wall outlets.		5		5	1														
			200		192															

		Maximum	Assessed Point	
	Criteria	Points Allowed	Value	Commentary
3	Plant Maintainability			•
3.1	Windows, doors, and walls are of material and finish			
	requiring minimum attendance.	10	8	
3.2	Outdoor light fixtures, electric outlets, equipment, and			
	other fixtures are accessible for repair and replacement.	10	10	
3.3	Floor coverings throughout the building require minimum			
	care.	10	10	
3.4	Ceilings and walls throughout the building, including			
	service areas, are easily cleaned and resistant to stain.	10	10	
3.5	Built-in equipment is designed and constructed for ease			
	of maintenance.	10	8	
3.6	Floors in restrooms, kitchen, cafeterias, and corridors			
	require a minimum of maintenance.	10	10	
3.7	Hardware and finishes are of durable quality.	10	10	
3.8				
	Restroom fixtures are wall mounted and of quality finish.	10	10	
3.9	Adequate custodial storage space with water and drain is			
	accessible throughout the building.	10	10	
3.10	Adequate electrical outlets and power are available in			
	every area to permit routine cleaning.	10	10	
	Total Plant Maintainability	100	96	

		Maximum	Assessed Point								
	Criteria	Points Allowed	Value			Com	men	tary			
4	Building Safety and Security										
Site	Security										
4.1	Student loading areas are segregated from other vehicular										
	traffic and pedestrian walkways.	15	15								
4.2	Access streets have sufficient signals and signs to permit										
	safe entrance to and exit from school area.	5	5								
4.3											
	Off-site sidewalks are available for safety of pedestrians.	5	0								
4.4	On-site sidewalks and steps are designed and	-	-								
	maintained for safety.	5	5								
45	Vehicular entrances and exits permit safe traffic flow.	5	5								
	Locations and types of playground equipement are free	•	Ů								
7.0	from hazard.	5	4								
	IIOIII IIazaiu.	3	4								
2	ding Safety										
	The heating unit(s) is located away from student occupied										
4.7		20	20								
	areas.										
	Multi-story buildings have at least two stairways.	15	15								
4.9	Exterior doors open outward and are equipped with panic										
	hardware.	10	10								
4.10	Emergency lighting is provided throughout the building										
	with exit signs on separate electrical circuit.	10	10								
4.11	Classroom doors are recessed and open outward.	10	10								
4.12	Building security systems are provided to assure										
	uninterrupted operation of the educational program.	10	8								
4.13	Flooring (including ramps and stairways) is maintained in										
	a nonslip condition.	5	5								
4.14	Stair risers (interior and exterior) do not exceed 6 1/2										
	inches and range in number from 3-16.	5	5								
4.15	Glass is properly located and protected with wire or										
	safety material to prevent accidental student injury.	5	5								
1 16	Fixed projections in the traffic areas do not extend more										
	than eight inches form the corridor wall.	5	5								
1 17	Traffic areas terminate at an exit or a stairway leading to		Ů								
	an egress.	5	5								
	an egress.		J								
	rgency Safety	15	15								
	Adequate fire safety equipment is properly located.	15	15								
+. 19	There are at least two independent exits from any point in	40	10								
	the building.	10	10								
	Stairways and exits are of noncombustible material.	10	10								
1.21											
	Fire-resistant materials are used throughout the structure.	10	8								
1.22	Automatic and manual emergency alarm system with a										
	distinctive sound and flashing light is provided.	10	10								
1.23	Ample space is provided in corridors or protected areas										
	for student safety in the event of natural disasters.	5	5								
	Total Building Safety and Security	200	190								

				Assesse										
_	Criteria	Allo	wed	Valu	ue	1		Com	mentar	у				
	Educational Adequacy emic Learning Space													
5.1	eniic Leanning Space													
	Size of academic learning areas meet desirable standards.	2	25	25	5									
	Classroom space permits arrangements for small group activity.	1 1	15	12										
	Location of academic learning areas is near related													
	educational activities and away from disruptive noises.	1	10	10)									
	Personal space in the classroom away from group instruction allows privacy time for individual students.	1	10	8										
	Storage for student materials is adequate.		10	8										
5.6	Storage for teacher materials is adequate.	1	10	8										
Spec	ial Learning Space Size of special learning area(s) meets standards.	1	15	15										
	Design of special learning area(s) in compatible with	,	ıə	10)									
	instructional need.	1	10	8										
	Library/Resource/Media Center provides appropriate and attractive space.	١ ,	10	10	,									
	Gymnasium (or covered P.E. area) adequately serves	1	10	10	,									
	physical education instruction.		5	5										
	Pre-kindergarten and kindergarten space is appropriate for	١.												
	age of students and nature of instruction. Music Program is provided with adequate sound-treated	1	10	10)									
0.12	space.		5	4										
	Space for art is appropriate for special instruction, supplies,													
	and equipment. Space for technology education, including computer labs,		5	4										
	permits use of state-of-the-art equipment.	,	5	4										
5.15	Space adjacent to classrooms is provided for small groups													
	and remedial instruction.		5	3										
5.16	Storage for student and teacher material is adequate.	 	5	4										
	ort Space				1									
5.17	Teachers' lounge and work areas reflect teachers as			'										
	professionals. Cafeteria/cafetorium is attractive with sufficient space for	1	10	10)									
	delivery, storage, and food preparation.	1	10	10)									
5.19	Administrative offices provide an appearance consistent	-	-											
	with the maturity of the students served.		5	5										
	Counselor's office insures privacy and sufficient storage. Clinic is near administrative offices and is equipped to meet		5	5										
	requirements.		5	5										
	Suitable reception space is available for students, teachers,													
	and visitors. Administrative personnel are provided sufficient work space		5	5										
	and privacy.		5	4										
	Total Educational Adequacy	20	00	18:	2									
		Maximu	m Point	Assesse	d Point									
	Criteria	Allo	wed	Valu	ue			Com	mentar	у				
	Environment for Education													
Exter	rior Environment													
6.1	Overall design is aesthetically pleasing to age of students.	1	15	15	5									
6.2	Site and building are well landscaped.		10	10										
	Exterior noise and poor environment do not disrupt learning.	_	10	10	1									
0.3	Entrances and walkways are sheltered from sun and	1	U	10	,									
1	Entrances and walkways are shellered from sun and													
	inclement weather.		10	8										
			10 5	5		1				-		1	-	
6.5	inclement weather. Building materials provide attractive color and texture.													
6.5 Interi	inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an		5	5										
6.5 Interi 6.6	inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an impetus to learning.													
6.5 Interi	inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an impetus to learning. Year around comfortable temperature is provided	2	20	20)									
6.5 Interi 6.6 6.7	inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an impetus to learning.	2	5	5)									
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6.5 Interi 6.6 6.7 6.8	inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an impetus to learning. Year around comfortable temperature is provided throughout the building. Ventilating system provides adequate circulation of clean air. Lighting system provides proper intensity, diffusion, and	2 1	20	200	5									
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6.5 Interi 6.6 6.7 6.8 6.9 6.10 6.11	inclement weather. Building materials provide attractive color and texture. Or Environment Color schemes, building materials, and decor provide an impetus to learning. Year around comfortable temperature is provided throughout the building. Ventilating system provides adequate circulation of clean air. Lighting system provides proper intensity, diffusion, and distribution of illumination. Drinking fountains and restrooms facilities are conveniently located. Communication among students is enhance by commons area(s) for socialization.	2 1 1 1 1	5	5 20 15 15 15 6	5									
6.5 Interi 6.6 6.7 6.8 6.9 6.10 6.11	inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an impetus to learning. Year around comfortable temperature is provided throughout the building. Ventilating system provides adequate circulation of clean air. Lighting system provides proper intensity, diffusion, and distribution of illumination. Drinking fountains and restrooms facilities are conveniently located. Communication among students is enhance by commons	2 1 1 1 1	200	5 20 15 15	5									
6.5 Interi 6.6 6.7 6.8 6.9 6.10 6.11 6.12 6.13	inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an impetus to learning. Year around comfortable temperature is provided throughout the building. Ventilating system provides adequate circulation of clean air. Lighting system provides proper intensity, diffusion, and distribution of illumination. Drinking fountains and restrooms facilities are conveniently located. Communication among students is enhance by commons area(s) for socialization. Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age group.	1 1 1 1 1 1	5	5 20 15 15 15 6	55555									
6.5 Interi 6.6 6.7 6.8 6.9 6.10 6.11 6.12 6.13	inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an impetus to learning. Year around comfortable temperature is provided throughout the building. Ventilating system provides adequate circulation of clean air. Lighting system provides proper intensity, diffusion, and distribution of illumination. Drinking fountains and restrooms facilities are conveniently located. Communication among students is enhance by commons area(s) for socialization. Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age group. Large group areas are designed for effective management	1 1 1 1 1 1 1	5 20 15 15 15 10 10	2C 2C 155 155 155 155 155 155 155 155 155 15	5									
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6.5 Interior 6.6 6.7 6.8 6.9 6.10 6.11 6.12 6.13 6.14 6.15	inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an impetus to learning. Year around comfortable temperature is provided throughout the building. Yentilating system provides adequate circulation of clean air. Lighting system provides proper intensity, diffusion, and distribution of illumination. Drinking fountains and restrooms facilities are conveniently located. Communication among students is enhance by commons area(s) for socialization. Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age group. Large group areas are designed for effective management of students. Acoustical treatment of ceilings, walls, and floors provides	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 20 15 15 15 15 10 10	5 200 155 155 155 155 155 155 155 155 155 1	5									
6.5 Interior 6.6 6.7 6.8 6.9 6.10 6.11 6.12 6.13 6.14 6.15	inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an impetus to learning. Year around comfortable temperature is provided throughout the building. Yentilating system provides adequate circulation of clean air. Lighting system provides proper intensity, diffusion, and distribution of illumination. Drinking fountains and restrooms facilities are conveniently located. Communication among students is enhance by commons area(s) for socialization. Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age group. Large group areas are designed for effective management of students. Acoustical treatment of ceilings, walls, and floors provides effective sound control. Window design contributes to a pleasant environment.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 20 15 15 15 15 10 10	5 20 15 15 15 16 6 10 6 8 8 8	55 55 55 55 55 55 55 55 55 55 55 55 55									
6.5 Interi 6.6 6.7 6.8 6.9 6.10 6.11 6.12 6.13 6.14 6.15 6.16 6.17	inclement weather. Building materials provide attractive color and texture. or Environment Color schemes, building materials, and decor provide an impetus to learning. Year around comfortable temperature is provided throughout the building. Ventilating system provides adequate circulation of clean air. Lighting system provides proper intensity, diffusion, and distribution of illumination. Drinking fountains and restrooms facilities are conveniently located. Communication among students is enhance by commons area(s) for socialization. Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age group. Large group areas are designed for effective management of students. Acoustical treatment of ceilings, walls, and floors provides effective sound control.	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	200 155 155 150 100 100	2C 155 155 155 155 155 155 155 155 155 15	5 5 5 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6									

Building	Construction Date	<u>Size</u>	Grade Level
Pequea Elementary School	(1953) 1955, 1958, 1988,	54,920 SF	K-6

Location Willow Street, PA

Site Size Approximately 10 acres

Municipal Jurisdiction Pequea Township, Lancaster County

Occupancy Group Group 'B' Educational

Construction Type Non-Combustible

Applicable Building Code

• PA Uniform Construction Code (UCC):

International Existing Building Code / 2009

International Building Code / 2009

ICC Electrical Code 2009 (utilizes National Electric Code-

2002 standards)

International Energy Conservation Code 2009

International Existing Building Code 2009

International Fire Code 2009
International Fuel Gas Code 2009
International Mechanical Code 2009
International Plumbing Code 2009
International Residential Code 2009

International Urban-Wildland Interface Code 2009

- ADAAG (Americans with Disabilities Accessibility Guidelines)
- ASHRAE Standards

Site:

The Pequea Elementary School is located in Willow Street, among open farmland and residential development in the Village of West Willow. The School is located on Millwood Road, at the intersection with Bauer Avenue, in Pequea Township. Bus Drop off, as well as visitor access and parking is located on the east side of the building, off Millwood Road and the Parent drop-off and additional vehicular parking is located on the south side of the building, off Bauer Avenue.

The school is sited on the southeast portion of the site, which is relatively level, with some gradual slope. Hard and soft surface play areas are located on the south and southeast sides of the building, and the soft play and kindergarten play areas are located on the south side of the building. Play fields are located on the northwest portion of the site and border farmland. Access to all play areas from the building is good and requires no conflicts with vehicular traffic.

The original one story building was "L" shaped in plan with a main classroom wing and a shorter, intersecting classroom wing. The 1988 addition connected the "L" to create an interior courtyard surrounded by classrooms. Future expansion of the building is possible and will be dictated by existing site conditions.

Building:

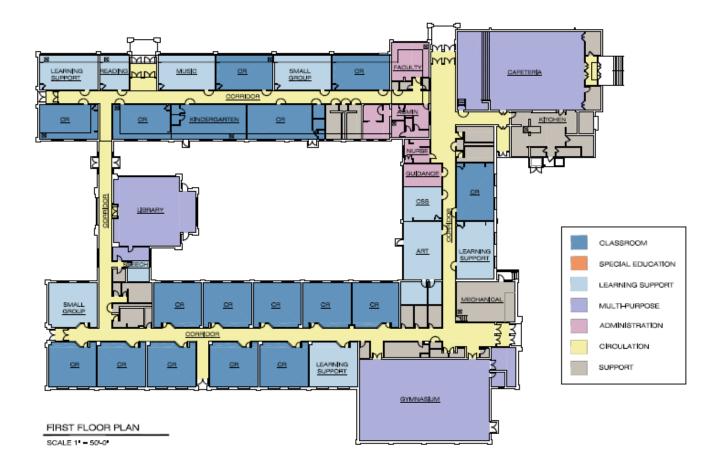
The Pequea Elementary School was originally constructed in 1953, with several small addition projects following, with the last project having been completed in 1988. A small exterior masonry restoration project was completed in 2008 as well as upgrades to the building security system. The School is a one story building with exterior brick veneer. The building structural system is masonry load bearing, with some steel framing roof joist structure.

The Pequea Elementary School, having undergone the last major renovation project in 1988, is overall in fair - good condition. The lifespan of the major building components and operational systems is in the 25 – 30 year range and as such, the building should continue to serve the Penn Manor School District for the foreseeable future., however as annual capital maintenance expenses can be expected to increase as the building systems and major components begin to age, there may be a point in the next 5–7 years that the school district will want to consider a renovation project at the school. Inasmuch as a building is a static, non-dynamic entity, subject to the forces of nature and the aging and deterioration process, it is recommended that annual visual inspections of the building, including the interior, exterior and the roof, be completed as part of a proactive and on-going maintenance program.

Aerial Photograph



Floor Plan



I. ADA, SAFETY & BUILDING CODE

Accessibility

- An accessible route should be added from the paved play area to the swings and to the playing field. Detectable warnings should be installed on the concrete ramps that provide ADA access from the parking lots. Two (2) exits from the building should have accessible walks added to them, particularly the double doors in the rear which exit onto grass, currently.
- Handicapped parking spaces should be provided. Three (3) spaces should be provided based on a total of 66 parking spaces, currently in use.
- Handicapped parking signs should be added.
- Exterior railing on the steps serving the southeast entrance side of the building should be replaced to meet code. One of the three handrails currently in place is damaged and bent, and they do not appear to meet current building code for extensions and guards.

Code Compliance / Safety

- Adequate exterior lighting appears to be at the parking and driveway areas of the building.
- The front drop-off is adequate in size and configuration for buses. A Parent drop-off and pick-up appears to be along the side of the building, though it is not marked. Signs and/or markings should be added to direct parents and visitors. Site distance from the driveways onto Millwood road appears to be adequate.
- Parking is adequate for daytime use; there are approximately 66 marked parking spaces. The parallel parking spaces along the front of the building should be marked with line striping. There are some limited areas for parking expansion along the southwest side of the school. If desired, additional parking would better accommodate special events such as concerts and open houses.
- The current fencing is limited to a softball/baseball field backstop, which appears to be in good condition.
- The site drainage appears to function well, overall. The inlet in the north corner of the front parking lot is scheduled to be lowered with an upcoming paving project, which will improve its function.
- The main office is located remote from the main entrance. When the building is renovated it is recommended that options be explored to relocate the office for direct access, line of sight and supervision of the main entrance.
- The stage is not handicapped accessible.
- ADA toilet room upgrades are needed throughout the building and should be addressed as part of a renovation project.
- ADA door hardware should be installed as part of a renovation project.

- Interior ADA compliant room identification and directional signage should be installed throughout the building.
- There is a washer and dryer unit located in the dry food storage room in the kitchen, which is a health code violation. The washer and dryer unit should be relocated.

II. EDUCATIONAL PROGRAM / FUNCTIONAL

- Pequea Elementary is located on an approximately 9.10 acre site, which is less than the PDE planning standard of 13.5 acres (10 acres PLUS one additional acre per every 100 students). It's noted that most of the 9 acres is usable and has been developed effectively. There appears to be potential to acquire additional land, as there is open space to the south and west of the site, should expansion of the school become desirable. The site is located in an R-2, Residential zoning district.
- The school has an inadequate amount of small group, or pull-out type academic support spaces.
- The school has inadequate amount of conference and meeting space.
- Additional faculty restrooms are recommended.
- Due to the special education population and nature of the programs, it is recommended that dedicated toilet facilities be provided for special education.
- A computer room, or laptop computers for all students is desirable.
- Additional storage space is needed.
- The Health Room is undersized.
- The conference room is located adjacent to and adjoining the principal's office, compromising privacy.

III. PHYSICAL PLANT

A. Site

- The asphalt paved areas are in need of repair and overlay. Pavement overlay is scheduled for summer of 2010.
- Most concrete curbs appear to be in fair to good condition. There are a few areas of cracked or mis-aligned curb which should be repaired when renovations take place. There is some minor sidewalk cracking/displacement that should be repaired.
- Play equipment appears to be in good condition. Rubber pads should be installed under the swing wear areas (similar to the Martic Elementary renovation) to

reduce maintenance and enhance safety on the swings. Existing benches at the play area are in good condition. The flagpole should be replaced.

- There are a few overgrown trees and shrubs to be removed or thinned out. An overgrown tree close to the building on the northwest side should be removed.
- Along the south side of the multipurpose room there are a few areas that have subsided against the foundation, which should be backfilled and seeded to restore the grade along the foundation and direct water away. In general, the site appears to be well-drained.
- The building is connected to public water and sewer; no problems reported.
- The Basketball standards are rusted and should be painted. The paved, play area color coating should be repainted when renovations take place.

B. Building

- Exterior windows are in good condition.
- A recent project replaced exterior joint material and window caulking, of which are in very good condition.
- There are some older exterior doors on the original part of the building that should be replaced.
- In the cafeteria, the original in-wall tables remain, however are non-functional and should be considered for removal.
- The overhead garage door at the receiving are should be replaced.
- The exterior masonry should be pressure washed and receive a water repellant sealant.
- The exterior "dryvit" material fascia and trim is stained and should be cleaned, have the cracks patched and recoated and sealed.
- In the gymnasium, the basketball backstop padding should be replaced.

C. Interior Finishes

Interior finishes are in fair to good condition with no immediate recommendations, other than some water stained ceiling tiles that should be replaced. Routine maintenance will maintain the finishes in good condition for the foreseeable future until the building is renovated. At that time, finishes should be evaluated and replaced on a 20 – 25 year life cycle analysis.

D. Specialties

Toilet partitions should be replaced as part of toilet room renovations.

- Chalkboards should be replaced with whiteboards to meet district standards.
- Educational casework is in fair condition and there are no immediate recommendations. As part of a renovation project, it is likely that the casework will be replaced.

E. HVAC

<u>System</u>

- The HVAC System for this building utilizes unit ventilators with 2 pipe hot water heating for the classroom areas, air handlers with hot water heating for the Multi-Purpose Room and Cafeteria, split system air conditioners with hot water heating for the Office Areas and hot water cabinet heaters, convectors and unit heaters for corridors, toilets, storage areas, etc.
- The systems in this building were installed in various phases. A major addition was constructed in 1989. The equipment in these areas is well maintained and is still functioning even though it is approaching the end of its expected life (20-25 years). Some equipment was re-used in the original building since this equipment had been recently installed.
- At this time, the only areas that are air conditioned are the Office Areas.
- In order to provide air conditioning for the entire building, a majority of the existing equipment would have to be replaced.
- To provide air conditioning, we would recommend the installation of a Geothermal Heat Pump System consistent with the systems recently installed at other buildings in the District.
- If a major renovation project is not planned for the near future, there are several Capital Improvement Plan items that should be considered for implementation as follows:
 - Energy Conservation Upgrades
 - Replace Pneumatic Control System
- A new 10,000 gallon underground fuel oil tank was installed as part of the 1989 project.

Ventilation

- Currently, ventilation air is provided through wall louvers and roof caps associated with the unit ventilators and air handlers. Each space is set-up to provide 100% fresh air to the space with an associated ducted relief air system. Exhaust air from toilets is removed by rooftop exhaust fans.
- The current amount of ventilation air is not adequate to meet the requirements of the current IMC 2009 Code.

- If a new HVAC System is provided for the building utilizing Geothermal Heat Pumps, ventilation air would be provided through central rooftop heat recovery units.
- Under any renovation project, we would also recommend replacement of all of the existing rooftop exhaust fans.

Air Conditioning

 Presently, only a few areas of the building are air conditioned. Installation of a Geothermal Heat Pump System would provide air conditioning for the entire building with the exception of toilets, mechanical rooms, storage rooms and corridor areas.

Ductwork

 With the existing unit ventilator type of system, minimal ductwork is installed in the building. If any ductwork is re-used as part of a renovation project, it should be cleaned.

Hot Water System

- The building is currently heated with (2) oil-fired cast iron boilers. Water is circulated by (2) base mounted centrifugal pumps. This equipment was installed in 1989.
- The hot water piping and insulation system is in good condition. It is possible that some of this piping could be used as part of the distribution system for the Geothermal Heat Pump System.

Automatic Temperature Control

- The existing temperature control system is pneumatic with some DDC zone control, a mixture of various manufacturers and it is near the end of its expected life.
- We would recommend that this system should be replaced with a new Direct Digital Control (DDC) System as part of any renovation project.

Special Exhaust Systems

The kitchen hood was installed as part of the 1980's project and appears to be in good condition.

F. Plumbing

Plumbing Fixtures

Most plumbing fixtures in the building were replaced since 1989. Plumbing fixtures in earlier additions are original and are in need of replacement. While some handicapped provisions exist, the installation probably does not comply with current ADA requirements.

- Due to age, we would recommend replacement of the fixtures in the earlier additions. Automatic sensors would be provided for urinals consistent with District policy.
- In addition, the kitchen grease interceptor is in need of replacement

Domestic Water Service

- The existing water service is private from a well with an underground hydropneumatic storage tank. A chlorination system is installed.
- A hot water storage tank was installed in 1989. The associated circulating pumps are in need of replacement. The associated oil fired water heater has been replaced since 1989, is approximately 10 years old and is in good condition.
- Domestic water is distributed through copper piping with fiberglass insulation. Piping in approximately two thirds of the building is original and is in need of replacement. In addition, the piping in the 1989 addition is continually experiencing "pinhole" leaks, possibly due to an original manufacturing defect, and should be replaced.

Sanitary Sewer

• The sanitary sewer system is connected to a public sewer system.

Storm Sewer

 Roof drains in the flat roof areas are piped to an offsite drainage system. The system is in good condition. Roof drains should be replaced as part of any roof replacement project.

Fire Sprinklers

• The building is not currently sprinklered. A sprinkler system could be required under the new IBC 2009 Code depending on the extent of any renovation project. If a sprinkler system is required, a storage tank and fire pump would be required.

G. Electrical

Electrical Service

- The incoming electrical service is rated 1600 amps at 120/208 volts. The main service equipment is a floor mounted switchboard which was installed during the 1988 renovation. The service equipment can be used for another 20 years but may prove to be undersized if air conditioning or additional space is added to the building. The switchboard is located in a corridor near the kitchen and is exposed to foot traffic and freight deliveries. A more protected location is recommended.
- The existing utility company transformers are pole mounted. The addition of loads for air conditioning or additional space is likely to require the installation of a ground mounted transformer.

Electrical Distribution

 All of the circuit breaker panels in the building were installed in 1988 or added at a later date. These panels are acceptable for use for another 20 years. Some panels have space for added loads and some are full or nearly full.

Emergency Power & Lighting

- The existing emergency power source is a 7.5 kW diesel fueled generator located in the boiler room. This generator was installed in 1988 and is acceptable for at least 15 more years of service unless load is added to it. The generator currently powers emergency lighting and the UPS for the card access, intrusion detection and CCTV Camera Systems, the fire alarm and generator accessories. Emergency lighting levels are lower than currently required by the building code.
- In a general renovation of the building it will be necessary to increase the level and area of coverage of emergency lighting. In accordance with the evaluation criteria the telephone, data and paging systems should be added to the generator. It may also be desirable to power the walk-in refrigerator and freezer from the generator. Adding refrigeration loads to the emergency power system will require the generator to be replaced with a larger unit.
- For code compliance, the generator and transfer switch should be located in a dedicated room.

Lighting

- Luminaires throughout the building were replaced in the 1988 renovation and are generally in useable condition. However most luminaires utilize 4 lamps in a lensed troffer luminaire. These luminaires should be replaced with 2 lamp open reflector troffers with electronic ballasts for reduced energy consumption.
- Gym luminaires are equipped with metal halide lamps. These lamps have a long warm-up time and are therefore turned on in the morning and left on until late at night. Gym lighting should be replaced with linear high bay fluorescent lighting controlled by motion sensors. Fluorescent lighting can be adjusted to multiple levels depending upon activities and the motion sensors will turn all but a minimum amount of lighting off when the gym is unoccupied.
- Lighting in the multi-purpose room, library, office and miscellaneous spaces also uses 4 lamp lensed troffer style luminaires and should be replaced with open reflector troffers for increased energy efficiency.
- Exterior building mounted security lighting is provided around the entire perimeter
 of the building. These luminaires utilize HID (high intensity discharge) lamps.
 LED lighting should be provided around the entire perimeter of the building for
 added security and reduced energy consumption.
- Demolished lamps and ballasts should be disposed of in accordance with regulations for hazardous materials.

 Existing parking and walkway areas are illuminated by pole mounted HID shoebox style luminaires which were installed in 2008. Existing luminaires are adequate for the parking areas. Driveway connections to public streets are not illuminated.

Lighting Controls

- Classrooms have 2 wall switches arranged to switch one half of the lamps in each luminaire. This provides two levels of lighting but does not darken the teaching wall during the use of projectors. No automatic controls are currently provided. Provide motion sensors, daylight sensors, multiple switches and a load shedding relay to reduce energy consumption in classrooms. Provide switches on the teaching wall to allow the teacher to adjust light levels without leaving the front of the room.
- Provide two levels of lighting in corridors. Provide full lighting during normally occupied times and reduced lighting levels for those periods of time when the building has minimum occupancy. Provide time based control of corridor and stair lighting to insure that lights are turned off during unoccupied times and to reduce the amount of staff time needed to turn lights on at the beginning of the day and off at the end of the day. Provide corridor and stairway nightlights for security and safety.
- Provide motion sensor and daylight sensor control of lighting in offices, cafeteria, library and miscellaneous spaces. For safety do not provide automatic control of lighting in the kitchen.

Fire Alarm System

The existing 1988 fire alarm system is functional but is not fully ADA and Code compliant and is nearing the end of its useful life. Provide a new ADA Compliant fire alarm system including an annunciator at the front entrance.

Clock System

Presently most classrooms have either an unsynchronized battery powered clock or an "atomic" clock which is synchronized to an external time base. Some instructional spaces have no clocks. Provision of a wireless master clock or expansion of the "atomic" clock system would be consistent with other elementary schools in the District and would assist in maintaining coordination for activities which occur outside of the classroom.

Intercom & Sound System

• An intercom system which allows two way communications between the office and each classroom exists and is in operable condition. This system is approaching the end of its useful life and will need replaced in the next few years to avoid expensive repairs. The system does not allow general paging in restrooms. This system should be replaced as a part of any general renovation.

Telephone System

 Each classroom is provided with a telephone which operates as Voice Over the Internet (VOIP). The system is in good condition. The electronics for this system should be provided with emergency power.

Data Networking

The building is equipped with a data network which does not meet all of the buildings present needs. Network patch panels and switches are located in the Office Area at the front of the building and in a closet in the rear corridor. The network station cabling is Category 5. Connection to the District file servers in the High School is by way of leased fiber optic lines. Provide dedicated closets for patch panels and switches.

At the time of the next renovation provide a head end room for the wide area network electronics. Provide a dedicated network cable pathway (cable tray) in corridor ceilings and re-cable the network with Category 6 cable and materials. Provide additional network jacks to accommodate program needs and to make rooms more versatile. Provide a dedicated parking area for mobile computer carts. Provide additional dedicated spaces for network components throughout the building.

In order to maintain reasonable parity with recently remodeled buildings, Category 6 cable should be provided to the ceiling cavity and teacher's desk in each classroom to support technology upgrades.

Security System

- The building presently has a two closed circuit TV cameras, a recorder and a monitor which view activity in the main lobby. The monitor is located in the School Office and the recorder is on a shelf in the Custodians area. The Building has an intrusion detection system with motion sensors in some corridors.
- Additional cameras should be provided in the gym, lobby, playground, corridors, multi-purpose room and exterior of the building. Access to live and recorded images via the wide area network should be provided.
- Door contacts on exterior doors have been provided to ensure that all doors are closed when the last person leaves the building.
- An access control system is in place at several exterior doors.
- Installation of additional motion detectors in corridors, computer equipment rooms and offices containing sensitive records would reduce the potential for vandalism and unauthorized access to records.

Theatrical Lighting

There is no theatrical lighting installed at the stage area in this building. Some lighting for events is provided by troffers and flood lights above the stage. Provision of a small dimming system and minimal theatrical lighting would be consistent with other elementary buildings in the District.

Public Address System

The existing gym does not have a public address system. Provide a public address system to meet program needs. A public address system is installed in the multi-purpose room.

Classroom Presentation Equipment

• One classroom was found to have a portable smart board. LCD projectors were not observed in any classrooms. Provide smart boards or MIMIO (computer-marker board interface device) and LCD projectors in classrooms, instructional spaces, conference rooms and the library in accordance with the District Technology Plan. Provide a media transport system to deliver images from the teacher's computer, sound and video programming to the projector. Provide an amplifier and speakers to enhance the audio from the LCD. Provide a wireless microphone for use by the teacher in classrooms and large instructional spaces.

Video Distribution

 The District IT Department does not feel that a traditional dedicated video distribution system is necessary because equivalent content is available over the internet.

Receptacles

- Receptacle locations are generally adequate. Renovations which change room layouts will necessitate providing or relocating receptacles. A dedicated circuit should be provided for the teacher's computer and LCD projector. At least three other circuits should be provided in each classroom.
- If new technology upgrades are incorporated in the classrooms before the next renovation, receptacles to serve the LCD projector and wireless network hub will need to be provided in the ceiling cavity.

Facility Condition Index

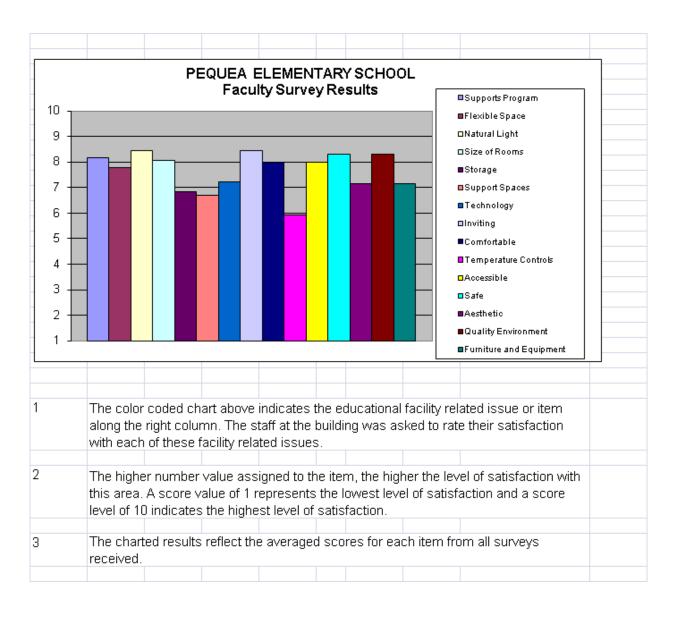
The Facility Cost Index (FCI) is used throughout the facility condition assessment industry as a relative indicator of a buildings condition. Based on industry-wide standards, if the cost to repair exceeds 60% of the cost to replace, the facility should be looked at more closely as a possible candidate for replacement. As a rule of thumb, an FCI below 10% is considered good. An FCI above 60% would suggest that the building is a candidate for replacement.

	FC	CI RATINGS
1	0	General Maintenance
2	10	Minor
3	50	Moderate
4	75	Major
5	100	Replace

	Pequ	uea Elementary S	School		
No.	Componenet / System	Percent of total	Rating (1 - 5)	Rating %	Adj %
1	Roofing	4.9%	1	0	0.00%
2	Exterior Walls	5.4%	2	0.1	0.54%
3	Exterior Windows	2.4%	1	0	0.00%
4	Exterior - Doors	0.6%	2	0.1	0.06%
5	Interior Floors	7.6%	3	0.5	3.80%
6	Interior Walls	4.0%	2	0.1	0.40%
7	Interior Ceilings	5.4%	2	0.1	0.54%
8	Interior - Other	3.3%	2	0.1	0.33%
9	HVAC	20.7%	4	0.75	15.53%
10	Electrical Lighting	10.0%	5	1	10.00%
11	Electrical Distrib.	1.3%	3	0.5	0.65%
12	Electrical Other	0.5%	3	0.5	0.25%
13	Plumbing	5.5%	3	0.5	2.75%
14	Fire / Life Safety	2.3%	3	0.5	1.15%
15	Specialties	0.8%	3	0.5	0.40%
16	Structural	19.3%	1	0	0.00%
17	Technology	3.5%	3	0.5	1.75%
18	Accessibility	2.5%	3	0.5	1.25%
	_				39.40%

Faculty Survey:

The average score reported by the staff for these building characteristics is 7.67, which is an above average score and reflects the condition and staff perception of the building's performance. The school facility, having last been renovated in 1988 has some facility needs and is one of two remaining schools in the district with no air conditioning. While not a technical survey or evaluation, school facility staff that spend considerable time in a school building have an innate understanding and perception of these identifiable building characteristics. The response from teaching staff generally is indicative of the overall existing conditions, quality and adequacy of the educational environment. Refer to the detailed building assessments for a detailed qualitative facility assessment.



PEN	N MANOR SCHOOL DISTRICT																				
PEQ	UEA ELEMENTARY SCHOOL APPRAISAL																				
	Criteria	Maxim Al	num P			ssed l Value							c	omm	entar	ry					
1	The School Site																				
1.1	Site is large enough to meet educational needs as defined																'				
	by state and local requirements		25			20		Ideal	site s	ize wo	uld be	14 ac	cres. C	urren	t site :	size	is appr	oxima	tely 10	acre	S.
1.2	Site is easily accessible and conveniently located for the					40															
4.0	present and future population. Location is removed from undesirable business, industry,		20		-	16															
1.3	and traffic.		10			10															
1.4	Site is large enough for future expansion, if needed.		5			3		Limite	ed du	e to ex	istina	confia	uration	n							
	Topography is varied enough to provide desired																				
	appearance but without steep inclines.		5			5															
	Site is well landscaped.		5			5															
	Site has stable, well drained soil free of erosion. Site is suitable for special instructional needs, e.g. outdoor		5			5															
1.8	learning.		5			4															
1.9	Pedestrian services include adequate sidewalks with																				
	designated crosswalks, curb cuts, and correct slopes		5		l	5		l													
1.10	Sufficient on-site, solid surface parking for faculty and staff																				
L	is provided.		5		<u> </u>	4															
1.11	Discourage and an account of the second of t		_		l	-		l													
1 12	Playgrounds are separated from streets and parking areas. Playgrounds are well equipped and appropriate for the age		5		1	5															
1.12	levels.		5			5															
	101010.																				
	Total - The School Site		100			87															
		•																			
		Maxim	num P	oints	Asse	ssed	Point														
	Criteria	Al	llowe	d		Value							C	omm	entar	ry					
2	Structural and Mechanical Features																				
2.1	Structure meets all barrier-free requirements both																				
	externally and internally.		15			12															
2.2	Roofs appear sound, have positive drainage, and are weather tight.		15			15															
23	Foundations are strong and stable with no observable		10			10															
2.0	cracks.		10			10															
2.4	Exterior and interior walls have sufficient expansion joints																				
	and are free of deterioration.		10			10															
2.5	Entrances and exits are located so as to permit efficient																				
	student traffic flow.		10			8															
2.6	Building "envelope" generally provides for energy conservation (See criteria)		10			8															
27	Structure is free of friable asbestos and toxic materials.				<u> </u>			A - I	-4 6			-4 -61									
	Interior walls permit sufficient flexibility for a variety of class		10		 	8		ASDE	Stos f	ee to t	ne bes	SE OT KI	iowiec	ıge							
2.0	sizes.		5		l	2		l													
2.9	Well maintained ceilings adequately retard sound.		5			4															
	Adequate light sources, well maintained, and properly				t	r															
	placed are provided.	L	15		L	9		T-12	lamps	s											
2.11	Electrical controls are safely protected with disconnect																				
0.10	switches easily accessible.		10		<u> </u>	8															
	Labeled electrical system is not subject to over-heating. Drinking fountains are adequate in number and placement,		10		 	8															
2.13	and are properly maintained including provisions for the				l			l													
	disabled.		10		l	8		l													
2.14	Number and size of restrooms meet requirements.		10			6		Non a	acces	sible											
	Internal water supply is adequate with sufficent pressure to																				
L	meet health and safety requirements.		10		L	8															
2.16	Drainage systems are properly maintained and meet		40		l	40		l													
2 47	requirements. Fire alarms, smoke detectors, and sprinkler systems are		10		<u> </u>	10															
2.17	properly maintained and meet requirements.		10		l	6		l													
2.18	Intercommunication system consists of a central unit that																				
	allows dependable two-way communication between the				l			l													
	office and instructional areas.	L	10		L	4		L													
	Undergound electrical service is provided.		5			5															
2.20	Exterior water supply is sufficient and available for normal																				
0.01	usage.		5		<u> </u>	5															
2.21	Each teaching/learning area has four or more convenient wall outlets.		5		l	5		l													
	wan outed.		200		\vdash	159															
		l				.55															

		Maximum	Assessed Point	
	Criteria	Points Allowed	Value	Commentary
3	Plant Maintainability			
3.1	Windows, doors, and walls are of material and finish requiring minimum attendance.	10	8	
3.2	Outdoor light fixtures, electric outlets, equipment, and other fixtures are accessible for repair and replacement.	10	8	
3.3	Floor coverings throughout the building require minimum care.	10	6	
3.4	Ceilings and walls throughout the building, including service areas, are easily cleaned and resistant to stain.	10	8	
3.5	Built-in equipment is designed and constructed for ease of maintenance.	10	8	
3.6	Floors in restrooms, kitchen, cafeterias, and corridors require a minimum of maintenance.	10	8	
3.7	Hardware and finishes are of durable quality.	10	6	
3.8	Restroom fixtures are wall mounted and of quality finish.	10	6	
3.9	Adequate custodial storage space with water and drain is accessible throughout the building.	10	8	
3.10	Adequate electrical outlets and power are available in every area to permit routine cleaning.	10	6	
	Total Plant Maintainability	100	72	

		Maximum	Assessed Point												
	Criteria	Points Allowed	Value					С	omn	enta	ry				
4	Building Safety and Security														
Site	Security														
4.1	Student loading areas are segregated from other vehicular														
	traffic and pedestrian walkways.	15	12												
4.2	Access streets have sufficient signals and signs to permit														
	safe entrance to and exit from school area.	5	4												
4.3															
	Off-site sidewalks are available for safety of pedestrians.	5	0												
4.4	On-site sidewalks and steps are designed and														
	maintained for safety.	5	4												
	Vehicular entrances and exits permit safe traffic flow.	5	4												
4.6	Locations and types of playground equipement are free														
	from hazard.	5	5												
	ding Safety			ļ											
4.7	The heating unit(s) is located away from student occupied														
	areas.	20	20												
	Multi-story buildings have at least two stairways.	15	15												
4.9	Exterior doors open outward and are equipped with panic														
	hardware.	10	10												
4.10	Emergency lighting is provided throughout the building														
	with exit signs on separate electrical circuit.	10	6												
4.11	Classroom doors are recessed and open outward.	10	6	Original bui	ilding	not re	cesse	d							
	Building security systems are provided to assure														
	uninterrupted operation of the educational program.	10	6												
4.13	Flooring (including ramps and stairways) is maintained in														
	a nonslip condition.	5	5												
4.14	Stair risers (interior and exterior) do not exceed 6 1/2														
	inches and range in number from 3-16.	5	5												
4.15	Glass is properly located and protected with wire or														
	safety material to prevent accidental student injury.	5	4												
4.16	Fixed projections in the traffic areas do not extend more														
	than eight inches form the corridor wall.	5	5												
4.17	Traffic areas terminate at an exit or a stairway leading to														
	an egress.	5	5												
	rgency Safety														
	Adequate fire safety equipment is properly located.	15	9	Not proper	amou	nt of f	îre ext	inguis	hers,	no s	prin	klers			
4.19	There are at least two independent exits from any point in														
	the building.	10	10												
	Stairways and exits are of noncombustible material.	10	8												
4.21	Fire-resistant materials are used throughout the structure.														
		10	8	Exits used	for st	irage									
4.22	Automatic and manual emergency alarm system with a														
	distinctive sound and flashing light is provided.	10	6												
4.23	Ample space is provided in corridors or protected areas														
	for student safety in the event of natural disasters.	5	5												
	Total Building Safety and Security	200	162	l											

	Criteria	Maximum P			ssed Point Value		Commentary										
5	Educational Adequacy	Allowed	1		value						Comi	nentar	y				
Aced	emic Learning Space																
5.1	Size of academic learning areas most decirable standards	25			20												
5.2	Size of academic learning areas meet desirable standards. Classroom space permits arrangements for small group	25			20												
	activity.	15			12												
5.3	Location of academic learning areas is near related educational activities and away from disruptive noises.	10			10												
5.4	Personal space in the classroom away from group	10			10												
	instruction allows privacy time for individual students.	10			6												
	Storage for student materials is adequate. Storage for teacher materials is adequate.	10 10			8												
Spec	ial Learning Space																
	Size of special learning area(s) meets standards.	15			12												
5.8	Design of special learning area(s) is compatible with instructional need.	10			8												
5.9	Library/Resource/Media Center provides appropriate and																
5.40	attractive space.	10			8												
5.10	Gymnasium (or covered P.E. area) adequately serves physical education instruction.	5			5												
5.11	Pre-kindergarten and kindergarten space is appropriate for																
E 10	age of students and nature of instruction. Music Program is provided with adequate sound-treated	10			10												
5.12	space.	5			1	In a cla	issroom,	tempo	rarily								
5.13	Space for art is appropriate for special instruction, supplies,																
514	and equipment. Space for technology education, including computer labs,	5		1	4												
5.14	permits use of state-of-the-art equipment.	5			3												
5.15	Space adjacent to classrooms is provided for small groups																
E 16	and remedial instruction. Storage for student and teacher material is adequate.	5 5			3												
5.16	Storage for student and teacher material is adequate.	1			3												
	ort Space																
5.17	Teachers' lounge and work areas reflect teachers as professionals.	10			8												
5.18	Cafeteria/cafetorium is attractive with sufficient space for	10			0												
	delivery, storage, and food preparation.	10			8												
5.19	Administrative offices provide an appearance consistent with the maturity of the students served.	5			3												
5.20	Counselor's office insures privacy and sufficient storage.	5			4												
5.21	Clinic is near administrative offices and is equipped to meet	_															
5 22	requirements. Suitable reception space is available for students, teachers,	5		-	4												
	and visitors.	5			3												
5.23	Administrative personnel are provided sufficient work space	_			_												
	and privacy.	5		I	3												
	Total Educational Adequacy	200			153												
		Maximum P	ointe	Λοοο	ssed Point												
	Criteria	Allowed			Value						Comr	nentar	y				
	Environment for Education																
Exter	ior Environment																
6.1	Overall design is aesthetically pleasing to age of students.	15			12												
	Site and building are well landscaped.	10			8												
63	Exterior noise and poor environment do not disrupt learning.	40			10												
6.3	Entrances and walkways are sheltered from sun and	10			10												
	inclement weather.	10			6												
6.5	Building materials provide attractive color and texture.	5		$\vdash \Box$	4												
Interi	or Environment					\vdash			1		+			+	+	+	
	Color schemes, building materials, and decor provide an								-1		1						
67	impetus to learning. Year around comfortable temperature is provided	20		1	12												
6.7	throughout the building.	15			9												
6.8	Ventilating system provides adequate circulation of clean																
6.0	air.	15		1	9												
6.9	Lighting system provides proper intensity, diffusion, and distribution of illumination.	15			9	T-12 la	mps										
6.10	Drinking fountains and restrooms facilities are conveniently						-,										
6 4 4	located.	15		ļ	12												
0.11	Communication among students is enhance by commons area(s) for socialization.	10			6												
	Traffic flow is aided by appropriate foyers and corridors.	10			10												
6.13	A	40															
6.14	Areas for students to interact are suitable to the age group. Large group areas are designed for effective management	10		 	6												
	of students.	10			8												
6.15	Acoustical treatment of ceilings, walls, and floors provides	40															
6.16	effective sound control. Window design contributes to a pleasant environment.	10 10		1	8												
	Furniture and equipment provide a pleasing atmosphere.																
	Total Environment for Education	10 200			6												
		200		1	143												

FACILITY OVERVIEW										
Building	Construction Date	Size	Grade Level							
Ann Letort Elementary School	(1960) 1961, 2002	41,704 SF	K-6							
Location	561 Letort Road Washington Bord	561 Letort Road Washington Boro, PA 17582								
Site Size	Approximately 12	2 acres								
Municipal Jurisdiction	Manor Township									
Occupancy Group	Group 'B' Educat	ional								
Construction Type	Non-Combustible	e								

Applicable Building Code

• PA Uniform Construction Code (UCC):

International Existing Building Code / 2009

International Building Code / 2009

ICC Electrical Code 2009 (utilizes National Electric Code-

2002 standards)

International Energy Conservation Code 2009

International Existing Building Code 2009

International Fire Code 2009
International Fuel Gas Code 2009
International Mechanical Code 2009
International Plumbing Code 2009
International Residential Code 2009

International Urban-Wildland Interface Code 2009

- ADAAG (Americans with Disabilities Accessibility Guidelines)
- ASHRAE Standards

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

FACILITY OVERVIEW

Site:

The Letort Elementary School is located in Washington Boro, Manor Township on a 12 acre site. While mainly a rural area, the school is located adjacent to and nearby residential development. The School is located on Letort Road, approximately 5 miles southwest of Millersville Borough. Site access for bus and parent drop off, as well as vehicular parking, is located on the east side of the building.

