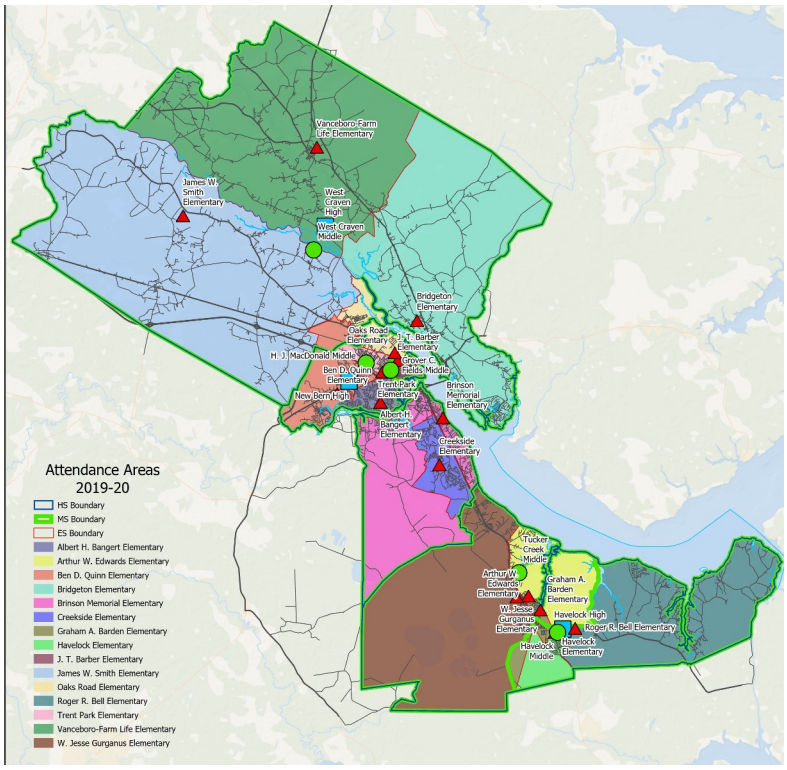
Craven County Schools

Long Range Facility Needs Assessment
2019



Prepared for the Craven County Board of Education:

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COUNTY SCHOOLS
Today's Learners... Tomorrow's Leaders

Board of Education

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December 2019

Dear Craven County Schools Stakeholders,

In June of 2018, the Craven County Board of Education adopted a new vision for public education in a unanimous resolution affirming the work of a diverse, 62-member community stakeholder group who spent six months to memorialize the aspirations of our community for our children. That vision states

> *We envision a public education system that challenges all students as learners and prepares them to imagine and create a successful life; values educators and empowers them to inspire and spark innovation in every student; leads in education and community engagement; and invites all students, their families, and all members of the community to work together to support public education to the benefit of our students, our community, our nation and our world.*

Craven County Schools leadership and educators have resolved that we will meet that vision by "…educating all learners to personal, professional, and civic success through challenging and personalized instruction." Our school district's mission and community vision for public education require facilities that enable our students to develop, grow, and become responsible citizens in an environment that facilitates the highest levels of learning and problem solving. In addition, we are called in public education to align the learning of our students to respond to the workforce needs of our community and region, now and in the future. These workforce needs are constantly changing and responding to the demand for skilled trades, increasing automation in our manufacturing and service industries, and the rapid transition to an economy based on knowledge and knowledge application rather than a factory model of work.

Craven County has a rich history of protecting and prioritizing the care of the public's assets in our school facilities and buildings. This has been achieved through the diligent work and leadership of the Craven County Schools Facilities Services division, our school leaders, and our educators. We recognize that these buildings are not only reflections of the learning we want for our students but are also learning facilities for the cultural, social, and even spiritual growth of our community. These buildings are the hubs of our community and serve the essential purpose of facilitating an education that will lead to the successful futures of our graduates but also serve a range of purposes for our community to include recreation, cultural performance, and civic pursuits.