The existing site is relatively level but does have varying degrees of gentle slope, allowing for adequate and positive drainage. Hard surface play areas are located on the south side of the building, as are soft play and kindergarten play areas. Play fields are located on the west and north sides of the building. Access to all play areas from the building is good and requires no conflicts with vehicular traffic.

The building is simple in plan, with the main corridor running in the north-south direction and an intersecting, secondary corridor running in the east-west direction. All program spaces are accessed from these corridors. Future expansion of the building is possible and will be dictated by existing conditions.

Building:

The Letort Elementary School underwent a comprehensive renovation and construction project, having been completed in 2002. Recent Capital Improvements include upgrades to the building security system in 2008. The School is a one story building with exterior brick veneer. The building structural system is masonry load bearing, with a steel framing and metal joist roof structure and some wood roof decking. The 2002 renovation project addressed the identified life-safety, physical plant and educational program needs in order to effectively extend the life span of the building and its operational systems, and should serve the Penn Manor School District well into the future. Inasmuch as a building is a static, non-dynamic entity, subject to the forces of nature and the aging and deterioration process, it is recommended that annual visual inspections of the building, including the interior, exterior and the roof, be completed as part of the annual school district maintenance program.

Aerial Photograph



First Floor Plan



FIRST FLOOR PLAN

I. ADA, SAFETY & BUILDING CODE

Accessibility

- The location of accessible routes within the site for parking, walks and building entrances appear to be compliant. Some items should be addressed: Sidewalk curb ramps (i.e.. the front entrance) should have detectable warning panels added where ramps or accessible routes meet the vehicular driveways.
- The number of accessible parking spaces is adequate based on approximately 71 marked parking spaces. One of the current accessible spaces should be marked: "van accessible."
- A sign indicating a handicapped, van accessible parking space should be added. The height of the handicapped parking space signs should be corrected.
- The railings on the exterior steps, located on the south end of the building, should be replaced with 42-inch high guards to protect any portion of the elevated walkway and ramp that exceeds 30 inches in height.

Code Compliance

- The off-site walkway that leads from the rear of the school to Carol Drive does not appear to have any lighting. Walkway lighting should be considered, if permissible by the landowner.
- The front drop -off is adequate in size and configuration for the buses. A Parent drop-off and pick-up is designated within the front parking lot. The service area, located in the rear, has adequate area and turn-around space. The site distance at the west exit driveway onto Letort Road, looking west appears to be less than desirable. It's recommended that this exit driveway align closer to a 90 degree intersection with Letort Road, and be reduced in its expanse to better channel the vehicular movements at controlled speeds.
- Parking is adequate for daytime use; there are approximately 71 marked parking spaces. There are areas for parking expansion in the rear of the school. If desired, additional parking would better accommodate special events such as concerts and open houses.

II. EDUCATIONAL PROGRAM / FUNCTIONAL

Conestoga Elementary is located on an approximately 11.5 acre site, which is less than the PDE planning standard of 13.5 acres (10 acres PLUS one additional acre per every 100 students). It's noted that most of the 11.5 acres is usable and has been developed effectively. There is very limited potential to acquire additional land, as the site is bound by residential scale properties to the north and west, and Letort Road to the south.

III. PHYSICAL PLANT

A. Site

- The front driveway is recommended for repair and overlay within the next 3 to 4 years. The parking lot and play area pavements appear to be in good condition with the exception of some shrinkage cracks in the rear which should be filled as soon as possible.
- There are concrete curbs that are in need of minor repair.
- Play equipment appears to be in good condition. The overall size of the play equipment areas are smaller than at most of the other Penn Manor Elementary Schools.
- It's recommended that the paved area be expanded up to the fence line to the west, to eliminate the worn grass area and to reduce the need for trimming around the fence. It's recommended that a woodcarpet area be installed around the parallel bars to reduce the mud exposure in this area. Rubber pads should be installed under the swing wear area (similar to the Martic Elementary renovation) to reduce maintenance and enhance safety on the swings.
- The flagpole is showing signs of corrosion and wear and is recommended for replacement
- The addition of shade trees is recommended around the playground area to provide cooling shade to the pavements and people using the playground.
- Public sewer has been made available at the south west corner of the site along Letort Road. It is recommended that the existing sewer drain field be decommissioned and a new sewer lateral be installed to the building as soon as feasible, putting the building on public sewer.
- It is recommend that the school connect to the public water system as soon as it is made feasible. At this time, it is believed that the Columbia water Company is planning an expansion into the nearby area which will make public water available.
- Junior sized baseball and soccer fields are on the Letort Elementary property. The infield appears to be well drained and maintained. It's recommended that the sideline fences and backstop fence receive minor repairs and re-painting to extend the life of this fencing.

B. Building

■ The building underwent comprehensive renovations in 2002 and all major building components and systems were either replaced or upgraded. The following educational program related observations / recommendations have been identified:

- Letort Elementary School is one of two elementary schools in the school district (Eshleman ES), that has a multipurpose room and not a separate gymnasium and cafeteria. A separate gymnasium would be preferred over a multi-purpose room, as the space is unable to be used during lunch hours, however for a school of this size, a multi-purpose is considered acceptable.
- The school has inadequate amount of conference and meeting space.
- The school has an inadequate amount of small group, or pull-out type academic support spaces.

C. Interior Finishes

No recommendations

D. Specialties

No recommendations

E. HVAC

The HVAC System was replaced in 2002. A ground source heat pump system was installed consisting of a 2-pipe loop water system connected to heat pump units throughout the building. The loop is connected to an underground closed loop, geothermal bore field for the purpose of extracting heat from the ground during the heating season and rejecting heat during the cooling season. Ventilation air is provided through central energy recovery units. An electronic DDC system is installed to provide automatic temperature control.

F. Plumbing

In general, domestic water piping was upgraded as part of the 2002 project. Storm water and sanitary piping was generally re-used. Domestic hot water is provided by a propane water heater connected to underground propane tank(s). The building is served by an on-site septic system. Public water is not available. A well feeds an underground water storage tank. A booster pump system draws water from the tank and feeds the building.

Fire Protection

There is no sprinkler system installed for this building.

G. Electrical

Electrical Service

The incoming electrical service is rated 1600 amps at 120/208 volts. The main service equipment is a floor mounted switchboard which was installed during the 2002 renovation. The service equipment can be used for another 30 years and is adequate for a 6 to 10 room expansion of the building.

 The existing utility company transformer is ground mounted and located on the south side of the building.

Electrical Distribution

 All of the circuit breaker panels in the building were installed in 2002. These panels are acceptable for use for another 30 years. Most panels have space for added loads.

Emergency Power & Lighting

- The existing emergency power source is a 35 kW propane gas fueled generator located in the mechanical room. This generator was installed in 2002 and is acceptable for at least 20 more years of service unless load is added to it. The generator currently powers emergency lighting and the UPS for the card access, intrusion detection and CCTV Camera Systems, the chlorinator, data system and telephones. The generator also powers the water pressure booster pumps and through the use of a manual transfer switch can power the well pumps.
- It may be desirable to power the walk-in refrigerator, paging system and freezer from the generator. Adding these loads to the emergency power system will require the generator to be replaced with a larger unit.
- For code compliance the generator and transfer switches should be enclosed in a dedicated room.

Lighting

- Luminaires throughout the building were replaced in the 2002 renovation and are in good condition.
- Gym luminaires are equipped compact fluorescent lamps. These lamps are instant-on but are turned on in the morning and left on until late at night. Gym lighting should be controlled by motion sensors. The motion sensors will turn all but a minimum amount of lighting off when the gym is unoccupied.
- Lighting in the corridors, offices and miscellaneous spaces use lensed troffer style luminaires. The library lighting uses cross-baffle luminaires to reduce glare. This lighting meets the evaluation criteria requirements.
- Exterior building mounted security lighting is currently provided only on all sides of the building. These luminaires utilize HID (high intensity discharge) lamps. LED lighting could be provided around the entire perimeter of the building to reduce energy consumption.
- Existing parking and walkway areas are illuminated by pole mounted HID shoebox style luminaire. Existing luminaires are adequate for most parking areas. Driveways are not illuminated.

Lighting Controls

- Classrooms have multiple wall switches arranged to provide two levels of lighting and to darken the teaching wall during the use of projectors. No automatic controls are currently provided. Provide motion sensors and daylight sensors to reduce energy consumption in classrooms. Provide switches on the teaching wall to allow the teacher to adjust light levels without leaving the front of the room.
- Provide two levels of lighting in corridors. Provide full lighting during normally occupied times and reduced lighting levels for those periods of time when the building has minimum occupancy. Provide time based control of corridor and stair lighting to insure that lights are turned off during unoccupied times and to reduce the amount of staff time needed to turn lights on at the beginning of the day and off at the end of the day. Provide corridor and stairway nightlights for security and safety.
- Provide motion sensor control of lighting in multi-purpose room, offices, library and miscellaneous spaces. For safety do not provide automatic control of lighting in the kitchen.
- Daylight sensors could also be provided but their operation would require a ballast replacement in the luminaires located within 15 feet of the windows. At current costs for electricity, daylight sensors will not be paid for by energy savings before this building is renovated.
- If the District purchases electrical power from a company which offers a rate reduction for load shedding, it will be necessary to provide load shedding controls for lighting (and HVAC equipment).

Fire Alarm System

 The existing 2002 fire alarm system is functional and meets ADA and Code requirements at the time of installation. The system should remain useable for another 12 years.

Clock System

Classrooms and other spaces have synchronized clocks.

Intercom & Sound System

• An intercom system which allows two way communications between the office and each classroom by way of a ceiling mounted speaker exists and is in operable condition. This system is expected to be usable for the next 15 years. The system does not allow general paging in restrooms.

Telephone System

 Each classroom is provided with a telephone which operates as Voice Over the Internet (VOIP). The system is in good condition.

Data Networking

The building is equipped with a data network which meets most of the buildings present needs. Network patch panels and switches are located in a dedicated room near the library and a closet in the primary wing. The network station cabling is Category 5e. Connection to the District file servers is by way of leased

fiber optic lines. A dedicated closet for patch panels and switches is provided. A dedicated network cable pathway (cable tray) in corridor ceilings exists.

In order to maintain reasonable parity with recently remodeled buildings, Category 6 cable should be provided to the ceiling cavity and teacher's desk in each classroom to support classroom technology upgrades

Security System

- The building presently has a two closed circuit TV cameras, a recorder and a monitor which view activity in the main lobby. The monitor is located in the School Office and the recorder is on a shelf in the Custodians area. The Building has an intrusion detection system with motion sensors in some corridors.
- Additional cameras should be provided in the multi-purpose room, lobby, playground, corridors and exterior of the building. Access to live and recorded images via the wide area network should be provided.
- Door contacts on exterior doors have been provided to ensure that all doors are closed when the last person leaves the building.
- An access control system is in place at several exterior doors.
- Installation of additional motion detectors in corridors, computer equipment rooms and offices containing sensitive records would reduce the potential for vandalism and unauthorized access to records.

Theatrical Lighting

 Minimal theatrical lighting is installed facing an area of the multi-purpose room where portable risers are installed as needed. A small wall mounted dimming system provides control of these lights.

Public Address System

• The existing multi-purpose room has a public address system which meets program needs.

Classroom Presentation Equipment

One primary classroom was found to have a smart board. LCD projectors were not observed in any classrooms. Each classroom was provided with a receptacle and two data ports in the ceiling cavity. Existing surface raceway is available to house a projector port and associated cabling. Provide smart boards or MIMIO (computer-marker board interface device) and LCD projectors in classrooms, instructional spaces, conference rooms and the library in accordance with the District Technology Plan. Provide a media transport system to deliver images from the teacher's computer and sound and video programming to the projector. Provide an amplifier and speakers to enhance the audio from the LCD. Provide a wireless microphone for use by the teacher in classrooms and large instructional spaces.

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

FACILITY OVERVIEW

Video Distribution

■ The District IT Department does not feel that a traditional dedicated video distribution system is necessary because equivalent content is available over the internet.

Receptacles

 Receptacle locations are generally adequate. Renovations which change room layouts will necessitate providing or relocating receptacles.

Facility Condition Index

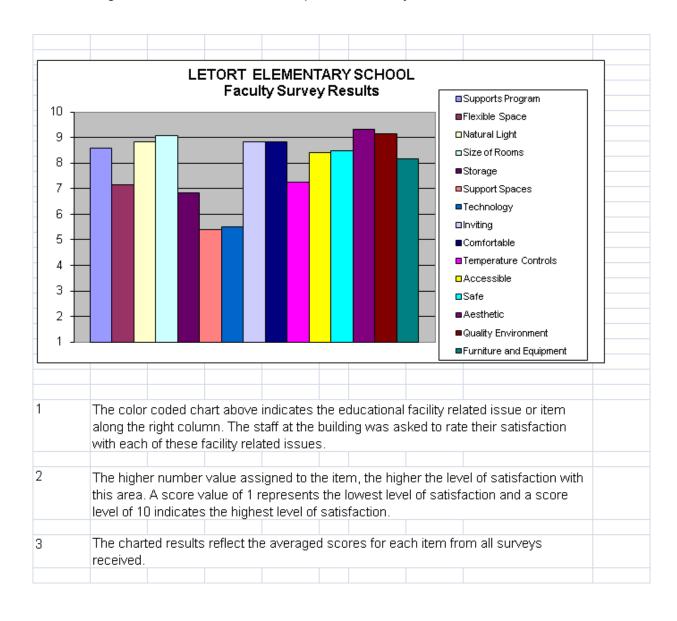
The Facility Cost Index (FCI) is used throughout the facility condition assessment industry as a relative indicator of a buildings condition. Based on industry-wide standards, if the cost to repair exceeds 60% of the cost to replace, the facility should be looked at more closely as a possible candidate for replacement. As a rule of thumb, an FCI below 10% is considered good. An FCI above 60% would suggest that the building is a candidate for replacement.

	FC	CI RATINGS
1	0	General Maintenance
2	10	Minor
3	50	Moderate
4	75	Major
5	100	Replace

	Leto	ort Elementary S	chool		
No.	Componenet / System	Percent of total	Rating (1 - 5)	Rating %	Adj %
1	Roofing	4.9%	1	0	0.00%
2	Exterior Walls	5.4%	1	0	0.00%
3	Exterior Windows	2.4%	1	0	0.00%
4	Exterior - Doors	0.6%	1	0	0.00%
5	Interior Floors	7.6%	1	0	0.00%
6	Interior Walls	4.0%	1	0	0.00%
7	Interior Ceilings	5.4%	1	0	0.00%
8	Interior - Other	3.3%	1	0	0.00%
9	HVAC	20.7%	1	0	0.00%
10	Electrical Lighting	10.0%	3	0.5	5.00%
11	Electrical Distrib.	1.3%	1	0	0.00%
12	Electrical Other	0.5%	3	0.5	0.25%
13	Plumbing	5.5%	1	0	0.00%
14	Fire / Life Safety	2.3%	3	0.5	1.15%
15	Specialties	0.8%	1	0	0.00%
16	Structural	19.3%	1	0	0.00%
17	Technology	3.5%	3	0.5	1.75%
18	Accessibility	2.5%	1	0	0.00%
					8.15%

Faculty Survey:

The average score reported by the staff for these building characteristics is 7.99, which is an above average score and reflects the good condition of the facility as a result of the renovation project in 2002. While not a technical survey or evaluation, school facility staff that spend considerable time in a school building have an innate understanding and perception of these identifiable building characteristics. The response from teaching staff generally is indicative of the overall existing conditions, quality and adequacy of the educational environment. Refer to the detailed building assessments for a detailed qualitative facility assessment.



E1	ORT ELEMENTARY SCHOOL APPRAISAL			
	Criteria	Maximum Points Allowed	Assessed Point Value	t Commentary
1	The School Site			
1.1	Site is large enough to meet educational needs as			
	defined by state and local requirements	25	25	Ideal site size would be 13-14 acres. Current site size is approximately 12 acre
1.2	Site is easily accessible and conveniently located for the			
	present and future population.	20	20	
1.3	Location is removed from undesirable business, industry, and traffic.	10	10	
1.4	Site is large enough for future expansion, if needed.	5	5	
	Topography is varied enough to provide desired	-	-	
	appearance but without steep inclines.	5	5	
1.6	Site is well landscaped.	5	5	
1.7	Site has stable, well drained soil free of erosion.	5	5	
1.8	Site is suitable for special instructional needs, e.g. outdoor learning.	5	4	
1.9	Pedestrian services include adequate sidewalks with designated crosswalks, curb cuts, and correct slopes	5	5	
1.10	Sufficient on-site, solid surface parking for faculty and staff is provided.	5	5	
1.11	Playgrounds are separated from streets and parking areas.	5	5	
1.12	Playgrounds are well equipped and appropriate for the age levels.	5	5	
	Total - The School Site	100	99	
	Total - The School Site	100	<u> </u>	1
		Maximum	Assessed Point	t
	Criteria	Points Allowed	Value	Commentary

	Criteria	Maximum Points Allowed	Assessed Point Value	Commentary
2	Structural and Mechanical Features	Points Allowed	value	Commentary
_	Structure meets all barrier-free requirements both			
	externally and internally.	15	15	
2.2	Roofs appear sound, have positive drainage, and are			
	weather tight.	15	12	
	Foundations are strong and stable with no observable cracks.	10	10	
2.4	Exterior and interior walls have sufficient expansion joints			
	and are free of deterioration.	10	10	
	Entrances and exits are located so as to permit efficient student traffic flow.	10	10	
2.6	Building "envelope" generally provides for energy		_	
0.7	conservation (See criteria)	10	8	Original 1960's construciton
	Structure is free of friable asbestos and toxic materials.	10	8	
	Interior walls permit sufficient flexibility for a variety of class sizes.	5	2	
2.9	Well maintained ceilings adequately retard sound.	5	5	
2.10	Adequate light sources, well maintained, and properly placed are provided.	15	15	
2.11	Electrical controls are safely protected with disconnect			
	switches easily accessible.	10	10	
2.12	Labeled electrical system is not subject to over-heating.	10	10	
2.13	Drinking fountains are adequate in number and placement, and are properly maintained including provisions for the disabled.	10	10	
2.14	Number and size of restrooms meet requirements.	10	10	
	Internal water supply is adequate with sufficent pressure to meet health and safety requirements.	10	8	
2.16	Drainage systems are properly maintained and meet requirements.	10	10	
2.17	Fire alarms, smoke detectors, and sprinkler systems are properly maintained and meet requirements.	10	10	
2 18	Intercommunication system consists of a central unit that		10	
2.10	allows dependable two-way communication between the		40	
2.10	office and instructional areas.	10	10	System does not allow for general paging in restrooms
2.19	Undergound electrical service is provided.	5	5	
	Exterior water supply is sufficient and available for normal usage.	5	5	
2.21	Each teaching/learning area has four or more convenient	_	_	
_	wall outlets.	5	5	
		200	188	

Criteria	Allowed		
	Allowed	Value	Commentary
Plant Maintainability			
Windows, doors, and walls are of material and finish requiring minimum attendance.	10	8	
Outdoor light fixtures, electric outlets, equipment, and other fixtures are accessible for repair and replacement.	10	8	
Floor coverings throughout the building require minimum care.	10	8	
Ceilings and walls throughout the building, including service areas, are easily cleaned and resistant to stain.	10	8	
Built-in equipment is designed and constructed for ease of maintenance.	10	8	
Floors in restrooms, kitchen, cafeterias, and corridors require a minimum of maintenance.	10	10	
Hardware and finishes are of durable quality.	10	10	
Restroom fixtures are wall mounted and of quality finish.	10	10	
Adequate custodial storage space with water and drain is accessible throughout the building.	10	10	
		10	
	100	90	
	Outdoor light fixtures, electric outlets, equipment, and other ixtures are accessible for repair and replacement. Floor coverings throughout the building require minimum care. Ceilings and walls throughout the building, including service areas, are easily cleaned and resistant to stain. Built-in equipment is designed and constructed for ease of maintenance. Floors in restrooms, kitchen, cafeterias, and corridors require a minimum of maintenance. Hardware and finishes are of durable quality. Restroom fixtures are wall mounted and of quality finish. Adequate custodial storage space with water and drain is accessible throughout the building.	Outdoor light fixtures, electric outlets, equipment, and other fixtures are accessible for repair and replacement. 10 Floor coverings throughout the building require minimum care. Ceilings and walls throughout the building, including service areas, are easily cleaned and resistant to stain. Built-in equipment is designed and constructed for ease of maintenance. 10 Floors in restrooms, kitchen, cafeterias, and corridors require a minimum of maintenance. 10 Hardware and finishes are of durable quality. Restroom fixtures are wall mounted and of quality finish. 10 Adequate custodial storage space with water and drain is accessible throughout the building. Adequate electrical outlets and power are available in every area to permit routine cleaning.	Outdoor light fixtures, electric outlets, equipment, and other lixtures are accessible for repair and replacement. 10 8 Floor coverings throughout the building require minimum care. 10 8 Ceilings and walls throughout the building, including service areas, are easily cleaned and resistant to stain. 10 8 Built-in equipment is designed and constructed for ease of maintenance. 10 8 Floors in restrooms, kitchen, cafeterias, and corridors require a minimum of maintenance. 10 10 Hardware and finishes are of durable quality. Restroom fixtures are wall mounted and of quality finish. 10 10 Adequate custodial storage space with water and drain is accessible throughout the building. Adequate electrical outlets and power are available in every area to permit routine cleaning. 10 10

		•	•																
		Maximum Points									_								
	Criteria	Allowed	Value				_				Com	ım	entar	<u>_</u>		_		 	
	Building Safety and Security																		
	Security						L									L			
4.1	Student loading areas are segregated from other vehicular																		
	traffic and pedestrian walkways.	15	12	Ther	e are	some	iss	ues, b	out th	ey ar	e dict	tat	ed by	the s	site				
4.2	Access streets have sufficient signals and signs to permit																		
	safe entrance to and exit from school area.	5	5																
4.3	Off-site sidewalks are available for safety of pedestrians.	5	0																
4.4	On-site sidewalks and steps are designed and maintained																		
	for safety.	5	4																
4.5	Vehicular entrances and exits permit safe traffic flow.	5	5																
4.6	Locations and types of playground equipement are free																		
	from hazard.	5	5																
	ling Safety																		
4.7	The heating unit(s) is located away from student occupied																		
	areas.	20	20																
	Multi-story buildings have at least two stairways.	15	15																
4.9	Exterior doors open outward and are equipped with panic																		
	hardware.	10	10																
4.10	Emergency lighting is provided throughout the building with																		
	exit signs on separate electrical circuit.	10	10																
	Classroom doors are recessed and open outward.	10	10																
4.12	Building security systems are provided to assure																		
	uninterrupted operation of the educational program.	10	8	Reco	mmer	nd add	diti	onal m	otior	n sen	sors a	an	d cam	eras	3				
4.13	Flooring (including ramps and stairways) is maintained in a																		
	nonslip condition.	5	5																
4.14	Stair risers (interior and exterior) do not exceed 6 1/2																		
L	inches and range in number from 3-16.	5	5	<u> </u>															
4.15	Glass is properly located and protected with wire or safety	_	_	1															
L	material to prevent accidental student injury.	5	5	<u> </u>															
4.16	Fixed projections in the traffic areas do not extend more	_	_	1															
	than eight inches form the corridor wall.	5	5	<u> </u>															
4.17	Traffic areas terminate at an exit or a stairway leading to an	_	_	1															
	egress.	5	5	-															
F	Land Control Control			├															
	rgency Safety	15	15	├															
	Adequate fire safety equipment is properly located. There are at least two independent exits from any point in	15	15	\vdash															
4.19	the building.	10	10	1															
4 20	Stairways and exits are of noncombustible material.	10	10	-															
	Fire-resistant materials are used throughout the structure.	10	10	-															
4.21	incresistant materials are used throughout the structure.	10	8																
4 22	Automatic and manual emergency alarm system with a		-	 															
7.22	distinctive sound and flashing light is provided.	10	10	1															
4 23	Ample space is provided in corridors or protected areas for		10	\vdash															
7.20	student safety in the event of natural disasters.	5	5	1															
-	Total Building Safety and Security	200	187	\vdash															
	. Jan. Daniery and Gooding		.0,																

Total Environment for Education

FACILITY OVERVIEW

	Criteria	Maximum Points Allowed	Assessed Point Value	Commentary
5	Educational Adequacy	r onits Anowed	value	Commentary
	lemic Learning Space			
	Size of academic learning areas meet desirable standards.	25	25	
5.2	Classroom space permits arrangements for small group activity.	15	12	
5.3	Location of academic learning areas is near related educational activities and away from disruptive noises.			
5.4	Personal space in the classroom away from group	10	10	
	instruction allows privacy time for individual students.	10	8	
	Storage for student materials is adequate.	10	8	
	Storage for teacher materials is adequate.	10	8	
	Size of special learning area(s) meets standards.	15	12	
	Design of special learning area(s) is compatible with instructional need.	10	8	
5.9	Library/Resource/Media Center provides appropriate and attractive space.	10	10	
5.10	Gymnasium (or covered P.E. area) adequately serves			
5.11	physical education instruction. Pre-kindergarten and kindergarten space is appropriate	5	5	
	for age of students and nature of instruction.	10	10	
	Music Program is provided with adequate sound-treated space.	5	1	
5.13	Space for art is appropriate for special instruction,	_	4	
5.14	supplies, and equipment. Space for technology education, including computer labs,	5	4	
5 15	permits use of state-of-the-art equipment. Space adjacent to classrooms is provided for small	5	4	
0.10	groups and remedial instruction.	5	2	Building layout does not permit, other than in corridors.
5.16	Storage for student and teacher material is adequate.	5	4	
Supr	port Space			
	Teachers' lounge and work areas reflect teachers as professionals.	10	10	
5.18	Cafeteria/cafetorium is attractive with sufficient space for			
5.19	delivery, storage, and food preparation. Administrative offices provide an appearance consistent	10	10	
	with the maturity of the students served.	5	5	
	Counselor's office insures privacy and sufficient storage.	5	5	
5.21	Clinic is near administrative offices and is equipped to meet requirements.	5	5	
5.22	Suitable reception space is available for students,			
5 23	teachers, and visitors. Administrative personnel are provided sufficient work	5	5	
5.25	space and privacy.	5	5	
	Total Educational Adequacy	200	176	
		Maximum	Assessed Point	
<u> </u>	Criteria	Points Allowed	Value	Commentary
	Environment for Education			
Exte	rior Environment Overall design is aesthetically pleasing to age of			
6.1	students.	15	12	
	Site and building are well landscaped.	10	8	
63	Exterior noise and poor environment do not disrupt learning.	10	10	
0.5	Entrances and walkways are sheltered from sun and	10	10	
6.4	inclement weather.	10	6	Some coverage at main entrance
6.5	Building materials provide attractive color and texture.	5	5	
Inter	ior Environment			
	Color schemes, building materials, and decor provide an impetus to learning.	20	20	
6.7	Year around comfortable temperature is provided			
6.8	throughout the building. Ventilating system provides adequate circulation of clean	15	15	
	air. Lighting system provides proper intensity, diffusion, and	15	15	
	distribution of illumination.	15	15	
6.10	Drinking fountains and restrooms facilities are conveniently located.	15	15	
6.11	Communication among students is enhance by commons area(s) for socialization.	10	6	Plan is not conducive
6.12	Traffic flow is aided by appropriate foyers and corridors.	10	10	THAT IS NOT CONDUCTIVE
	Areas for students to interact are suitable to the age			
6.14	group. Large group areas are designed for effective management	10	6	
	of students. Acoustical treatment of ceilings, walls, and floors	10	8	
5.10	provides effective sound control.	10	8	
	Window design contributes to a pleasant environment.	10	10	
6.17	Furniture and equipment provide a pleasing atmosphere.	10	40	
		10	10	•

FACI	LIT	V C	\/E	D\/I	
FAGI		1 0		RVI	

Building	Construction Date	Size	Grade Level						
Marticville Middle School School	(1970) 1988, 2008	107,409 SF	7-8						
Location	356 Frogtown Ro Pequea, PA 1756								
Site Size	Pequea, PA 17565 Approximately 28 acres								
Municipal Jurisdiction	Martic Township,	Lancaster County							
Occupancy Group	Group 'B' Educat	ional							

Applicable Building Code

Construction Type

• PA Uniform Construction Code (UCC):

International Existing Building Code / 2006

International Building Code / 2006

ICC Electrical Code 2006 (utilizes National Electric Code-

2002 standards)

Non-Combustible

International Energy Conservation Code 2006

International Existing Building Code 2006

International Fire Code 2006
International Fuel Gas Code 2006
International Mechanical Code 2006
International Plumbing Code 2006
International Residential Code 2006

International Urban-Wildland Interface Code 206

 ADAAG (Americans with Disabilities Accessibility Guidelines)

ASHRAE Standards

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

FACILITY OVERVIEW

Site:

The Marticville Middle School is located in Pequea, PA and although the area is rural, there are some adjacent and nearby residences. The School is bordered by farmland and residences to the north. The School is located on Frogtown Road, accessed via Route 324. Bus Drop off, as well as visitor access and parking is located on the north side of the building. Parent drop-off and additional vehicular parking is located on the north side of the building, at the lower parking lot.

The school is sited on the highest elevation of the site, sloping gently to the northeast. Hard surface play area is located on the north side of the building, and the play fields are located on the north and northeast sides of the building. Access to the main play areas from the building is good and requires no conflicts with vehicular traffic.

Building:

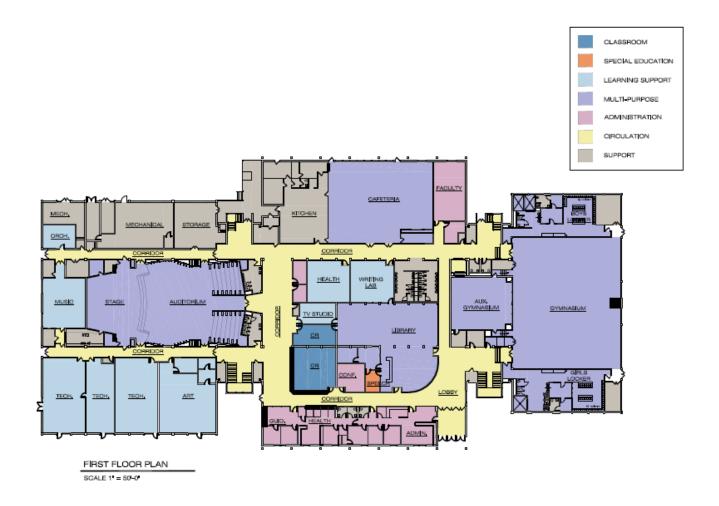
The Marticville Middle School was originally constructed in 1970, with building renovations having been completed in 1988. The School is a two story building with exterior brick and concrete veneer. The building structural system is concrete. The new main stair towers on the front of the building, added as part of the 2008 construction renovation project, are steel framed.

The Marticville Middle School underwent a comprehensive renovation project which completed in 2007. The building project targeted life-safety and building code issues, as well physical plant needs and educational program upgrades. The Marticville Middle School will serve the community and school district well into the future. Inasmuch as a building is a static, non-dynamic entity, subject to the forces of nature and the aging and deterioration process, it is recommended that annual visual inspections of the building, including the interior, exterior and the roof, be completed as part of a proactive and on-going maintenance program.

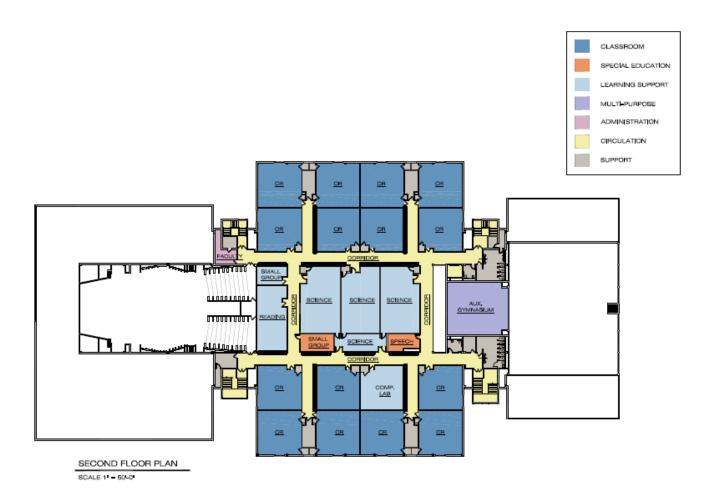
Aerial Photograph



First Floor Plan



Second Floor Plan



I. ADA, SAFETY & BUILDING CODE

ADA, Safety and Building Code issues were addressed in the 2008 renovations.
 There are no recommendations in this area.

II. EDUCATIONAL PROGRAM / FUNCTIONAL

 Program issues were addressed in the 2008 renovation. There are no recommendations in this area.

III. PHYSICAL PLANT

A. Site

 Site related improvements were included in the 2008 renovation project. There are no current recommendations.

B. Building

 Building needs were included in the 2008 renovation. There are no current recommendations.

C. Interior Finishes

 Interior finishes were replaced or upgraded in the 2008 renovation and there are no recommendations in this area.

D. Specialties

No recommendations

E. HVAC

The HVAC System was replaced in 2008. A ground source heat pump system was installed consisting of a 2-pipe loop water system connected to heat pump units throughout the building. The loop is connected to an underground closed loop, geothermal bore field for the purpose of extracting heat from the ground during the heating season and rejecting heat during the cooling season. Ventilation air is provided through central energy recovery units. An electronic DDC system is installed to provide automatic temperature control.

F. Plumbing

In general, domestic water piping was upgraded as part of the 2008 project. Storm water and sanitary piping was generally re-used. Domestic hot water is provided by a propane water heater connected to a storage tank. The building is served by an on-site sewage treatment plant. Public water is not available. A well feeds a water storage tank.

Fire Protection

 Several small areas of the building are covered by a sprinkler system connected to the domestic water system.

G. Electrical

Electrical Service

• Renovations to the Marticville Middle School building were completed in 2008. The electrical power distribution system is new and can be expected to serve the facility for the next 35 years. The lighting system is new and expected to serve the building for the next 20 years unless new technologies in lighting are released for commercial use in the next few years and demonstrate a reasonable payback. The addition of motion sensors in the gym and multi-purpose room should be considered and is expected to provide a reasonable payback.

Technology

- The technology systems installed at Marticville Middle School generally meet the criteria used to evaluate the facilities described in this report. LCD projectors were installed as a part of this renovation but only a few smart boards were included. Consideration should be given to providing smart boards or MIMIO (computer-marker board interface device) as an independent project since this building is unlikely to be renovated again for 17 years.
- A web accessible closed circuit television system with cameras covering a majority of interior and exterior spaces was not included in the Marticville Middle School project but is now a part of the evaluation criteria. Cameras were installed at the main entrance and at interior corridor intersections. Due to the length of time until the next renovation, consideration should be given to installing this security upgrade as a stand alone project.
- As a less costly alternative to web accessible cameras, the existing system could be expanded to cover the exterior and additional interior spaces without the web accessibility. The down side to this is that this is one of the most remote buildings in the district and a system that is not web accessible results in a delay until authorized personnel can view recorded events or evaluate on going events.
- With the pending conversion of some cable TV channels to digital format, install three digital converters to permit continued access to three of the higher numbered channels. Three converters are provided at not cost by the cable TV service provider. Additional converters can be leased or purchased.

Facility Condition Index

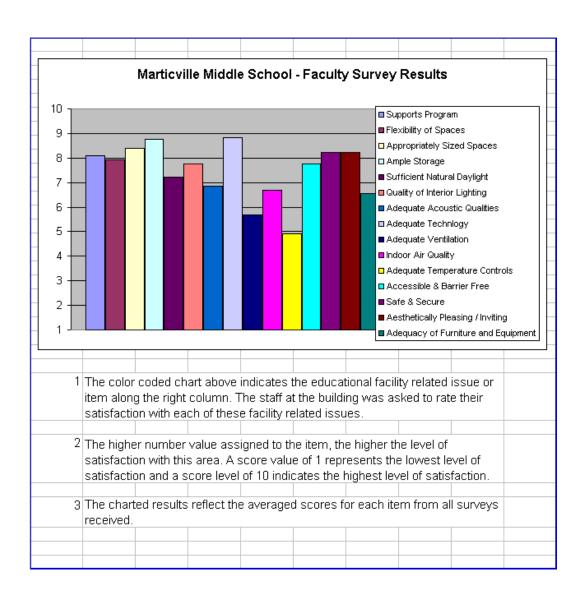
The Facility Cost Index (FCI) is used throughout the facility condition assessment industry as a relative indicator of a buildings condition. Based on industry-wide standards, if the cost to repair exceeds 60% of the cost to replace, the facility should be looked at more closely as a possible candidate for replacement. As a rule of thumb, an FCI below 10% is considered good. An FCI above 60% would suggest that the building is a candidate for replacement.

	F	CI RATINGS					
1	0	General Maintenance					
2 10 Minor							
3	50	Moderate					
4	75	Major					
5	100	Replace					

	Mar	ticville Middle S	chool		
No.	Componenet / System	mponenet / System Percent of Rating total (1 - 5)			
1	Roofing	4.9%	1	0	0.00%
2	Exterior Walls	5.4%	1	0	0.00%
3	Exterior Windows	2.4%	1	0	0.00%
4	Exterior - Doors	0.6%	1	0	0.00%
5	Interior Floors	7.6%	1	0	0.00%
6	Interior Walls	4.0%	1	0	0.00%
7	Interior Ceilings	5.4%	1	0	0.00%
8	Interior - Other	3.3%	1	0	0.00%
9	HVAC	20.7%	1	0	0.00%
10	Electrical Lighting	10.0%	1	0	0.00%
11	Electrical Distrib.	1.3%	1	0	0.00%
12	Electrical Other	0.5%	1	0	0.00%
13	Plumbing	5.5%	1	0	0.00%
14	Fire / Life Safety	2.3%	1	0	0.00%
15	Specialties	0.8%	1	0	0.00%
16	Structural	19.3%	1	0	0.00%
17	Technology	3.5%	1	0	0.00%
18	Accessibility	2.5%	1	0	0.00%
					0.00%

Post Occupancy Evaluation

The following survey of the staff was conducted as part of a post occupancy evaluation process. The average score reported by the staff for these building characteristics is 7.47, which is an above average score and reflects the condition and staff perception of the building's performance after the renovation. Overall survey results of the descriptive building characteristics identified above were positive. The lowest scores received from the staff were for adequate ventilation and adequate temperature controls. After review of the new geothermal HVAC system and the Plant Manager's overall satisfaction with the system performance, CRA determined that the system was performing well and a period of break-in and adjustment was needed.



	RTICVILLE MIDDLE SCHOOL APPRAISAL										- 1				
	Out to the	Maximum Points	Assessed					•							
1	Criteria The School Site	Allowed	Valu	Э			_	Con	ment	ary		_	Т	_	Γ
	Site is large enough to meet educational needs as				!		-			!_	!	!_		_	ļ
	defined by state and local requirements	25	25												
1.2	Site is easily accessible and conveniently located for the														
1 2	present and future population.	20	20												
1.3	Location is removed from undesirable business, industry, and traffic.	10	10												
1.4	Site is large enough for future expansion, if needed.	5	5												
1.5	Topography is varied enough to provide desired	•	J												
	appearance but without steep inclines.	5	5												
	Site is well landscaped.	5	4												
	Site has stable, well drained soil free of erosion. Site is suitable for special instructional needs, e.g.,	5	5												
1.0	outdoor learning.	5	4												
1.9	Pedestrian services include adequate sidewalks with														
	designated crosswalks, curb cuts, and correct slopes	5	4												
.10	Sufficient on-site, solid surface parking for faculty and staff is provided.	5	5												
.11	Intramural athletic areas are separated from streets and	<u> </u>	"												
	parking areas.	5	5												
.12	Intramural areas are provided for a variety of youth activities.	5	5												
	activities.							Т		Т		Т	Τ	Т	Γ
	Total - The School Site	100	97						•						
			ı												
	Out and a	Maximum Points													
	Criteria	Allowed	Valu	9				Con	ment	ary		Т	T		Π
2	Structural and Mechanical Features														
	Structure meets all barrier-free requirements both														
2.1	externally and internally.	15	15												
	Roofs appear sound, have positive drainage, and are														
2.2	weather tight.	15	15												
23	Foundations are strong and stable with no observable cracks.	10	10												
	Exterior and interior walls have sufficient expansion														
2.4	joints and are free of deterioration.	10	10												
2.5	Entrances and exits are located so as to permit efficient student traffic flow.	10	10												
2.5	Building "envelope" generally provides for energy	10	10												
2.6	conservation (See criteria)	10	8												
2 7	Structure is free of friable asbestos and toxic materials.	40	40												
2.7	Interior walls permit sufficient flexibility for a variety of	10	10												
2.8	class sizes.	5	3												
2.9	Well maintained ceilings adequately retard sound.	5	4												
	Adequate light sources, well maintained, and properly														
2.10	placed are provided.	15	15												
2.11	Electrical controls are safely protected with disconnect switches easily accessible.	10	10												
	,														
2.12	Labeled electrical system is not subject to over-heating.	10	10												
	Drinking fountains are adequate in number and														
2.13	placement, and are properly maintained including provisions for the disabled.	10	8												
			8												
. 14	Number and size of restrooms meet requirements.	10	8												
2.15	Internal water supply is adequate with sufficent pressure to meet health and safety requirements.	10	10												
	Drainage systems are properly maintained and meet														
2.16	requirements.	10	10												
17	Fire alarms, smoke detectors, and sprinkler systems are properly maintained and meet requirements.	10	10												
11	Intercommunication system consists of a central unit	10	10												
	that allows dependable two-way communication														
2.18	between the office and instructional areas.	10	10												
2.19	Undergound electrical service is provided.	5	5												
200	Exterior water supply is sufficient and available for	_													
20	normal usage. Each teaching/learning area has four or more	5	4												
		i													
2.21	convenient wall outlets.	5	5			 									_

		Maximi	um Points	Assesse	d Point	1										
	Criteria		owed	Va					(omm	entar	y				
2	Plant Maintainability									-			\vdash		-	\vdash
	Plant Maintainability Windows, doors, and walls are of material and finish												Ш		_	
	requiring minimum attendance.		10	1	0											
	Outdoor light fixtures, electric outlets, equipment, and other fixtures are accessible for repair and replacement.		10	8	3											
33	Floor coverings throughout the building require minimum care.		10	,	3											
3.3	care.		10	<u> </u>)											
3.4	Ceilings and walls throughout the building, including service areas, are easily cleaned and resistant to stain. Built-in equipment is designed and constructed for ease		10		3											
3.5	of maintenance. Floors in restrooms, kitchen, cafeterias, and corridors		10		3											
	require a minimum of maintenance.		10		3											
3.7	Hardware and finishes are of durable quality.		10	1	0											
	Restroom fixtures are wall mounted and of quality finish. Adequate custodial storage space with water and drain		10	1	0											
	is accessible throughout the building. Adequate electrical outlets and power are available in		10	3	3											
3.10	every area to permit routine cleaning.		10		3	<u> </u>										
	Total Plant Maintainability		100	8	6											
		Maxim	um Points	Assesse	d Point											
	Criteria		owed	Va					(Comm	entar	у				
	Building Safety and Security															
	Safety					\vdash							П			щ
4.1	Student loading areas are segregated from other vehicular traffic and pedestrian walkways. Access streets have sufficient signals and signs to		15	1	2											
	permit safe entrance to and exit from school area.		5		5											
	Off-site sidewalks are available for safety of pedestrians. On-site sidewalks and steps are designed and		5	()											—
	maintained for safety.		5		1											
	Vehicular entrances and exits permit safe traffic flow. Locations and types of playground equipement are free		5		5											
	from hazard.		5		5											
	ling Safety The heating unit(s) is located away from student occupied areas.		20	2			LI									
	· ·															
	Multi-story buildings have at least two stairways. Exterior doors open outward and are equipped with		15	1	5											
4.9	panic hardware. Emergency lighting is provided throughout the building		10	1	0											
4.10	with exit signs on separate electrical circuit.		10		0											
	Classroom doors are recessed and open outward. Building security systems are provided to assure		10	1	0											
4.12	uninterrupted operation of the educational program. Flooring (including ramps and stairways) is maintained		10	3	3											
4.13	in a nonslip condition.		5		5											
4.14	Stair risers (interior and exterior) do not exceed 6 1/2 inches and range in number from 3-16.		5		5											
	Glass is properly located and protected with wire or safety material to prevent accidental student injury.		5		5											
4.16	Fixed projections in the traffic areas do not extend more than eight inches form the corridor wall. Traffic group terminate at an exit or a chainway leading to		5		5											
4.17	Traffic areas terminate at an exit or a stairway leading to an egress.		5		5											
	•												ш			
Ema	Criteria		um Points owed	Assesse Va			, ,	ı		Comm	entar	y		_		
	rgency Safety Adequate fire safety equipment is properly located.		15	1	5		ш.	!	!	1		·				
	There are at least two independent exits from any point in the building.		10		0											
	Stairways and exits are of noncombustible material.		10		0											
	Fire-resistant materials are used throughout the structure.		10		3											
	Automatic and manual emergency alarm system with a distinctive sound and flashing light is provided.		10	1	0											
	Ample space is provided in corridors or protected areas		_													
	for student safety in the event of natural disasters. Total Building Safety and Security	:	5 200	18	3 7											

		Maximum Points	Assessed Point	
	Criteria	Allowed	Value	Commentary
	Educational Adequacy			
	emic Learning Space Size of academic learning areas meet desirable			
	standards. Classroom space permits arrangements for small group	15	12	
	activity.	10	6	
	Location of academic learning areas is near related			
5.3	educational activities and away from disruptive noises. Personal space in the classroom away from group	10	8	
5.4	instruction allows privacy time for individual students.	5	3	
5.5	Storage for student materials is adequate.	5	4	
5.6	Storage for teacher materials is adequate.	5	4	
Snec	ial Learning Space			
5.7	Size of special learning area(s) meets standards.	15	15	
	Design of special learning area(s) is compatible with instructional need.	10	8	
	Library/Resource/Media Center provides appropriate			
5.9	and attractive space.	15	15	
5.10	Gymnasium and out-door facilities adequately serve physical education instruction.	10	10	
	Science program is provided sufficient space and			
5.11	equipment. Music program is provided adequate sound-treated	10	10	
5.12	space. Space for art is appropriate for special instruction,	10	10	
	space for art is appropriate for special instruction, supplies, and equipment.	10	10	
	Space for technology education, including computer		45	
5.14	labs, permits use of state-of-the-art equipment.	10	10	
5.15	Space adjacent to classrooms is provided for small groups and remedial instruction.	5	3	
5.16	Storage for student and teacher materials is adequate.	5	3	
C	and Success			
	Teachers' lounge and work areas reflect teachers as			
5.17	professionals.	10	8	
5 18	Cafeteria/cafetorium is attractive with sufficient space for delivery, storage, and food preparation.	10	10	
0.10	Administrative offices provide an appearance consistent			
5.19	with the maturity of the students served.	10	10	
5.20	Counselor's office insures privacy and sufficient storage.	5	5	
	Clinic is near administrative offices and is equipped to meet requirements.	5	5	
	Suitable reception space is available for students,			
5.22	teachers, and visitors. Administrative personnel are provided sufficient work	5	5	
5.23	space and privacy.	5	5	
-	Total Educational Adequacy	200	179	
			A	
	Criteria	Maximum Points Allowed	Assessed Point Value	Commentary
	Environment for Education			
	rior Environment Overall design is aesthetically pleasing to age of			
6.1	students.	15	12	
	Site and building are well landscaped. Exterior noise and poor environment do not disrupt	10	8	
6.3	learning.	10	8	
	Entrances and walkways are sheltered from sun and inclement weather.	10	6	
6.5	Building materials provide attractive color and texture.	5	4	
Interi	or Environment			
	Color schemes, building materials, and decor provide an			
6.6	impetus to learning. Year around comfortable temperature is provided	20	16	
6.7	throughout the building.	15	15	
6.8	Ventilating system provides adequate circulation of clean air.	15	15	
	Lighting system provides proper intensity, diffusion, and			
6.9	distribution of illumination. Drinking fountains and restrooms facilities are	15	15	
6.10	conveniently located.	15	12	
6.11	Communication among students is enhance by commons area(s) for socialization.	10	8	
	, ,			
	Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age	10	10	
6.13	group.	10	8	
6.14	Large group areas are designed for effective management of students.	10	8	
	Acoustical treatment of ceilings, walls, and floors			
	provides effective sound control. Window design contributes to a pleasant environment.	10 10	8 4	
	Furniture and equipment provide a pleasing			
6.17	atmosphere. Total Environment for Education	10 200	8 165	
	. J =11711 Ollillotti (Ol Euucauoti	200	100	

EACI	I IT	·V	\cap	VIEW
FAG			υv	$VI \square VV$

Building	Construction Date	Size	Grade Level	
Manor Middle School School	(1994)	116,000 SF	7-8	
Location				
Site Size	Approximately 5			

Municipal Jurisdiction Manor Township, Lancaster County

Occupancy Group Group 'B' Educational

Construction Type Non-Combustible

Applicable Building Code

• PA Uniform Construction Code (UCC):

International Existing Building Code / 2009

International Building Code / 2006

ICC Electrical Code 2009 (utilizes National Electric Code-

2002 standards)

International Energy Conservation Code 2009

International Existing Building Code 2009

International Fire Code 2009
International Fuel Gas Code 2009
International Mechanical Code 2009
International Plumbing Code 2009
International Residential Code 2009

International Urban-Wildland Interface Code 2009

- ADAAG (Americans with Disabilities Accessibility Guidelines)
- ASHRAE Standards

Site:

The Manor Middle School is located in Millersville, PA, in a rural area, with nearby residential development. The School is bordered on the north and south by residential properties, and on the east and west by open farm land. The School is located on Ironstone Ridge Road, at the intersection with Charlestown Road, in Manor Township. Bus Drop off is on the east side of the building, as well as parking, Parent drop off is located on the southwest side of the building, with parking. Additional parking is located on the west side of the building.

The school is sited at the highest elevation of the site, with gentle sloping away from the building in each direction. Hard surface play areas are located on the west side of the building, Play fields are located on the west, north and south sides of the building. The Manor Middle School

borders a township park, and is linked via an asphalt walkway. This community park area is used heavily by the school district and the community. Access to all play areas from the building is good and requires no conflicts with vehicular traffic.

The original building was a single linear one-story classroom wing, anchored by the multipurpose room. After several building additions, the building is rectangular in plan, with a connected interior circulation loop around an open courtyard. Future expansion of the building is possible and will be dictated by existing site conditions.

Building:

The School is a two story building with exterior brick veneer. The building structural system is structural steel, with steel framing and roof joist structure.

The Manor Middle School, having being constructed in 1994, is in good condition and the major building systems and operational components are well within their rated life spans. Recent Capital Improvements include upgrades to the security system in 2008 and exterior window caulking and expansion joint replacement in 2009. As such, the Manor Middle School should serve the Penn Manor School District well into the foreseeable future. Inasmuch as a building is a static, non-dynamic entity, subject to the forces of nature and the aging and deterioration process, it is recommended that annual visual inspections of the building, including the interior, exterior and the roof, be completed as part of a the annual school district maintenance program.

School District Administrative Offices:

The administrative offices of the Penn Manor School District are located within the Manor Middle School facility. Separate parking and entrances were designed as part of the Manor Middle School project. The condition of the administrative office facilities is very good.

District Maintenance Building:

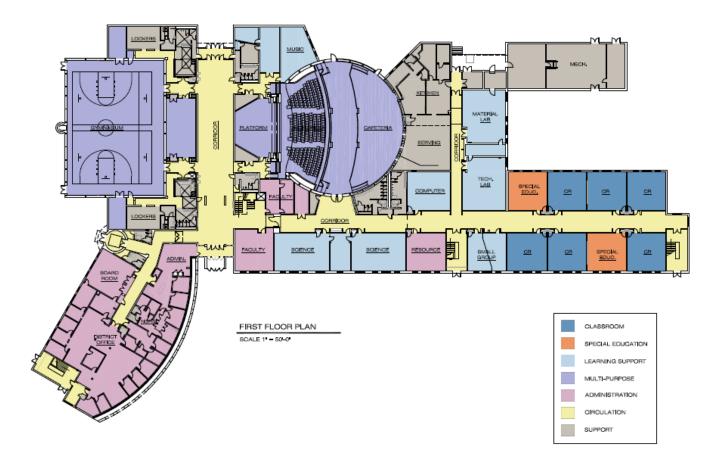
A school district maintenance facility was constructed on the southeast portion of the Manor Middle School site in 2006. The facility provides for administrative, as well as maintenance and storage space to support the school district's Director of Building's and Grounds and maintenance staff. The facility is in excellent condition.

Aerial Photograph

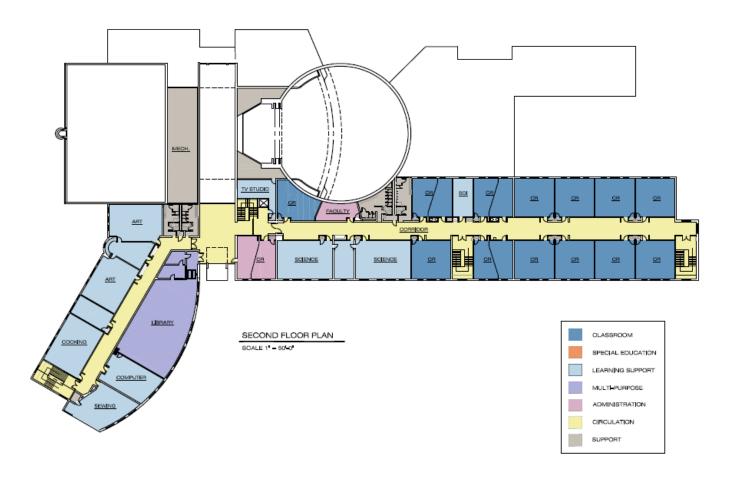


^{**} Photograph taken prior to construction of the District Maintenance Building.

First Floor Plan



Second Floor Plan



I. ADA, SAFETY & BUILDING CODE

Accessibility

- Exterior routes to the main building entrances and exits appear to be compliant. Detectable warnings should be installed on the concrete ramps that provide ADA access from the parking lots. A paved, accessible walk should be extended to the baseball/softball complex located southwest of the school building.
- The six (6) marked handicapped parking spaces are adequate in number.
- Handicapped parking signage should be upgraded to meet ADA requirements for sign height and location.
- Exterior railings appear to be generally compliant.
- The ADA shower seat in the boys locker room is broken.
- The ADA accessible staff toilet room in the boys locker room has had wall mounted clothing shelving and other items installed that do not permit accessible access to the plumbing fixtures. It is recommended that these items be relocated and that the accessible route be restored.

Code Compliance / Safety

- Adequate exterior lighting appears to be in place at the parking and driveway areas of the building.
- The front drop-off is adequate in size and configuration for buses. A Parent drop-off and pick-up is located on the south end of the building. Site distance from the driveways onto Ironstone Ridge Road and Charlestown Road appears to be adequate.
- Parking complies with local code requirements; there are approximately 150 marked parking spaces. The existing paved play area can be used for overflow parking if needed. Additional parking could be added to the south parking lot or off of the rear access drive, if needed for expansion.
- The current fencing consists of baseball field backstops and fencing around the tennis courts. Codes do not require fencing around the property.
- The site stormwater drainage appears to function well, currently. Any future expansion will need to comply with current local and state stormwater requirements which will likely require upgrades to the current system.
- There is a classroom on the second floor, adjacent to the stairtower off the main lobby. This classroom is located above the faculty room on the first floor. There are two doors in this classroom that should be B-Label, 2 hour rated doors due to the location of this classroom in an enclosed exitway. The doors are not rated.
- In the Technology Education area, there is a room with woodworking equipment that has a vinyl tile floor. The sawdust generated by the equipment causes a

slippery condition on the floor. Consideration should be given to removing the tile in this area in lieu of a concrete floor with a slip resistant coating applied.

- In the Technology Education area, some of the woodworking equipment appears to be located too close and without the recommended safety clearances. This should be evaluated and equipment should be relocated as required to achieve the manufacturer's recommended safety clearances.
- In the Board Room of the District Office portion of the building, there are data and power cords which run above the floor in a location and could pose a tripping hazard. Provisions should be explored to reroute the wiring, or at a minimum, the wiring should be enclosed in a protected floor saddle-type wiring harness.
- In the music area there is hallway between the raised platform and the Music room. In this hallway, at the time of this survey, there were music stand and other miscellaneous equipment stored in the hallway, reducing the required exit width. It is recommended that this hallway be kept clear of music equipment in order to provide code compliant egress from this area.
- There is a washer and dryer unit in the dry food storage room in the kitchen. This is a health code violation and the washer/dryer unit should be relocated.

II. EDUCATIONAL PROGRAM / FUNCTIONAL

- Manor Middle School is located on an approximately 50 acre site, which exceeds the PDE planning standard of approximately 28 acres for the student capacity at Manor (20 acres PLUS one additional acre per every 100 students). It's noted that the Manor Middle School site also includes the District Office and a Maintenance Building with associated parking and storage on the site. This site also benefits from the adjoining Manor Township Park to the south with its fields and walking trails. The trail system connects into the school site and serves local residents as well as students.
- There is a room on the fist floor, adjacent to a faculty room that was originally designed as a storage room which has been converted to an educational use. There is an overhead unit heater and the room has no ventilation. Appropriate ventilation should be provided and it is recommended that writing and tackable surfaces be added to support the program use.
- There is an office / staff area in the kitchen that was originally designed as a storage room. This area has an overhead unit heater and the room has no ventilation. Appropriate ventilation should be provided.
- There are multiple classrooms, originally designed with movable partitions with doors on each side of the partition, allowing for flexible small group learning areas when needed. These spaces are being used as classrooms due to enrollment and program needs. If the building is renovated in the future, consideration should be given to providing flexible, small group learning areas on each floor.
- In the School District office, open office space and work areas originally planned have been eliminated due to the need for additional work areas. Flexible,

demountable partitions have been added on these areas to create the additional needed spaces. This has somewhat compromised the original design and intended interior circulation. If the District Office remains in the Middle School, additional space may be required in the future to support growth.

- Additional tackable wall surface should be added in the Music room.
- The stage is a dedicated music instruction room, compromising and making the use of this space for presentations, assemblies, etc difficult.

III. PHYSICAL PLANT

A. Site

- The asphalt paved areas are in need of repair and overlay. Some small areas of deteriorated pavement are in need of patching as soon as possible.
- Most concrete curbs appear to be in fair to good condition. There are a few areas of cracked or deteriorated curb which should be repaired when renovations take place. There is some minor sidewalk and concrete step cracking/displacement that should be repaired. The deteriorated sidewalk running into the administration wing should be replaced.
- Miscellaneous benches and picnic tables need to be re-finished and kept in good repair as needed. The wooden guiderail along the main access drive needs repair and replacement of deteriorated wood members. This guiderail should be considered for replacement with metal at the next major renovation.
- The dumpster and delivery area to the rear of the school is of adequate size and appears to be in good condition, overall. Repair and or patch of the concrete pad is recommended.
- The bus loading area is adequate. Generous staff and visitor parking is provided. With building exits in the rear, students can access the large paved and grassed play areas without crossing vehicle lanes.
- Adequate parking exists on site with room for expansion.
- There are a few overgrown trees and shrubs to be removed or thinned out. Many of the mature trees would benefit from removing the lower limbs to provide better visibility in to the building zone and to provide adequate headroom under the limbs. Overall the landscape is attractive and well maintained.
- Overall the storm drainage appears to function well. There are some wet areas in the bottom of the detention basins which could be converted from grass to wetland species in order to reduce mowing and maintenance of those areas.
- The flush curb on the south edge of the Maintenance building parking area, which allows free drainage into a wetland basin, should be defined with bollards to prevent vehicles from running off the edge and down the slope.

- The building is connected to public water and sewer; no problems reported.
- The paved, play area color coatings should be repainted. The tennis court surfacing should be re-coated. Repair and re-finish of the tennis court fencing is needed; bottom and mid-rails should be added to the fence framework for greater stability and longevity of the fence fabric. The backstop fences and benches at the baseball field should be repaired as needed. On the south baseball field, permanent sideline shelters should be considered to replace the wooden ones which appear to be nearing the end of their service. The portable bleachers should be upgraded with proper side rails and rear rails to meet codes and prevent falls.

B. Building

- The terrazzo flooring in the corridors on the first floor has been experiencing ongoing issues with the floor bubbling. This is a reoccurring problem that the district has been repairing on an as needed basis. It is likely that there will be additional repair required in the future.
- The weatherstripping in the exterior doors should be replaced and in some cases, is missing.
- The drywall intermediate bulkhead in the curtainwall of the stairtower on the southeast corner of the building is in need of repair.
- The safety wall pads in the gymnasium are showing signs of wear.
- The exterior concrete masonry base around the perimeter of the building is stained and shows signs of efflorescence in multiple areas. It is recommended that this material be low-pressure cleaned to eliminate this condition.
- The dock leveler at the receiving area loading dock is significantly rusted, it is recommended that the steel plate be cleaned, sanded, primed and painted with a rust inhibitive coating.
- The safety bumper pads at the loading dock are showing signs of wear and should be scheduled for replacement.

C. Interior Finishes

- Interior painting is needed at the drywall partitions in the administration, guidance and health area of the building.
- The carpet is beginning to show signs of wear but is still in fairly good condition.
- The vinyl sheet flooring is beginning to show signs of age and wear, especially in the cafeteria and should be scheduled for replacement within the next five years.
- The interior hollow metal door frames are showing signs of peeling paint and should be scheduled for painting.

- The steel handrails in the stairtowers are in need of painting.
- There are areas where there is water damaged ceiling tiles in need of replacement, including the band equipment storage room, art storage room and other miscellaneous locations.

D. Specialties

- There is some damage to the plastic laminate door fronts in some of the science rooms that should be addressed.
- The existing chalkboards in the classrooms are adjustable height, removable units. In several areas, white boards have been installed over the chalkboard units. Consideration should be given to replacing the chalkboard units with marker surfaces as desired.

E. HVAC

<u>System</u>

The HVAC System was replaced in 1994. A 4-pipe system is installed in the building. Hot water for heating is supplied by (2) cast iron sectional boilers. Chiller water is provided by a single water cooled centrifugal chillers connected to a cooling tower. All areas of the building are air conditioned except for the gymnasiums and corridor, storage, mechanical areas. Heating and cooling is distributed by air handler and unit vents. Heating terminal equipment includes cabinet heaters, convectors, unit heaters and wall fin radiation. An electronic DDC system is installed to provide automatic temperature control.

F. Plumbing

- All domestic water, sanitary and storm water piping was newly installed in 1994. Domestic hot water is provided by a gas-fired water heater connected to a storage tank with hot water recirculating pumps. Plumbing fixtures are new as part of the 1994 project. The building is served by public water and public sewer.
- There is no sprinkler system installed for this building.

G. Electrical

Electrical Service

- The incoming electrical service is rated 3000 amps at 277/480 volts. The main service equipment is a floor mounted switchboard which was installed when the building was built in 1994. The service equipment can be used for another 25 years but may prove to be undersized if additional space is added to the building.
- The existing utility company transformer is ground mounted and can be upgraded if an addition is built on to the existing building.

Electrical Distribution

All of the circuit breaker panels in the building were installed in 1994 or added at a later date. These panels are acceptable for use for another 25 years. Some panels have space for added loads and some are full or nearly full. The existing power distribution system has enough capacity to supply additional circuit breaker panels if needed for additional receptacles and equipment to support educational programs.

Emergency Power & Lighting

- The existing emergency power source is a 30 kW diesel fueled generator located in the main electric room. This generator was installed in 1994 and is acceptable for at least 15 more years of service unless load is added to it. The generator currently powers emergency lighting and the UPS for the card access, intrusion detection and CCTV Camera Systems. It also powers the fire alarm system, but not the paging system.
- In a general renovation of the building it will be necessary to increase the level and area of coverage of emergency lighting. In accordance with the evaluation criteria the telephone and data systems should be added to the generator. It may also be desirable to power the walk-in refrigerator and freezer from the generator. Adding the refrigeration loads to the emergency power system may require the generator to be replaced with a larger unit.
- For code compliance, the generator should be enclosed in a dedicated room.

Lighting

- Luminaires throughout the building were installed in the 1994 when the building was constructed and are generally in useable condition. Most luminaires utilize 3 or 4 lamps in lensed troffers with magnetic ballasts and T12 lamps. These luminaires should be replaced with 2 lamp open reflector troffers with electronic ballasts for reduced energy consumption at the time of the next renovation.
- Gym luminaires are equipped with metal halide lamps. These lamps have a long warm-up time and are therefore turned on in the morning and left on until late at night. Gym lighting should be replaced with linear high bay fluorescent lighting controlled by motion sensors. Fluorescent lighting can be adjusted to multiple levels depending upon activities and the motion sensors will turn all but a minimum amount of lighting off when the gym is unoccupied.
- Lighting in the cafeteria, library, office and miscellaneous spaces also use 3 or 4 lamp lensed troffer style luminaires and should be replaced with open reflector troffers for increased energy efficiency at the time of the next renovation.
- Exterior building mounted security lighting is not provided. Many exterior alcove areas have building mounted area flood lights. These luminaires utilize HID (high intensity discharge) lamps. LED lighting should be provided around the entire perimeter of the building to reduce energy consumption and increase security at night after parking lot, walk way and exit lights are turned off.

- Demolished lamps and ballasts should be disposed of in accordance with regulations for hazardous materials.
- Existing parking and walkway areas are illuminated by pole mounted HID shoebox style luminaire and some bollards. Existing luminaires are adequate for most parking areas.

Lighting Controls

- Classrooms have 2 wall switches arranged to switch one half of the lamps in each luminaire. This provides two levels of lighting but does not darken the teaching wall during the use of projectors. No automatic controls are currently provided. Provide motion sensors, daylight sensors, multiple switches and a load shedding relay to reduce energy consumption in classrooms during the next renovation. Provide switches on the teaching wall to allow the teacher to adjust light levels without leaving the front of the room.
- Provide two levels of lighting in corridors during the next renovation. Provide full lighting during normally occupied times and reduced lighting levels for those periods of time when the building has minimum occupancy. Provide time based control of corridor and stair lighting to insure that lights are turned off during unoccupied times and to reduce the amount of staff time needed to turn lights on at the beginning of the day and off at the end of the day. Provide corridor and stairway nightlights for security and safety.
- Provide motion sensor and daylight sensor control of lighting in offices, cafeteria, library and miscellaneous spaces. For safety do not provide automatic control of lighting in the kitchen.

Fire Alarm System

The existing 1994 fire alarm system is functional but is not fully ADA and Code compliant. The existing system has a remaining life of about 10 years until service parts become difficult to obtain.

Clock System

 Classrooms have synchronized clocks. Other instructional spaces and offices also have synchronized clocks. The clock system is expected to be useable for the next 5 to 10 years.

Intercom & Sound System

• An intercom system which allows two way communications between the office and each classroom by way of telephone handsets exists and is in marginally operable condition. This system includes classroom speakers for general announcements. This system is expected to be useable for the next 5 to 10 years. The system allows general paging in instructional spaces and offices but not in corridors or restrooms. This system should be replaced as a part of any general renovation and consideration should be given to providing corridor and restroom speakers.

Telephone System

 Each classroom is provided with a telephone which operates as Voice Over the Internet (VOIP). The system is in good condition. The electronics for this system should be provided with emergency power.

Data Networking

The building is equipped with a data network which meets some of the buildings present needs, but is in need of upgrades. Most of the network station cabling is Category 5 with a recent addition of some Category 5e cabling. If the building is not remodeled in the near future it may become necessary to replace all of the older network cabling with Category 6 cable to insure system capacity to meet program needs. Provide additional network jacks to accommodate program needs and to make rooms more versatile.

In order to maintain reasonable parity with recently remodeled buildings, Category 6 Cable should be provided to the ceiling cavity and teacher's desk in each classroom to support classroom technology upgrades.

Security System

- The building presently has a two closed circuit TV cameras, a recorder and a monitor which view activity in the main lobby. The monitor is located in the School Office and the recorder is on a shelf in the Custodians area. The Building has an intrusion detection system with motion sensors in some corridors.
- Additional cameras should be provided in the gym, lobby, playground, corridors, multi-purpose room, and exterior of the building to provide a more complete record of activities in and around the building.
- Door contacts on exterior doors have been provided to ensure that all doors are closed when the last person leaves the building.
- An access control system is in place at several exterior doors.
- Installation of additional motion detectors in corridors, computer equipment rooms and offices containing sensitive records would reduce the potential for vandalism and unauthorized access to records.

Theatrical Lighting

 Theatrical lighting was installed at the stage area in the multipurpose room at the time the building was constructed and appears to be adequate for present program needs.

Public Address System

 The existing gym and multipurpose rooms have public address systems which meet current needs.

Classroom Presentation Equipment

 A few rooms in Manor Middle School have smart boards and ceiling mounted LCD projectors. Most do not. Provide smart boards or MIMIO (computer-marker board interface device) and LCD projectors in classrooms, instructional spaces,

conference rooms and the library in accordance with the District Technology Plan. Provide a media transport system to deliver sound and video from the teacher's computer and other programming to the projector. Provide an amplifier and speakers to enhance the audio from the LCD projector. Provide a wireless microphone for use by the teacher in classrooms and large instructional spaces.

Video Distribution

 Long term maintenance of the video distribution system is not necessary since equivalent cont is available over the internet.

Receptacles

Receptacle locations are generally adequate. Renovations which change room layouts will necessitate providing or relocating receptacles. A dedicated circuit should be provided for the teacher's computer and LCD projector. At least two other circuits should be provided in each classroom.

If new technology upgrades are incorporated in the classrooms before the next renovation, receptacles to serve the LCD projector and wireless network hub will need to be provided in the ceiling cavity.

Facility Condition Index

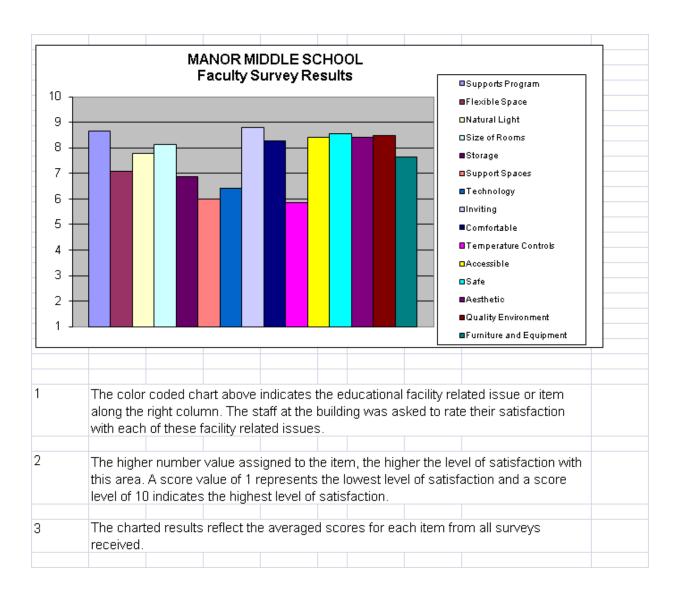
The Facility Cost Index (FCI) is used throughout the facility condition assessment industry as a relative indicator of a buildings condition. Based on industry-wide standards, if the cost to repair exceeds 60% of the cost to replace, the facility should be looked at more closely as a possible candidate for replacement. As a rule of thumb, an FCI below 10% is considered good. An FCI above 60% would suggest that the building is a candidate for replacement.

FCI RATINGS											
1	0	General Maintenance									
2	10	Minor									
3	50	Moderate									
4	75	Major									
5	100	Replace									

	М	lanor Middle Sch	iool		
No.	Componenet / System	Percent of total	Rating (1 - 5)	Rating %	Adj %
1	Roofing	4.9%	1	0	0.00%
2	Exterior Walls	5.4%	2	0.1	0.54%
3	Exterior Windows	2.4%	1	0	0.00%
4	Exterior - Doors	0.6%	2	0.1	0.06%
5	Interior Floors	7.6%	3	0.5	3.80%
6	Interior Walls	4.0%	2	0.1	0.40%
7	Interior Ceilings	5.4%	2	0.1	0.54%
8	Interior - Other	3.3%	2	0.1	0.33%
9	HVAC	20.7%	2	0.1	2.07%
10	Electrical Lighting	10.0%	3	0.5	5.00%
11	Electrical Distrib.	1.3%	1	0	0.00%
12	Electrical Other	0.5%	3	0.5	0.25%
13	Plumbing	5.5%	1	0	0.00%
14	Fire / Life Safety	2.3%	2	0.1	0.23%
15	Specialties	0.8%	2	0.1	0.08%
16	Structural	19.3%	1	0	0.00%
17	Technology	3.5%	3	0.5	1.75%
18	Accessibility	2.5%	1	0	0.00%
					15.05%

Faculty Survey:

The average score reported by the staff for these building characteristics is 7.70, which is an above average score. This reflects the overall good condition of the facility as a result of the school being built in 1994, but indicates increasing conditions as the facility ages. While not a technical survey or evaluation, school facility staff that spend considerable time in a school building have an innate understanding and perception of these identifiable building characteristics. The response from teaching staff generally is indicative of the overall existing conditions, quality and adequacy of the educational environment. Refer to the detailed building assessments for a detailed qualitative facility assessment.



	N MANOR SCHOOL DISTRICT					· · · · · · · · · · · · · · · · · · ·											T		
MAN	IOR MIDDLE SCHOOL APPRAISAL			1		<u> </u>						_		1	-	\perp	_		
		Maxim	num	Points	Asse	ssed Poin		I				1							
	Criteria	-	llow		7.000	Value	•					Com	menta	ary					
	The School Site																		
1.1	Site is large enough to meet educational needs as																		
	defined by state and local requirements Site is easily accessible and conveniently located for the		25			25	-												
	present and future population.		20			20													
	Location is removed from undesirable business,					40													
	industry, and traffic. Site is large enough for future expansion, if needed.		10 5			10 5													
1.5	Topography is varied enough to provide desired		5 5																
	appearance but without steep inclines. Site is well landscaped.		5 5			5 4													
	Site is well landscaped. Site has stable, well drained soil free of erosion.		5			4													
	Site is suitable for special instructional needs, e.g.,																		
1.0	outdoor learning. Pedestrian services include adequate sidewalks with		5			4													
	designated crosswalks, curb cuts, and correct slopes		5			5	Nee	ds son	ne ma	intena	nce								
	Sufficient on-site, solid surface parking for faculty and																		
1 11	staff is provided. Intramural athletic areas are separated from streets and		5		-	4	Not	ufficie	ent eve	ent pa	rking								
	parking areas.		5			5										_		_	
	Intramural areas are provided for a variety of youth		_			_													
	activities.		5			5								1				\neg	П
	Total - The School Site		100	1		96				-	1		1	1					
	Criteria	-	num Ilow	Points	Asse	essed Poin Value	t					Com	menta	arv.					
		Ŷ	110 44			Value							liente	l y			T	\neg	
	Structural and Mechanical Features Structure meets all barrier-free requirements both																		
	externally and internally.		15			15													
	Roofs appear sound, have positive drainage, and are																		
	weather tight. Foundations are strong and stable with no observable		15			12													
	cracks.		10			10													
	Exterior and interior walls have sufficient expansion		10			10													
	joints and are free of deterioration. Entrances and exits are located so as to permit efficient		10			10													
2.5	student traffic flow.		10			10													
	Building "envelope" generally provides for energy conservation (See criteria)		10			6	Windows need replaced in futue renovation. Not thermally broken												
2.0	Structure is free of friable asbestos and toxic materials.		10			- 0	VVIIIC	10W5 I	iceu ii	spiace	uiiii	ulue ie	ilovai	1011. 1	NOL II	CIIII	ally D	UKCI	
2.7			10			10													
	Interior walls permit sufficient flexibility for a variety of class sizes.		5			3													
	Well maintained ceilings adequately retard sound.							.al 4	- · ·	iac '	der · ·	n F -							
2.9	Adequate light sources, well maintained, and properly		5			3	Sour	id tran	smiss	ion be	twee	n floors	5						
2.10	placed are provided.		15			12													
	Electrical controls are safely protected with disconnect																		
2.11	switches easily accessible.		10			6													
2.12	Labeled electrical system is not subject to over-heating.		10			10													
	Drinking fountains are adequate in number and		_			_		_	_	_	_		_	_	_	_		_	_
	placement, and are properly maintained including provisions for the disabled.		10			10													
	Number and size of restrooms meet requirements.		10			8													
0.45	Internal water supply is adequate with sufficent pressure					10													-
	to meet health and safety requirements. Drainage systems are properly maintained and meet		10			10	-												
	requirements.		10			10													
	Fire alarms, smoke detectors, and sprinkler systems are		, -			_													
2.17	properly maintained and meet requirements. Intercommunication system consists of a central unit		10			8													
	that allows dependable two-way communication																		
	between the office and instructional areas.		10			8													
2.19	Undergound electrical service is provided. Exterior water supply is sufficient and available for		5			5													
2.20	normal usage.		5		<u>L</u>	5	\perp												
2.04	Each teaching/learning area has four or more		_			-													
2.21	convenient wall outlets. Total - Structural and Mechanical		5 200			5 176													
	rotar - Structural and Mechanical		∠00		<u> </u>	1/0													

		Maxir	num	Points	Asse	ssed	Point	l												_
	Criteria		llowe			Value							Com	ment	ary					- 11
•	Dlaut Maintainahilitu																			+
3	Plant Maintainability Windows, doors, and walls are of material and finish									ļ							ļ			Ш
3.1	requiring minimum attendance.		10				8													
	Outdoor light fixtures, electric outlets, equipment, and																			
3.2	other fixtures are accessible for repair and replacement.		10				8													
	Floor coverings throughout the building require																			
3.3	minimum care.		10				8													
	Ceilings and walls throughout the building, including																			
3.4	service areas, are easily cleaned and resistant to stain. Built-in equipment is designed and constructed for ease		10		8															
3.5	of maintenance.		10		8															
	Floors in restrooms, kitchen, cafeterias, and corridors																			
	require a minimum of maintenance. Hardware and finishes are of durable quality.		10				6 8		ings c	racke	d in re	stroo	ms, ma	ainter	ance (on ter	razzo			
0.7	Transvaro and milenes are or darable quality.																			_
3.8	Restroom fixtures are wall mounted and of quality finish.		10				8													
3.9	Adequate custodial storage space with water and drain is accessible throughout the building.		10				10													
	Adequate electrical outlets and power are available in																			
3.10	every area to permit routine cleaning. Total Plant Maintainability		10 100			80	8													
	i otai i idiit maiiitailiability		100			30		ļ.												
																				П
	Criteria		num Illowe	Points ed		ssed Value	Point						Comi	<u>me</u> nt	ary	_	_			
4	Building Safety and Security																			
Site	Safety																			floor
4.1	Student loading areas are segregated from other vehicular traffic and pedestrian walkways.		15			15														
	Access streets have sufficient signals and signs to																			
4.2	permit safe entrance to and exit from school area.		5			4														
4.2	Off-site sidewalks are available for safety of pedestrians.		5			0														
4.3	On-site sidewalks and steps are designed and		3			U														
	maintained for safety.		5			4														
4.5	Vehicular entrances and exits permit safe traffic flow. Locations and types of playground equipement are free		5			4														
4.6	from hazard.		5			5							,							
Build	ling Safety																		-	+
	The heating unit(s) is located away from student																			
4.7	occupied areas. Multi-story buildings have at least two stairways.		20 15			20 15														
4.0	Exterior doors open outward and are equipped with					-10														
4.9	panic hardware.		10			10														
4.10	Emergency lighting is provided throughout the building with exit signs on separate electrical circuit.		10			10														
	Classroom doors are recessed and open outward.		10			10														
4,12	Building security systems are provided to assure uninterrupted operation of the educational program.		10			6		Need	more	came	eras a	nd mo	otion se	ensor	s					
	Flooring (including ramps and stairways) is maintained										01		30							
4.13	in a nonslip condition. Stair risers (interior and exterior) do not exceed 6		5			5														
4.14	1/2 inches and range in number from 3-16.		5			5														
	Glass is properly located and protected with wire or																			
4.15	safety material to prevent accidental student injury. Fixed projections in the traffic areas do not extend more		5			4														
4.16	than eight inches form the corridor wall.		5		<u></u>	5														
1 17	Traffic areas terminate at an exit or a stairway leading to		5			5														
4.17	an egress.		5			э														П
	Out to a to			Points			Point						0							
Eme	Criteria rgency Safety	_ A	llowe	ea		Value							Comi	ment	ary		1	1		П
	Adequate fire safety equipment is properly located.		15			12				•										
4 10	There are at least two independent exits from any point in the building.		10			10														
	Stairways and exits are of noncombustible material.		10			6		Stain	vellu	sed for	r stora	ide of	paper							_
	Fire-resistant materials are used throughout the							Cianv	von ut	Jou IUI	JUIA	.gu UI	Papel.							
4.21	structure.		10			10														
4.22	Automatic and manual emergency alarm system with a distinctive sound and flashing light is provided.		10			10														
																				_
4 22	Ample space is provided in corridors or protected areas for student safety in the event of natural disasters.		5			5														
7.23	Total Building Safety and Security		200			180			_							_		_	_	_
	· · · · · · · · · · · · · · · · · · ·				•															

	Criteria	Maximum Points Allowed		sed Point				,	com.	nenta	arv			
5	Educational Adequacy	Allowed	<u> </u>	aiue			1	П	, OIIII	lienta	ai y			
Aced	emic Learning Space													
	Size of academic learning areas meet desirable standards.	15		12										
	Classroom space permits arrangements for small group													
	activity. Location of academic learning areas is near related	10		8										
5.3	educational activities and away from disruptive noises.	10		10										
	Personal space in the classroom away from group instruction allows privacy time for individual students.	5		4										
5.5	Storage for student materials is adequate.	5		4										
5.6	Storage for teacher materials is adequate.	5		4										
Speci	ial Learning Space													- 1
5.7	Size of special learning area(s) meets standards. Design of special learning area(s) is compatible with	15		12										
	instructional need.	10		8										
	Library/Resource/Media Center provides appropriate													
	and attractive space. Gymnasium and out-door facilities adequately serve	15		12										-
5.10	physical education instruction.	10		8										
	Science program is provided sufficient space and equipment.	10		6	Prep roo	oms tight	t. No fu	ıme hoo	bc					
	Music program is provided adequate sound-treated				op .o.	omo agn	110 10	31110 1100						
	space. Space for art is appropriate for special instruction,	10		8										
	supplies, and equipment.	10		8										
	Space for technology education, including computer													
	labs, permits use of state-of-the-art equipment. Space adjacent to classrooms is provided for small	10		8										$-\parallel$
	groups and remedial instruction.	5		3										
5.16	Storage for student and teacher materials is adequate.	5		4										
Sunn	ort Space													
	Teachers' lounge and work areas reflect teachers as													
	professionals.	10		8										
	Cafeteria/cafetorium is attractive with sufficient space for delivery, storage, and food preparation.	10		10										
	Administrative offices provide an appearance consistent	10		10										!
5.19	with the maturity of the students served.	10		8	Expand	ed admir	n has c	reated	need	l for s	pace			
5.20	Counselor's office insures privacy and sufficient storage.	5		5										
	Clinic is near administrative offices and is equipped to	_		-										
	meet requirements. Suitable reception space is available for students,	5		5										
5.22	teachers, and visitors.	5		5										
	Administrative personnel are provided sufficient work space and privacy.	5		4										
	Total Educational Adequacy	200	1	164										
		Maximum Points		sed Point					_					
	Criteria	Allowed	V.	alue			1		Comi	menta	ary	ı		П
	Environment for Education										-			-
	Overall design is aesthetically pleasing to age of		<u> </u>			-								
	students. Site and building are well landscaped.	15 10		15 8										
	Exterior noise and poor environment do not disrupt													
	learning. Entrances and walkways are sheltered from sun and	10		10										-
	inclement weather.	10		6										
6.5	Building materials provide attractive color and texture.	5		5										
	or Environment		\Box		$-\mathbb{F}$	-		$+ \top$	_				Н	\dashv
	Color schemes, building materials, and decor provide an		 				1			<u> </u>	1	Ь—	ш	
	impetus to learning.	20	 	16										
6.7	Year around comfortable temperature is provided throughout the building.	15		15										
	Ventilating system provides adequate circulation of				Na con									
	clean air.	15	 	12	NO ecor	nomizers	on off	ice air h	iandl	ers				- 11
6.9	Lighting system provides proper intensity, diffusion, and distribution of illumination.	15		12										
	Drinking fountains and restrooms facilities are													
	conveniently located. Communication among students is enhance by	15	-	15										
	communication among students is enhance by commons area(s) for socialization.	10	1	8										
6.11														
				10										-+
6.12	Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age	10												
6.12	Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age group.	10 10		8										
6.12	Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age group. Large group areas are designed for effective	10		8										
6.12 6.13 6.14	Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age group.													
6.12 6.13 6.14 6.15	Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age group. Large group areas are designed for effective management of students. Acoustical treatment of ceilings, walls, and floors provides effective sound control.	10 10		8 8										
6.12 6.13 6.14 6.15 6.16	Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age group. Large group areas are designed for effective management of students. Acoustical treatment of ceilings, walls, and floors provides effective sound control. Window design contributes to a pleasant environment.	10		8										
6.12 6.13 6.14 6.15 6.16	Traffic flow is aided by appropriate foyers and corridors. Areas for students to interact are suitable to the age group. Large group areas are designed for effective management of students. Acoustical treatment of ceilings, walls, and floors provides effective sound control.	10 10		8 8										

Building	Construction Date	<u>Size</u>	Grade Level						
Penn Manor High School School	(!958) 1997	326,312 SF	9-12						
Location		East Cottage Avenue Millersville, PA 17551							
Site Size	Approximately 3	2 acres							
Municipal Jurisdiction	Millersville Boro	Millersville Borough, Lancaster County							
Occupancy Group	p Group 'B' Educational								
Construction Type	Non-Combustib								

Applicable Building Code

PA Uniform Construction Code (UCC):

International Existing Building Code / 2009

International Building Code / 2009

ICC Electrical Code 2009 (utilizes National Electric Code-

2002 standards)

International Energy Conservation Code 2009

International Existing Building Code 2009

International Fire Code 2009
International Fuel Gas Code 2009
International Mechanical Code 2009
International Plumbing Code 2009
International Residential Code 2009

International Urban-Wildland Interface Code 2009

- ADAAG (Americans with Disabilities Accessibility Guidelines)
- ASHRAE Standards

Site:

The Penn Manor High School is located in Millersville, PA in a residential area and adjacent to Millersville University. The main school access is from Cottage Avenue; however there are additional access points from Herr Avenue and North George Street. Bus Drop off is separated from parent drop off and visitor parking. The majority of parking is located on the south side of the building, although parking is available in various areas on site.