The last comprehensive facility assessment and long range plan conducted by the Craven County School System was done by the North Carolina Department of Public Instruction in 1990 by the School Planning Division. In that document, recommendations were made to improve the

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organization of the district and its facilities to ensure the delivery of the basic education plan (adopted by the North Carolina State Board of Education in 1985). The information in the pages that follow represent the first and most comprehensive assessment of the Craven County School facilities since the new century began. In the coming months, the Craven County Board of Education, informed by input from the community, will begin to use this information to develop a long range facility master plan for consideration by the Craven County Board of Commissioners. The Craven County Board of Education recognizes the importance of these assets to our children and the greater community and takes seriously the feedback of our community to inform this planning process.

In that spirit, the Craven County Board of Education invites you to become involved in this community conversation over the next few months and assist us in realizing our vision to help every student imagine and create a successful life for themselves and collectively to inform a bright and successful future for Craven County.

Sincerely,

Dr. Meghan S. Doyle
Superintendent
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This study is the result of the Craven County Board of Education's desire to look at the existing school maintained facilities and in an effort to determine needs; it was conducted in conjunction with the Craven County Board of Commissioners. Results of this facility study can be found on the following pages.

Table of Contents

Table of Contents	
Introduction	**1**
Executive Summary	**3**
Demographic Analysis	**26**
Student Population	**29**
Capacity Calculations	**40**
Capacity Diagrams	**57**
Curriculum Requirements	**72**
Classroom Square Footage	**90**
Life Cycle Analysis	**107**
District Wide Overview	**119**
District Wide Site Analysis	**135**
Guide for Space Inventory Work-sheets	**140**
Elementary Schools	**146**
Middle Schools	**311**
High Schools	**371**
Other Facilities	**420**

Introduction

Every year on the first day of school, new kindergarteners appear in school doorways with parents in tow wanting the best for their children. These families are filled with expectations, aspirations and optimism for the future and how an education will impact it. Each group of students is unique and comes with different abilities, needs, and passions that must be supported, developed, and grown in our public school system.

Principals, teachers, and staff have all made their life's work helping each child, and eventually, each graduate, realize their dreams. Craven County School staff can, do, and will continue to bring our community's vision for public education to fruition. However, there are numerous challenges. The work contained herein is intended as documentation of the strengths, weaknesses, and challenges faced by the school system with respect to the facilities within which instruction is delivered by our dedicated professionals to ensure the learning and ultimate success of all of our students. It is important to understand the assets and limitations of each facility within our school system.

Craven County Schools (CCS) seeks to provide transparency and welcomes accountability for the state of the facilities operated by the school system. This document is intended to identify portions of the schools physical environment that need improvement or modification with the expressed purpose to serve as effective tools to support education. While there are many things working well and are numerous good points that could and potentially should be noted, they are not identified or listed herein. By highlighting potential improvements, CCS will be able to focus limited funding to the most critical issues. In doing this, CCS can shoulder the responsibility of maintaining the investments the community has already made in the buildings and grounds that serve both our students and the entire community.

This document does not constitute a plan or determine a direction for addressing capacity overages or aged facilities, nor does it indicate the investments that must be made to each facility. **It is a collection of data based on the North Carolina Department of Public Instruction's Minimum Facility Standards as applied to Craven County Schools.** It constitutes the base data on which a responsible plan can be developed. Although total dollar figures are calculated here, they do not represent a request for funding, nor is this a Capital Improvement Plan (CIP). It is simply data that should be used to determine what, if any, additions, renovations, and investments should be made to individual facilities.

This document describes the existing conditions of each campus and building within the system, as of the 2018-19 school year. It includes measurable physical data for each school in the system relating to items such as campus acreage, building age and square footage. Furthermore, it includes data on the current student population as well as a population forecast for the next ten (10) years. These are aligned with the existing capacities at each campus along with each facility's capacity to expand and support additional students.