The school site is sloping, with the original section of the high school built into the hillside. Tennis courts are located on the north side of the building, with the running track, athletic practice field, and the Junior Varsity football field located on the west side of the building. Currently, Penn Manor plays its home football games in the adjacent Millersville University football stadium. Access to physical education, practice fields and the track, from the building, is good and requires no conflicts with vehicular traffic. The majority of the athletic fields are located at the nearby Comet Field sports complex.

The original building was a two story building built into the sloping site. There was an adjacent 9th grade building which was eventually connected to and made part of the high school. The existing high school is a spread out and meandering plan, covering a large portion of the site. Future expansion of the building would be possible, but will be dictated by existing site conditions.

Building:

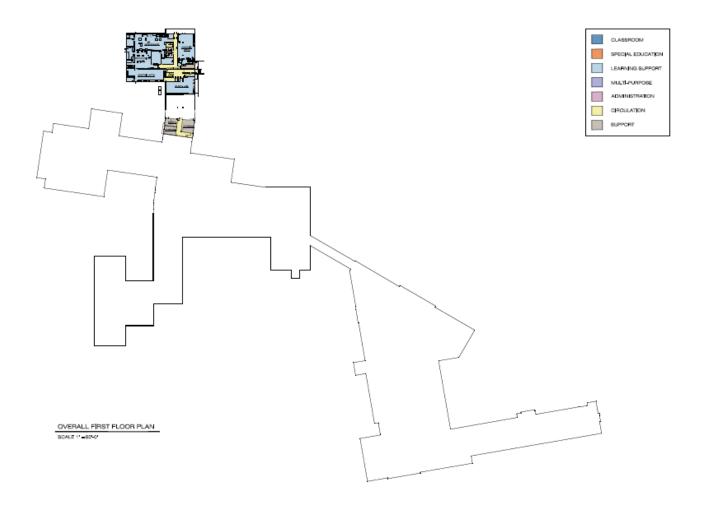
The Penn Manor High School was originally constructed in 1958, with the only major renovation and construction project occurring in 1997. The nearby Comet Field Fieldhouse facility was constructed in 1990 and recently renovated in 2006. A synthetic turf field and bleachers were added to Comet Field in 2007. Recent Capital Improvements include security system upgrades in 2008 and classroom technology upgrades in 2009. The School is a multilevel building with exterior brick veneer, with "dryvit" infill and accents. The building structural system is masonry load bearing, with some steel framing roof joist structure.

The Penn Manor High School, having undergone the last major renovation project in 1997, is in good condition. The lifespan of the major building components and operational systems is in the 25 – 30 year range and as such, the building should continue to serve the Penn Manor School District for the foreseeable future, however inasmuch as a building is a static, non-dynamic entity, subject to the forces of nature and the aging and deterioration process, it is recommended that annual visual inspections of the building, including the interior, exterior and the roof, be completed as part of a proactive and on-going maintenance program. As educational delivery and technology continue to change and affect the way schools are utilized, it is to be expected that ongoing and additional building upgrades, as part of normal capital improvements will be required,

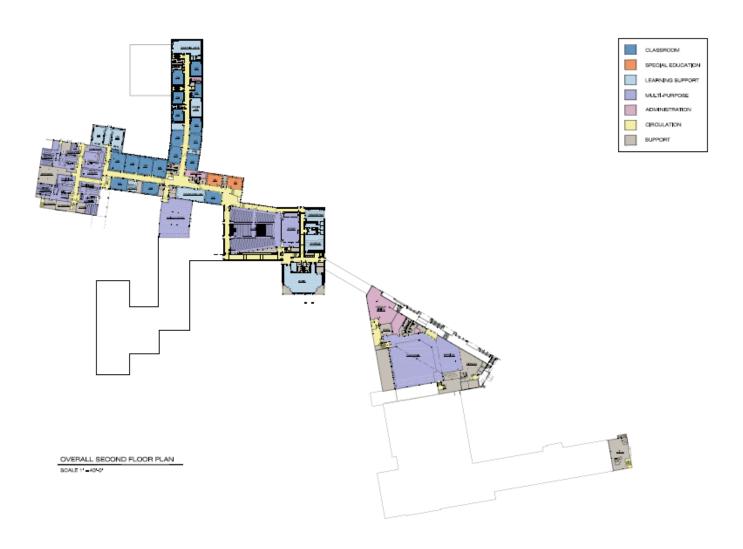
Aerial photograph



First Level Overall Floor Plan



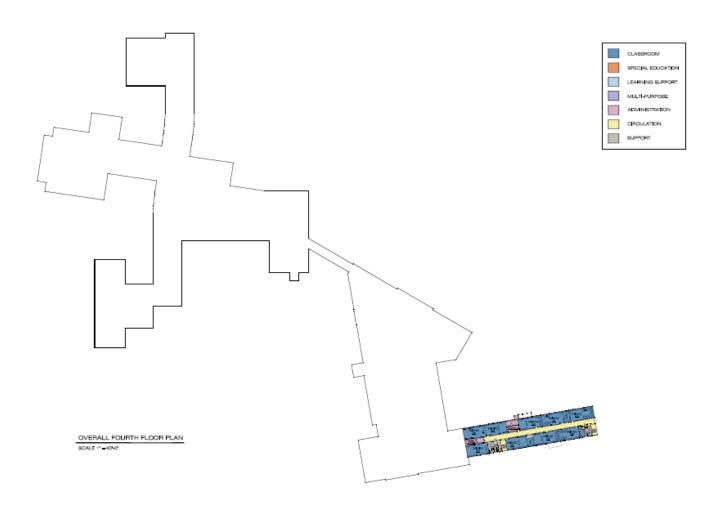
Second Level Overall Floor Plan



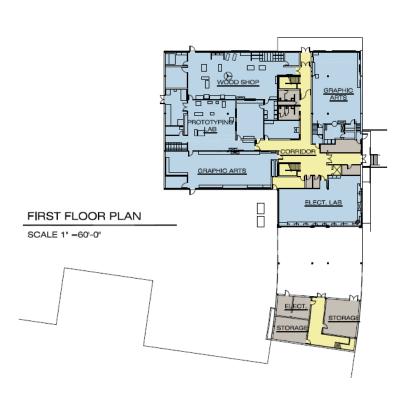
Third Level Overall Floor Plan

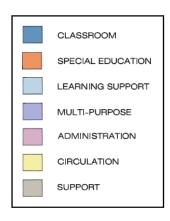


Fourth Level Overall Floor Plan



First Level Partial Floor Plan

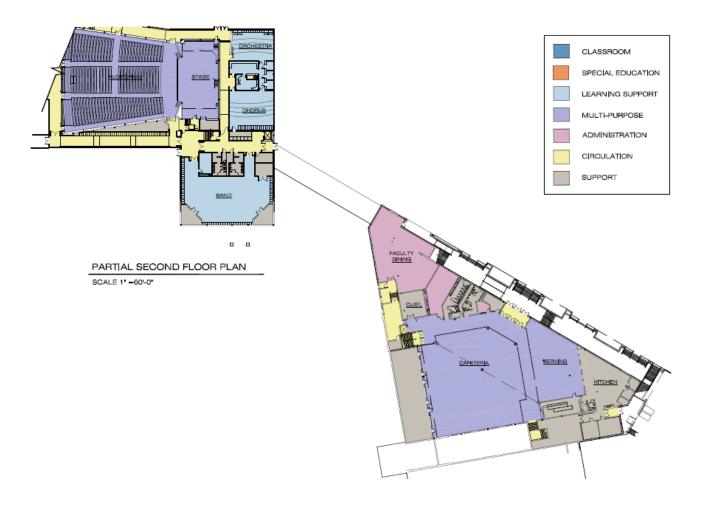




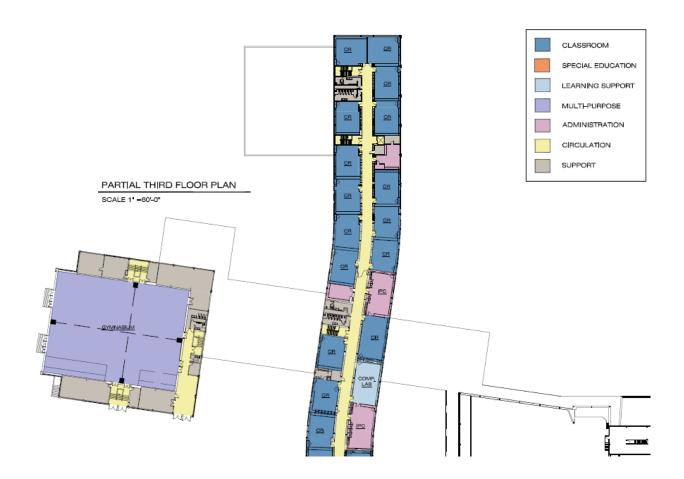
Second Level Partial Floor Plan



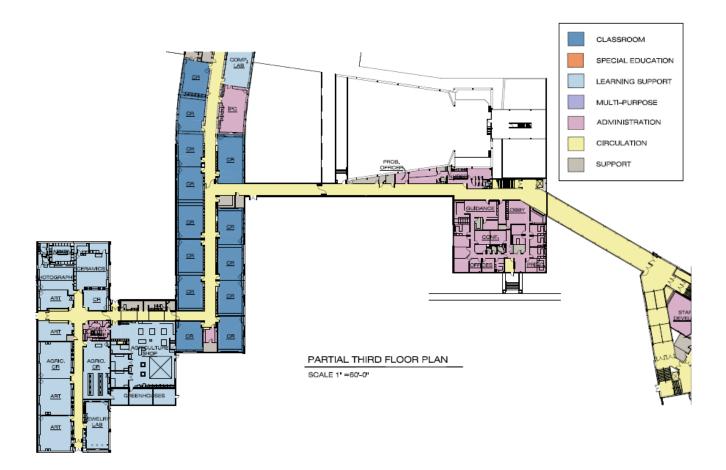
Second Level Partial Floor Plan



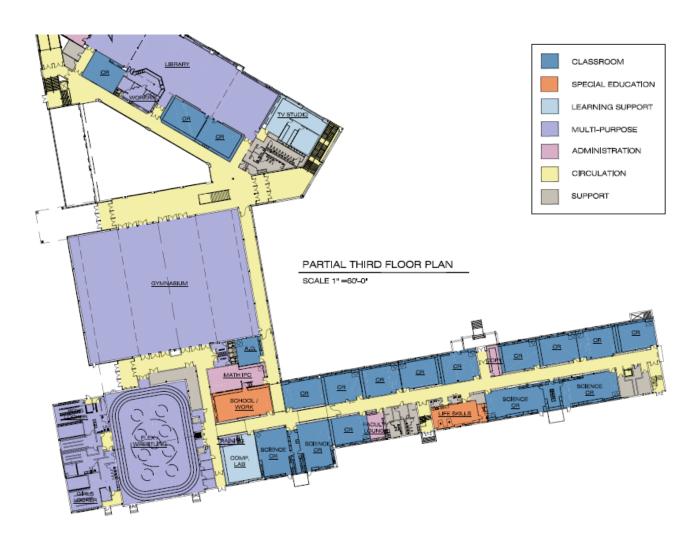
Third Level Partial Floor Plan



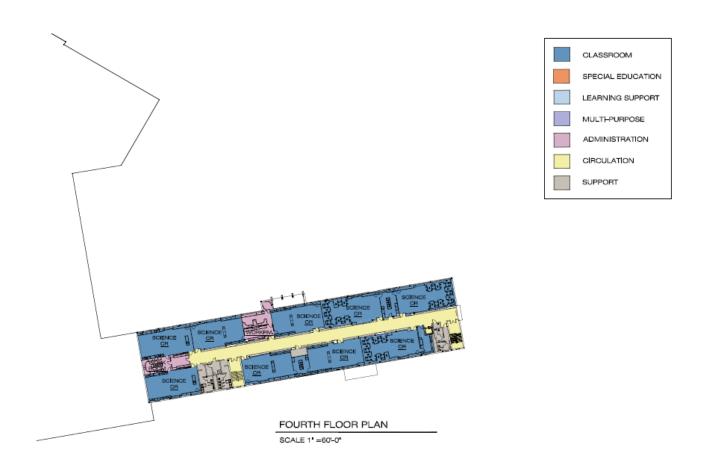
Third Level Partial Floor Plan



Third Level Partial Floor Plan



Fourth Level Partial Floor Plan



I. ADA, SAFETY & BUILDING CODE

Accessibility

- Detectable warnings should be installed on the concrete ramps that provide ADA access from the parking lots. There are numerous exits and entrances that are not accessible; where feasible, accessibility should be provided. For example the walk from the southern, main surface parking lot sloping down to the courtyard exceeds 5% slope, the maximum accessible slope.
- Handicapped parking spaces should be provided in proximity to main entrances. Eleven (11) spaces should be provided based on a total of 542 daily use parking spaces. Currently, there are four (4) Handicapped parking spaces within parking lot D1 (near south greenhouse), however there is not an accessible building entrance in proximity. These spaces are recommended for relocation.
- Handicapped parking signs should be repaired where necessary. Two (2) handicapped parking signs need to be added.
- Most of the exterior railings do not meet code for guards at walls greater that 30 inches high, or along stairs. Specifically along the west side, south of the West Gym, there are numerous code deficiencies in respect to railings along stairs and guards along tops of walls. Railings along the bridge entry walk into the "West Complex" do not meet code and pose a significant fall hazard and liability concern.

Code Compliance

- Adequate exterior lighting appears to be present in the parking and driveway areas around the building. There are numerous stairs, walks, and courtyard areas which are likely lacking in sufficient nighttime lighting. Areas which are used or planned for nighttime use should be upgraded with adequate lighting for safety and security.
- In general the vehicular circulation is confusing for visitors due to the unusual shape of the property and building, and due to the lack of visibility from main roads. Signs and/or markings should be added to better direct parents and visitors. The bus drop-off is adequate in size and configuration for buses. A parent drop-off and pick-up appears to be located in the northeastern portion of the site. Sight distance from the driveways onto local street network appears to be adequate. There is a driveway interconnection with Millersville University, however it is not clearly marked where the Penn Manor Campus begins when arriving from the University side.
- Parking is adequate for daytime use; there are approximately 542 marked parking spaces. During evening special events, parking may also be available at the University. A two-level parking deck is shared with the University, with the High School afforded use of the upper deck. There are very limited areas parking for expansion. Along the south and west face of the southwest building wing, paved parking abuts the face of the building. It's recommended that parking be set back from building walls to protect the building from vehicle damage, better define building entries, and facilitate snow removal.

- There are some limited areas of fencing that need repair or replacement. The vinyl-clad chain link fence around the track facility is in excellent condition.
- The site drainage appears to function well, overall. There are lower level lawn areas where drainage could be improved. The concrete plaza on the north side needs repair, and drainage improvements are recommended to coincide with repairs to this plaza.
- In the wrestling room, the wrestling mat was laid directly over the original wood gym floor, creating a tripping hazard as you enter the wrestling room. A transition strip the full width of the opeing should be provided.
- The exit way from the band room is obstructed by miscellaneous equipment, filing cabinets, etc. This area should be kept open to meet egress requirements.
- In the library, there are three exits from the library into the adjacent corridor. At one exit location, there is an overhead LED exit sign, however there is a tactile sign on the door reading "no exit'. The tactile sign should be removed and the exit way cleared, or the overhead LED exit sign should be removed to avoid confusion.
- In at least one location the area of rescue assistance call button station has been vandalized and is inoperable. This should be repaired.
- The passenger elevator is in need of upgrades to the controls to comply with ADA requirements.
- Current stairway interior railing and guardrails at landings do not meet current codes. These are currently "grandfathered", but it is recommended that these railings be replaced during the next renovation project.

II. EDUCATIONAL PROGRAM / FUNCTIONAL

- Penn Manor is located on an approximately 32 acre site, which is significantly less than the PDE planning standard of approximately 60 acres (35 acres PLUS one additional acre per every 100 students). It's noted that most of the 32 acres is usable and has been developed to near reasonable maximum build-out. There is very limited potential to acquire additional undeveloped properties, as the High School is bounded by residential properties to the east, north and west, and Millersville University to the south.
- The main visitor entrance from the rear parking lot is not a welcoming or appealing entrance. Consideration should be given during any future renovations, to address this issue and improve this entrance to the building.
- The student lockers are very narrow and not functional. Consideration should be given to replacing the lockers with double-stacked wider units.
- Smartboards are installed over the chalkboards in various areas, reducing the usable writing surface.

- The ticker booth located in the auditorium lobby is a temporary, wood frame and plywood structure. This should be removed and replaced with a more suitable, permanent structure.
- The Music program area lacks adequate storage and support spaces.
- There is very little available classroom space available as almost all of the spaces are used each block, each day. There is little flexibility to accommodate additional student enrollment or program expansion.
- There are few rooms for pull out, flexible type instruction.
- There are an inadequate amount of spaces for academic support and itinerates.

III. PHYSICAL PLANT

A. Site

- Limited areas of asphalt pavement are in need of repair and overlay immediately, particularly the northern most entry driveway, and around some drainage inlets. Complete pavement overlay of parking and driveways is recommend with the regular renewal cycle (within the next 5-8 years).
- Most concrete curbs appear are in fair condition. There are a few areas of cracked or mis-aligned curb which should be repaired when renovations take place. Concrete walks range from poor to good condition. There are current sidewalks with cracking/displacement and settlement that should be replaced. There are a few areas along drives and parking lots where vehicles are creating wear and ruts in the grass. To address this condition, curb is recommended to better define driveways and protect landscape from damage and erosion.
- Tops and face of some cast concrete retaining walls are deteriorating and in need of repair and refinishing.
- Furnishings including benches, trash receptacles and tables, are present in a variety of styles and range in condition from poor to good. Change-over to a consistent and functional style using durable materials/construction is recommended for exterior site furnishings. There are dumpster area that are open to drives and parking. Consolidated trash area with screens and/or fences is recommended for appearance and safety.
- There are a few overgrown trees and shrubs to be removed or thinned out. There are many areas around the building which would benefit in appearance from improved landscaping. Landscape material is recommended to provided shade, define use areas, and to screen exposed building foundation walls, and of which there are many around the High School. Screening of trash areas and utilities is also recommended.
- Low-lying lawn areas and the north entry plaza are in need of drainage improvements; in general the site appears to be well-drained.

- The building is connected to public water and sewer; no problems reported.
- The track and associated field events have recently been renovated and are in good condition. The synthetic turf field inside the track is in good condition. Then tennis courts should be renovated with new color coat and associated repairs within the next 2-3 years. In general the High School site has very limited outdoor athletic facilities. It is noted that the nearby Comet Field complex contains the varsity athletic fields and a fieldhouse. A pedestrian access easement for walkers and golf- cart type transportation across the adjoining properties could be investigated to provide better and more direct access from the High School to the Comet Field complex.

B. Building

- There are various areas where the plastic laminate window sill material is delaminating and needs reattached or replaced.
- The exterior masonry is in need of repointing in various areas and should be lowpressure cleaned and sealed.
- At the upper auditorium the exterior brick is spalling and delaminating due to moisture penetration caused by the weep holes being covered up during the last renovation project in 1997. In order to maintain the brick wall and address the problem, the brick wall would need to be removed and reconstructed with proper flashing and weep holes installed. This is too cost prohibitive and is not recommended. The recommendation is to cover the brick with a metal siding with a finish that matches the texture appearance of the exterior insulation finish system on the building, or apply an elastomeric coating.
- The exterior soffits have begun to fail on the building and are in need of replacement. This work is planned to occur during the fall / winter of 2010.
- The exterior insulation and finish system on the exterior of the building is badly stained and in need of crack and damage repair in certain areas. Additionally, the expansion joints should be replaced.
- In the prop storage room above and behind the stage in the auditorium, there are some damaged roof deck insulation panels that should be patched frm the underside to avoid continued deterioration.
- The exterior windows should be recaulked and the building expansion joints should be replaced.

C. Interior Finishes

- The interior of the building is need of painting in various areas.
- There are areas of carpeting and vinyl tile flooring in need of replacement.

- There are water damaged and dirt stained ceiling tiles in several areas in need of replacement.
- There are several areas of terrazzo that are in need of repair or replacement.
- The hollow metal doors and frames at the stair towers are in need of painting.

D. Specialties

- The folding partition in the auxiliary gym / wrestling room is in poor condition and should be replaced or removed.
- The wall padding in the wrestling room is peeling away from the wall in several areas and should be reattached.
- In the boy's locker room at the auxiliary gym / wrestling room, there are some wood tops missing form the pedestal base.
- The lockers in the locker rooms adjacent to the auxiliary gymnasium / wrestling room are beginning to rust and should be considered for repainting.
- In several toilet rooms the toilet partitions are damaged and should be replaced.
- In one of the art rooms, the upper wall cabinet shelves are sagging and should be replaced. Additionally, in several classrooms the plastic laminate edge has come off the book shelving and should be repaired.

E. HVAC

■ The HVAC System was replaced in 1997. A 4-pipe system is installed in the building. Hot water for heating is supplied by (2) fire tube boilers. Chiller water is provided by (2) water cooled centrifugal chillers connected to a cooling tower. All areas of the building are air conditioned except for the gymnasiums and corridor, storage, mechanical areas as well as some shop areas. Heating and cooling is distributed by air handler and unit vents. Heating terminal equipment includes cabinet heaters, convectors, unit heaters and wall fin radiation. An electronic DDC system is installed to provide automatic temperature control.

F. Plumbing

- In general, domestic water piping was upgraded as part of the 1997 project. Storm water and sanitary piping was generally re-used. Domestic hot water is provided by (2) gas-fired water heaters connected to a storage tank with hot water recirculating pumps. In general, plumbing fixtures were replaced as part of the 1997 project. The building is served by public water and public sewer.
- Portions of the building (new additions) were installed with sprinkler system as part of the 1997 project. The entire building is not sprinklered.

G. Electrical

Electrical Service

- The incoming electrical service is rated 200 amps at 12,470 volts. The main service equipment is a pole mounted fusible switch located along Cottage Ave. which was installed during the 1997 renovation. The high voltage service feeds two transformers rated 1500 kVA and one transformer rated 500 kVA to provide power to distribution points located in three electric rooms. The service equipment can be used for another 30 years and is able to accommodate some additions to the building.
- No utility company transformers are used to provide power to the High School.

Electrical Distribution

All of the circuit breaker panels in the building were installed in 1997 or added at a later date. These panels are acceptable for use for another 30 years. Some panels have space for added loads and some are full or nearly full. A study of the electrical distribution system was conducted in 2008 and indicated that all transformers and major power feeders have capacity for additional loads. New panels will be required at some locations in order to tap this available capacity.

Emergency Power & Lighting

- The existing emergency power source is a 150 kW diesel fueled generator located near the boiler room. This generator was installed in 1997 and is acceptable for at least 20 more years of service unless load is added to it. The generator currently powers emergency lighting and the UPS for the card access, intrusion detection and CCTV Camera Systems. It also powers the paging system and fire alarm system.
- A 50 kW generator was installed in 2009 to power air conditioning and data equipment in the district file server room.
- Emergency lighting is acceptable and does not need changes unless exit pathways or room utilization is changed.
- For code compliance, the generator should be enclosed in a dedicated room.

Lighting

- Luminaires throughout the building were replaced in the 1997 renovation and are generally in good condition. Most luminaire types use T8 lamps and electronic ballasts and only extremely minimal energy efficiency would be gained by replacing these lamps and ballasts.
- Most instructional space luminaires utilize 3 lamps in a deep cell parabolic louvered troffer luminaire. These luminaires were designed to control glare on computer monitors but are inefficient and create an over all dim appearance in

rooms in which they are installed. Replacing these luminaires with 2 lamp open reflector troffers with electronic ballasts is unlikely to cover the replacement costs with a reduction in energy consumption. It is recommended that the existing luminaires be used until the next renovation.

- Varsity Gym and Wrestling Room luminaires are equipped with metal halide lamps. These lamps have a long warm-up time and are therefore turned on in the morning and left on until the end of the day. Lighting in the West Gym was recently replaced with linear fluorescent high bay luminaires with motion sensor control. Varsity Gym and Wrestling Room lighting should be replaced with linear high bay fluorescent lighting controlled by motion sensors at the time of the next renovation. Fluorescent lighting can be adjusted to multiple levels depending upon activities and the motion sensors will turn all but a minimum amount of lighting off when the gym is unoccupied.
- Lighting in the cafeteria, library, office and miscellaneous spaces uses T8 lamps in various styles of luminaires and does not need be replaced with open reflector troffers for increased energy efficiency.
- Exterior building mounted security lighting is provided in only a few scattered places. These luminaires utilize HID (high intensity discharge) lamps. LED lighting should be provided around the perimeter of the building where it is determined that security lighting is needed. Existing lighting at exit doors should be replaced with LED luminaires when existing high pressure sodium luminaires fail to reduce energy consumption.
- Demolished lamps and ballasts should be disposed of in accordance with regulations for hazardous materials.
- Existing parking and walkway areas are illuminated by pole mounted HID shoebox style luminaire. Existing luminaires are adequate for most parking areas.

Lighting Controls

- Classrooms have 2 wall switches arranged to switch luminaires in the front of the room separately from those at the rear of the room. This darkens the teaching wall during the use of projectors but does not provide two levels of lighting. No automatic controls are currently provided. In future renovations provide motion sensors, daylight sensors, multiple switches and a load shedding relay to reduce energy consumption in classrooms and provide switches on the teaching wall to allow the teacher to adjust light levels without leaving the front of the room.
- In the future provide two levels of lighting in corridors. Provide full lighting during normally occupied times and reduced lighting levels for those periods of time when the building has minimum occupancy. Provide time based control of corridor and stair lighting to insure that lights are turned off during unoccupied times and to reduce the amount of staff time needed to turn lights on at the beginning of the day and off at the end of the day. Provide corridor and stairway nightlights for security and safety.

In the future provide motion sensor and daylight sensor control of lighting in offices, cafeteria, library and miscellaneous spaces. For safety do not provide automatic control of lighting in the kitchen.

Fire Alarm System

The existing 1997 fire alarm system is functional but is not fully ADA and Code compliant with current editions of these codes. The existing system has a remaining life of about 10 years until service parts become difficult to obtain.

Clock System

 Presently classrooms and most other occupied spaces have a synchronized clock system with a local time base. The system is operational and has a remaining life of 10 years.

Intercom & Sound System

• An intercom system which allows two way communications between the office and each classroom by way of classroom speakers is in operable condition. This system has a remaining useful life of about 10 years. The system does not allow general paging in corridors, miscellaneous occupied spaces and restrooms. Consideration should be given to expanding the coverage of this system to allow announcements to be heard in all spaces which could be occupied by students and staff.

Telephone System

Each classroom is provided with a telephone which operates as Voice Over the Internet (VOIP). The system is in good condition. The electronics for this system should be provided with emergency power.

Data Networking

The building is equipped with a data network which meets most of the buildings present needs. The data network was upgraded in 2009 as a part of the Classroom of the Future project. Network patch panels and switches are in numerous dedicated closets throughout the building. The network station cabling is Category 5e. Charging stations were provided for mobile computer carts as a part of the Classroom of the Future project.

Security System

- The building presently has numerous closed circuit TV cameras, recorders and monitors which view activity in most parts of the building. The monitors and recorders are located in data closets. This system has been assembled in multiple stages using grant money. Recorders are not networked and recorded images can not be viewed without going to the data closet where the recorder is located.
- Additional cameras and recorders should be provided by a single manufacturer or group of manufacturers who provide compatible products. Recorders and camera

controls should be networkable to allow access to live and recorded images via the wide area network. As existing cameras and recorders fail, they should be replaced with networkable products.

- Door contacts on exterior doors have been provided to ensure that all doors are closed when the last person leaves the building. An access control system is in place at several exterior doors. The security system was upgraded in 2008 and is operational and expected to be useful for the next 10 years.
- Installation of additional motion detectors in corridors, computer equipment rooms and offices containing sensitive records would reduce the potential for vandalism and unauthorized access to records.

Theatrical Lighting

 Theatrical lighting was installed during the 1997 renovation of the building and is in operable condition.

Public Address System

 The auditorium and Varsity Gym have public address systems which meet current needs.

Classroom Presentation Equipment

• Almost all classrooms were provided with interactive smart boards and LCD projectors during the Classroom of the Future project in 2009. It may be desirable to provide a wireless microphone for use by the teacher in some classrooms and large instructional spaces.

Video Distribution

The high school has an existing video distribution system. With the pending conversion of some cable TV channels to digital format, install three digital converters to permit continued access to three of the higher numbered channels. Three converters are provided at no cost by the cable TV service provider. Additional converters can be leased or purchased. Some additional signal processing equipment may need to be provided to interface the converters to the existing distribution system. Consider utilizing a system which converts analog and digital cable channels to base band for viewing using a computer and web browser at the time of a general renovation of the building.

Receptacles

Receptacle locations are generally adequate. Renovations which change room layouts will necessitate providing or relocating receptacles. A dedicated circuit should be provided for the teacher's computer and LCD projector. At least three other circuits should be provided in each classroom.

Facility Condition Index

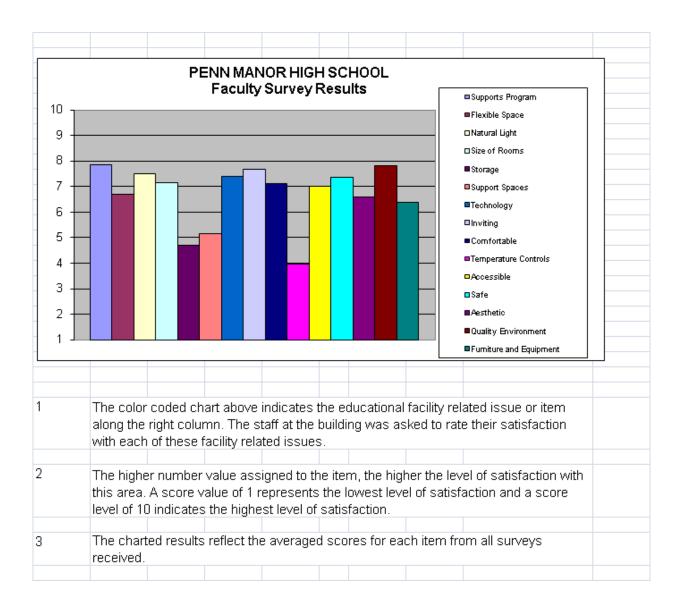
The Facility Cost Index (FCI) is used throughout the facility condition assessment industry as a relative indicator of a buildings condition. Based on industry-wide standards, if the cost to repair exceeds 60% of the cost to replace, the facility should be looked at more closely as a possible candidate for replacement. As a rule of thumb, an FCI below 10% is considered good. An FCI above 60% would suggest that the building is a candidate for replacement.

FCI RATINGS										
1	0	General Maintenance								
2	10	Minor								
3	50	Moderate								
4	75	Major								
5	100	Replace								

	Penn Manor High School										
No.	Componenet / System	Percent of total	Rating (1 - 5)	Rating %	Adj %						
1	Roofing	4.9%	2	0.1	0.49%						
2	Exterior Walls	5.4%	3	0.5	2.70%						
3	Exterior Windows	2.4%	2	0.1	0.24%						
4	Exterior - Doors	0.6%	1	0	0.00%						
5	Interior Floors	7.6%	3	0.5	3.80%						
6	Interior Walls	4.0%	2	0.1	0.40%						
7	Interior Ceilings	5.4%	2	0.1	0.54%						
8	Interior - Other	3.3%	2	0.1	0.33%						
9	HVAC	20.7%	2	0.1	2.07%						
10	Electrical Lighting	10.0%	2	0.1	1.00%						
11	Electrical Distrib.	1.3%	1	0	0.00%						
12	Electrical Other	0.5%	1	0	0.00%						
13	Plumbing	5.5%	1	0	0.00%						
14	Fire / Life Safety	2.3%	2	0.1	0.23%						
15	Specialties	0.8%	3	0.5	0.40%						
16	Structural	19.3%	1	0	0.00%						
17	Technology	3.5%	1	0	0.00%						
18	Accessibility	2.5%	2	0.1	0.25%						
					12.45%						

Faculty Survey:

The average score reported by the staff for these building characteristics is 6.69, which is an above average score. This reflects the overall good condition of the facility as a result of the school being renovated in 1997, but indicates increasing conditions as the facility ages. While not a technical survey or evaluation, school facility staff that spend considerable time in a school building have an innate understanding and perception of these identifiable building characteristics. The response from teaching staff generally is indicative of the overall existing conditions, quality and adequacy of the educational environment. Refer to the detailed building assessments for a detailed qualitative facility assessment.



CEFPI Appraisal

PEI	IN MANOR SCHOOL DISTRICT IN MANOR HIGH SCHOOL APPRAISAL													T	T	\top	\exists	
		Maximum	Dointe	Assessed	Point											ш	コ	
	Criteria	Allow		Value							Con	nmen	tary					
1	The School Site															\Box	\Box	
1.1	Site is large enough to meet educational needs as	0.5	•	40		C :-		- 14			- 50							İ
.2	defined by state and local requirements Site is easily accessible and conveniently located for	25		10		Desir	eable	site w	ouia c	e in tr	16 50-	oo aci	e ran	је			_	
	the present and future population.	20		16		Traffi	c will l	be rea	ligned	by bo	rough							
1.3	Location is removed from undesirable business, industry, and traffic.	10		8														
	Site is large enough for future expansion, if needed.	5		1														
1.5	Topography is varied enough to provide desired appearance but without steep inclines.	5		3														
1.6	Site is well landscaped.	5		4														
	Site has stable, well drained soil free of erosion.	5		5														
1.8	Site is suitable for special instructional needs, e.g., outdoor learning.	_																
1.9	Pedestrian services include adequate sidewalks with	5		3														
40	designated crosswalks, curb cuts, and correct slopes	5		5														
. 10	Sufficient on-site, solid surface parking for faculty, students and staff is provided.	5		3														
.11	Athletic areas are adequate with sufficient parking																_	
.12	space. Streets and parking areas are well designed with solid	5		3														
. 12	surfaces.	5	1	4											_			
	Total - The School Site	100		65	l									<u> </u>		ш	\perp	
ÈΙ	NN MANOR SCHOOL DISTRICT													П	Т	$\top \top$	П	T
ÈΙ	IN MANOR HIGH SCHOOL APPRAISAL																	
																	_	
	Criteria	Maximum Allow		Assessed Value							Con	nmen	tarv					
2	Structural and Mechanical Features	Allow	u	Value							00		Lu. y	Т	Т	TI	\neg	
2.1	Structure meets all barrier-free requirements both			_										-				
2 2	externally and internally. Roofs appear sound, have positive drainage, and are	15		9		ADA	acces	s from	exter	ior po	or in s	ome a	areas					
	weather tight.	15		12														
2.3	Foundations are strong and stable with no observable cracks.	10		10														
2.4	Exterior and interior walls have sufficient expansion																	
2.5	joints and are free of deterioration. Entrances and exits are located so as to permit	10		6														
	efficient student traffic flow.	10		10														
2.6	Building "envelope" generally provides for energy conservation (See criteria)	10		8														
2.7	Structure is free of friable asbestos and toxic materials.	40																
2.8	Interior walls permit sufficient flexibility for a variety of	10		8													_	
	class sizes.	5		2														
	Well maintained ceilings adequately retard sound. Adequate light sources, well maintained, and properly	5		5														
	placed are provided. Electrical controls are safely protected with disconnect	15		12														
	switches easily accessible.	10		6														
.12	Labeled electrical system is not subject to over- heating.	10		8														
2.13	Drinking fountains are adequate in number and	"		0												-		
	placement, and are properly maintained including			_		Ue		falle	~	r 00-1	ore #	nd int	orlat	nol =!	nin~			
2.14	provisions for the disabled. Number and size of restrooms meet requirements.	10 10		6 8		наче	some	failing	y wate	er cool	ers, tie	ea into	origi	ıaı pı	ping		_	
	Internal water supply is adequate with sufficent					_,												
.16	pressure to meet health and safety requirements. Drainage systems are properly maintained and meet	10		8		There	e are s	som w	ater p	ressur	e issu	es						
	requirements.	10		10														
17	Fire alarms, smoke detectors, and sprinkler systems are properly maintained and meet requirements.	10		8														
	Intercommunication system consists of a central unit																	
2.18	that allows dependable two-way communication	10		٥														
.18	hatwaan the office and instructional areas	. 10		8														
	between the office and instructional areas. Undergound electrical service is provided.			5														
2.19	Undergound electrical service is provided. Exterior water supply is sufficient and available for	5		5													_	
2.19	Undergound electrical service is provided. Exterior water supply is sufficient and available for normal usage.			3														
2.19	Undergound electrical service is provided. Exterior water supply is sufficient and available for	5															_	

CEFPI Appraisal

		Maximum Points		
-	Criteria	Allowed	Value	Commentary
	Plant Maintainability Windows, doors, and walls are of material and finish			
3.1	requiring minimum attendance.	10	8	
3.2	Outdoor light fixtures, electric outlets, equipment, and	-		
	other fixtures are accessible for repair and		_	
3 3	replacement. Floor coverings throughout the building require	10	8	
3.3	minimum care.	10	8	
3.4			-	
	Ceilings and walls throughout the building, including			
2.5	service areas, are easily cleaned and resistant to stain. Built-in equipment is designed and constructed for	10	8	
3.5	ease of maintenance.	10	8	
3.6	Floors in restrooms, kitchen, cafeterias, and corridors			
	require a minimum of maintenance.	10	8	
	Hardware and finishes are of durable quality.	10	8	
3.8	Restroom fixtures are wall mounted and of quality finish.	10	6	there are many original fixtures
3.9	Adequate custodial storage space with water and drain	10	0	there are many original fixtures
0.0	is accessible throughout the building.	10	8	
3.10	Adequate electrical outlets and power are available in			
-	every area to permit routine cleaning.	10	8	
	Total Plant Maintainability	100	78	
\vdash		Maximum Points	Assessed Point	<u>•</u> T
	Criteria	Allowed	Value	Commentary
4	Building Safety and Security	Allowed	Value	- Commentary
	Security			
	Student loading areas are segregated from other			
4.0	vehicular traffic and pedestrian walkways.	15	12	
4.2	Access streets have sufficient signals and signs to permit safe entrance to and exit from school area.	5	5	
43	Off-site sidewalks are available for safety of	5	5	
1.0	pedestrians.	5	3	
4.4	On-site sidewalks and steps are designed and			
L.	maintained for safety.	5	4	
4.5	Vehicular entrances and exits permit safe traffic flow.	5	3	Traffic onto side street is an issue
4.6	Athletic field equipment is properly located and free		3	Tranic onto side street is an issue
	from hazard.	5	4	
L				
	ding Safety The heating unit(s) is located away from student			
4.7	occupied areas.	20	20	
4.8	Multi-story buildings have at least two stairways.	15	15	
4.9	Exterior doors open outward and are equipped with			
4.40	panic hardware.	10	10	
4.10	Emergency lighting is provided throughout the building			
	with exit signs on separate electrical circuit.	10	10	
	Classroom doors are recessed and open outward.	10	8	
4.12	Building security systems are provided to assure			
4 40	uninterrupted operation of the educational program. Flooring (including ramps and stairways) is maintained	10	8	<u> </u>
4.13	in a nonslip condition.	5	5	
4.14	Stair risers (interior and exterior) do not exceed 6 1/2			
	inches and range in number from 3-16.	5	5	
4.15	Glass is properly located and protected with wire or	_		
4 16	safety material to prevent accidental student injury. Fixed projections in the traffic areas do not extend	5	4	+
7.10	more than eight inches form the corridor wall.	5	4	
4.17	Traffic areas terminate at an exit or a stairway leading			
	to an egress.	5	5	
E	rgency Safety	\vdash		+ + + + + + + + + + + + + + + + + + + +
	Adequate fire safety equipment is properly located.	15	12	+ + + + + + + + + + + + + + + + + + + +
	There are at least two independent exits from any point		·-	†
	in the building.	10	10	
	Stairways and exits are of noncombustible material.	10	8	Using stairwells for storage
4.21	Fire-resistant materials are used throughout the structure.	10	8	
4.22	ou uotul C.	10	0	+
1.22	Automatic and manual emergency alarm system with a			
	distinctive sound and flashing light is provided.	10	8	
4.23	Ample space is provided in corridors or protected			
	areas for student safety in the event of natural	_		
	disasters.	5 200	5 176	+
Ь	Total Building Safety and Security	200	1/0	

CEFPI Appraisal

_		I	I													
	Criteria	Maximum Points Allowed	Assessed Point Value						Co	mmer	ntarv					
5	Educational Adequacy															
Aced	lemic Learning Space Size of academic learning areas meet desirable															
5.1	standards.	10	8													
5.2	Classroom space permits arrangements for small	5	2													
5.3	group activity.	5	3													
	Location of academic learning areas is near related		_													
5.4	educational activities and away from disruptive noises.	10	6													
0	Personal space in the classroom away from group															
5.5	instruction allows privacy time for individual students. Storage for student materials is adequate.	5 5	3													
5.6	Storage for teacher materials is adequate.	5	4													
	cial Learning Space Size of special learning area(s) meets standards.	15	12													
	Design of special learning area(s) meets standards.	15	12													
	instructional need. Library/Resource/Media Center provides appropriate	10	8													
5.9	and attractive space.	15	15													
5.10	Gymnasium and out-door facilities adequately serve	4-	45													
5.11	physical education instruction. Science program is provided sufficient space and	15	15													
	equipment.	10	8													
5.12	Music program is provided adequate sound-treated space.	10	8													
5.13	Space for art is appropriate for special instruction,															
5 14	supplies, and equipment. Space for technology education, including computer	10	8	_												
	labs, permits use of state-of-the-art equipment.	10	8													
5.15	Space adjacent to classrooms is provided for small															
5.16	groups and remedial instruction.	5	3													
	Storage for student and teacher materials is adequate.	5	4	L												
	port Space															
5.17	Teachers' lounge and work areas reflect teachers as professionals.	10	8													
5.18	Cafeteria/cafetorium is attractive with sufficient space															
5 10	for delivery, storage, and food preparation. Administrative offices provide an appearance	10	8													
	consistent with the maturity of the students served.	10	6													
5.20	Counselor's office insures privacy and sufficient storage.	10	8													
5.21	Clinic is near administrative offices and is equipped to	10	0													
F 22	meet requirements. Suitable reception space is available for students,	5	4													
5.22	teachers, and visitors.	5	3													
5.23	Administrative personnel are provided sufficient work	_														
	space and privacy. Total Educational Adequacy	5 200	4 158													
	Criteria	Maximum Points Allowed	Assessed Point Value						Co	mmer	tarı					
6	Environment for Education	Allowed	Value		Τ	Τ	Т		T	IIIIIei	lary	Т	\top	П	T	
	rior Environment															
6.1	Overall design is aesthetically pleasing to age of students.	15	9													
6.2	Site and building are well landscaped.	10	8													
6.3	Exterior noise and poor environment do not disrupt learning.	10	10													
6.4	Entrances and walkways are sheltered from sun and															
6 -	inclement weather.	10	6													
6.5	Building materials provide attractive color and texture.	5	3													
	ior Environment															
0.0	Color schemes, building materials, and decor provide an impetus to learning.	20	16													
6.7	Year around comfortable temperature is provided															
6.8	throughout the building. Ventilating system provides adequate circulation of	15	12													
	clean air.	15	12													
6.9	Lighting system provides proper intensity, diffusion, and distribution of illumination.	15	12		_			_	_	_		_	-	_	_	
6.10	Drinking fountains and restrooms facilities are															
6 14	conveniently located. Communication among students is enhance by	15	12													
	commons area(s) for socialization.	10	6	L												
6.12	Traffic flow is aided by appropriate foyers and		8													
6.13	corridors. Areas for students to interact are suitable to the age	10	•													
	group.	10	6													
6.14	Large group areas are designed for effective management of students.	10	8													
6.15	Acoustical treatment of ceilings, walls, and floors															
6.16	provides effective sound control.	10	8													
	Window design contributes to a pleasant environment.	10	6	L												
6.17	Furniture and equipment provide a pleasing atmosphere.	10	8													
—	atmosphere. Total Environment for Education	200	142	\vdash												
l																

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

FACILITY OVERVIEW									
Building	Construction Date	<u>Size</u>	Grade Level						
Comet Fieldhouse School	(1990) 2006	7,866 SF	-						
Location	Millersville, PA	Millersville, PA							
Site Size	Approximately 47	Approximately 47 acres							
Municipal Jurisdiction	Lancaster Towns	Lancaster Township, Lancaster County							

Site:

The Penn Manor High School main athletic field complex is located approximately 1.5 miles from the High School on a 47 acre parcel of Land in Lancaster Township, PA. The complex includes athletic fields, the Comet Fieldhouse, as well as a 600 seat all purpose stadium for soccer, field hockey and lacrosse. Penn Manor School District buses are also stored within a fenced-in area on site. The complex is located adjacent to farmland on the western border, a School District of Lancaster Elementary School on the northeast border, with the remainder of adjacent property being residential area. The complex is accessed from route 741 on the east side of the site and from Barbara Street on the north side.