A large portion of this report is a comparative analysis in which each school is evaluated against a set of standards to determine potential need. These standards are based on a combination of The North Carolina Department of Public Instruction (NCDPI) Minimum Facility Standards and local decisions based on local curriculum and workforce needs in Craven County.

The population forecasting used in this document is developed by Mike Miller of Numerix Solutions out of South Carolina. He uses cutting edge global positioning data and mathematical algorithms to forecast population changes and their implications. In creating the forecast, Numerix geocodes each existing student and tracks where they attend school. Armed with this knowledge and with the birth and migration rates within the county, Numerix runs their algorithms to determine the most probable growth at each campus within the system.

This report addresses several main concerns directly related to public education facilities. The first is to ensure the appropriate number of students are assigned to each facility in order to maximize efficiency while avoiding overcrowding. The second is to ensure equity for all students to have a quality learning environment.

Students change on a daily basis, education goals based on workforce demands change over time, but school facilities last a lifetime.

Executive Summary

EXECUTIVE SUMMARY

The Craven County School System

Craven County Schools currently operates twenty three (23) traditional K-12 schools with an additional two early college sites totaling 2,379,833 square feet of real estate. The system is responsible for 13,600 pre-K through 13 students and employs approximately 1,600 teachers, staff, maintenance, and administrative individuals. It is governed by a seven member Board of Education.

Aging School Infrastructure

The rapid aging of America's school infrastructure has long been documented. In 1995, the Governmental Accounting Office put the cost of repairing or upgrading the nation's schools into "good overall condition" at $112 billion. In 1999, a report entitled Condition of America's Public School Facilities stated that "seventy-five percent of schools needed to spend some money on repairs, renovations and modernizations to put their buildings into good overall condition". Finally, the American Society of Civil Engineers puts out a report card every three years, with the most recent being 2017. Across the country, our schools received a D+ with the additional comment that *"53% of schools need improvements to reach "good" condition."*

Craven County School History

Craven County's 23+ instructional facilities were built between 1951 (J.T. Barber) and 2007 (Creekside). Craven County can pride itself on the responsible manner in which it has sought to maintain these facilities within the limited resources available to the community. Many of these buildings were built to address extreme population growth during the baby boom. As with most schools built during this time, they were constructed relatively inexpensively without consideration to life cycle costs that are important today. The result is that these buildings do not last as long as the ones built before and after the initial baby boom.

State and Federal Mandates

The age and condition of school facilities in America are not often taken into consideration by State and Federal public policy and funding makers. Mandates from state and federal lawmakers, often unfunded, are regularly given to local school boards, which have no choice but to implement them. Funding which could otherwise go to renovations, winds up addressing capacity or other program related issues.

On March 16, 2018, HB 90 was signed into law. This statute changed the teacher-student ratio, effectively changing the number of students in a classroom. This un-funded mandate reduced the number of students in Kindergarten thru third grade classrooms, thereby requiring additional K-3 classrooms for the same number of students. The pressure created by reducing capacity in these classrooms was alleviated by removing all restrictions on how many students can be in 4th-12th grade classrooms. Although it is well intended and supports best practices of increasing the teacher-student ratio for our youngest students, this bill has the potential to create overcrowding and a reduced teacher to student ratio in 4th and 5th grade classrooms, thereby jeopardizing each school's ability to provide a complete program.

Craven's Unique Community

Compliance with Federal and State mandates and aging infrastructure frame Craven County Schools as similar to other school districts in the state, but numerous other characteristics make it unique. With a relatively low population density of 146 individuals per square mile, a good portion of the county is dedicated to farming and recreation. This is in contrast with New Bern's density of over 1,000 people per square mile.

It is home to US Marine Corps Air Station Cherry Point in Havelock. Within the county there are more than 60,000 acres owned by the federal government, including the very large Croatan National Forest.

Craven Community College provides higher education for the surrounding area and works in conjunction with the school system supporting the two Early College programs. Craven Early College (CEC) program is located at the New Bern campus while the Early College East (Eastern Applied Sciences and Technology) is located in Havelock.

Purpose of the Long-Range Facility Needs Assessment

Simply put, the purpose of this planning document is to detail statistically valid third-party research on student population, to complete an exhaustive inventory of existing facilities, and to compare these two pieces of independent research to determine:

1. Student population sizes for each school, for each of the next ten years.
2. When, specifically, individual school facilities will reach their maximum student capacity.
3. What possible building renovations or campus expansions are possible at each of the existing school locations.
4. What deferred maintenance items exist for each school.

This document is **not** meant to provide the Craven County Board of Education with a specific plan for meeting the needs identified. It is the responsibility of the school system and the local community to determine the appropriate manner and schedule for accomplishing that. This document provides the informational foundation for such local planning efforts. It is the responsibility of the school district and the community to create a plan which meets the unique needs of Craven County.

Methodology

This assessment may be termed a "compilation study" and was completed using the final work products from two independently contracted sources as well as numerous contributors. Smith Sinnett Architecture's work compromises a majority of the data collection and analysis in this document. Mike Miller of Numerix Solutions did the population forecast, which provides invaluable data on overcrowding and overall growth patterns.

None of this work would be possible if not for Craven County staff who provided critical information on the school system. Maintenance personnel spent precious time walking us through the buildings and discussing options for improvement and collecting data on each facility. Principals were also invaluable in describing how each facility functions and where they saw potential for improvement.

Craven Curriculum Requirements for Facilities

While the Federal Government and the State of North Carolina enforce a variety of rules and regulations regarding the provision of instructional services, some decisions remain within the discretion of Local Education Authority (LEA). A standard for facilities was created based heavily on the NCDPI Minimum Recommended Standards and was modified only slightly to address community needs. One of the primary questions is how big should schools be. Below are the discussed ideal student capacities along with anticipated maximum core capacity.

Elementary:	450 - 700	Core 700
Middle:	600 - 800	Core 800
High:	800 - 1,200	Core 1,200

Technology and Infrastructure

Technology is also a subject for local decision. Craven County Schools has established a tiered technology vision that supports teacher productivity, classroom connectivity and student one-to-one device access to technology. The tiers are based on the age of students and their responsibility level. As students age, and coursework and research requirements increase, they receive more responsibility with the equipment until the point where they take equipment home in order to complete their assignments. This plan has been updated significantly since Hurricane Florence.

Craven County School staff has been consistently improving wireless systems throughout the county and has reached the point where each school is capable of handling one-to-one network access for all students simultaneously.

To keep up with education delivery methods, the school system will need to continually replace outdated equipment with new.

Other local decisions included:

- Individual classroom sizes that align with program content.
- Continue with the elementary, middle, and high school grade level configuration.
- How many square feet to provide in the cafeteria for each student.
- Classroom finishes including flooring and lighting.
- Providing indoor air quality that complies with current code requirements.
- Providing appropriate flexible spaces for pedagogical and programmatic changes in the future.
- Ensuring all schools, within a given level (elementary, middle, or high), have access to the type of specialized instructional areas specified as necessitated by the state. Depending on the school level, such spaces might include: Media Centers or Libraries, Auditoriums, Multipurpose Rooms or Gymnasiums, Play Areas or formal Athletic Facilities. However, in completing this objective, special consideration must be given to promote equity throughout the different schools at each grade level.

District-Wide Site Appraisals

Site appraisals were conducted for every campus within the system. The purpose of this report was to compare NCDPI standards for campus acreage to the actual campus acreages of each school site. Generally most of the school parcels have sufficient acreage. There are, however, several small campuses and several very large ones.

Facility Appraisals

As mentioned previously, a complete inventory was taken of every school facility within the system. Facility appraisals were conducted on a campus by campus basis using the NCDPI / Craven County Schools minimum facility standards. In addition, renovations or potential expansions necessary to maintain or protect existing assets and provide necessary instructional and support spaces and systems were identified. Significant investment potential exists to bring some of the older schools up to current standards. Items of deferred maintenance or larger necessary repairs to existing campuses are defined within the Long Range Facility Needs Assessment. Such repairs might include replacement of a gymnasium floor, painting an entire school or replacing an electrical or mechanical system.