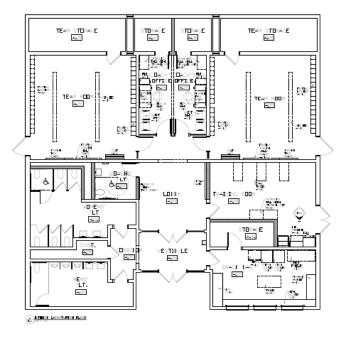
Building:

The Comet Fieldhouse facility was originally constructed in 1990. The original facility included fieldhouse facilities as well as space for school district maintenance. The construction of a new district maintenance building in 2006 allowed for the renovation and expansion of the existing fieldhouse into the space vacated by school district maintenance. Renovations to the fieldhouse were completed in 2006, which included adding additional locker room facilities in the previous maintenance space. School District-wide security improvements in 2008 included the fieldhouse facility. The facility is in good condition and should continue to serve the school district for the foreseeable future, however inasmuch as a building is a static, non-dynamic entity, subject to the forces of nature and the aging and deterioration process, it is recommended that annual visual inspections of the building, including the interior, exterior and the roof, be completed as part of a proactive and on-going maintenance program.

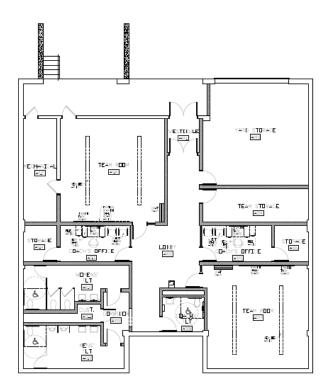
Aerial Photograph



First Floor Plan



Lower Level



INTRODUCTION

Short-Term Capital Facility Renewal

The following pages contain cost estimates for short – term capital facility renewal renovations to the following facilities

- Hambright Elementary School
- Pequea Elementary School
- Conestoga Elementary School
- Letort Elementary School
- Eshleman Elementary school
- Manor Middle School
- Penn Manor High School

The short-term improvements are not intended to be 20 - 25 year comprehensive building upgrades or expansion projects, rather address the more urgent, or critical needs of a facility; typically driven by deferred maintenance, equipment failure, non-conformance with current building codes and changes in technology.

The following chart summarizes the total short-term capital facility renewal recommendations for the Penn Manor School District facilites:

	DA / CODE IMPLIANCE	GENERAL ROVEMENTS	INTERIOR FINISHES			SPECIALTIES		HVAC		PLUMBING		ELECTRICAL		TOTAL
Hambright Elementary School	\$ 5,750.00	\$ 51,960.00	\$	83,400.00	\$	34,500.00	\$	251,000.00			\$	814,192.00	\$	1,240,802.00
Pequea Elementary School	\$ 19,250.00	\$ 2,500.00	\$	70,150.00	\$	27,600.00	\$	128,000.00	\$	90,000.00	\$	546,914.00	\$	884,414.00
Conestoga Elementary School	\$ 3,750.00	\$ 37,500.00	\$	152,073.00	\$	18,400.00	\$	150,000.00	\$	-	\$	442,714.00	\$	804,437.00
Letort Elementary School	\$ 1,500.00	\$ 60,500.00	\$	-	\$	16,100.00	\$	30,000.00	\$	200,000.00	\$	274,412.00	\$	582,512.00
Eshleman Elementary School	\$ 15,750.00	\$ -	\$	-	\$	16,100.00	\$	-	\$	-	\$	342,617.00	\$	374,467.00
Manor Middle School	\$ 5,750.00	\$ 303,250.00	\$	143,500.00	\$	69,500.00	\$	300,000.00	\$	-	\$	919,000.00	\$	1,741,000.00
Penn Manor High School	\$ 7,000.00	\$ 317,500.00	\$	580,000.00	\$	110,000.00	\$	500,000.00	\$	-	\$	919,000.00	\$	2,433,500.00
	\$ 58,750.00	\$ 773,210.00	\$	1,029,123.00	\$	182,200.00	\$	1,359,000.00	\$	290,000.00	\$	3,339,849.00	\$	8,061,132.00

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

SHORT TERM CAPITAL FACILITY RENEWAL COST ESTIMATE

Hambright Elementary School Recommended Scope of Work Short Term Life Cycle Renewal

CONSTRUCTION COST / SCOPE OF WORK SUMMARY

I. ADA, Safety and Building Code	Total
A. ADA & Code Compliance	\$5,750
SUBTOTAL	\$5.750

	Physical Plant Condition General Building Improvements	\$51,960
	Interior Finishes	\$83,400
C.	Specialties	\$34,500
D.	HVAC	\$251,000
E.	Plumbing	
F.	Electrical	\$814,192
	SUBTOTAL	\$1,235,052

TOTAL	\$1,240,802

SHORT TERM CAPITAL FACILITY RENEWAL COST ESTIMATE

I. ADA, Safety and Building Code Upgrades

	Qty.	Unit	Unit Cost	Total
A. ADA & Code Compliance				
Accessibility to Playgrounds Road Frontage Improvements	1 LS	;	\$5,000.00	\$5,000
3. Exterior Signage (ADA compliance)	1 LS		\$ 750.00	\$750
			sub-total	\$5,750

II. Physical Plant Upgrades Qty. Unit Unit Cost Total A. General Building Improvements 1. Sitework No Change Recommended 2. Structural System No Change Recommended 3. Energy No Change Recommended 4. Roofing System Roof Patching & Repair 53,920 sf \$0.50 \$26,960 5. Exterior Envelope Caulking & Joint Repair \$ 25,000.00 \$25,000 1 allow 6. Exterior Trim No Change Recommended 7. Windows No Change Recommended 8. Exterior Doors No Change Recommended 9. Interior Walls No Change Recommended 10. Interior Doors No Change Recommended 11. Interior Glass No Change Recommended

sub-total

\$51,960

SHORT TERM CAPITAL FACILITY RENEWAL COST ESTIMATE

8. Interior Finishes	Qty. Unit	Unit Cost	Total
1. Terrazzo			
No Change Recommended			
2. Resilient Flooring			
No Change Recommended 3. Carpet			
No Change Recommended			
Terrazzo / Ceramic Tile / Quarry Tile No Change Recommended			
5. Resinous Flooring No Change Recommended			
6. Wood Flooring Refinish Gym Floor	4,000 sf	\$ 4.00	\$16,000
7. Ceiling System			
No Change Recommended			
Gypsum Wallboard or Plaster No Change Recommended			
Paint Finish Interior Painting	53,920 sf	\$1.25	\$67,400
		· · · · · · · · · · · · · · · · · · ·	
		sub-total	\$83,400
:. Specialties	Qty. Unit		
C. Specialties 1. Casework No Change Recommended	Qty. Unit		\$83,400
1. Casework	Qty. Unit 30 ea		
1. Casework No Change Recommended 2. Chalk/ marker / tack boards		Unit Cost	Total
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended		Unit Cost	Total
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended 4. Lockers No Change recommended		Unit Cost	Total
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended 4. Lockers No Change recommended 5. Operable Walls No Change Recommended		Unit Cost	Total
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended 4. Lockers No Change recommended 5. Operable Walls No Change Recommended 6. Acoustics No Change Recommended		Unit Cost	Total
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended 4. Lockers No Change recommended 5. Operable Walls No Change Recommended 6. Acoustics No Change Recommended 7. Fixed Seating No Change Recommended		Unit Cost	Total
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended 4. Lockers No Change recommended 5. Operable Walls No Change Recommended 6. Acoustics No Change Recommended 7. Fixed Seating No Change Recommended 8. Kitchen Equipment		Unit Cost	Total
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended 4. Lockers No Change recommended 5. Operable Walls No Change Recommended 6. Acoustics No Change Recommended 7. Fixed Seating No Change Recommended 8. Kitchen Equipment No Change Recommended 9. Athletic Equipment		Unit Cost	Total

SHORT TERM CAPITAL FACILITY RENEWAL COST ESTIMATE

	III. Physic	al Plant ^ı	Upgrades -	Continued
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сружие селина	Qty. Unit	Unit Cost	Total
D. HVAC			
1. System			
Replace boilers	1 allow	\$89,000.00	\$ 89,000.00
Add ductless split system air conditioners, heat pumps	1 allow	\$100,000.00	\$ 100,000.00
2.Pumps			
Replace base mounted pumps	1 allow	\$50,000.00	\$ 50,000.00
3. Grease Trap			
Replace Grease Interceptor	1 allow	\$12,000.00	\$ 12,000.00
		sub-total	\$ 251,000.00
E. Plumbing			
1. Distribution No Change Recommended			
2. Fixtures No Change Recommended			
-			
3. Equipment			
No Change Recommended			

	sub-total				
	Qty.	Unit	Unit Cost	Total	
ectrical					
Add loads to emergency generator	53,920	sf	\$0.10	\$ 5,392.00	
Replace Gym Lighting	53,920	sf	\$6.00	\$ 323,520.00	
Add switches at teaching wall	53,920	sf	\$0.40	\$ 21,568.00	
Replace perimeter security lighting	53,920	sf	\$0.45	\$ 24,264.00	
Replace fire alarm system	53,920	sf	\$0.75	\$ 40,440.00	
Replace CCTV system	53,920	sf	\$2.40	\$ 129,408.00	
Add sound system in gym	53,920	sf	\$0.90	\$ 48,528.00	
Partial upgrade to data cables and jacks	53,920	sf	\$1.91	\$ 102,987.20	
Provide classroom voice amplifiers, LCD projector, media transport and wireless microphone.	53,920	sf	\$1.59	\$ 85,732.80	
Add receptacles (includes surface raceway for power and telecom in existing rooms)	53,920	sf	\$0.50	\$ 26,960.00	
Generator Room improvements	53,920	sf	\$0.10	\$ 5,392.00	

sub-total \$ 814,192.00

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

SHORT TERM CAPITAL FACILITY RENEWAL COST ESTIMATE

Eshleman Elementary School Recommended Scope of Work Short Term Life Cycle Renewal

CONSTRUCTION COST / SCOPE OF WORK SUMMARY

I. ADA, Safety and Building Code		Total	
	A. ADA & Code Compliance		\$15,750
		SUBTOTAL	\$15,750
III. F	Physical Plant Condition		
Α.	General Building Improvements		
В.	Interior Finishes		
C.	Specialties		\$16,100
D.	HVAC		-
E.	Plumbing		
F.	Electrical		\$342,617
		SUBTOTAL	\$358,717

TOTAL	\$374,467

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

SHORT TERM CAPITAL FACILITY RENEWAL COST ESTIMATE

	Qty. Unit	Unit Cost		Total
ADA & Code Compliance				
Accessible walks to building doors	1 LS	\$15,000.00	\$	15,000.00
exterior signage	1 LS	\$500.00	\$	500.00
Accessibility to playgrounds	1 LS	\$3,000.00	\$	750.00
		sub-total	¢	15.750.00

II. Physical Plant Upgrades Qty. Unit Unit Cost Total A. General Building Improvements 1. Sitework No Change Recommended 2. Structural System No Change Recommended 3. Energy No Change Recommended 4. Roofing System No Change Recommended 5. Exterior Envelope No Change recommended 6. Exterior Trim No Change Recommended 7. Windows No Change Recommended 8. Exterior Doors No Change Recommended 9. Interior Walls No Change Recommended 10. Interior Doors No Change Recommended 11. Interior Glass No Change Recommended sub-total

II. Physical Plant Upgrades - Continued				
B. Interior Finishes	Qty.	Unit	Unit Cost	Total
1. Terrazzo No Change Recommended				
Resilient Flooring No Change Recommended				
3. Carpet No Change Recommended				
Terrazzo / Ceramic Tile / Quarry Tile No Change Recommended	11001			
5. Resinous Flooring No Change Recommended				
6. Wood Flooring No Change Recommended				
7. Ceiling System No Change Recommended				
Gypsum Wallboard or Plaster No Change Recommended				
Paint Finish No Change Recommended				
			sub-total	\$ -
	Qty.	Unit	Unit Cost	Total
C. Specialties				
Casework No Change Recommended				
Chalk/ marker / tack boards New Promrthean boards	14 e	a	\$1,150.00	\$ 16,100.00
Toilet Partitions / Misc. No Change Recommended				
4. Lockers No Change recommended				
5. Operable Walls No Change Recommended				
6. Acoustics No Change Recommended				
7. Fixed Seating No Change Recommended				
Kitchen Equipment No Change Recommended				
9. Athletic Equipment No Change Recommended				
10. Theatre & Stage Equipment No Change Recommended				
			sub-total	\$ 16,100.00

ID/AC	Qty.	Unit	Unit Cost	Tot
HVAC				
l. System				
No Change recommended				
2.Pumps No Change Recommended				
B. Grease Trap No Change Recommended				
			sub-total	\$ -
Plumbing				
I. Disttribution No Change Recommended				
2. Fixtures No Change Recommended				
B. Equipment				
No Change Recommended				
No Change Recommended			sub-total	
No Change Recommended Electrical	Qty.	Unit	sub-total Unit Cost	Tot
Electrical	Qty . 42,614	Unit		
	_		Unit Cost	\$ 4,261.4
Electrical Add loads to emergency generator Add switches at teaching wall Replace perimeter security lighting	42,614 42,614 42,614	sf sf sf	\$0.10 \$0.40 \$0.49	\$ 4,261.4 \$ 17,045.6 \$ 20,880.8
Electrical Add loads to emergency generator Add switches at teaching wall Replace perimeter security lighting Replace clock system	42,614 42,614 42,614 42,614	sf sf sf sf	\$0.10 \$0.40 \$0.49 \$0.38	\$ 17,045.6 \$ 20,880.8 \$ 16,193.3
Electrical Add loads to emergency generator Add switches at teaching wall Replace perimeter security lighting Replace clock system Extend intercom, into additional spaces	42,614 42,614 42,614 42,614 42,614	sf sf sf sf sf	\$0.10 \$0.40 \$0.49 \$0.38 \$0.15	\$ 4,261.4 \$ 17,045.6 \$ 20,880.8 \$ 16,193.3 \$ 6,392.1
Electrical Add loads to emergency generator Add switches at teaching wall Replace perimeter security lighting Replace clock system Extend intercom, into additional spaces Replace CCTV system	42,614 42,614 42,614 42,614 42,614 42,614	sf sf sf sf sf	\$0.10 \$0.40 \$0.49 \$0.38 \$0.15 \$2.40	\$ 4,261.4 \$ 17,045.6 \$ 20,880.8 \$ 16,193.3 \$ 6,392.1 \$ 102,273.6
Electrical Add loads to emergency generator Add switches at teaching wall Replace perimeter security lighting Replace clock system Extend intercom, into additional spaces Replace CCTV system Partial Upgrade to data network cables and jacks	42,614 42,614 42,614 42,614 42,614 42,614 42,614	sf sf sf sf sf sf	\$0.10 \$0.40 \$0.49 \$0.38 \$0.15 \$2.40 \$1.91	\$ 4,261.4 \$ 17,045.6 \$ 20,880.6 \$ 16,193.3 \$ 6,392.1 \$ 102,273.6 \$ 81,392.7
Electrical Add loads to emergency generator Add switches at teaching wall Replace perimeter security lighting Replace clock system Extend intercom, into additional spaces Replace CCTV system	42,614 42,614 42,614 42,614 42,614 42,614	sf sf sf sf sf	\$0.10 \$0.40 \$0.49 \$0.38 \$0.15 \$2.40	\$ 4,261.4 \$ 17,045.6 \$ 20,880.6 \$ 16,193.3 \$ 6,392.1 \$ 102,273.6 \$ 81,392.7
Electrical Add loads to emergency generator Add switches at teaching wall Replace perimeter security lighting Replace clock system Extend intercom, into additional spaces Replace CCTV system Partial Upgrade to data network cables and jacks Classroom technology including LCD projector, wireless microphone with amplifier and speakers, media transport from teacher's computer to projector Add receptacles (includes surface raceway for power and telecom in existing rooms)	42,614 42,614 42,614 42,614 42,614 42,614 42,614 42,614	sf sf sf sf sf sf sf	\$0.10 \$0.40 \$0.49 \$0.38 \$0.15 \$2.40 \$1.91 \$1.59	\$ 4,261.4 \$ 17,045.6 \$ 20,880.8 \$ 16,193.3 \$ 6,392.1 \$ 102,273.6 \$ 81,392.7 \$ 67,756.2
Electrical Add loads to emergency generator Add switches at teaching wall Replace perimeter security lighting Replace clock system Extend intercom, into additional spaces Replace CCTV system Partial Upgrade to data network cables and jacks Classroom technology including LCD projector, wireless microphone with amplifier and speakers, media transport from teacher's computer to projector Add receptacles (includes surface raceway for power and telecom in	42,614 42,614 42,614 42,614 42,614 42,614 42,614 42,614	sf sf sf sf sf sf sf	\$0.10 \$0.40 \$0.49 \$0.38 \$0.15 \$2.40 \$1.91 \$1.59	\$ 4,261.4 \$ 17,045.6 \$ 20,880.8 \$ 16,193.3 \$ 6,392.1 \$ 102,273.6 \$ 81,392.7 \$ 67,756.2

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

SHORT TERM CAPITAL FACILITY RENEWAL COST ESTIMATE

Conestoga Elementary School Recommended Scope of Work Short Term Life Cycle Renewal

CONSTRUCTION COST / SCOPE OF WORK SUMMARY

I. ADA, Safety and Building Code	Total
A. ADA & Code Compliance	\$3,750
SUBTOTAL	\$3.750

III. P	Physical Plant Condition	
Α.	General Building Improvements	\$37,500
В.	Interior Finishes	\$152,073
C.	Specialties	\$18,400
D.	HVAC	\$150,000
E.	Plumbing	
F.	Electrical	\$442,714
	SUBTOTAL	\$800,687

TOTAL	\$804,437

	Qty. Unit	Unit Cost	Tota
ADA & Code Compliance			
Detectable warnings	1 LS	\$1,000.00	\$ 1,000.00
Accessibility to Playgrounds	1 LS	\$2,000.00	\$ 2,000.00
Add van accessible space	1 LS	\$750.00	\$ 750.00
Exterior ADA signage	1 LS	\$750.00	\$ 750.00
		sub-total	\$ 3,750.00

	Qty. Unit	Unit Cost	Tota
. General Building Improvements			
Sitework Sidewalk repair / replacement	1 LS	\$2,500.00	\$ 2,500.00
Structural System No Change Recommended			
3. Energy No Change Recommended			
Roofing System No Change Recommended			
5. Exterior Envelope Dryvit repair and recoating	1 LS	\$35,000.00	\$ 35,000.00
6. Exterior Trim No Change Recommended			
7. Windows No Change Recommended			
8. Exterior Doors No Change Recommended			
9. Interior Walls No Change Recommended			
10. Interior Doors No Change Recommended			
11. Interior Glass No Change Recommended			

sub-total

\$37,500

B. Interior Einichee	Qty. Unit	Unit Cost	Total
3. Interior Finishes			
1. Terrazzo No Change Recommended			
2. Resilient Flooring VCT replacement	30,000 sf	\$2.25	\$ 67,500.00
3. Carpet Carpet replacement	7,500 sf	\$4.00	\$ 30,000.00
4. Terrazzo / Ceramic Tile / Quarry Tile No Change Recommended			
5. Resinous Flooring No Change Recommended			
6. Wood Flooring No Change Recommended			
7. Ceiling System Replace damaged ceiling tile	1 allow	\$1,500.00	\$ 1,500.00
Gypsum Wallboard or Plaster No Change Recommended			
9. Paint Finish Interior Painting	42,458 sf	\$1.25	\$ 53,072.50
		sub-total	\$ 152,072.50
C. Specialties	Qty. Unit	Unit Cost	Total
Casework No Change Recommended			
Chalk/ marker / tack boards New Promrthean boards	16 ea	\$1,150.00	\$ 18,400.00
Toilet Partitions / Misc. No Change Recommended			
4. Lockers No Change recommended			
5. Operable Walls No Change Recommended			
6. Acoustics No Change Recommended			
7. Fixed Seating No Change Recommended			
8. Kitchen Equipment No Change Recommended			
9. Athletic Equipment No Change Recommended			
10. Theatre & Stage Equipment No Change Recommended			
		sub-total	\$ 18,400.00

D. HVAC

1. System			
Upgrade energy management controls	1 LS	\$100,000.00	\$ 100,000.00
Energy conservation upgrades	1 LS	\$50,000.00	\$ 50,000.00
2.Pumps			
No Change Recommended			
3. Grease Trap			
No Change Recommended			
		sub-total	\$ 150,000.00
<u>E. Plumbing</u>			
1. Disttribution			
No Change Recommended			
2. Fixtures			
No Change Recommended			
3. Equipment			
No Change Recommended			

			sub-total	
F. Electrical	Qty.	Unit	Unit Cost	Total
Add loads to emergency generator	42,458	sf	\$0.05	\$ 2,122.90
Replace Gym Lighting	7.200	sf	\$6.00	\$ 43,200,00
Provide switching at teaching wall	42,458	sf	\$0.40	\$ 16,983.20
Replace perimeter security lighting	42,458	sf	\$0.49	\$ 20,804.42
Replace clock system	42,458	sf	\$0.38	\$ 16,134.04
Add corridor and rest room speakers	42,458	sf	\$0.15	\$ 6,368.70
Replace CCTV system	42,458	sf	\$2.40	\$ 101,899.20
Partial upgrade to data network cables and jacks	42,458	sf	\$1.91	\$ 81,094.78
Classroom technology including LCD projector, wireless microphone with amplifier and speakers, media transport from teacher's computer to projector	7,200	sf	\$1.59	\$ 11,448.00
Add receptacles (includes surface raceway for power and telecom in existing rooms)	42,458	sf	\$0.50	\$ 21,229.00
Enclose Emergency generator	42,458	sf	\$0.36	\$ 15,284.88
Replace fire alarm system, public address and master clock systems	42,458	sf	\$2.50	\$106,145.00

sub-total \$ 442,714.12

Pequea Elementary School Recommended Scope of Work Short Term Life Cycle Renewal

CONSTRUCTION COST / SCOPE OF WORK SUMMARY

I. ADA, Safety and Building Code	Total
A. ADA & Code Compliance	\$19,250
SUBTOTAL	\$19.250

 III. Physical Plant Condition

 A. General Building Improvements
 \$2,500

 B. Interior Finishes
 \$70,150

 C. Specialties
 \$27,600

 D. HVAC
 \$128,000

 E. Plumbing
 \$90,000

 F. Electrical
 \$546,914

 SUBTOTAL

TOTAL	\$884,414

DA & Code Compliance	Qty. Unit	Unit Cost		Tota
Add walkways, curb ramps and detectable warnings	1 LS	\$18,000.00	\$	18,000.00
Add (3) accessible parking spaces	1 LS	\$500.00	\$	500.00
Exterior Signage (ADA compliance)	1 LS	\$ 750.00	\$	750.00
Exterior Signage (ADA compliance)	1 LS	\$ 750.00	\$	
		sub-total	Te.	19.250.0

	Qty. Unit	Unit Cost	Tota
A. General Building Improvements			
1. Sitework			
Sidewalk repair / replacement	1 LS	\$2,500.00	\$ 2,500.00
2. Structural System			
No Change Recommended			
3. Energy			
No Change Recommended			
4. Roofing System			
No Change Recommended			
5. Exterior Envelope			
No Change Recommended			
6. Exterior Trim			
No Change Recommended			
7. Windows			
No Change Recommended			
8. Exterior Doors			
No Change Recommended			
9. Interior Walls			
No Change Recommended			
10. Interior Doors			
No Change Recommended			
11. Interior Glass			
No Change Recommended			

sub-total

\$2,500

B. Interior Finishes	Qty. Unit	Unit Cost	Total
1. Terrazzo No Change Recommended			
2. Resilient Flooring No Change Recommended			
3. Carpet No Change Recommended			
4. Terrazzo / Ceramic Tile / Quarry Tile No Change Recommended			
5. Resinous Flooring No Change Recommended			
6. Wood Flooring No Change Recommended			
7. Ceiling System Replace damaged ceiling tile	1 allow	\$ 1,500.00	\$ 1,500.00
Gypsum Wallboard or Plaster No Change Recommended			
9. Paint Finish Interior Painting	54,920 sf	\$1.25	\$68,650
		sub-total	\$70,150
C. Specialties	Qty. Unit	Unit Cost	Total
1. Casework No Change Recommended			
Chalk/ marker / tack boards New Promrthean boards	24 ea	\$ 1,150.00	\$27,600
3. Toilet Partitions / Misc. No Change Recommended			
4. Lockers No Change recommended			
5. Operable Walls No Change Recommended			
6. Acoustics No Change Recommended			
7. Fixed Seating No Change Recommended			
8. Kitchen Equipment No Change Recommended			
9. Athletic Equipment No Change Recommended			
10. Theatre & Stage Equipment No Change Recommended			
		sub-total	\$27,600

	Qty.	Unit	Unit Cost		Total
D. HVAC					
1. System					
Replace boilers			4400 000 00		
Add ductless split system air conditioners, heat pumps		illow illow	\$100,000.00 \$28,000.00	\$ \$	100,000.00 28,000.00
Power connections for split system air conditioners 2.Pumps	1 0	IIIUW	\$20,000.00	Ą	20,000.00
Replace base mounted pumps					
3. Grease Trap					
No Change Recommended					
			sub-total	\$	128,000.00
E. Plumbing					
1. Distribution	4 -		#00.000.00		00 000 00
Replace domestic water piping	18	illow	\$90,000.00	\$	90,000.00
2. Fixtures No Change Recommended					
2 5					
3. Equipment No Change Recommended					
• •			sub-total		\$90,000
No Change Recommended	Qty.	Unit	sub-total Unit Cost		\$90,000
No Change Recommended F. Electrical	-		Unit Cost		Total
No Change Recommended E. Electrical Add loads to emergency generator	54,920	sf	Unit Cost \$0.05	\$	Total
No Change Recommended F. Electrical Add loads to emergency generator Replace Gym Lighting	54,920 7,200	sf sf	Unit Cost \$0.05 \$6.00	\$	7 <i>otal</i> 2,746.00 43,200.00
No Change Recommended F. Electrical Add loads to emergency generator Replace Gym Lighting Add switches on teaching wall	54,920 7,200 54,920	sf sf sf	\$0.05 \$6.00 \$0.40	\$ \$	2,746.00 43,200.00 21,968.00
No Change Recommended F. Electrical Add loads to emergency generator Replace Gym Lighting Add switches on teaching wall Replace perimeter security lighting	54,920 7,200 54,920 54,920	sf sf sf sf	\$0.05 \$6.00 \$0.40 \$0.40	\$ \$ \$	7 <i>otal</i> 2,746.00 43,200.00 21,968.00 21,968.00
No Change Recommended E. Electrical Add loads to emergency generator Replace Gym Lighting Add switches on teaching wall Replace perimeter security lighting Replace fire alarm system	54,920 7,200 54,920 54,920 54,920	sf sf sf sf sf	\$0.05 \$6.00 \$0.40 \$0.40 \$0.75	\$ \$ \$	2,746.00 43,200.00 21,968.00 21,968.00 41,190.00
F. Electrical Add loads to emergency generator Replace Gym Lighting Add switches on teaching wall Replace perimeter security lighting Replace fire alarm system Replace clock system	54,920 7,200 54,920 54,920 54,920 54,920	sf sf sf sf sf	\$0.05 \$6.00 \$0.40 \$0.40 \$0.75 \$0.38	\$ \$ \$ \$	2,746.00 43,200.00 21,968.00 21,968.00 41,190.00 20,869.60
F. Electrical Add loads to emergency generator Replace Gym Lighting Add switches on teaching wall Replace perimeter security lighting Replace fire alarm system Replace lock system Replace Intercom System	54,920 7,200 54,920 54,920 54,920 54,920 54,920	sf sf sf sf sf sf	\$0.05 \$6.00 \$0.40 \$0.40 \$0.75 \$0.38 \$0.42	\$ \$ \$ \$	2,746.00 43,200.00 21,968.00 21,968.00 41,190.00 20,869.60 23,066.40
F. Electrical Add loads to emergency generator Replace Gym Lighting Add switches on teaching wall Replace perimeter security lighting Replace fire alarm system Replace clock system Replace Intercom System Replace CCTV system	54,920 7,200 54,920 54,920 54,920 54,920 54,920 54,920	sf sf sf sf sf sf sf	\$0.05 \$6.00 \$0.40 \$0.40 \$0.75 \$0.38 \$0.42 \$2.40	\$ \$ \$ \$ \$	2,746.00 43,200.00 21,968.00 21,968.00 41,190.00 20,869.60 23,066.40 131,808.00
F. Electrical Add loads to emergency generator Replace Gym Lighting Add switches on teaching wall Replace perimeter security lighting Replace fire alarm system Replace clock system Replace Intercom System Replace CCTV system Add sound system in gym	54,920 7,200 54,920 54,920 54,920 54,920 54,920 54,920 7,200	sf sf sf sf sf sf sf sf	\$0.05 \$6.00 \$0.40 \$0.40 \$0.75 \$0.38 \$0.42 \$2.40 \$0.70	\$ \$ \$ \$ \$	2,746.00 43,200.00 21,968.00 21,968.00 41,190.00 20,869.60 23,066.40 131,808.00 5,040.00
No Change Recommended Electrical Add loads to emergency generator Replace Gym Lighting Add switches on teaching wall Replace perimeter security lighting Replace fire alarm system Replace clock system Replace Intercom System Replace CCTV system	54,920 7,200 54,920 54,920 54,920 54,920 54,920 54,920	sf sf sf sf sf sf sf	\$0.05 \$6.00 \$0.40 \$0.40 \$0.75 \$0.38 \$0.42 \$2.40	\$ \$ \$ \$ \$	2,746.00 43,200.00 21,968.00 21,968.00 41,190.00 20,869.60 23,066.40 131,808.00 5,040.00
F. Electrical Add loads to emergency generator Replace Gym Lighting Add switches on teaching wall Replace perimeter security lighting Replace fire alarm system Replace clock system Replace lotercom System Replace CCTV system Add sound system in gym Replace data network cables and jacks Classroom technology including LCD projector, wireless microphone	54,920 7,200 54,920 54,920 54,920 54,920 54,920 7,200 54,920	sf sf sf sf sf sf sf sf	\$0.05 \$6.00 \$0.40 \$0.40 \$0.75 \$0.38 \$0.42 \$2.40 \$0.70 \$1.91	\$ \$ \$ \$ \$ \$	2,746.00 43,200.00 21,968.00 21,968.00 41,190.00 20,869.60 23,066.40

\$ 546,913.60

sub-total

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

SHORT TERM CAPITAL FACILITY RENEWAL COST ESTIMATE

Letort Elementary School Recommended Scope of Work Short Term Life Cycle Renewal

CONSTRUCTION COST / SCOPE OF WORK SUMMARY

I. ADA, Safety and Building Code	Total
A. ADA & Code Compliance	\$1,500
SUBTOTAL	\$1,500

 III. Physical Plant Condition

 A. General Building Improvements
 \$60,500

 B. Interior Finishes
 \$16,100

 C. Specialties
 \$16,100

 D. HVAC
 \$30,000

 E. Plumbing
 \$200,000

 F. Electrical
 \$274,412

 SUBTOTAL

TOTAL	\$582,512

ADA, Safety and Building Code Upgr	rades Oty. Unit	Unit Cost	Tota
Detectable warnings	1 LS	\$750.00	\$ 750.0
Exterior ADA signage	1 LS	\$750.00	\$ 750.0
		sub-total	\$ 1,500.0

	Qty. Unit	Unit Cost	Tota
A. General Building Improvements			
1. Sitework			
Sidewalk repair	1 LS	\$5,000.00	\$ 5,000.00
Repair curbing and steps	1 LS	\$7,500.00	\$ 7,500.00
Expansion & upgrades of site furnishings	1 LS	\$25,000.00	\$ 25,000.00
Add shade trees at play areas	1 LS	\$8,000.00	\$ 8,000.00
Repair, stabilize and seed eroded areas	1 LS	\$10,000.00	\$ 10,000.00
Sideline fence and bench upgrades	1 LS	\$5,000.00	\$ 5,000.00
2. Structural System			
No Change Recommended			
3. Energy			
No Change Recommended			
4. Roofing System			
No Change Recommended			
5. Exterior Envelope			
No Change recommended			
6. Exterior Trim			
No Change Recommended			
7. Windows			
No Change Recommended			
8. Exterior Doors			
No Change Recommended			
9. Interior Walls			
No Change Recommended			
10. Interior Doors			
No Change Recommended			
11. Interior Glass			
No Change Recommended			
		sub-total	\$60,500

II. Physical Plant Upgrades - Continued				
B. Interior Finishes	Qty.	Unit	Unit Cost	Total
1. Terrazzo				
No Change Recommended				
2. Resilient Flooring No Change Recommended				
3. Carpet No Change Recommended				
4. Terrazzo / Ceramic Tile / Quarry Tile No Change Recommended				
5. Resinous Flooring No Change Recommended	111111111111111111111111111111111111111			
6. Wood Flooring No Change Recommended				
7. Ceiling System No Change Recommended				
Gypsum Wallboard or Plaster No Change Recommended				
9. Paint Finish No Change Recommended				
			sub-total	\$ -
	Qty.	Unit	Unit Cost	Total
C. Specialties	ury.	O/M	Umi Gosi	7 0247
1. Casework No Change Recommended				
2. Chalki marker i tack boards				
New Promrthean boards	14 (98	\$1,150.00	\$ 16,100.00
Toilet Partitions / Misc. No Change Recommended				
4. Lockers No Change recommended				
Operable Walls No Change Recommended				
6. Acoustics				
No Change Recommended				
7. Fixed Seating No Change Recommended				
8. Kitchen Equipment No Change Recommended				
9. Athletic Equipment No Change Recommended				
10. Theatre & Stage Equipment No Change Recommended				
			sub-total	\$ 16,100.00

	Qty.	Unit	Unit Cost		Total
D. HVAC					
1. System					
Energy conservation upgrades	1 L	.S	\$30,000.00	\$	30,000.00
2.Pumps No Change Recommended					
3. Grease Trap No Change Recommended					
			sub-total	\$	30,000.00
E. Plumbing					
1. Disttribution					
Public water and sewer connections	1 L	.S	\$200,000.00	\$	200,000.00
2. Fixtures No Change Recommended					
3. Equipment					
No Change Recommended					
			sub-total		\$200,000
	Qty.	Unit	Unit Cost		Total
F. Electrical					
Add loads to emergency generator	41,704	sf	\$0.10	\$	4,170.40
Add switches at teaching wall Add speakers in rest rooms	41,704 41,704	sf sf	\$0.40 \$0.05	\$ \$	16,681.60 2,085.20
Replace CCTV system	41,704	Sf	\$2.40	\$	100,089.60
Partial upgrade to data network cables and jacks	41,704	sf	\$1.91	\$	79,654.64
Classroom technology including LCD projector, wireless microphone with amplifier and speakers, media transport from teacher's computer to	41,704	51	\$1.59	•	70,004.04
projector		sf		\$	66,309.36
Enclose emergency generator	41,704	sf	\$0.13	\$	5,421.52

\$ 274,412.32

sub-total

Manor Middle School Recommended Scope of Work Short Term Life Cycle Renewal

CONSTRUCTION COST / SCOPE OF WORK SUMMARY

I. ADA, Safety and Building Code	Total
A. ADA & Code Compliance	\$5,750
SUBTOTAL	\$5,750

III. F	Physical Plant Condition		
Α.	General Building Improvements		\$303,250
В.	Interior Finishes		\$143,500
C.	Specialties		\$69,500
D.	HVAC		\$300,000
E.	Plumbing		
F.	Electrical		\$919,000
		SUBTOTAL	\$1 735 250

TOTAL	\$1,741,000

I. ADA, Sa	fetv and	Building	Code	Upgrades
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DA & Code Compliance	Qty. Unit	Unit Cost	Tota
Add walkways and detectable warnings	1 LS	\$10,000.00	 5,000.00
Correct exterior signage heights	1 LS	\$750.00	\$ 750.00
		sub-total	 5,750.00

II. Physical Plant Upgrades

1 LS	\$225,000.00	\$	225,000.00
1 LS	\$15,000.00	\$	15,000.00
1 LS	\$15,000.00	\$	15,000.00
	\$1,500.00	\$	1,500.00
1 LS	\$3,000.00	\$	3,000.00
1 LS	\$2,500.00	\$	2,500.00
1 LS	\$300,000.00	\$	300,000.00
1 Allow	\$ 2,500.00		\$2,500
1 Allow	\$ 750.00		\$750
	sub-total		\$303,250
	1 LS 1 LS 1 LS 1 LS 1 LS 1 LS	1 LS \$15,000.00 1 LS \$15,000.00 1 LS \$1,500.00 1 LS \$3,000.00 1 LS \$2,500.00 1 LS \$300,000.00	1 LS \$15,000.00 \$ 1 LS \$15,000.00 \$ 1 LS \$1,500.00 \$ 1 LS \$3,000.00 \$ 1 LS \$2,500.00 \$ 1 LS \$300,000.00 \$ 1 LS \$300,000.00 \$ 1 LS \$300,000.00 \$

1 Allow 10,000 sf	\$ 25,000.00	\$25,000
		\$25,000
		\$25,000
		\$25,000
10,000 sf		
	\$ 4.00	\$40,000
1 Allow	ф 3 500 00	\$3,500
I Allow	\$ 5,500.00	\$3,500
1 Allow	\$75,000.00	\$75,000
	sub-total	\$143,500
Qty. Unit	Unit Cost	Total
30 ea	\$ 1,150.00	\$34,500
1 LS	\$ 35,000.00	\$35,000
		\$69,500
	Qty. Unit	1 Allow \$75,000.00 sub-total Qty. Unit Unit Cost 30 ea \$ 1,150.00

	Qty.	Unit	Unit Cost	7
D. HVAC				
1. System				
Energy conservation upgrades		allow	\$200,000.00	\$ 200,000
Upgrade building energy management controls	1 8	allow	\$100,000.00	\$ 100,000
2.Pumps No Change Recommended				
3. Grease Trap No Change Recommended				
			sub-total	\$ 300,000
E. Plumbing				
1. Disttribution				
No Change Recommended				
2. Fixtures				
No Change Recommended				
3. Equipment				
No Change Recommended				
			sub-total	
	Qty.	Unit	Unit Cost	т
F. Electrical				
Add loads to emergency generator	116,000	sf	\$0.03	\$ 3,480
Replace Gym Lighting	7,200	sf	\$6.00	\$ 43,200
Add switches at teaching wall	116,000	sf	\$0.40	\$ 46,400
·	116,000	sf	\$0.49	\$ 56,840
Replace perimeter security lighting		sf	\$0.15	\$ 17,400
Replace perimeter security lighting Add corridor and restroom speakers	116,000			
Replace perimeter security lighting Add corridor and restroom speakers Replace CCTV system-64 cameras	116,000	sf	\$2.40	\$ 278,400
Replace perimeter security lighting Add corridor and restroom speakers Replace CCTV system-64 cameras Partial upgrade to data cables and jacks	116,000 116,000	sf sf	\$1.91	\$ 278,400 \$ 221,560
Replace perimeter security lighting Add corridor and restroom speakers Replace CCTV system-64 cameras Partial upgrade to data cables and jacks Classroom technology including LCD projector, wireless microphone with amplifier and	116,000	sf		\$ 221,560
Replace perimeter security lighting Add corridor and restroom speakers Replace CCTV system-64 cameras Partial upgrade to data cables and jacks Classroom technology including LCD projector, wireless microphone with amplifier and speakers, media transport from teacjer's computer to projector	116,000 116,000 116,000	sf sf sf	\$1.91 \$1.59	\$ 221,560 \$ 184,440
Replace perimeter security lighting Add corridor and restroom speakers Replace CCTV system-64 cameras Partial upgrade to data cables and jacks Classroom technology including LCD projector, wireless microphone with amplifier and	116,000 116,000	sf sf	\$1.91	\$ 221,560
Replace perimeter security lighting Add corridor and restroom speakers Replace CCTV system-64 cameras Partial upgrade to data cables and jacks Classroom technology including LCD projector, wireless microphone with amplifier and speakers, media transport from teacjer's computer to projector Add receptacles (includes surface raceway for power and telecom in existing rooms)	116,000 116,000 116,000 116,000	sf sf sf sf	\$1.91 \$1.59 \$0.50	\$ 221,560 \$ 184,440 \$ 58,000

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

SHORT TERM CAPITAL FACILITY RENEWAL COST ESTIMATE

Penn Manor High School Recommended Scope of Work Short Term Life Cycle Renewal

CONSTRUCTION COST / SCOPE OF WORK SUMMARY

I. ADA, Safety and Building Code	Total
A. ADA & Code Compliance	\$7,000
SUBTOTAL	\$7,000

 III. Physical Plant Condition

 A. General Building Improvements
 \$317,500

 B. Interior Finishes
 \$580,000

 C. Specialties
 \$110,000

 D. HVAC
 \$500,000

 E. Plumbing

F. Electrical

SUBTOTAL \$1,533,605

TOTAL \$1,540,605

\$26,105

Qty. Unit	Unit Cost		Tota
1 LS	\$18,000.00	\$	5,000.00
1 LS	\$2,000.00	\$	2,000.0
1 LS	\$500.00	\$	500.0
	1 LS 1 LS	1 LS \$18,000.00 1 LS \$2,000.00	1 LS \$18,000.00 \$ 1 LS \$2,000.00 \$

II. Physical Plant Upgrades

	Qty. Unit	Unit Cost		Totai
A. General Building Improvements				
1. Sitework				
Add & replace exterior railings and guards	1 LS	\$35,000.00	\$	35,000.00
Fencing replacement and repair	1 LS	\$7,500.00	\$	7,500.00
Add directional signage	1 LS	\$1,500.00	\$	1,500.00
Repair s and asphalt overlay	1 LS	\$325,000.00	\$	325,000.00
Concrete walkway repair & replacement	1 LS	\$80,000.00	\$	80,000.00
Add dumpster enclosures / replace benches	1 LS	\$25,000.00	\$	25,000.00
Landscape removal and pruning	1 LS	\$20,000.00	\$	20,000.00
Improve plaza drainage and lower level lawn area	1 LS	\$12,500.00	\$	12,500.00
Tennis court repairs and colo coating	1 LS	\$35,000.00	\$	35,000.00
2. Structural System				
No Change Recommended				
3. Energy				
No Change Recommended				
4. Roofing System				
No Change Recommended				
5. Exterior Envelope				
Repoint brick, caulk windows and replace exp. Joints Auditorium brick wall repair	1 LS 1 LS	\$125,000.00 \$75,000.00	\$ \$	125,000.00 75,000.00
6. Exterior Trim		-		
No Change Recommended				
7. Windows				
Repair plastic laminate window sills	1 LS	\$7,500.00	\$	7,500.00
8. Exterior Doors				
No Change Recommended				
9. Interior Walls				
No Change Recommended				
10. Interior Doors				
Door hardware replacement	1 LS	\$75,000.00	\$	75,000.00
11. Interior Glass				
No Change Recommended				
		sub-total		\$317,500

Qty. Unit	Unit Cost		Tota
1 Allow	\$75,000.00	\$	75,000.00
1 Allow	\$250,000.00	\$	250,000.00
1 Allow	\$100,000.00	\$	100,000.00
1 Allow	\$75,000.00	\$	75,000.00
4 41	A E 000 00		
1 Allow	\$5,000.00	\$	5,000.00
1 Allow	\$75,000.00	\$	75,000.00
	sub-total	\$ 5	80,000.00
Qty. Unit	Unit Cost		Tota
4.00	475,000,00		75 000 00
I Allow	\$75,000.00	•	75,000.00
	\$ 35,000.00		\$35,000
1 LS	\$ 50,000.00		,
1 LS	\$ 55,000.00		
	1 Allow 1 Allow 1 Allow 1 Allow 1 Allow 1 Allow	1 Allow \$75,000.00 1 Allow \$250,000.00 1 Allow \$100,000.00 1 Allow \$75,000.00 1 Allow \$5,000.00 Sub-total	1 Allow \$75,000.00 \$ 1 Allow \$250,000.00 \$ 1 Allow \$100,000.00 \$ 1 Allow \$75,000.00 \$ 1 Allow \$5,000.00 \$ 1 Allow \$75,000.00 \$ Sub-total \$5.5

. Interior Finishes	Qty. Unit	Unit Cost	Total
1. Terrazzo			
No Change Recommended			
2. Resilient Flooring		* * * * * * * * * *	
Vinyl floor tile replacement allowance 3. Carpet	1 Allow	\$ 25,000.00	\$25,000
Carpet replacement allowance	10,000 sf	\$ 4.00	\$40,000
4. Terrazzo / Ceramic Tile / Quarry Tile No Change Recommended			
5. Resinous Flooring No Change Recommended			
6. Wood Flooring No Change Recommended			
7. Ceiling System	4 . 0.11	ф. 0.500.00	A2 F00
Replace damaged ceiling tile	1 Allow	\$ 3,500.00	\$3,500
8. Gypsum Wallboard or Plaster No Change Recommended			
9. Paint Finish Interior Painting	1 Allow	\$75,000.00	\$75,000
		sub-total	\$143,500
. Specialties	Qty. Unit	Unit Cost	Total
1. Casework			
_			
Casework No Change Recommended	30 ea	\$ 1,150.00	\$34,500
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards	30 ea	\$ 1,150.00	\$34,500
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended	30 ea	\$ 1,150.00	\$34,500
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended 4. Lockers No Change recommended	30 ea	\$ 1,150.00	\$34,500
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended 4. Lockers No Change recommended 5. Operable Walls No Change Recommended	30 ea	\$ 1,150.00	\$34,500
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended 4. Lockers No Change recommended 5. Operable Walls No Change Recommended 6. Acoustics	30 ea	\$ 1,150.00	\$34,500
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended 4. Lockers No Change recommended 5. Operable Walls No Change Recommended 6. Acoustics No Change Recommended 7. Fixed Seating	30 ea	\$ 1,150.00	\$34,500
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended 4. Lockers No Change recommended 5. Operable Walls No Change Recommended 6. Acoustics No Change Recommended 7. Fixed Seating No Change Recommended 8. Kitchen Equipment	30 ea	\$ 1,150.00 \$ 35,000.00	\$34,500 \$35,000
1. Casework No Change Recommended 2. Chalk/ marker / tack boards New Promethean Boards 3. Toilet Partitions / Misc. No Change Recommended 4. Lockers No Change recommended 5. Operable Walls No Change Recommended 6. Acoustics No Change Recommended 7. Fixed Seating No Change Recommended 8. Kitchen Equipment No Change Recommended 9. Athletic Equipment			

	Qty.	Unit	Unit Cost	Tota
D. HVAC				
1. System				
Energy conservation upgrades		llow	\$100,000.00	\$ 100,000.00
Replace building energy management controls		llow	\$300,000.00	\$ 300,000.00
Replace condensate drain lines	1 8	llow	\$100,000.00	\$ 100,000.00
2.Pumps No Change Recommended				
Grease Trap No Change Recommended				
			sub-total	\$ 500,000.00
E. Plumbing				
Disttribution No Change Recommended				
2. Fixtures No Change Recommended				
3. Equipment				
No Change Recommended				
			sub-total	
	Qty.	Unit	Unit Cost	 Tota
F. Electrical	Giy.	O'm	C.m. 0032	, Ola
Enclose generator	326,312	sf	\$0.08	\$ 26,104.96

\$ 26,104.96

sub-total

Introduction

The Penn Manor School District desires to provide equal educational opportunities for all students and to maintain community schools. In order to maintain these characteristics, the information presented in this section details various facility options that the Penn Manor School District can explore to address long range facility needs within the Penn Manor School District, while addressing educational program objectives and projected student enrollment.

The information, as outlined in this section, has been developed to:

- Address possible facility options in order to maximize the efficient use of the current facilities, while exploring long range facility options that can be implemented to address the long term needs of the school district.
- Address the present and projected student population in the school district.
- Provide preliminary construction and total project cost information for each planning option.
- Provide a statement of eligible financial reimbursement from the PA Department of Education, where applicable.
- Provide background and planning information to allow the school board to make informed decisions regarding short and ling term facility needs in order to assist the Penn Manor School District in developing a long range facilities master plan.

In researching the various options, the following planning assumptions have been made:

- 1. The Penn Manor School District will maintain a half day Kindergarten program for the foreseeable future, however wishes to explore facility implications of implementing a full day Kindergarten program.
- 2. The Elementary School program will continue to include grades K-6.
- 3. While the School District does not wish to realign attendance zones in order to address enrollment fluctuations and projected enrollment, the School Board will consider all reasonable alternatives in order to maximize the efficient use of the school districts facilities.
- 4. The Penn Manor School District, in response to the ongoing and emerging environmental and energy issues which affect all of us, desires to maintain facilities that are environmentally conscious and energy efficient. The goal is to create an educational environment that supports the teaching and awareness of sustainability and conservation concepts, educating students on the many aspects and importance of sustainable design, energy efficiency and environmental stewardship. Future construction projects in the school district may or may not be LEED certified, and shall be evaluated on a case by case basis.

Hambright Elementary School

The following long range facility options have been explored in order to address the identified needs at the current Hambright Elementary School, and in consideration of the long term needs of the school district:

♣ OPTION 1 – Renovations to Existing Facility (Grades K-6)

- Comprehensive renovations and additions to the existing facility to address all identified Life-Safety & Building Code, Educational Program and Physical Plant needs.
- Life-Cycle renewal of major building systems and components, extending the functional lifespan of the main operational systems an additional 20 – 25 years into the future.

♣ OPTION 2 - Construction of New Elementary School (Grades K-6)

- Construct new Elementary School on land adjacent to the existing Manor Middle School, as part of an overall long range master plan build-out and development of the site, with possible additional future facilities to include a new stadium, athletic and community fields, new high school, or conversion of Manor Middle School to a high school facility.
- At the completion of the construction of a new Elementary School, the current Hambright Elementary School facility will be closed and the school district would have the option of selling the current facility, or otherwise exploring alternative uses for the facility.

OPTION 3 - Conversion of portion of current High School facility into a Grade K-6 Elementary School

- This option is totally contingent on the option to construct a new high school or convert the Manor Middle School facility into a high school, with building additions. (See High School Options)
- At the completion of the construction of a new High School, or the conversion of the existing Manor Middle School into a new High School facility, including building additions, the existing high school can be re-purposed to include a Grade K-6 Elementary School to replace Hambright Elementary School facility. At the completion of the conversion and renovation of a portion of the current high school into an elementary school, the current Hambright Elementary School facility will be closed and the school district would have the option of selling the current facility, or otherwise exploring alternative uses for the facility.

Hambright Elementary School OPTION 1

- ✓ Comprehensive renovations to current facility.
- ✓ Minor building addition to address program needs and provide for flexible pull-out instructional space.
- ✓ Life-Cycle renewal of all major building systems.
- ✓ Improve overall site circulation and safety.



Advantages

- Maintain community school
- Life-cycle renewal of existing facility and operational systems
- Extend functional lifespan if existing building 20-25 years
- Lower cost than new facility



Disadvantages

- Site is below minimum recommended size in acreage
- Lack of space to accommodate future additions
- Existing facility not as efficient as new building
- Disruption to educational process during construction



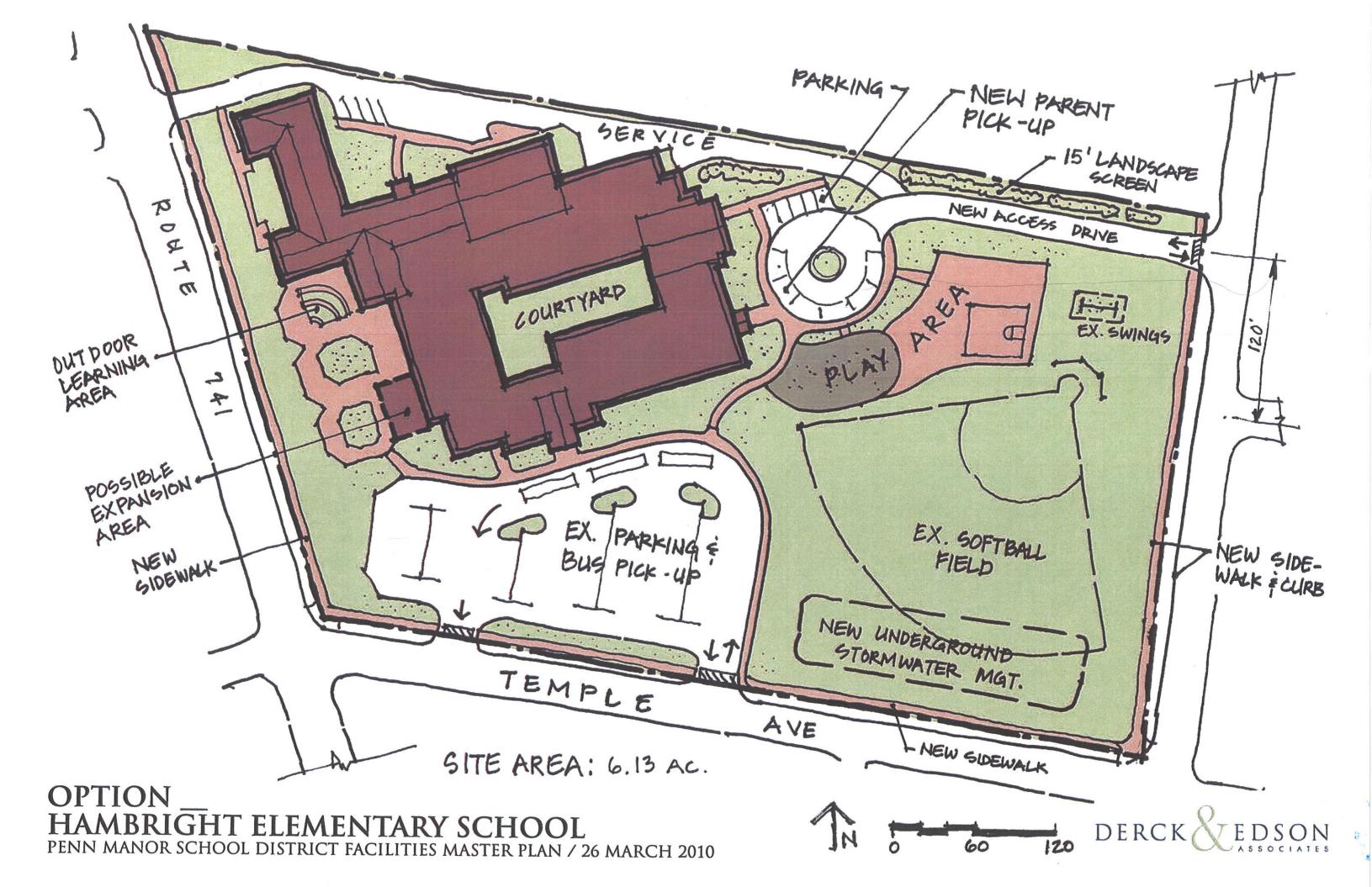
Considerations

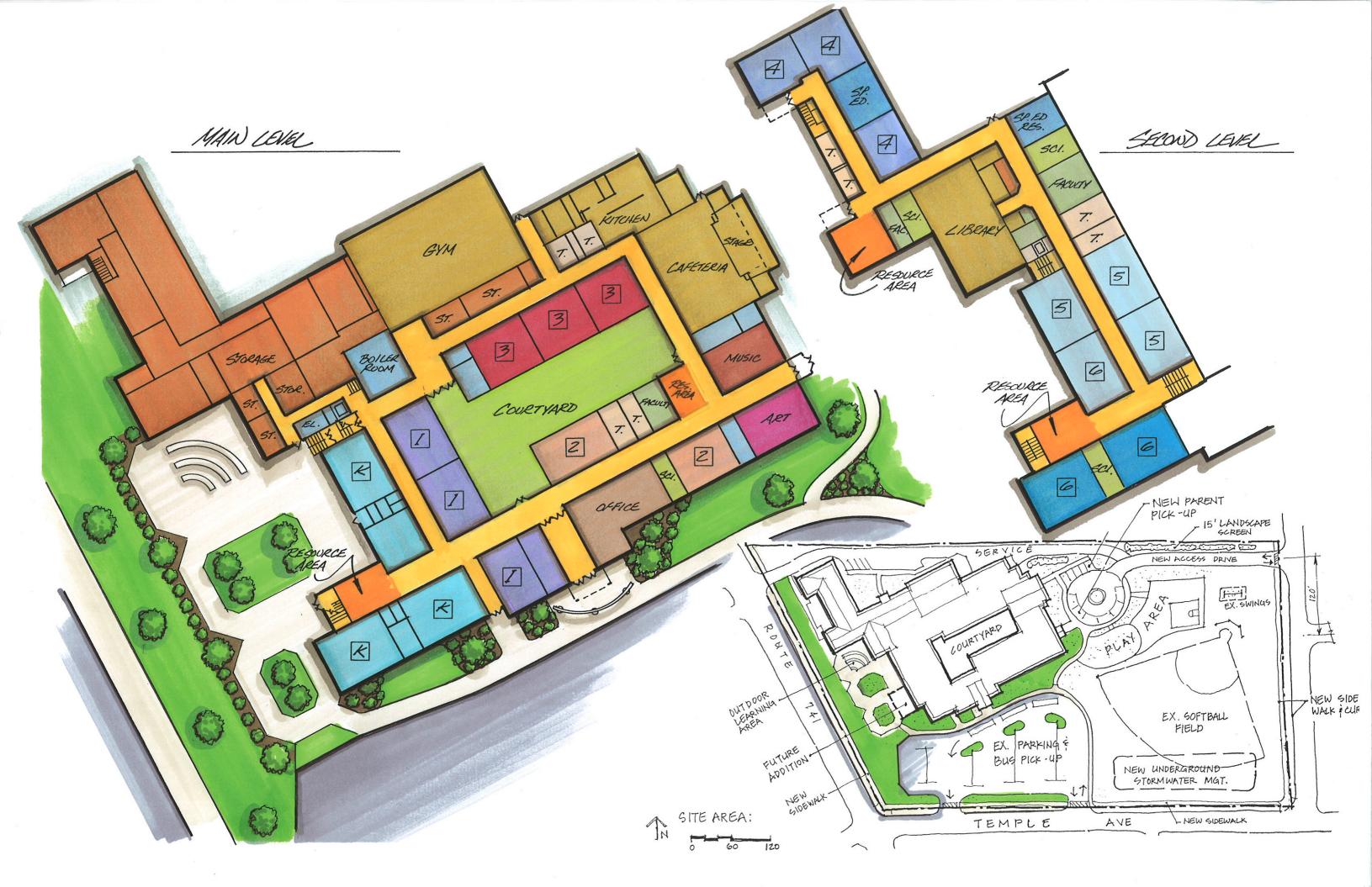
- Develop construction phasing plan to minimize disruption to students & staff
- Construction costs are currently very competitive
- Community dialogue regarding facility recommendations



Estimate of Total Project Construction Costs

Construction Cost - \$7,758,200
 Total Project Cost - \$9,334,267





Hambright Elementary School OPTION 1 – TOTAL PROJECT COST

 -		HT ELEMENTARY S					RENOVATIONS
		y Construction Budg	et				
3ep	tembe	r, 2010					
	SCOPE	OF WORK	QUANTITY		UNIT		COST
	0001 E	OI WORK	QOA(41111		ONT		0001
I.	SITEWO)RK				\$	894,000
						, ·	
II.	NEW C	ONSTRUCTION				\$	1,340,000
III.	BUILDI	NG RENOVATIONS					
a.	General	Renovations	53,920		\$ 25.69	\$	1,385,426
b.	HVAC		53,920	sf	\$ 27.00	\$	1,455,840
С.	Plumbin	g	53,920		\$ 5.30	\$	285,776
d.	Electrica	al	53,920		\$ 25.69	\$	1,385,219
	SUB-TO	TAL				\$	6,746,261
		- 1" 10 "	(D: 1 O 400)				074000
	-	Escalation / Contingency	y to Bid @ 10%			\$	674,626
	_	Cost of LEED @ 5%				\$	337,313
	-	COST OF LEED (B) 3 70				Ψ	337,313
	TOTAL	CONSTRUCTION COST				\$	7,758,200
						<u> </u>	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
IV.	ADDITIO	ONAL PROJECT COSTS					
		Professional fees			6.00%	\$	487,856
		Non-Basic Services / Mis			0.75%	\$	58,187
		Moveable furniture and	quipment		4.00%	\$	310,328
		Utilities / misc			0.25%	\$	25,000
		Borings / Survey			0.20%	\$	15,510
		Building Permit / Plan Re	view Fee		0.35%	\$	23,612
		Modular Classrooms			1.75%	\$	135,769
		Construction testing & in	nspections		0.75%	\$	58,187
		Special Inspections			0.75%	\$	58,187
		Construction contingen	СУ		3.00%	\$	232,748
		Printing costs			0.20%	\$	15,516
		Financing Costs			2.00%	\$	155,164
	SUB-TO	TAL			20.00%	\$	1,576,067
V	TOTAL	PROJECT COST				\$	9,334,267
•						•	2,20-1,201
	DDE DE	IMBURSEMENT				\$	2,092,079
VI.	LDEVE	INDUITOLINLIAI				-	_,00_,01

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

FACILITY OPTIONS

Hambright Elementary School OPTION 1 – CONSTRUCTION COST SUMMARY

Hambright Elementary School Recommended Scope of Work Proposed Facility Improvements

September, 2010

CONSTRUCTION COST / SCOPE OF WORK SUMMARY

I. A	OA, Safety and Building Code		Total
Α.	ADA & Code Compliance		\$352,355
В.	Site		\$236,000
C.	Building		\$429,086
	-	SUBTOTAL	\$1,017,441
II. P	rogram Related		
Α.	Program Renovations		\$795,750
		SUBTOTAL	\$795,750
III. F	Physical Plant Condition		
Α.	Site Improvements		\$657,000
В.	General Building Improvements		\$539,085
C.	Interior Finishes		\$428,765
D.	Specialties		\$558,825
E.	HVAC		\$1,455,840
F.	Plumbing		\$70,096
G.	Electrical		\$1,223,459
		SUBTOTAL	\$4,933,070

TOTAL	\$6,746,261
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Hambright Elementary School OPTION 1 – CONSTRUCTION COST SUMMARY

I. ADA, Safety and Building Code Upgrades	Qty. Unit	Unit Cost	Total
A. ADA & Code Compliance			
1. Exterior Routes	1.450.15	Φ 0000	<u> </u>
Township sidewalks - 4' wide	1,450 LF	\$ 30.00	\$43,50
Twp. Curb/Ramps/Widening	680 LF	\$ 28.00	\$19,04
Accessibility to playgrounds	1 LS	\$ 5,000.00	\$5,000
2. Parking Provide Accessible Parking Spaces	1 ls	\$ 7,500.00	\$7,500
3. Exterior Signage Exterior and ADA Signange	1 ls	\$ 750.00	\$750
4. Interior Routes			
Chairlift to stage	1 ls	\$ 15,000.00	\$15,000
5. Handrails and Railings	4.1	A F F 6 0 0 0	ÅF
New Wall handrailings at Stars	1 Is	\$ 5,500.00	\$5,500
6. Elevator Elevator Control Upgrades	1 ls	\$ 10,000.00	\$10,000
7. Doors		·	
No Change Recommended 8. Rescue Assistance	1 ls	\$ 10,000.00	\$10,000
No Change Required (If Building is Sprinklered)			
Interior Signage Provide new ADA signage throughout	1 ls	\$ 5,000.00	\$5,00
Hardware Install new ADA compliant door hardware throughout	115 sets	\$ 375.00	\$43,125
11. Restrooms			
ADA renovations to existing student gang toilet rooms	8 ea	\$ 12,500.00	\$100,000
ADA renovations to Health Room toilet room	1 ea	\$ 7,500.00	\$7,500 \$47,500
ADA renovations Kitchn toilet room ADA renovations for Faculty Toilet Rooms	1 ea 2 ea	\$ 17,500.00 \$ 7,500.00	\$17,500 \$15,000
12. Drinking Fountains Provide New Water Cooler Units	5 ea	\$ 1,500.00	\$7,500
13. Fire Alarm	3 64	Ψ 1,300.00	ψr,οου
New Fire Alarm System	53,920 sf	\$ 0.75	\$40,44
14. Telephone No Change Recommended			
15. Fixed Seating No Change Recommended			
16. Workstations			
No Change Recommended			
17. Performance Areas No Change recommended			
		sub-total	\$352,355
3. Site			
1. Security			
Install New Fencing on East Side of Play Area	375 lf	\$ 32.00	\$12,000
2. Vehicular Circulation New Parent Drop-Off / Pick-Up	1 ls	\$125,000.00	\$125,000
3. Parking Five (5) new spaces included in B.2			
Fencing North Property Line Fence Installation	750 lf	\$ 32.00	\$24,000
5. Drainage			
New Drainage - Stormwater per Township Ordinance	1 ls	\$ 75,000.00	\$75,000
		sub-total	\$236,0

Hambright Elementary School OPTION 1 – CONSTRUCTION COST SUMMARY

I. ADA. Safety and Building Code - Continued

	Qty. Uni	t U.	nit Cost	Totai
C. Building				
1. Security				
Exterior Perimeter Security Lighting	53,920 sf	\$	0.23	\$12,402
Vestibule Modifications for Secure Entrance	53,920 sf	\$	0.45	\$24,264
2. Means of Egress				
No Change recommended				
3. Fire Alarm System				
See 1.A.13				
4. Annunciator				
No Change Recommended				
5. Sprinkler System				
Sprinkler Existing Building	53,920 sf	\$	4.00	\$215,680
6. Fire Extinguishers				
Provide additiional fire extinguishers	3 ea	\$	500.00	\$1,500
7. Hazardous Materials				
Hazardous Material Allowance	53,920 sf	\$	1.00	\$53,920
8. Ventilation & Exhaust See III E				
9. Fuel Oil Storage Tank				
No Change Recommended				
10. Roof				
No Change Recommended				
11. Lightning Protection				
No Change Recommended				
12. Automatic Lighting Controls				
Lighting Controls	53,920 sf		\$2.25	\$121,320.00
		SH	o-total	\$429.086

Hambright Elementary School OPTION 1 – CONSTRUCTION COST SUMMARY

	Qty. Unit	U	nit Cost	Tota
1. Additional Program Space				
Classroom Addition	7,000 sf	\$	165.00	\$1,155,000
Stage Addition	600 sf	\$	225.00	\$135,000
Main Entrance Canopy Feature	1 Is	\$:	50,000.00	\$50,000
2. Size of Academic Learning Areas				
No Change Recommended				
3. Location and Relationship of Learning Areas				
Resource Area conversion / renovation	1,800 sf	\$	95.00	\$171,000
4. Educational Adequacy of Learning Areas				
Renovation of Music Room to SGI and Resource Room	850 sf	\$	95.00	\$80,750
5. Size of Specialized Learning Areas	1,000 sf	\$	95.00	\$95,000
New Music Room location renovation				
New Art Room location renovation	1,000 sf	\$	105.00	\$105,000
6. Adequacy of Library / Media Center				
Library Improvements	1 allow	\$ 3	50,000.00	\$50,000
7. Space For Faculty Resource & Work Rooms No Change recommended				
Adequacy of Gymnasium and I or Recreational Areas No Change Recommended				
9. Food Service Facilities				
No Change Recommended				
10. Adequacy of Administrative, Counselor and Health Services Offices				
Relocation / Renovation of new Office area	1,600 sf	\$	105.00	\$168,000
Renovate existing administration office into cr and guidance	1,200 sf	\$	105.00	\$126,000
11. Storage For Faculty and Student Materials				
No Change Recommended				
		sul	b-total	\$795,750

Hambright Elementary School OPTION 1 – CONSTRUCTION COST SUMMARY

III. Physical Plant Upgrades

A. Site_	Qty. Un	it Unit Cost	Total
1. Driveway Paving			
Paving / Overlay	1 ls	\$100,000.00	\$100,000
2. Concrete Walkways & Paving			· · · · · · · · · · · · · · · · · · ·
Minor Repairs	1 ls	\$5,000	\$5,000
3. Site Furnishings & Play Equipment			
New Exterior Learning Area on West Side	1 ls	\$25,000	\$25,000
New Play Area East Side / Expansion on West Side	1 ls	\$125,000.00	\$125,000
4. Service Areas No Change Recommended			
5. Student Loading See B.2			
6. Parking See B.3			
7. Landscaping			
New Landscaping, seeding and E&S Control North Property Line	1 ls	\$ 40,000.00	\$40,000
8. Storm Drainage			
Underground Stormwater Drainage System	1 ls	\$350,000.00	\$350,000
9. Utilities			
No Change Recommended			
10. Athletic facilities			
Basketball Backboards and Fence Repair	1 ls	\$ 12,000.00	\$12,000
		sub-total	\$657,000

Hambright Elementary School OPTION 1 – CONSTRUCTION COST SUMMARY

	Qty. Unit	Unit Cost	Total
General Building Improvements			
1. Foundations No Change Recommended			
2. Structural System No Change Recommended			
3. Energy No Change Recommended			
4. Roofing System Roof Patching & Repair New Roofing Shingles	53,920 sf 17,500 sf	\$0.50 \$3.50	\$26,960 \$61,250
5. Exterior Envelope Caulking & Joint Repair	17,500 si	\$ 25,000.00	\$25,000
6. Exterior Trim			
No Change Recommended			
7. Windows Replace Exterior Windows Interior Window Blinds	1 allow 1 allow	\$350,000.00 \$ 25,000.00	\$350,000 \$25,000
8. Exterior Doors Replace Exterior Doors Replace Exterior Doors	10 pr 2 ea	\$ 1,500.00 \$ 750.00	\$15,000 \$1,500
9. Interior Walls Patch / Repair / Misc.	1 allow	\$ 10,000.00	\$10,000
10. Interior Doors Interior Door Replacement	25 ea	\$ 375.00	\$9,375
11. Interior Glass Replace Wire Glass	1 ls	\$ 15,000.00	\$15,000
		sub-total	\$539,085
c. Interior Finishes	Qty. Unit	Unit Cost	Total
1. Terrazzo Patch / repair	1 allow	\$ 5,000.00	\$5,000
Resilient Flooring New flooring	35,000 sf	\$ 2.75	\$96,250
3. Carpet New Carpet	5,500 sf	\$ 3.25	\$17,875
4. Terrazzo / Ceramic Tile / Quarry Tile Patch / repair allowance	1 allow	\$ 25,000.00	\$25,000
Resinous Flooring New resinous flooring in bathrooms	2,000 sf	\$ 8.00	\$16,000
6. Wood Flooring Refinish Gym Floor	4,000 sf	\$ 4.00	\$16,000
7. Ceiling System New Ceiling throughout	53,920	\$ 2.75	\$148,280
8. Gypsum Wallboard or Plaster Patch / repair	1 allow	\$ 10,000.00	\$10,000
9. Paint Finish Paint Interior	53,920	\$ 1.75	\$ 94,360.00

Hambright Elementary School OPTION 1 – CONSTRUCTION COST SUMMARY

	Qty. Unit	Unit Cost	Total
D. Specialties_			
1. Casework			
New Classroom Casework allowance	1 allow	\$375,000.00	\$375,000
New Art Room Casework	75 lf	\$275.00	\$20,625
New Music Room Casework	40 lf	\$275.00	\$11,000
2. Chalk/ marker / tack boards			
New Promethean Boards	30 ea	\$ 1,150.00	\$34,500
New tack boards	1 allow	\$ 15,000.00	\$15,000
3. Toilet Partitions / Misc.			
New Toilet Partitions	27 ea	\$ 1,100.00	\$29,700
4. Lockers			
No Change recommended			
5. Operable Walls			
No Change Recommended			
6. Acoustics			
No Change Recommended			
7. Fixed Seating			
No Change Recommended			
8. Kitchen Equipment			
New equipment replacement budget	1 allow	\$ 50,000.00	\$50,000
9. Athletic Equipment			
New Basketball Backstop Padding	1 allow	\$ 500.00	\$500
New Safety Wall Pads @ Backstops	1 allow	\$ 7,500.00	\$7,500
10. Theatre & Stage Equipment New Stage Curtains	1 allow	\$ 15,000.00	\$15,000
	, anow	\$.5,500.00	Ţ 10,000
		sub-total	\$558,825

Hambright Elementary School OPTION 1 – CONSTRUCTION COST SUMMARY

	Qty. Unit	Unit Cost	Total
E. HVAC			
System New Water Source Heat Pump HVAC System	53,920 sf	\$27.00	\$1,455,840
Ventilation New Ventilation System included w/ New HVAC System			
Exhaust New Exhaust System included w/ New HVAC System			
4. Distribution HVAC Distrubution Ductwork included with New HVAC System			
Equipment New Main and Terminal HVAC Equipment included with new HVAC System			
Energy Management New DDC Controls, including CCTV, Security and Card Access Control, included with new HVAC System			
		sub-total	\$1,455,840
F. Plumbing			
Disttribution Replace Original Domestic Water Piping	53,920 sf	\$0.70	\$37,744.00
2. Fixtures Replace 1958 Fixtures	53,920 sf	\$0.50	\$26,960.00
Equipment Replace Hot Water Recirculating Pumps	53,920 sf	\$0.10	\$5,392.00
	Qty. Unit	sub-total Unit Cost	\$70,096 Total
G. Electrical			
1.Interior Lighting Replace interior light fixtures	53,920 sf	\$5.47	\$294,942.40
2. Exterior Lighting Site Lighting, Flagpole Lighting, Sign Lighting	53,920 sf	\$0.25	\$13,480.00
3. Power Supply No Change Recommended			
Electrical Service Replace Electric Service and Distribution Panels	53,920 sf	\$ 5.50	\$296,560
Distribution System Electrical Demolition	53,920 sf	\$1.00	\$53,920
Power for food service equipment	33,920 si 1 allow	\$15,000.00	\$15,000
HVAC system connections	53,920 sf	\$0.79	\$50,797
6. Transformers No Change Recommended			
7. Wiring Rough-ins & Connections for Sound System and Athletic Equipment Controls in Gym	53,920 sf	\$0.22	\$11,862
8. Receptacles and other devices Additional Receptacles	53,920 sf	\$ 2.50	\$134,800

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

FACILITY OPTIONS

Hambright Elementary School OPTION 1 – CONSTRUCTION COST SUMMARY

	Qty. Uni	t Un	it Cost	Total
9. Emergency Generator/ Battery Packs				
Replace Emergency Generator	53,920 sf	\$	0.65	\$35,048
10.Speaker / Call Intercom System				
New Paging / Intercom System	53,920 sf	\$	0.51	\$27,499
11. Remote Sound Systems				
Classroom Voice Amplification System	53,920 sf	\$	0.49	\$26,421
12. Clocks and Bells				
New Master Clock System	53,920 sf	\$	0.51	\$27,499
13. Telephone System				
No Change Recommended				
14. Television/ AV/ CATV System				
Replace Video Distribution System	53,920 sf	\$	0.40	\$21,568
Cable Tray for Telecom Cabling	53,920 sf	\$	1.80	\$97,056
15. Data Network System				
Pathways for Student, Teacher & Projector Ports	53,920 sf	\$	0.20	\$10,784
16. Head End Room & Distribution Closets				
No Change Recommended				
17. Theatrical Lighting				
Theatrical Lighting Upgrades	53,920 sf	\$	0.20	\$10,784
18. Presentation Equipment				
Make provisions for future classroom presentation equipment	53,920 sf		\$1.77	\$95,438
		sub	-total	\$1,223,459

Hambright Elementary School OPTION 1 – CALCUATION OF REIMBURSEMENT

ARCH. SQ FT 53,920 0 53,920 ST OR FORMULA and Sewage) mount (Amt & %) State Share \$2,092,079	\$4,489,440 \$0 \$4,489,440 \$2,092,079 \$2,092,079	\$4,489,440 EST. PROJ. COST \$6,418,200 \$1,340,000 \$7,758,200 \$4,489,440 \$0 \$0 \$0 \$0 \$4,489,440 \$9,334,267 .2241
53,920 0 53,920 ST OR FORMULA and Sewage) mount (Amt & %)	\$4,489,440 \$0 \$4,489,440 \$2,092,079	### EST. PROJ. COST \$6,418,200 \$1,340,000 \$7,758,200 \$4,489,440 \$0 \$0 \$0 \$4,489,440 \$0 \$1 \$1,340,000 \$1,340,
53,920 53,920 ST OR FORMULA and Sewage)	\$4,489,440 \$0 \$4,489,440	### EST. PROJ. COST \$6,418,200 \$1,340,000 \$7,758,200 \$4,489,440 \$0 \$0 \$0 \$4,489,440 \$0 \$1 \$1,340,000 \$1,340,
53,920 53,920 ST OR FORMULA and Sewage)	\$4,489,440 \$0 \$4,489,440	\$6,418,200 \$1,340,000 \$7,758,200 \$4,489,440 \$0 \$0 \$0 \$1 \$1,489,440 \$0 \$1,489,440 \$1,489,440 \$1,334,267
53,920 0 53,920 ST OR FORMULA and Sewage)	\$4,489,440 \$0	### EST. PROJ. COST ### \$6,418,200 ### \$1,340,000 ### \$7,758,200 ### \$4,489,440 ### ### \$0 #
53,920 0 53,920 ST OR FORMULA and Sewage)	\$4,489,440 \$0	\$6,418,200 \$1,340,000 \$7,758,200 \$4,489,440 \$0 \$0 \$0 \$0
53,920 0 53,920 ST OR FORMULA	\$4,489,440 \$0	\$1,340,000 \$1,340,000 \$7,758,200 \$4,489,440 \$0 \$0
53,920 0 53,920	\$4,489,440 \$0	### EST. PROJ. COST
53,920 0 53,920	\$4,489,440 \$0	EST. PROJ. COST \$6,418,200 \$1,340,000 \$7,758,200 \$4,489,440 \$0
53,920 0 53,920	\$4,489,440 \$0	EST. PROJ. COST \$6,418,200 \$1,340,000 \$7,758,200 \$4,489,440
53,920 0 53,920	\$4,489,440 \$0	EST. PROJ. COS1 \$6,418,200 \$1,340,000 \$7,758,200
53,920 0	\$4,489,440 \$0	EST. PROJ. COST \$6,418,200 \$1,340,000
53,920 0	\$4,489,440 \$0	EST. PROJ. COST \$6,418,200 \$1,340,000
53,920	\$4,489,440	EST. PROJ. COS1 \$6,418,200
		EST. PROJ. COST
ADCH CO ET	AMT DEIMPURGARIE	
		M 4 400 440
	l l	
5/5	/96	\$374,120
		\$374,120
		\$0
IVIEN I		
BAENT		
0	0	\$0
0	0	\$0
575	796	\$3,741,200
FTE	RPC	FORMULA AMOUNT
		\$9,334,26
and Sewage)		\$(
sement, New FTE)		(
		\$(
		(
		(
		7,600
		53,920
		\$1,340,000
		\$6,418,20
		57:
		.466
School - Reimburs	able PlanCon Renova	tion Project
. DISTRICT		
LIMINARY CALCU	ILATION OF REIMBUR	RSEMENT
	Sement, New FTE) and Sewage) FTE 575	Sement, New FTE)

Hambright Elementary School OPTION 2

- ✓ Construction of new Elementary School facility.
- ✓ Site acquisition or construct on district-owned land.
- ✓ Close, sell or find alternative use for existing school.



Advantages

- Ability to develop a new community school
- No disruption to students during construction
- New school can be designed to meet specific program needs
- New school can be designed to maximum efficiency
- School can be designed to accommodate future expansion



Disadvantages

- Cost is more than cost to renovate existing building
- Need to determine disposition of existing facility
- Need for site acquisition / development
- Potential loss of neighborhood school



Considerations

- Consider recommendation as part of overall district-wide master plan
- Current and future demographics and projected student enrollment
- Construction costs are currently very competitive
- Community dialogue regarding facility recommendations



Estimate of Total Project Construction Costs

Construction Cost - \$12,718,750
 Total Project Cost - \$15,229,239

Hambright Elementary School OPTION 2 – CONSTRUCTION COST SUMMARY

1/1	MBRIGHT ELEMENTARY SCH	JUL				NEW SCHOOL
re	liminary Construction Budget					
ep	tember, 2010					
	SCOPE OF WORK	QUANTITY		UNIT		COST
I.	SITEWORK				\$	2,500,000
	NEW CONSTRUCTION	62 500	_f	\$145	•	0.060.500
11.	500 students x 125sf / student	62,500	Sī	\$145	\$	9,062,500
	300 students x 123si7 student					
			sub-total		\$	11,562,500
			Sub-total		Ψ	11,302,300
	- Escalation to Bid @ 5%				\$	578,125.00
	- Project Contingency				\$	578,125.00
	- Cost of LEED @ 5%				\$	578,125.00
	TOTAL CONSTRUCTION COST				\$	12,718,750
IV.	ADDITIONAL PROJECT COSTS					
	- Professional fees			6.00%	\$	763,125
	- Non-Basic Services / Misc. C	onsultant fees		0.75%	\$	95,391
	 Moveable furniture and equipment 	ment		4.00%	\$	508,750
	- Utilities / misc			0.50%	\$	25,000
	- Borings / Survey			0.25%	\$	31,797
	- Building Permit / Plan Review	/ Fee		0.50%	\$	63,594
	- Modular Classrooms			1.00%	\$	127,188
	- Construction testing & inspe	ctions		0.75%	\$	95,39
	- Special Inspections			0.75%	\$	95,39
	- Construction contingency			3.00%	\$	381,563
	- Printing costs			0.30%	\$	68,920
	- Financing Costs			2.00%	\$	254,375
	SUB-TOTAL			19.80%	\$	2,510,489
V.	TOTAL PROJECT COST				\$	15,229,239
	DITE DEIMOLIDGEMENT				\$	2,262,227
VI.	PDE REIMBURSEMENT				Ψ	2,202,221

Hambright Elementary School OPTION 3

- ✓ Convert portion of existing high school into grade K-6 elementary school.
- ✓ Option possible only if new high school location chosen.
- ✓ Close, sell or find alternative use for existing Hambright school.



Advantages

- Allows for construction of a new high school
- No potential disruption to students during construction
- Core facilities are excellent for an elementary school
- Maintain community facilities within the existing high school
- District offices could be relocated to the K-6 location
- Current high school is large enough to accommodate additional students if fullday kindergarten were implemented
- Under the option to convert manor MS to a high school, the grade 7-8 students can be housed within this facility



Disadvantages

- Existing high school is too large for K-6 elementary school solely
- Cost of new high school facility
- Need for site acquisition / development
- Potential loss of neighborhood school in Hambright area
- Relatively low reimbursement from State for conversion

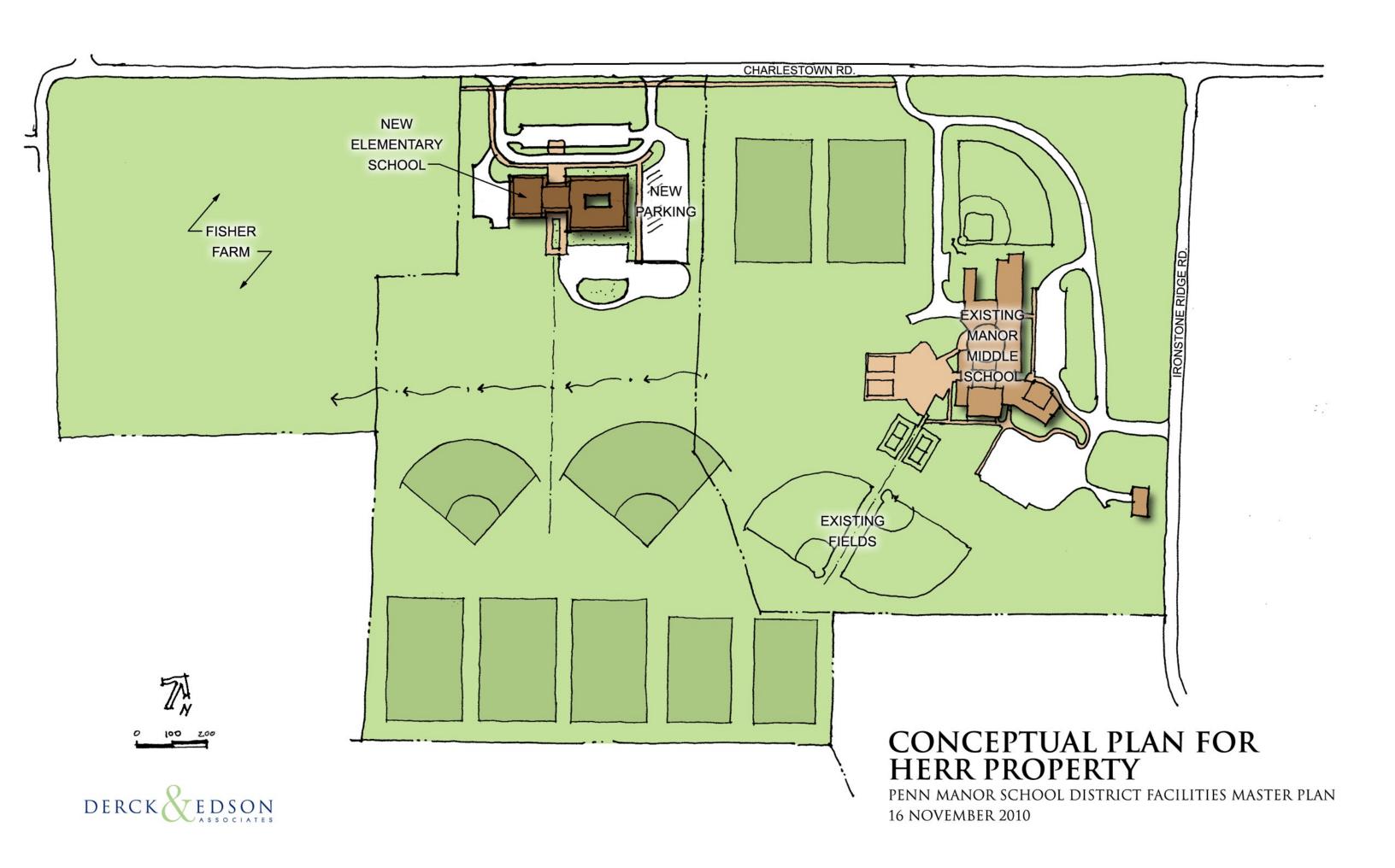


Considerations

- Consider recommendation as part of overall district-wide master plan
- Current and future demographics and projected student enrollment
- Construction costs are currently very competitive
- Community dialogue regarding facility recommendations
- Need / desire for new high school facility



- Construction Cost \$29,193,058
- Total Project Cost \$352058,841





Penn Manor High School

100 East Cottage Ave, Millersville, PA 17551 - Millersville Borough, Lancaster County, Pennsylvania

Prepared By: Jinates Prepared By: Jinates Prepared By: Jinates Prepared By: Jinates Printing Date: March 2, 2010
File: P./2008/080540 Penn Manor/GIS/08/1219-Penn Manor SD.mud Project & Gio/Ato Scale: 1*107
Feet Scale: 1*107
100 0 100 200 300



Hambright Elementary School OPTION 3 – CONSTRUCTION COST ESTIMATE

	NVERT HS TO ES - MS					RENOVATIONS
•re	liminary Construction Budge	et				
	otember, 2010					
	, , , , , , , , , , , , , , , , , , , ,					
	SCOPE OF WORK	QUANTITY		UNIT		COST
I.	SITEWORK				\$	1,250,000
II.	NEW CONSTRUCTION				\$	-
	BUILDING RENOVATIONS					
	General Renovations	326,312	sf	\$ 30.50	\$	9,952,516
	HVAC	326,312	sf	\$ 24.50	\$	7,994,644
	Plumbing	326,312	sf	\$ 3.50	\$	1,142,092
	Electrical	326,312	sf	\$ 19.00	\$	6,199,928
	SUB-TOTAL	020,012		\$ 77.50	\$	26,539,180
	- Escalation / Contingency	to Bid @ 10%			\$	2,653,918
	TOTAL CONSTRUCTION COST				\$	29,193,098
IV.	ADDITIONAL PROJECT COSTS - Professional fees			6.00%	s	1 835 980
IV.	- Professional fees	c. Consultant fees		6.00% 0.75%	\$	
IV.	 Professional fees Non-Basic Services / Mis 			0.75%	\$ \$	218,948
IV.	- Professional fees				\$	218,948 1,167,724
IV.	 Professional fees Non-Basic Services / Mis Moveable furniture and e 			0.75% 4.00%	\$	218,948 1,167,724 25,000
IV.	 Professional fees Non-Basic Services / Mis Moveable furniture and e Utilities / misc 	quipment		0.75% 4.00% 0.25%	\$ \$ \$	218,948 1,167,724 25,000 58,388
IV.	Professional fees Non-Basic Services / Mis Moveable furniture and e Utilities / misc Borings / Survey	quipment		0.75% 4.00% 0.25% 0.20%	\$ \$ \$ \$	218,948 1,167,724 25,000 58,388 92,887
IV.	Professional fees Non-Basic Services / Mise Moveable furniture and e Utilities / misc Borings / Survey Building Permit / Plan Re	quipment view Fee		0.75% 4.00% 0.25% 0.20% 0.35%	\$ \$ \$ \$ \$	218,948 1,167,724 25,000 58,386 92,887 510,879
IV.	Professional fees Non-Basic Services / Miss Moveable furniture and e Utilities / misc Borings / Survey Building Permit / Plan Re Modular Classrooms	quipment view Fee		0.75% 4.00% 0.25% 0.20% 0.35% 1.75%	\$ \$ \$ \$ \$	218,948 1,167,724 25,000 58,386 92,887 510,879 218,948
IV.	- Professional fees - Non-Basic Services / Mis Moveable furniture and e - Utilities / misc - Borings / Survey - Building Permit / Plan Re - Modular Classrooms - Construction testing & in - Special Inspections - Construction contingence	view Fee		0.75% 4.00% 0.25% 0.20% 0.35% 1.75% 0.75%	\$ \$ \$ \$ \$ \$	218,948 1,167,724 25,000 58,386 92,887 510,879 218,948
IV.	- Professional fees - Non-Basic Services / Misconder Furniture and experience of the services	view Fee		0.75% 4.00% 0.25% 0.20% 0.35% 1.75% 0.75% 0.75% 3.00% 0.20%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	218,948 1,167,724 25,000 58,388 92,887 510,879 218,948 218,948
IV.	- Professional fees - Non-Basic Services / Mis Moveable furniture and e - Utilities / misc - Borings / Survey - Building Permit / Plan Re - Modular Classrooms - Construction testing & in - Special Inspections - Construction contingence	view Fee		0.75% 4.00% 0.25% 0.20% 0.35% 1.75% 0.75% 0.75% 3.00%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	218,948 1,167,724 25,000 58,388 92,887 510,879 218,948 218,948 875,793 58,388
IV.	- Professional fees - Non-Basic Services / Misconder Furniture and experience of the services	view Fee		0.75% 4.00% 0.25% 0.20% 0.35% 1.75% 0.75% 0.75% 3.00% 0.20%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	218,948 1,167,724 25,000 58,388 92,887 510,879 218,948 218,948 875,793 58,386
	- Professional fees - Non-Basic Services / Miss - Moveable furniture and e - Utilities / misc - Borings / Survey - Building Permit / Plan Re - Modular Classrooms - Construction testing & in - Special Inspections - Construction contingenc - Printing costs - Financing Costs	view Fee		0.75% 4.00% 0.25% 0.20% 0.35% 1.75% 0.75% 0.75% 0.20% 2.00%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	218,948 1,167,724 25,000 58,386 92,887 510,879 218,948 875,793 58,386 583,862
V.	- Professional fees - Non-Basic Services / Miss - Moveable furniture and e - Utilities / misc - Borings / Survey - Building Permit / Plan Re - Modular Classrooms - Construction testing & in - Special Inspections - Construction contingenc - Printing costs - Financing Costs SUB-TOTAL	quipment view Fee spections		0.75% 4.00% 0.25% 0.20% 0.35% 1.75% 0.75% 0.75% 0.20% 2.00%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,835,980 218,948 1,167,724 25,000 58,386 92,887 510,879 218,948 875,793 58,386 583,862 5,865,743

Pequea Elementary School

The cost estimate for Pequea Elementary School short-term life cycle renovation is section 6 of this report was not a comprehensive long-term facility renewal project scope of work. The following cost estimate is the estimated cost to perform a comprehensive renovation to the Pequea Elementary School. No new building additions have been assumed as part of this cost estimate and would need to be added to the scope of work and cost, if additions are part of the educational program requirements.

ᅼ	QUEA ELEMENTARY SCHO	OL			
re	liminary Construction Budge	et			
	nCon Renovation project				
	SCOPE OF WORK	QUANTITY		UNIT	COST
I.	SITEWORK				\$ 50,250
-	NEW CONSTRUCTION				Not incl.
11.	NEW CONSTRUCTION				NOL IFICI.
III.	BUILDING RENOVATIONS				
	General Renovations	54,920	sf	\$ 28.00	\$ 1,537,760
	HVAC	54,920	sf	\$ 27.50	\$ 1,510,300
	Plumbing	54,920	sf	\$ 4.00	\$ 219,680
d.	Electrical	54,920	sf	\$ 22.50	\$ 1,385,219
	SUB-TOTAL				\$ 4,703,209
	- Escalation / Contingency	to Bid @ 15%			\$ 705,481
	- Cost of LEED @ 5%				\$ 235,160
	- 303t G/ EZED (@ 070				200,100
	TOTAL CONSTRUCTION COST				\$ 5,643,851
IV.	ADDITIONAL PROJECT COSTS				
	- Professional fees			6.00%	\$ 354,857
	- Non-Basic Services / Mis			0.75%	\$ 42,329
	- Moveable furniture and e	quipment		4.00%	\$ 225,754
	- Utilities / misc			0.25%	\$ 25,000
	- Borings / Survey			0.20%	\$ 11,288
	- Building Permit / Plan Re	view Fee		0.35%	\$ 16,461
	- Modular Classrooms			1.75%	\$ 98,767
	- Construction testing & in	spections		0.75%	\$ 42,329
	- Special Inspections			0.75%	\$ 42,329
	- Construction contingenc	У		3.00%	\$ 169,316
	- Printing costs			0.20% 2.00%	\$ 11,288
	- Financing Costs				\$ 112,877
	SUB-TOTAL			20.00%	\$ 1,152,594

Conestoga Elementary School

The cost estimate for Pequea Elementary School short-term life cycle renovation is section 6 of this report was not a comprehensive long-term facility renewal project scope of work. The following cost estimate is the estimated cost to perform a comprehensive renovation to the Pequea Elementary School. No new building additions have been assumed as part of this cost estimate and would need to be added to the scope of work and cost, if additions are part of the educational program requirements.

	liminary Construction Budge	et				
	nCon Renovation project					
	SCOPE OF WORK	QUANTITY		UNIT		COST
1	SITEWORK				\$	76,000
•	on End at				•	1 5,555
II.	NEW CONSTRUCTION					Not incl.
Ш	BUILDING RENOVATIONS					
	General Renovations	42,458	sf	\$ 28.00	\$	1,188,824
	HVAC	42,458	sf	\$ 27.50	\$	1,167,595
	Plumbing	42,458	sf	\$ 4.00	\$	169,832
	Electrical	42,458	sf	\$ 22.50	\$	1,385,219
<u> </u>	SUB-TOTAL	12,100	31	¥ 22.00	\$	3,987,470
	- Escalation / Contingency	to Bid @ 15%			\$	598,121
		10 514 (2) 10 / 0				000,121
	- Cost of LEED @ 5%				\$	199,374
	TOTAL CONSTRUCTION COST				\$	4,784,964
IV/	ADDITIONAL PROJECT COSTS					
۱۷.	- Professional fees			6.00%	s	300,855
	- Non-Basic Services / Mis	c Consultant fees		0.75%	s	35,887
	- Moveable furniture and e			4.00%	\$	191,399
	- Utilities / misc	quipmont		0.25%	s	25,000
	- Borings / Survey			0.20%	S	9,570
	- Building Permit / Plan Re	view Fee		0.35%	\$	13,958
	- Modular Classrooms			1.75%	s	83,737
	- Construction testing & in	spections		0.75%	\$	35,887
	- Special Inspections	росион		0.75%	\$	35,887
	- Construction contingence	:v		3.00%	\$	143,549
	- Printing costs	-		0.20%	\$	9,570
	- Financing Costs			2.00%	\$	95,699
	SUB-TOTAL			20.00%	\$	980,996

Penn Manor High School

The following long range facility options have been explored in order to address the identified needs at the current Penn Manor High School ad in consideration of the long term needs of the school district:

OPTION 1 – Maintain Existing Facility, Minor Renovations & Additions

- Complete mechanical and electrical capital project recommendations.
- Complete "program" renovations to convert a portion of typical classroom space to open, flexible learning areas to support an alternative instructional delivery model and educational technology.
- Minor building addition to offset building capacity reduction by converting dedicated classroom space to open, more flexible learning environment.

♣ OPTION 2 - Maintain Existing Facility - Comprehensive Renovations

- Maintain existing facility in current configuration. No building additions or program renovations / conversions of existing educational areas.
- Complete long-term facility renewal renovations to address current life-safety & building code, educational program and physical plant needs.

OPTION 3 – Maintain Existing Facility – Renovations & Additions

- Complete long-term facility renewal renovations to address current life-safety & building code, educational program and physical plant needs.
- Complete "program" renovations to convert a portion of typical classroom space to open, flexible learning areas to support an alternative instructional delivery model and educational technology.
- Minor building addition to offset building capacity reduction by converting dedicated classroom space to open, more flexible learning environment.

♣ OPTION 4 - Construction of new High School

- Construction of a new Penn Manor High School, designed to meet a set of specific and customized educational specifications for a 21st century learning environment
- The existing high school would need to be re-purposed or possibly sold.

OPTION 5 - Convert Manor Middle School to a new High School

- Construction of required building additions and renovations to the current middle school facility in order to convert the facility to a grade 9-12 High School.
- The current grade 7-8 students from Manor Middle School would be relocated to the current high school site, after renovations to convert the building to a combination elementary school and middle school.

Penn Manor High School OPTION 1

- ✓ Maintain Existing Facility, Minor Renovations & Additions
- ✓ Minor building addition to address program needs and provide for flexible learning areas within the high school.
- ✓ Complete mechanical and electrical capital project recommendations.
- ✓ Minor exterior site work.



Advantages

- Option addresses some educational programming issues.
- Short-term life-cycle renewal and capital project recommendations implemented
- Low cost option, comparatively.
- Minimal investment can improve and sustain high school facility while keeping the option open of new school in the future.



Disadvantages

- Current site is below minimum recommended size in acreage
- Lack of space to accommodate future additions
- Existing facility not as efficient as new building
- Disruption to educational process during construction
- Non-reimbursable option
- Short-term solution



Considerations

- Develop construction phasing plan to minimize disruption to students & staff
- Construction costs are currently very competitive
- Community dialogue regarding facility recommendations
- Desired location for high school within the school district.



- Construction Cost \$8.186.070
- Total Project Cost \$9,842,795

Penn Manor High School OPTION 1 - TOTAL PROJECT COST

	iam ni	NOK HI	10H 2C	/UOOL	-					RENOVATIONS
re	liminar	v Cons	tructio	n Budo	iet					
	tembei				,					
		,								
	SCOPE	OF WOR	K			QUANTITY		UNIT		COST
	OITEMO	DI/					I-		•	550,000
ı.	SITEWO	IKN					ls		\$	550,000
п	NEW CO	NISTRII	CTION			15,000	sf	\$ 185.00	\$	2,775,000
	INCH CO	71101110	011014			10,000	31	¥ 100.00	Ψ	2,770,000
III.	BUILDIN	IG RENO	VATION	s						
	General					326,312	sf	\$ 3.91	\$	1,275,000
	Program	Renovati	ions			30,000	sf	\$ 115.00	\$	3,450,000
b.	HVĂC					326,312	sf	\$ 1.23	\$	400,000
C.	Plumbing	9				326,312	sf	\$ 0.31	\$	100,000
d.	Electrica	ıl				326,312	sf	\$ 2.15	\$	702,000
	SUB-TO	TAL							\$	5,802,000
			on / Con				ls	20.0%	\$	1,160,400
	-	Building	3 Sprinkl	ering Co	ontingency	326,312	sf	\$ 3.75	\$	1,223,670
	TOTAL	CONSTRU	ICTION C	OST					\$	8,186,070
IV/	ADDITIO	INIAI PR	OJECT	COSTS						
•••			ional fee					6.00%	\$	514,488
					sc. Consulta	ent fees		0.75%	\$	61,396
					equipment			4.00%	\$	327,44
		Utilities						0.25%	\$	25,000
			/ Survey	,				0.20%	\$	16,37
					eview Fee			0.35%	\$	20,307
			Classro					1.75%	\$	143,258
	-	Constru	ction tes	sting & i	nspections			0.75%	\$	61,390
			Inspection					0.75%	\$	61,398
			iction co		су			3.00%	\$	245,582
	-	Printing	costs					0.20%	\$	16,37
	-	Financii	ng Costs	1				2.00%	\$	163,72
	SUB-TO	TAL						20.00%	\$	1,656,725
.,	TOTAL	DD0 150	T 000T							0.040.707
٧.	TOTAL	PRUJEC	LCOST						\$	9,842,795
VI.	PDE RE	IMBURS								

Penn Manor High School OPTION 2

- ✓ Maintain Existing Facility, Comprehensive Renovations.
- ✓ Complete long-term facility renewal renovations to extend lifespan of building and operational systems an additional 20 25 years.
- ✓ No reconfiguration of existing space. .



Advantages

- Extends lifespan of building and operational systems
- Project is reimbursable



Disadvantages

- Current site is below minimum recommended size in acreage
- Lack of space to accommodate future additions
- Existing facility not as efficient as new building
- Disruption to educational process during construction



Considerations

- Develop construction phasing plan to minimize disruption to students & staff
- Construction costs are currently very competitive
- Community dialogue regarding facility recommendations
- Desired location for high school within the school district.



- Construction Cost \$29,193,098
- Total Project Cost \$35,058,841

Penn Manor High School OPTION 2 - TOTAL PROJECT COST

\		DOL R	E NO	VATION	IS					RENOVATIONS
'I e	iminary	Const	tructio	n Buda	ıet					
	tember,				,					
-	,	,								
	SCOPE 0	OF WOR	K			QUANTITY		UNIT		COST
I.	SITEWOR	RK							\$	1,250,000
II.	NEW CO	NSTRU	CTION						\$	-
	DI III DINI	o DENIO	0 /A TIOI	10						
	BUILDIN			15		200 242	-6	ф 20.50	•	0.050.546
	General R	cenovalic	ms			326,312	sf	\$ 30.50	\$	9,952,516
	HVAC					326,312	sf	\$ 24.50	\$	7,994,644
	Plumbing					326,312	sf	\$ 3.50	\$	1,142,092
	Electrical					326,312	sf	\$ 19.00	\$	6,199,928
	SUB-TOT	AL						\$ 77.50	\$	26,539,180
	_ [Escalatio	on (Co	ntingenc	v to Bid	<i>€</i> 0 10%			\$	2,653,918
	- 1	ESCAIAU	0117 C 01	lungenc	y to blu	Q 1076			Ψ	2,000,910
	TOTAL CO	ONSTRU	CTION	COST					\$	29,193,098
IV.	ADDITIO									
		Professi						6.00%	\$	1,835,980
						sultant fees		0.75%	\$	218,948
				ure and	equipme	ent		4.00%	\$	1,167,724
		Utilities /						0.25%	\$	25,000
		Borings						0.20%	\$	58,388
	- 1	Building	Permit	/Plan Re	eview F	ee		0.35%	\$	92,887
		Modular						1.75%	\$	510,879
	- (Constru	ction te	sting & i	nspecti	ons		0.75%	\$	218,948
	- 5	Special I	Inspect	ions				0.75%	\$	218,948
	- (Constru	ction c	ontingen	су			3.00%	\$	875,793
		Printing						0.20%	\$	58,388
	- j	Financir	ng Cost	S				2.00%	\$	583,862
	SUB-TOT.	AL						20.00%	\$	5,865,743
		ROJEC	т соѕт	•					\$	35,058,841
V.	TOTAL P								1	. , ,
V.	TOTAL P									
	PDE REI		EMENT	•					\$	7,676,844

Penn Manor High School OPTION 3

- ✓ Maintain Existing Facility, Renovations & Additions
- ✓ Minor building addition to address program needs and provide for flexible learning areas within the high school.
- ✓ Complete long-term facility renewal renovations to extend lifespan of building and operational systems an additional 20 25 years.
- ✓ Minor exterior site work.



Advantages

- Option addresses educational environment and educational programming issues.
- Extends lifespan of building and operational systems
- Project is Reimbursable



Disadvantages

- Current site is below minimum recommended size in acreage
- Lack of space to accommodate future growth
- Existing facility not as efficient as new building
- Disruption to educational process during construction
- Increased cost of project



Considerations

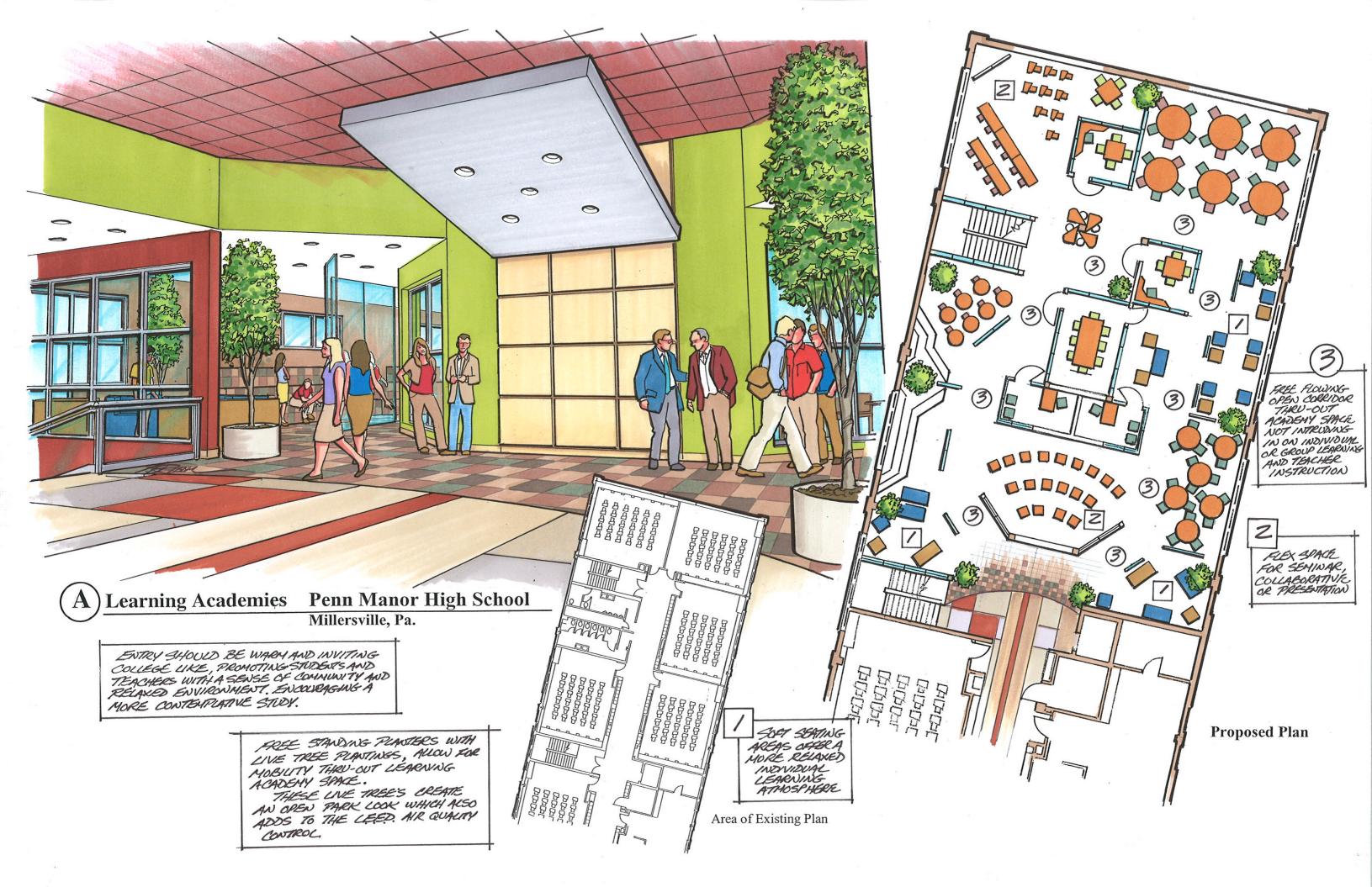
- Develop construction phasing plan to minimize disruption to students & staff
- Construction costs are currently very competitive
- Community dialogue regarding facility recommendations
- Desired location for high school within the school district.

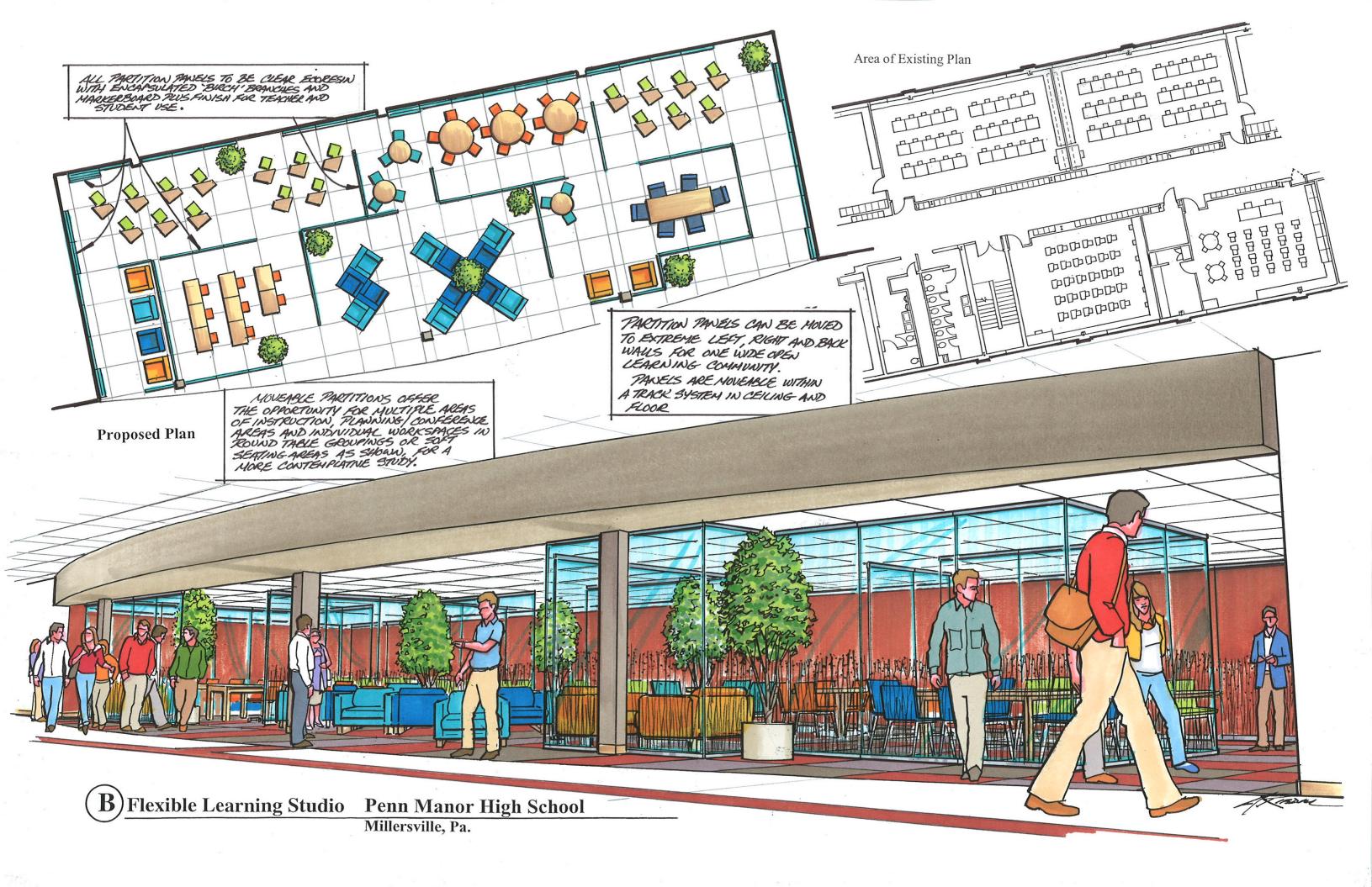


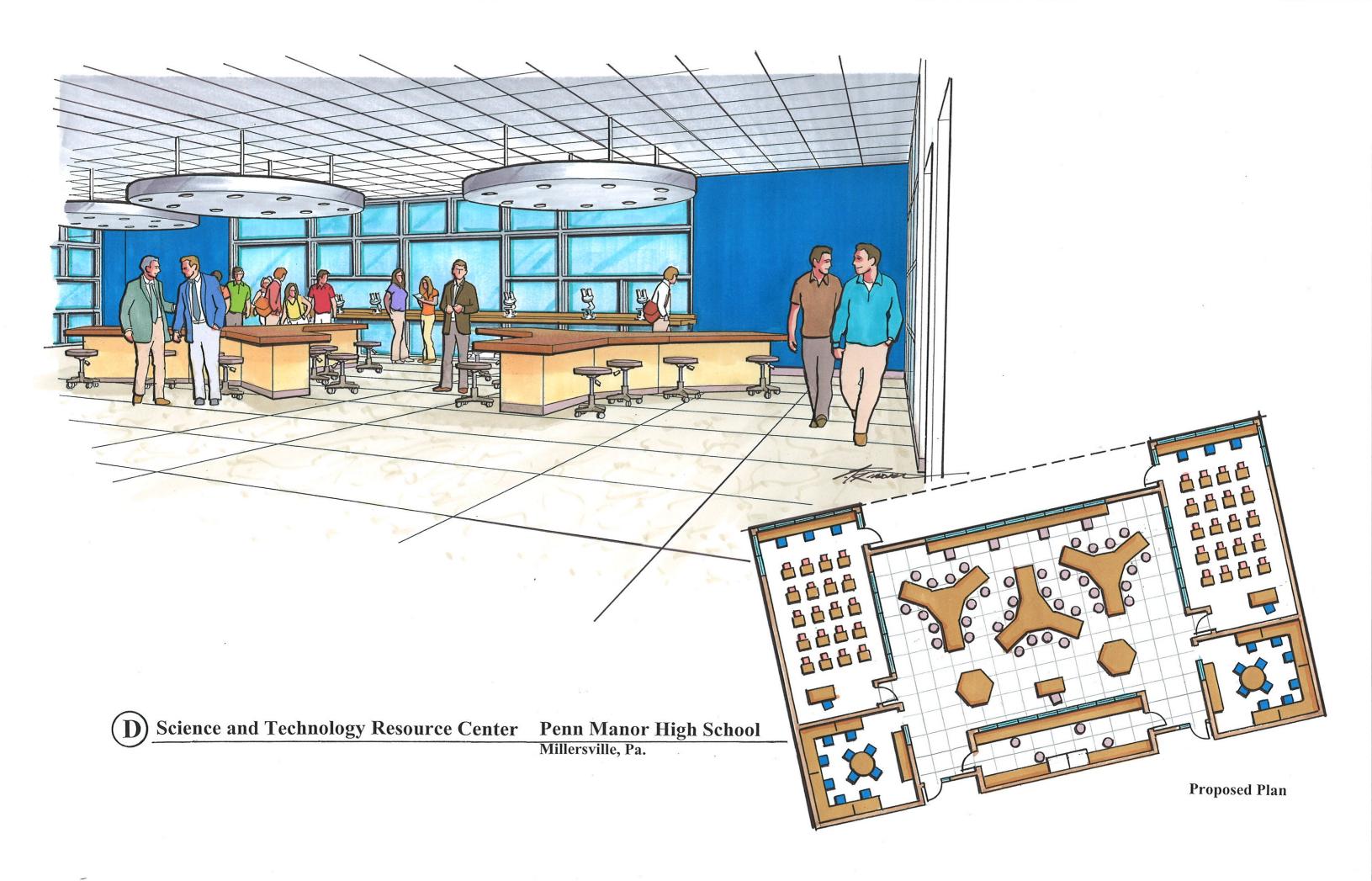
- Construction Cost \$8,186,070
- Total Project Cost \$9,842,795

Penn Manor High School OPTION 3 - TOTAL PROJECT COST

НS	PROG	RAM RENOVA	TIONS					RENOVATIONS
re	liminar	y Construction	Budget					
	tembei							
		, 2010						
	SCOPE	OF WORK		QUANTITY		UNIT		COST
_	SITEWO	IDK					\$	1,250,000
•	OHEWO	TATA					Ψ	1,200,000
II.	NEW CO	NSTRUCTION		15,000	sf	\$ 165.00	\$	2,475,000
						, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<u> </u>	
III.	BUILDIN	IG RENOVATIONS	3					
a.	General	Renovations		326,312	sf	\$ 30.50	\$	9,952,516
	Program	Renovations		30,000	sf	\$ 105.00	\$	3,150,000
b.	HVAC			326,312	sf	\$ 24.50	\$	7,994,644
С.	Plumbing	9		326,312	sf	\$ 3.50	\$	1,142,092
d.	Electrica	ı		326,312	sf	\$ 19.00	\$	6,199,928
	SUB-TO	TAL					\$	32,164,180
			ingency to Bid @				\$	3,216,418
	-	Building Sprinkle	ring Contingency	326,312	sf	\$ 3.75	\$	1,223,670
	TOTAL	CONSTRUCTION C	OST				\$	36,604,268
15.7	4 DDITIC	NAL PROJECT C	OOTO					
IV.		Professional fees				6.00%	\$	2,301,842
			es / Misc. Consult	ant fees		0.75%	\$	274,532
		Moveable furnitu		antiees		4.00%	\$	1,464,17
		Utilities / misc	re and equipment			0.25%	\$	25,000
		Borings / Survey				0.20%	\$	73,209
		Building Permit /				0.35%	\$	112,575
		Modular Classro				1.75%	\$	640,575
			ting & inspections			0.75%	\$	274,532
		Special Inspectio				0.75%	\$	274,532
		Construction cor				3.00%	\$	1,098,128
		Printing costs	go.i.ey			0.20%	\$	73,209
		Financing Costs				2.00%	s	732,085
	SUB-TO					20.00%	\$	7,344,389
								, ,
٧.	TOTAL I	PROJECT COST					\$	43,948,657
VI	PDF RF	IMBURSEMENT					\$	8,398,039
•								0,000,000
		SHARE					\$	35,550,618







Penn Manor High School OPTION 4

- ✓ Construct new High School
- ✓ Re-purpose or sell existing high school or portion thereof.
- ✓ Develop comprehensive educational specifications and visioning document for new 21st century educational high school environment.
- ✓ Site acquisition required.



Advantages

- New high school can be designed to meet the specific curriculum and educaiotnal goals of the school district and high school programs.
- Forward thinking option
- Lack of disruption to students and staff during construction
- Building can be designed with flexibility and adaptability in mind
- Project is Reimbursable



Disadvantages

- Need to purchase / acquire adequate site
- Most expensive option
- Need to determine disposition of existing facility



Considerations

- Construction costs are currently very competitive
- Community dialogue regarding facility recommendations
- Desired location for high school within the school district.



- Construction Cost \$60,775,000
- Total Project Cost \$72,416,176

Penn Manor High School OPTION 4 - TOTAL PROJECT COST

<u>'[</u>	NN MANOR HIGH SCHOOL					NEW SCHOOL
re	liminary Construction Budget					
ep	otember, 2010					
	SCOPE OF WORK	QUANTITY		UNIT		COST
		407411111		2		
I.	SITEWORK				\$	4,500,000
			_			
II.	NEW CONSTRUCTION	350,000	sf	\$140	\$	49,000,000
	2,000 students x 175sf / student					
			sub-total		\$	53,500,000
			Sub-total			00,000,000
	Facilities / Continuous				•	0.675.000.00
	- Escalation / Contingency				\$	2,675,000.00
	- Cost of LEED @ 5%				\$	2,675,000.00
					,	_,
	TOTAL CONSTRUCTION COST				\$	58,850,000
IV.	ADDITIONAL PROJECT COSTS					
	- Professional fees	\		6.00%	\$	3,531,000
	- Non-Basic Services / Misc. C		0.75% 4.00%	\$	441,375	
	Moveable furniture and equip Utilities / misc	pment		0.50%	\$	2,354,000
	- Borings / Survey			0.30%	\$	25,000 147,125
	- Building Permit / Plan Review	w Fee		0.50%	\$	294,250
	- Modular Classrooms	WIEC		1.00%	\$	294,230 588,500
	- Construction testing & inspe	ections		0.75%	\$	441,375
	- Special Inspections	Cuons		0.75%	\$	441,375
	- Construction contingency			3.00%	\$	1,765,500
	- Printing costs			0.30%	\$	68,926
	- Financing Costs			2.00%	\$	1,177,000
	SUB-TOTAL			19.80%	\$	11,275,426
						, , , ,
V.	TOTAL PROJECT COST				\$	70,125,426
VI.	PDE REIMBURSEMENT				\$	9,452,540

Penn Manor High School OPTION 5

- ✓ Convert Manor Middle School to high school facility.
- ✓ Conversion of portion of existing high school into middle school.
- ✓ Develop comprehensive educational specifications and visioning document for new 21st century educational high school environment at the Manor Middle School site, within limitations of the existing facility.
- ✓ Significant addition to Manor Middle School building required.
- ✓ Site acquisition required.



Advantages

- High School conversion can in large part be designed to meet the specific curriculum and educaiotnal goals of the school district and high school programs.
- Forward thinking option
- New construction areas can be designed with flexibility and adaptability in mind
- Efficient re-use of existing facilities
- A sustainable concept
- Project is Reimbursable



Disadvantages

- Need to purchase / acquire adequate site
- Cost of option
- Disruption to students and staff during construction

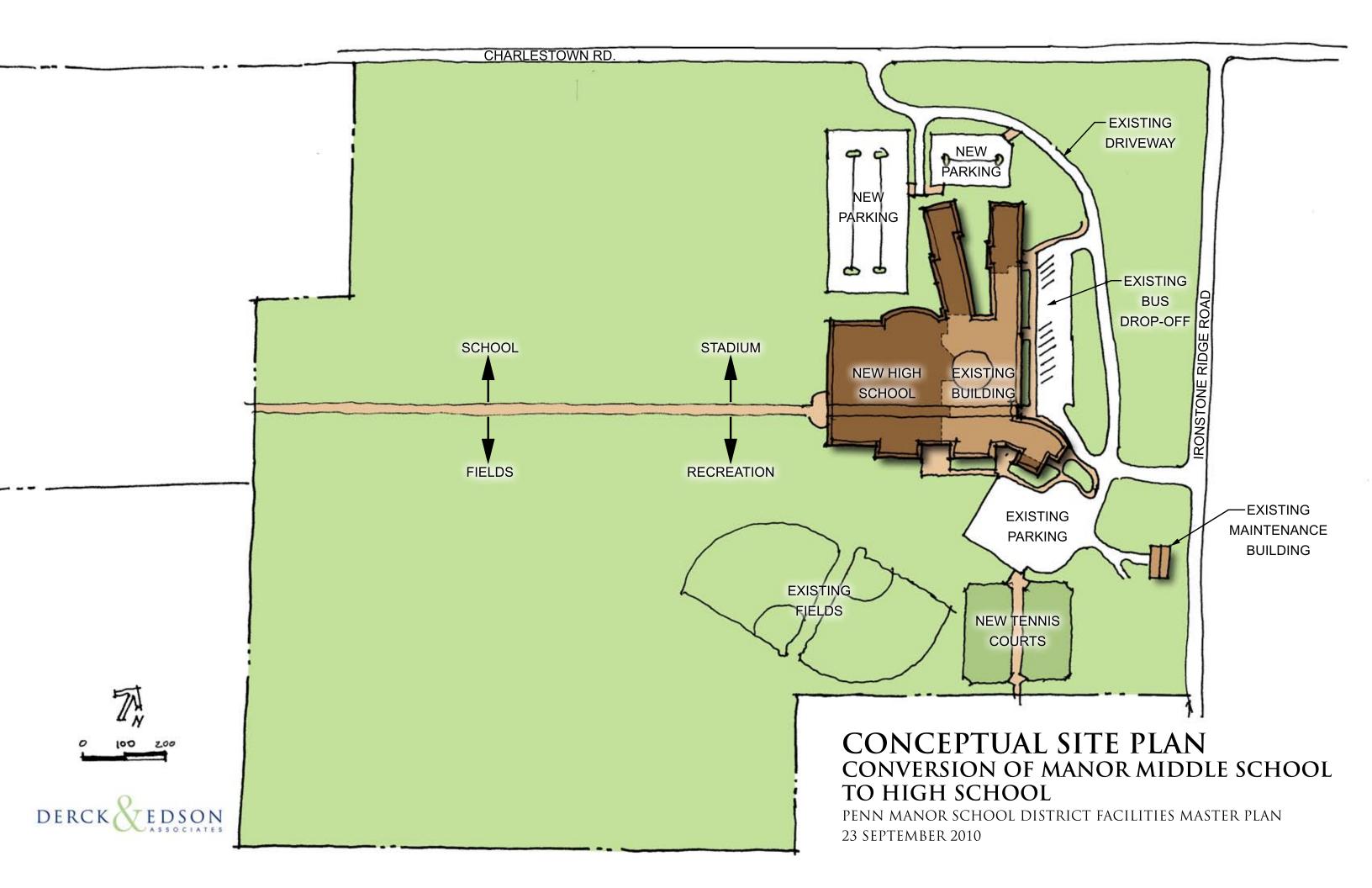


Considerations

- Construction costs are currently very competitive
- Community dialogue regarding facility recommendations
- Desired location for high school within the school district.



- Construction Cost \$60,775,000
- Total Project Cost \$72,416,176



Penn Manor High School OPTION 5 - TOTAL PROJECT COST

_	NVERT MANOR MS TO PENN	MANOK H2		REI	ITAVOF	ONS / ADDITIONS
re	liminary Construction Budget					
ep	otember, 2010					
•						
	SCOPE OF WORK	QUANTITY		UNIT		COST
	SITEWORK				\$	2,500,000
١.	SHEWORK				Ψ	2,500,000
П	NEW CONSTRUCTION	234,000	sf	\$ 145.00	\$	33,930,000
	N2II SSNSINSS	201,000	0,	¥ 110.00	•	00,000,000
III.	BUILDING RENOVATIONS					
a.	General Renovations	116,000	sf	\$ 25.00	\$	2,900,000
b.	HVAC	116,000	sf	\$ 10.00	\$	1,160,000
С.	Plumbing	116,000	sf	\$ 8.00	\$	928,000
d.	Electrical	116,000	sf	\$ 12.00	\$	1,392,000
	SUB-TOTAL				\$	42,810,000
	- Escalation / Contingency				\$	2,140,500
	- Cost of LEED @ 5%				\$	2,140,500
	- COST OF LEED (U) 3 %				Ψ	2,140,300
	TOTAL CONSTRUCTION COST				\$	47,091,000
					Ť	,,
IV.	ADDITIONAL PROJECT COSTS					
	- Professional fees			6.00%	\$	2,961,598
	- Non-Basic Services / Misc. C			0.75%	\$	353,183
	- Moveable furniture and equi	pment		4.00%	\$	1,883,640
	- Utilities / misc			0.25%	\$	25,000
	- Borings / Survey			0.20%	\$	94,182
	- Building Permit / Plan Review	w Fee		0.35%	\$	149,835
	- Modular Classrooms			1.75%	\$	824,093
	- Construction testing & inspe	ections		0.75%	\$	353,183
	- Special Inspections			0.75%	\$	353,183
	- Construction contingency			3.00%	\$	1,412,730
	- Printing costs			0.20%	\$	94,182
	- Financing Costs			2.00%	\$	941,820
	SUB-TOTAL			20.00%	\$	9,446,625
٧.	TOTAL PROJECT COST				\$	56,537,625
VI.	PDE REIMBURSEMENT				\$	8,510,578
70	LOCAL SHARE				\$	48,027,047



Penn Manor High School

100 East Cottage Ave, Millersville, PA 17551 - Millersville Borough, Lancaster County, Pennsylvania

Prepared By: Jinates Prepared By: Jinates Prepared By: Jinates Prepared By: Jinates Printing Date: March 2, 2010
File: P./2008/080540 Penn Manor/GIS/08/1219-Penn Manor SD.mud Project & Gio/Ato Scale: 1*107
Feet Scale: 1*107
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PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study

FACILITY OPTIONS

Penn Manor School District Football Stadium

The following long range facility options have been explored in order to address options related to the construction of a new athletic football stadium in consideration of the long term needs of the school district:

OPTION 1 – Maintain Existing Lease with Millersville University

No action required with this option

OPTION 2 - Convert and expand existing Penn Manor High School football field into Comet Stadium.

- Improvements to existing field including construction of bleachers, concession stand and restrooms and related site work.
- This solution is a long term solution and would indicate a long-term investment in the current site as the high school.

OPTION 3 - Convert and expand existing turf field at Comet field into Football Stadium.

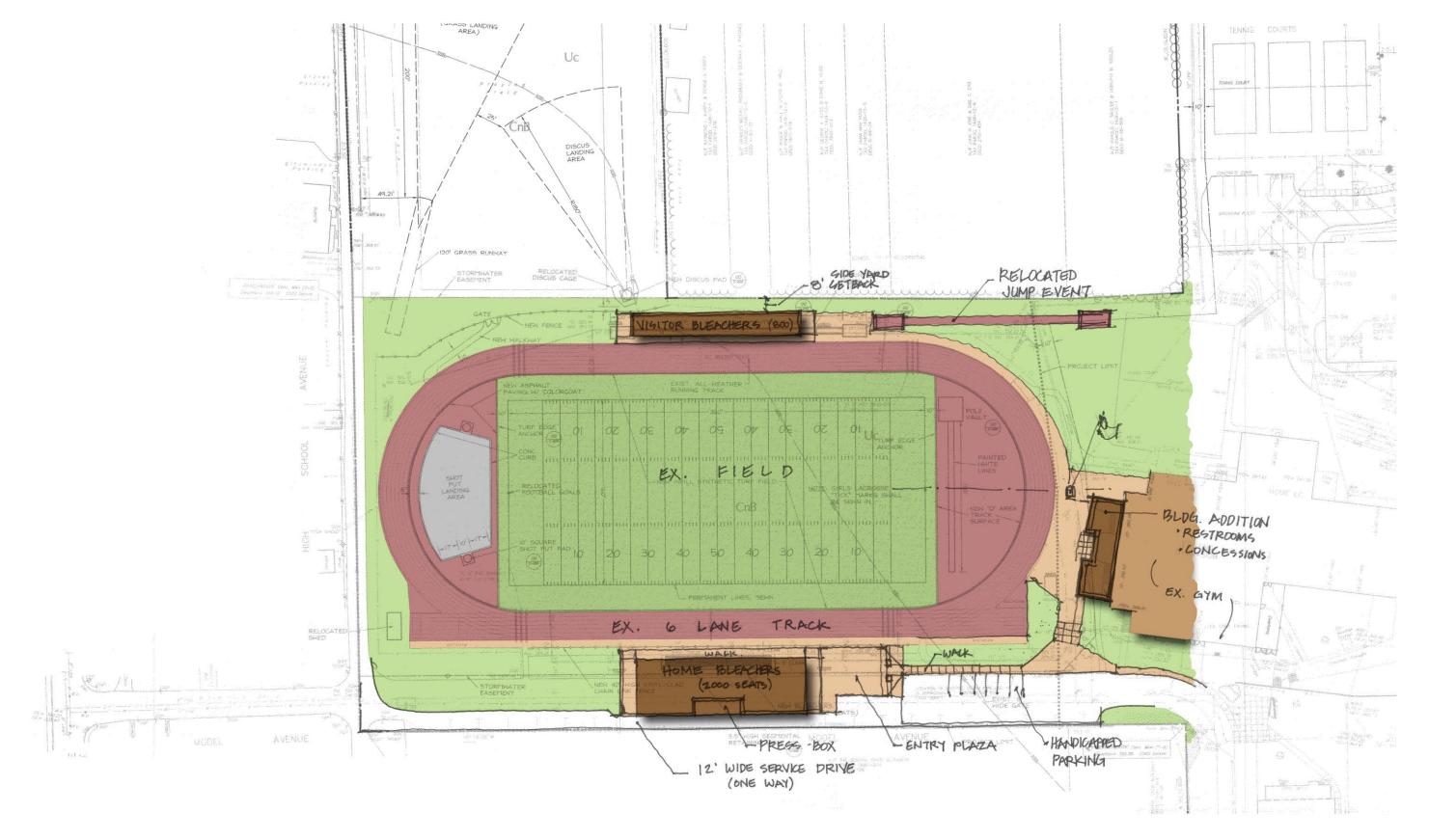
 Improvements needed to existing field including construction of additional bleachers, and expansion of existing concession stand, toilet facilities and fieldhouse.

♣ OPTION 4 – Construct new Comet Stadium.

- Construct on new land adjacent to Manor Middle School.
- Construct on Comet Field property maintaining current turf field complex.
- Construct on new land adjacent to Manor Middle School. Relocate all fields to this site and construct new fieldhouse. Sell Comet Field complex.

Penn Manor Athletic Stadium OPTION 2 – TOTAL PROJECT COST

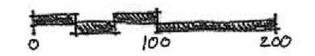
PEN	N MANOR SCHOOL DISTRICT				
STA	DIUM AT PENN MANOR HS				
reli	minary Construction Budget				
ept	ember, 2010				
	SCOPE OF WORK		C	OST	
I. \$	SITEWORK		\$ 2,075,000	\$	2,500,000
	New Lighting				
	New 3,000 seat Bleachers/press-box				
	Utility Upgrades				
	Relocated Long/Triple Jump				
	New Restrooms/concessions				
	Minor parking for ADA access				
5	SUB-TOTAL		\$ 2,075,000	\$	2,500,000
			_,,		_,,
	- Escalation / Contingency to Bid @ 10%		\$ 207,500	\$	250,000
			•		•
	TOTAL GOVERNMENT AND ADDRESS OF THE PROPERTY O		0.000.500	*	0.750.000
	TOTAL CONSTRUCTION COST		\$ 2,282,500	\$	2,750,000
IV. /	ADDITIONAL PROJECT COSTS				
	- Professional fees				
	- Utilities / misc				
	- Borings / Survey				
	- Building Permit / Plan Review Fee				
	- Construction testing & inspections				
	- Special Inspections				
	- Construction contingency				
	- Printing costs				
	- Financing Costs				
•	SUB-TOTAL	10.00%	\$228,250	\$	275,000
	10175	10.0070	Ψ-20,200	Ψ.	210,000
			A0 E46 ===		0.000.000
٧. ٦	TOTAL PROJECT COST		\$2,510,750	\$	3,025,000



PENN MANOR HIGH SCHOOL - FIELD CONVERSION TO STADIUM

PENN MANOR SCHOOL DISTRICT FACILITIES MASTER PLAN 23 SEPTEMBER 2010

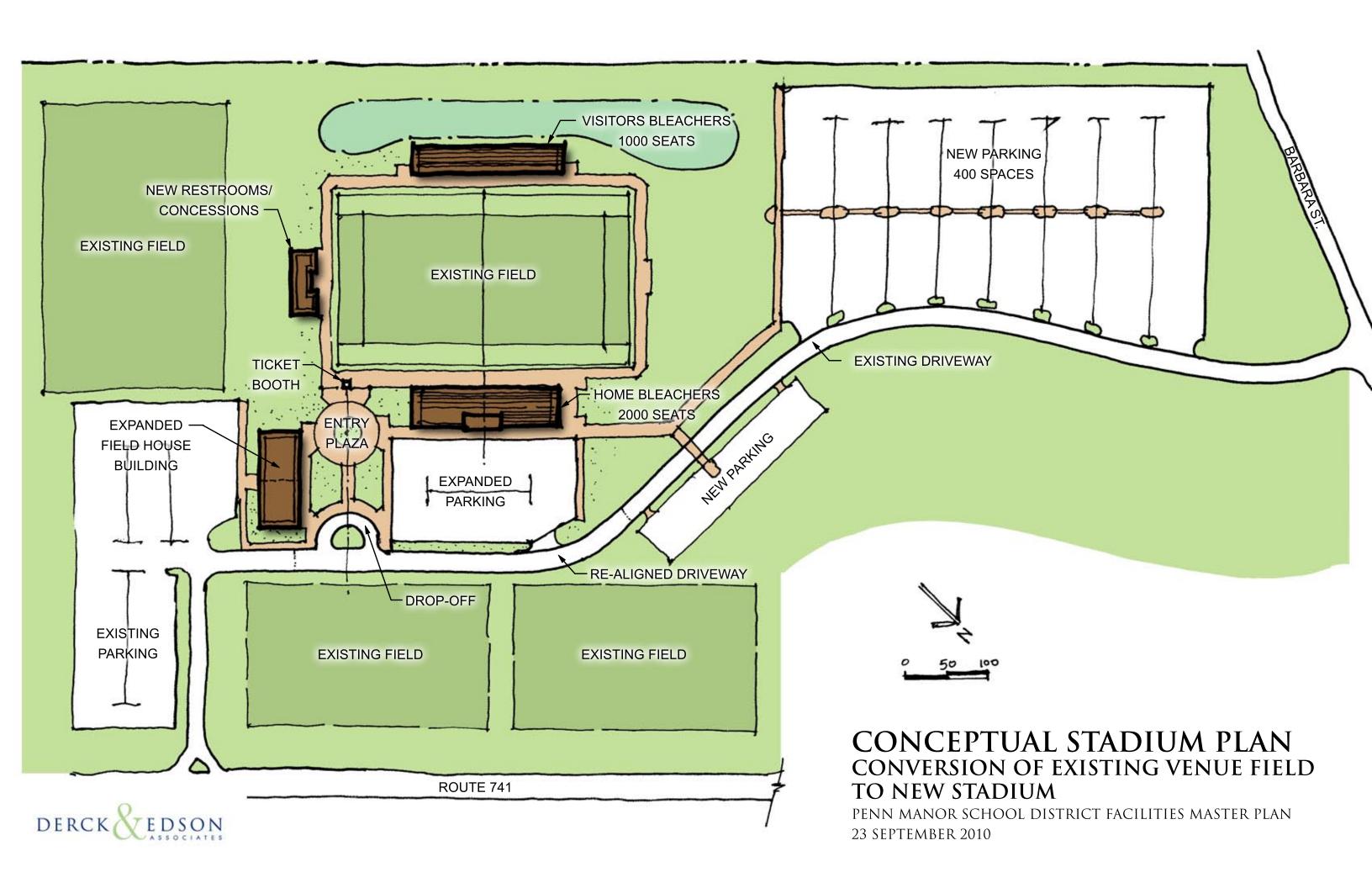






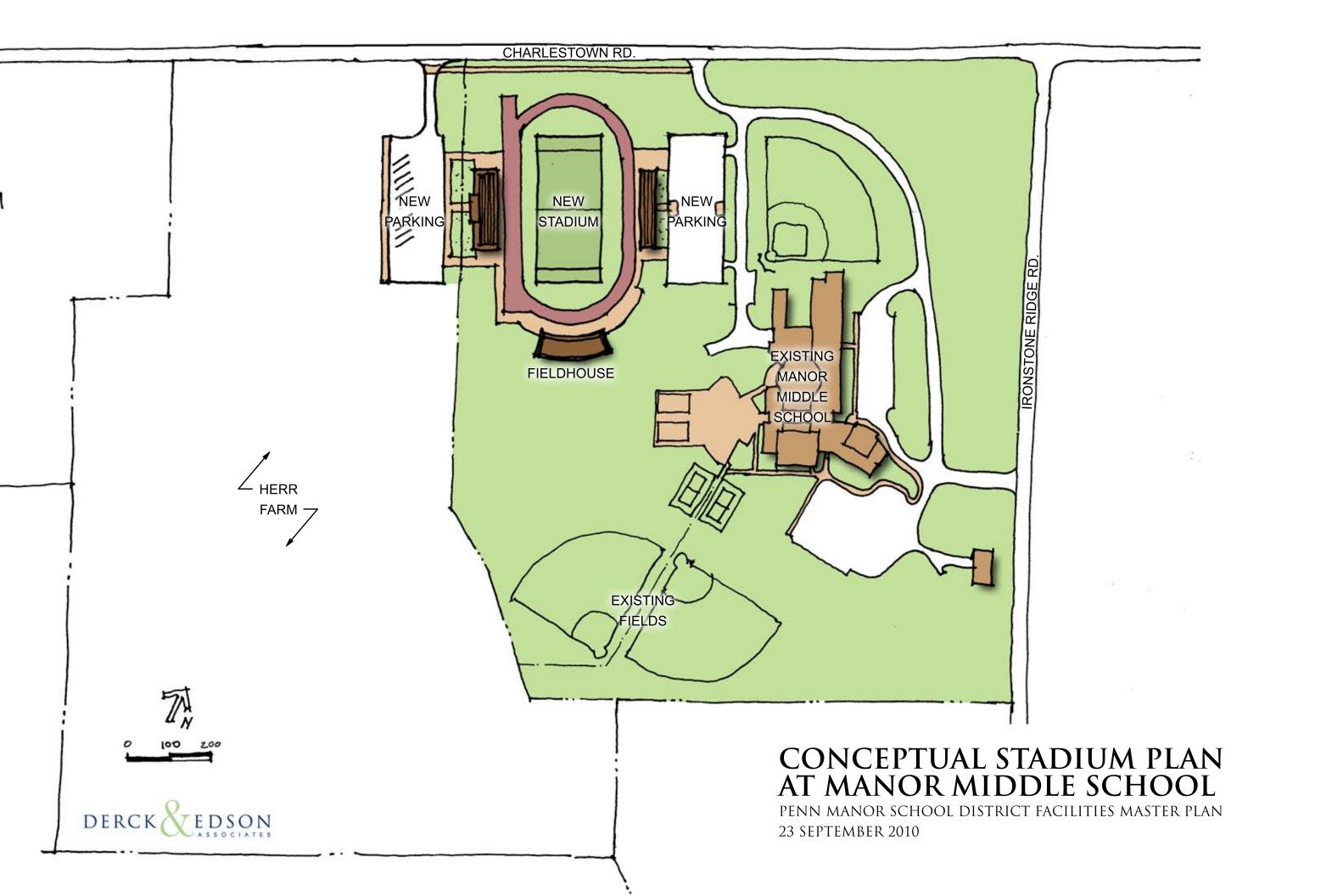
Penn Manor Athletic Stadium OPTION 3 – TOTAL PROJECT COST

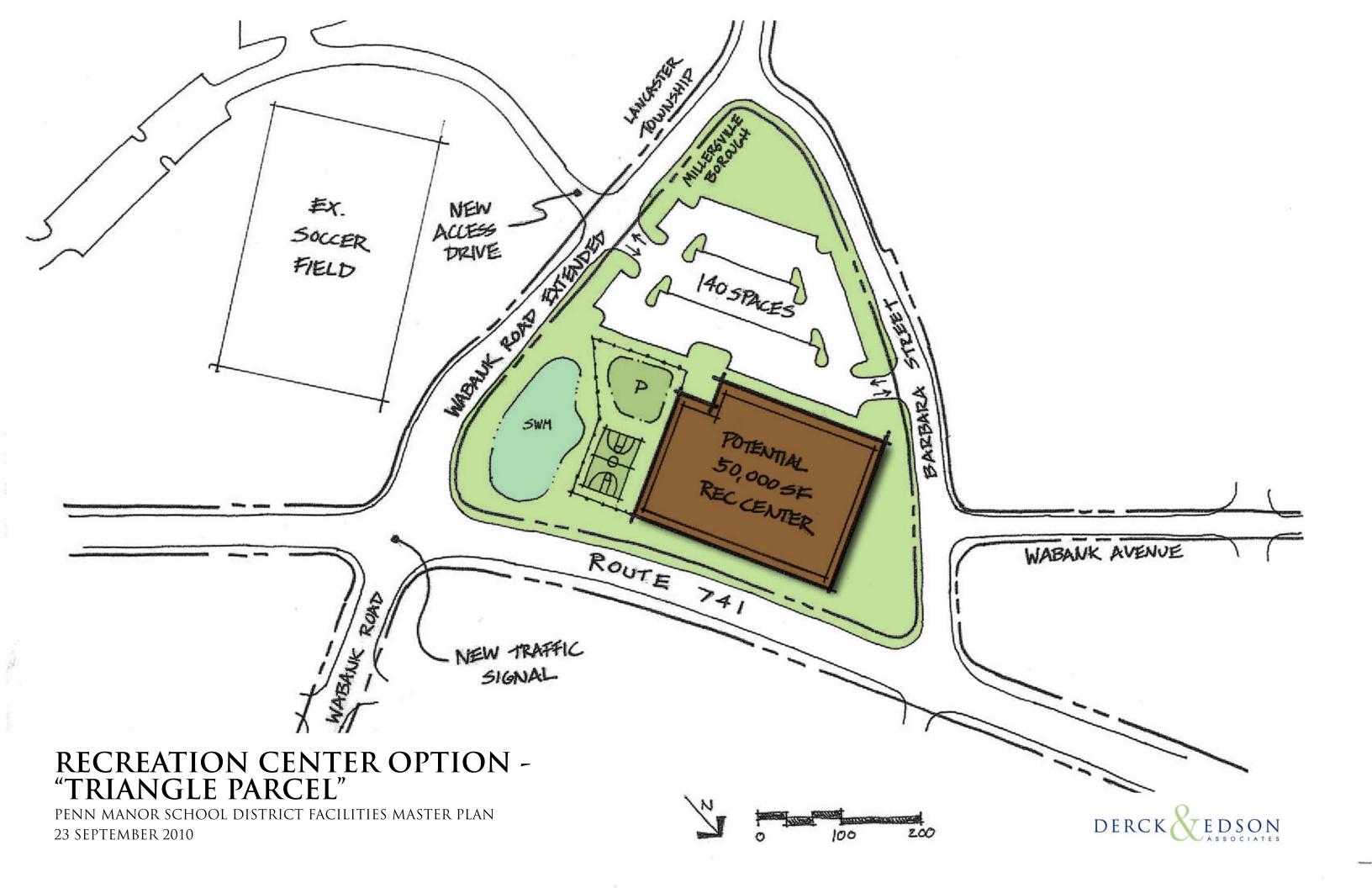
PENN MANOR SCHOOL DISTRICT			
CONVERT COMET FIELD TO STADIUM			
Preliminary Construction Budget			
September, 2010			
SCOPE OF WORK		COST	
I. SITEWORK	\$ 2	2,050,000 \$	2,875,000
New 3,000 seat Bleachers/press-box	4 2	2,000,000	2,075,000
Utility Upgrades			
Expanded Fieldhouse for football			
New Restrooms/concessions			
Major parking expansion (1 space/4 seats			
SUB-TOTAL	\$ 2	2,050,000 \$	2,875,000
30B-101AL	4 2	.,030,000 \$	2,875,000
- Escalation / Contingency to Bid @ 10%	\$	205,000 \$	287,500
- Escalation / Contingency to Bid to 10 /	3	203,000 \$	201,300
TOTAL CONSTRUCTION COST	* • •	0.0EE 000	2 460 500
TOTAL CONSTRUCTION COST	\$ 2	2,255,000 \$	3,162,500
IV. ADDITIONAL PROJECT COSTS			
- Professional fees			
- Utilities / misc			
- Borings / Survey			
- Building Permit / Plan Review Fee			
- Construction testing & inspections			
- Special Inspections			
- Construction contingency			
- Printing costs			
- Financing Costs			
SUB-TOTAL	10.00% \$22	25,500 \$	316,250
V. TOTAL PROJECT COST	\$2	2,480,500 \$	3,478,750

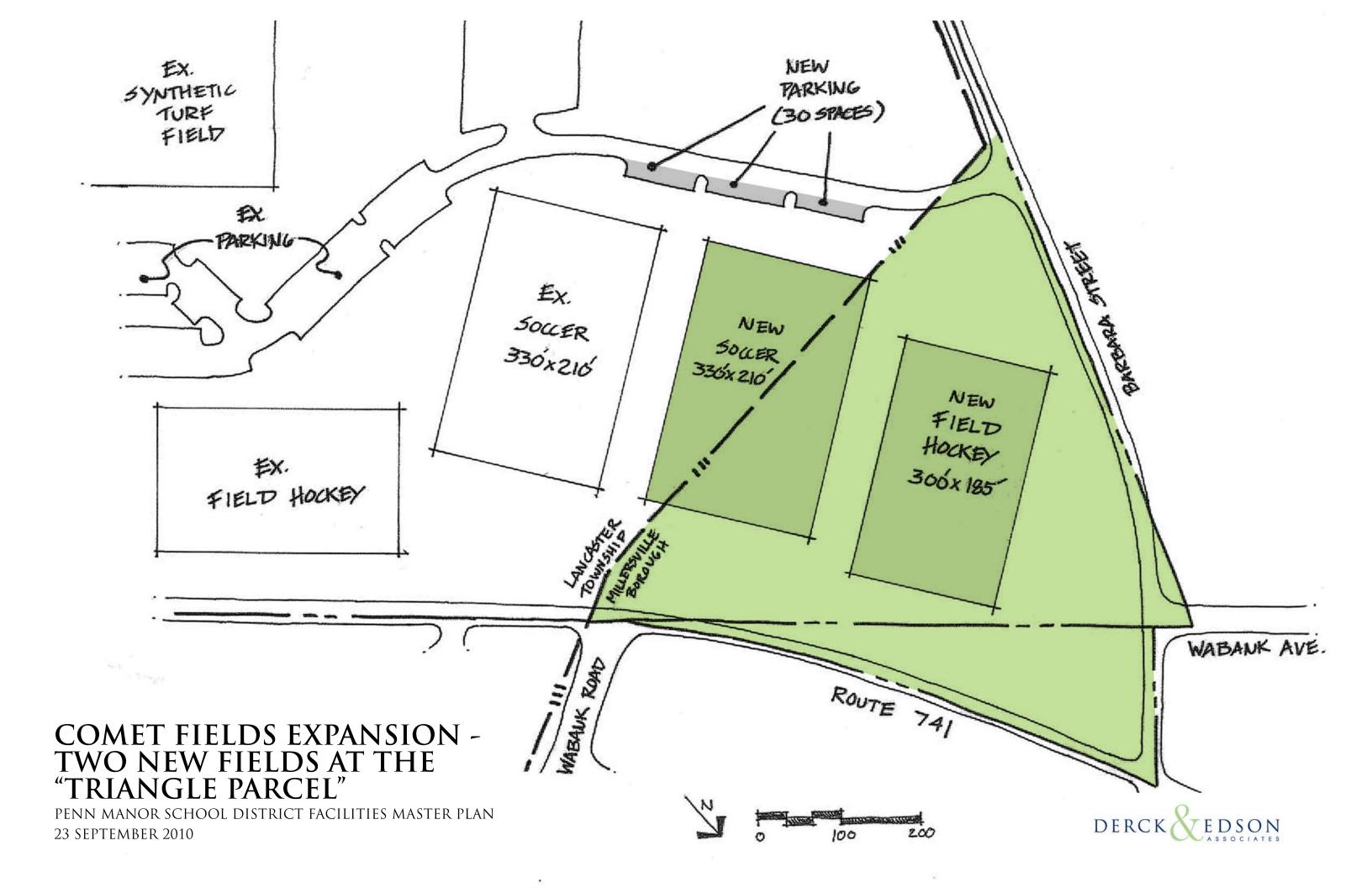


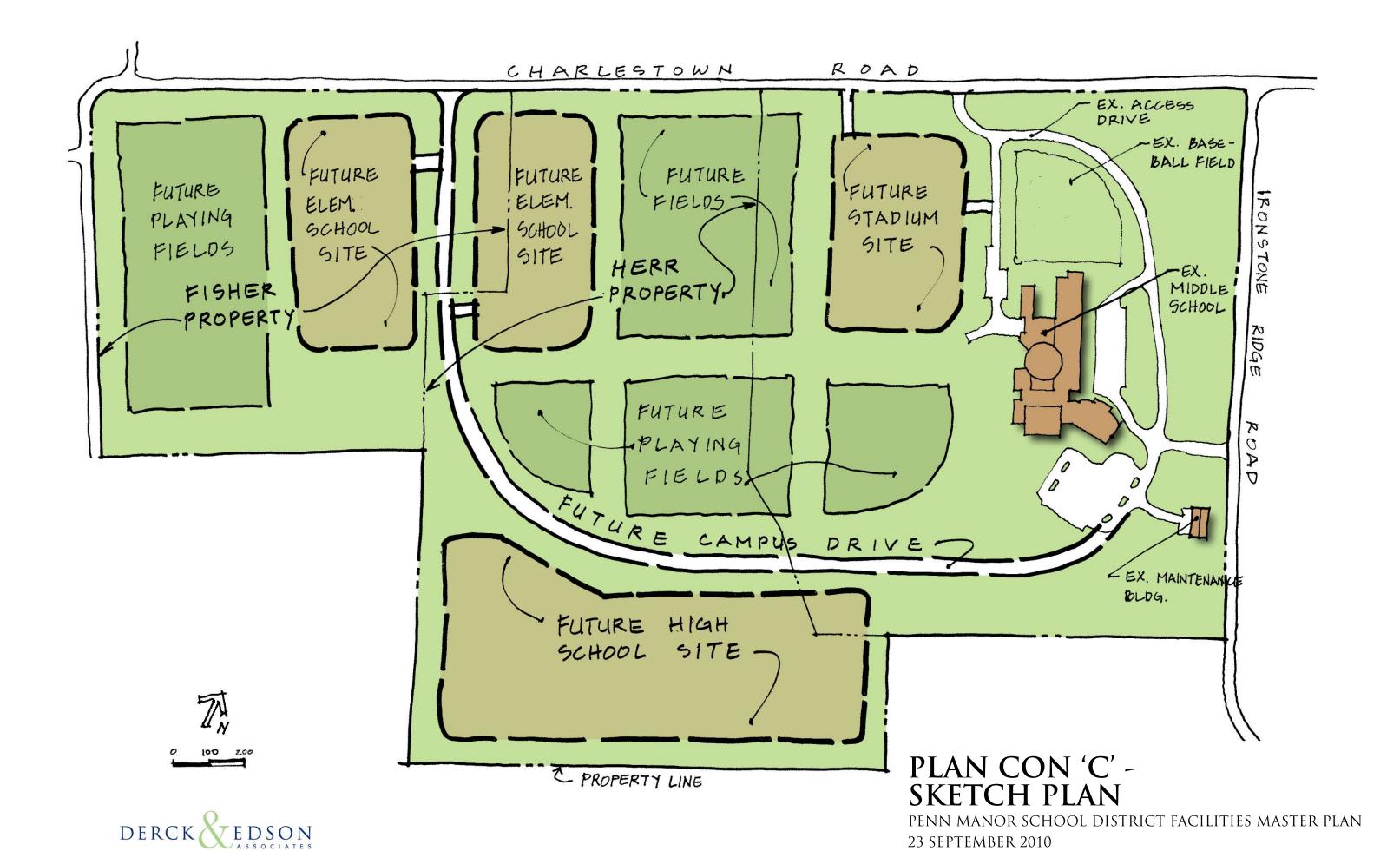
Penn Manor Athletic Stadium OPTION 4 – TOTAL PROJECT COST

PEI	NN MANOR SCHOOL DISTRICT					
NΕ	W STADIUM					
•re	liminary Construction Budget					
	otember, 2010					
•						
	SCOPE OF WORK			C	OST	
I.	SITEWORK		\$	4,150,000	\$	6,575,000
	400 meter track					
	Field events					
	Synthetic turf field (Soccer, lacrosse, field hockey, football)					
	Lighting/Electrical/Public address					
	3000 +/- seat bleachers and press-box					
	Restrooms/Concession					
	Fieldhouse					
	Utilities					
	Fencing/entrances					
	Parking					
	SUB-TOTAL SUB-TOTAL		\$	4,150,000	\$	6,575,000
	- Escalation / Contingency to Bid @ 10%		\$	415,000	\$	657,500
	TOTAL CONSTRUCTION COST		\$	4,565,000	\$	7,232,500
	TOTAL CONDITION OF T		•	4,000,000	•	1,202,000
IV.	ADDITIONAL PROJECT COSTS					
	- Professional fees					
	- Utilities / misc					
	- Borings / Survey					
	- Building Permit / Plan Review Fee					
	- Construction testing & inspections					
	- Special Inspections					
	- Construction contingency					
	- Printing costs					
	- Financing Costs					
	SUB-TOTAL	10.00%		\$456,500	\$	723,250
V	TOTAL PROJECT COST			\$5,021,500	\$	7,955,750









PLANNING CONSIDERATIONS

Building Condition Analysis Planning Considerations

Facility evaluations include estimates of the needed improvements and recommended facility improvements which appear in this report. Key points to consider when planning renovations or new construction are:

- □ What are the educational goals of the School Division?
- □ How do the educational facilities fit into the overall short/long term plans of the School Division and Community?
- □ How big is "too big" in terms of school size for our Communities?
- □ Can the facility be effectively/efficiently renovated?
- □ What is the historical significance of the area?
- □ What is the financial support for the proposed project?
- □ Is it the goal of the School Division to provide equitable educational facilities at all levels?
- What is the most cost effective use of taxpayer financed improvements?
- What are the ramifications of doing nothing?

The following are terminology and additional considerations to aid in the planning process:

□ **Terminology** The terms used to describe changes, updates, reconfiguration of spaces and other improvements made to an existing building are typically used interchangeably. The terminology is less important than the intent of the work described.

General Terminology

- Renovation: A very general term describing almost any type of building improvement. The building function remains the same.
- Alteration: Generally used to describe minor improvements.

Specific Terminology

- **Conversion**: The conversion of a building or spaces within a building to a different programmed use.
- **Rehabilitation:** This includes miscellaneous improvements that maintain the original function of the building without reshaping the spaces.
- Remodeling: Remodeling includes improvements that alter the original building components, including the rehabilitation of spaces to accommodate the educational program and specifications.

PLANNING CONSIDERATIONS

Modernization: This term generally is used to describe the most extensive building improvements. This level of work will bring an existing facility's serviceability and adequacy as close as possible to that of a new building.

□ Renovation and New Construction Considerations

Construction Cost

- o Is cost the most important consideration?
- o Is it less expensive to change the existing building, or build new?

Functional Adequacy

- Will the renovated building meet the needs and expectations of the educational program?...faculty and students? ...community? ...custodial and maintenance staff?
- o Are the compromises acceptable?
- o Can the existing building accommodate the desired changes?

Operating Costs

- O How much energy is currently being wasted by inefficient mechanical and electrical systems? ...improper insulation in roof, walls, windows? ...no vestibule air locks at main entrance doors?
- o How long will the existing systems last before replacement is required?
- o What do new systems cost and how much energy will they save?

Expandability

- Can future building additions be accommodated?
- Are there site restrictions?
- o Are there building organization restrictions?
- Can existing core spaces support additional students?

Flexibility

- o Can walls and structure be moved easily?
- Are future modifications technically feasible?

Aesthetics

- Does the building represent an appropriate image of the community?
- o Does the building provide an atmosphere that is conducive to learning?
- o What is the historical significance of the building?
- o Are the lighting, color schemes and finishes appropriate?
- Does the school represent the institutional backdrops of the past?

Site Considerations

- o Do all the planned changes fit on the site?
- o Is there sufficient parking and driveways (faculty, public, bus, visitors)?
- o Is storm water detention required and if so, is it feasible/affordable?
- o Will regulatory agencies allow land use development changes?
- o Do all desired recreational activities fit?

PLANNING CONSIDERATIONS

Heath and Safety

Will the existing renovated building meet the expectations on air quality? Hazardous materials? Fire protection and other life safety considerations? Handicapped accessibility and the ADA?

Code Restrictions

- Codes may require that the renovated building meet current standards.
 Is this work impractical (too costly for the benefit) for ramps, elevators, chair lifts, fire-rated walls, sprinklers, smoke detection, etc.?
- Do the codes allow for planned improvements in storm water management, building site coverage, building height or other zoning restrictions?

Life-span and Cost

- o Is initial cost or long-term cost more important?
- Do current market conditions warrant moving forward with a building project in the immediate future?

Student Enrollment

- Will there be enough space in the school division to accommodate future enrollments?
- When should we consider construction / renovation of our facilities to meet enrollment needs? How long does it take to plan and construct school facilities?
- o If our enrollment continues to increase, should we consider grade level changes in our elementary schools to increase building capacity? How does this affect our communities and our students?

ANTICIPATED LIFESPAN OF BUILDING COMPONENTS

COMPONENTS

Site Work	
Landscaping	
Building walkways	
Water lines	- 30-50 years
Fire lines	- 30-50 years
Water supply system	- 30 years
Sewer lines	- 30-50 years
Sewage disposal system	- 15 years
Site electrical	- 50 years
Storm drainage	
Perimeter fencing	
Parking and bus loop	- 20 years
Play and athletic fields	
Playground equipment	- 15 years
Faculation	
Foundation	50. 1
Basic	50+ years
Special (fill, piling)	-50+ years
Substructure	
Slab on grade	- 50+ years
O	
Superstructure	50
Floor	- 50 years
Roof (steel)	
Roof (wood)	- 30 years
Exterior Closure	
Exterior wall (masonry)	- 50+ years
Exterior wall (wood/EIFS)	- 5-30 vears
Exterior trim	- 20-30 vears
Exterior soffits	- 20-30 years
Windows/frames	
Doors/frames	20 years
	-
Roofing	
Roof structure	
Built-up roofing	
Shingle roofing	- 25-30 years
Metal roofing	- 30 - 40years
Single ply roofing	
Roof insulation (batt)	
Roof insulation (rigid)	
Roof drains	- 20-30 years
Skylights	- 20-30 years

Interior walls (paint) Interior walls (structure) Vinyl wall covering Interior doors Terrazzo flooring Interior Construction	- 30 years - 15 years - 30 years - 15-20 years
Wood flooring	- 15-20 years - 50+ years - 10-15 years - 50+ years
Specialties Casework	- 20-25 years - 15-20 years - 20 years - 20 years - 15-20 years - 15-20 years - 15-20 years - 25-30 years
Lockers Kitchen equipment Fire extinguishers Window treatment Stage systems Auditorium seating	- 20 years - 20 years - 15-20 years - 15-20 years - 15-20 years - 25-30 years

Heating Plant Steam systems Boilers (cast iron, steel) Safety relief valves Expansion tanks Gas/propane fuel system Oil fuel systems Stacks/breeching Fuel oil pumps Water recirc. Pumps Auto. Temp controls	40-50 years 20 years 30 years 40 years 40 years 50+ years 30 years 30 years 25-30 years
Stacks/breeching	50+ years
•	,
Pneumatic air compressors	
Refrigerant dryers	10-15 years
Louvers	40 years
Dampers	20 years
Fin tube radiation	35 years
Cast iron radiators	50+ vears
Unit ventilators	

ANTICIPATED LIFESPAN OF BUILDING COMPONENTS

COMPONENTS

	_		
Cooling		Fire Protection	
Central a/c system	30 years	Standpipes (wet/dry)	50+ vears
Window a/c units		Sprinklers	
		op.i.i.doro	oo you.o
Air Distribution/ Exhaust		Plumbing Fixtures	
Ductwork, diffusers, grilles	40-50 vears	Toilets, urinals	25-50 years
Ceiling fans		Service sinks, mop receptors	•
3	,	Water coolers	
PLUMBING			. 5 _ 5 , 5 6 5
Sanitary		ELECTRICAL	
Cast iron piping	35 years		
PVC piping		Power and Distribution	
Sewage ejector pumps		Power supply	30-35 years
Neutralization basins		Service	
	, , , , , , , , , , , , , , , , , , , ,	Distribution panels	
Storm water		Transformers	
Storm water piping	50+ vears	Wiring	
Downspouts	30 years	Receptacles	
Gutters		receptacies	oo oo years
Sump pumps		Lighting	
	56 youc	Security lighting	20-25 years
Domestic Cold Water		Parking areas	
HVAC make-up water	50+ vears	Interior Fixtures	
Galvanized water piping		interior i ixtares	20 20 years
Copper water piping		Life-safety Systems	20-25 vears
Backflow prevention		Battery pack	
Constant pressure pumps	•	Exit signs	
Hydro pneumatic tanks		Egress lighting	•
Tryare pricamatic tarine	oo youro	Egress lighting	20-20 years
Domestic Hot Water		Fire Alarm System	
Gas-fired storage	10-15 vears	Main panel	20-25 vears
Electric-fired storage		Remote annunciator	
Steam fired storage		Detection system	
Water to water source		Detection system	20-25 years
Expansion loops		Communications	
Temperature mixing valves		Public address system	20 years
Recirculation pumps		Speakers/call buttons	
Recirculation pumps	13-20 years	Clocks/bells	
Insulation			•
Hot and cold piping	50+ years	Telephone system Television system	
Equipment			
Equipment	301 years	Technology wiring	
Natural Gas System		Security alarm	10-20 years
Natural or low pressure	50+ vears		
Meter or pressure regulator			
meter or pressure regulator	501 years		

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study



AUTHOR'S CREDENTIALS

Name of Firm: Crabtree, Rohrbaugh & Associates, Architects

Address of Firm: Corporate Headquarters Office

401 East Winding Hill Road Mechanicsburg, PA 17055

Telephone/Fax Number: (717) 458-0272 / (717) 458-0047

E-mail Address/Website: cra@cra-architects.com / www.cra-architects.com

Names of Officers of the Company: Thomas C. Crabtree, President

G. Douglas Rohrbaugh, VicePres./Secretary

Incorporated in July of 1984 and now has over 90 experienced and recognized leaders in the field of architecture, engineering, design, planning and project management. The firm has significant experience providing architectural and engineering services, facility studies and master plans to School systems in Pennsylvania, Virginia, Maryland, and throughout the Mid-Atlantic region. Crabtree, Rohrbaugh & Associates began the design of its first educational project in 1993 and have designed over \$1 Billion Dollars of educational facilities. We have the ability to provide services through our Corporate Headquarters in Mechanicsburg, Pennsylvania as well as our Charlottesville, Virginia Office and provide engineering services from our related MEP and Structural Engineering firms.

Offering our client-oriented philosophy to providing professional architectural services; this client-oriented approach is the cornerstone to the professional relationship that we strive to build and maintain throughout the life of the project and beyond. It is this approach that has forged the client references we enjoy and has developed a long list of repeat clientele who have benefited from an approach to professional design services centered on their goals, ideals, and objectives.

Crabtree, Rohrbaugh & Associates provides several levels of accreditation to our projects, whether it is through Registered Educational Facilities Planners or LEED Certified Designers our projects receive the highest level of design review and accreditation.

The firm's principals and directors, Thomas C. Crabtree, G. Douglas Rohrbaugh, Richard C. LeBlanc, Paul Taylor, Brian Haines, John Beddia, Tracy Rohrbaugh, and Hal Hart have more than 200 years of experience in architecture.

Crabtree, Rohrbaugh & Associates offers services in the areas of architecture, engineering, landscape design, site planning, interior architecture, and construction administration. The firm designed a variety of projects including educational, retail, health care, religious, governmental, judicial, correctional, detention, warehousing, distribution, manufacturing, corporate office, commercial office, professional office, multi-family housing, residential, hotel, restaurant, recreational and banking facilities.

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study



AUTHOR'S CREDENTIALS

Name of Project Manager:

Hal Hart, Associate, AIA, REFP, LEED® AP

Education:

Bachelor of Architecture

- Temple University

Associates Degree Architectural Technology

- Thaddeus Stevens College

Professional Affiliation:

American Institute of Architects
Council of Educational Facility Planners International
United States Green Building Council

Facility Studies completed:

William Wetsel Middle School

Madison County High School

Potomac Elementary School

Amelia County Public Schools

Loudoun County Public Schools

Red Lion Area School District

Phoenixville Area School District

South Eastern School District

Philipsburg – Osceola Area School District

Penn Manor School District

Tuscarora Area School District

Lincoln Intermediate Unit #12

Seneca Highlands Intermediate Unit

North Star School District

Clearfield Area School District

Port Allegany School District

Dover Area School District

Pottstown School District

Wyomissing Area School District

Eastern Lancaster County School District

Altoona Area School District

Palmyra Area School District

Susquehanna Township School District

Upper Adams School District

Warren County School District

Elizabethtown Area School Dstrict

Shanksville-Stoneycreek School District

PENN MANOR SCHOOL DISTRICT

Facilities Master Plan Study



AUTHOR'S CREDENTIALS

Name of Project Manager:

Hal Hart, Associate, AIA, REFP, LEED® AP

Education:

Bachelor of Architecture Temple University

Professional Affiliation:

American Institute of Architects
Council of Educational Facility Planners International
United States Green Building Council

School Construction Projects:

Westmoreland County Public Schools

- Washington District Elementary School
- Washington and Lee High School

Fairfax County Public Schools

- Kings Park Elementary School Madison County Public Schools
- Madison County High School Amelia County Public Schools
- Amelia County High School

Loudoun County Public Schools

- Lovettsville Elementary School
- Broad Run High School
- Park View High School
- Hamilton Elementary School
- New Administration Building

Frederick County Public Schools

- Urbana High School

Littlestown Area School District

- Rolling Acres Elementary School

Keystone Central School District

- Robb Elementary School

Lewisburg Area School District

- Kelly Elementary School

Cornwall-Lebanon School District

- New Ebenezer Elementary School
- Cedar Crest Middle School
- Cedar Crest High School

Radnor Area School District

- Radnor High School

Red Lion Area School District

- Red Lion Sr. High School

Palmyra Area School District

- Palmyra Middle School

Forest Hills School District

- Forest Hills High School

Port Allegany School District

- Port Allegany Jr/Sr High School
- Port Allegany Elementary School

Susquehanna Township School District

- Susquehanna Twp. High School
- Susquehanna Twp. Middle School

Big Spring School District

- New High School

Milton Hershey School

- Fannie B. Hershey Elementary

Eastern York School District

- Wrightsville Elementary School

Troy Area School District

- Troy Sr. High School

Danville Area School District

- Liberty Valley Elementary School

Penn Manor School District

- Marticville Middle School
- Martic Elementary School
- Central Manor Elementary School
- Penn Manor High School
- Manor Middle School
- Pequea Elementary School

Eastern Lancaster County School District

- GardenSpot Middle-High School

Tuscarora School District

- James Buchanan High School

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