Capacity Calculations

The maximum capacity for each school was calculated based on current use, as well as what the capacities will be over the course of the next several years as HB 90 takes effect. The numbers were iterated to ensure all current programs are included.

Possible Facility Improvements

Possible improvements to each campus are covered in detail, with aerial photos and drawings of existing campuses coupled with conceptual drawings of areas of possible renovation and/or expansion. The types of necessary spaces are broken down for each school (science rooms, media centers, multipurpose rooms, etc.) and cost estimates are given for each necessary improvement. All cost estimates are given based on current to 2019 dollar amounts.

Facility Appraisal Summary Sheet

Identified improvements to every campus within the system are covered within one summary sheet. **This sheet depicts all improvement options that should be considered over the next ten years and should not be misinterpreted to mean all improvements are immediately necessary.**

A detailed analysis of the facility appraisals should be carefully reviewed to gain an understanding into the nature of this important spreadsheet.

District-Wide Site Appraisals - following page

Site assessments were conducted for every campus within the system. The purpose of this table is to compare NCDPI standards for campus acreage to the actual campus acreages of each school site.

The various colors indicate a ratio of existing acres / recommended acres. The recommendations are based on a one story building in a rural environment. Multi-story buildings and those within the city limits may have reduced acreage and still function properly.

Craven County Schools 2019

Acreage Comparison to NCDPI Recommendations

Having the appropriate acreage for a school depends on many factors. Issues range from multistory configurations to restrictions within a watershed and many other site specific conditions. The end result is that many sites have unusable acreage. The following comparison is used only as a general reference.	Existing				Potential	
	Existing Acres	Cleared Acres	2021 ADM Capacity	NCDPI Sugg. Acres	Potential Student Capacity Inc. PK	NCDPI Sugg. Acres
Elementary						
Bangert Elementary	13.5	7.8	386	13.86	386	13.86
Aurthur Edwards Elementary	15.3	13.9	626	16.26	626	16.26
Ben D. Quinn Elementary	63.1	17.2	386	13.86	402	14.02
Bridgeton Elementary	24.6	22.9	516	15.16	636	16.36
Brinson Memorial Elementary	34.2	21.3	772	17.72	772	17.72
Creekside Elementary	29.4	23.5	516	15.16	636	16.36
Graham A. Barden Elementary	9.4	5.6	318	13.18	366	13.66
Havelock Elementary and Havelock Middle *	31.2	10.0	422	14.22	600	16
J.T. Barber Elementary and Bus Garage *	16.7	10.6	376	13.76	424	14.24
James W. Smith Elementary	47.7	33.4	609	16.09	676	16.76
Oaks Road	18.1	9.0	368	13.68	368	13.68
Roger Bell Elementary	27.1	16.4	412	14.12	532	15.32
Trent Park Elementary	12.0	7.7	376	13.76	376	13.76
Vanceboro Farm Life Elementary	66.0	30.4	516	15.16	516	15.16
W.J. Gurganus Elementary-All Parcels	32.6	16.6	402	14.02	616	16.16
Total Elementary Schools	440.8	246.4	7,001.0	220	7932	229
Middle						
Grover C. Fields Middle	23.7	22.9	722	22.22	722	22.22
H.J. MacDonald Middle	42.7	31.8	888	23.88	888	23.88
Havelock Middle *		9.3	566	20.66	566	20.66
Tucker Creek Middle	52.7	37.8	686	21.86	930	24.3
West Craven Middle	41.9	35.9	758	22.58	758	22.58
Total Middle Schools	160.9	137.7	3,620.0	111	3864	114
High						
Havelock High School	53.1	51.2	1140	41.4	1140	41.4
New Bern High	95.2	68.3	1733	47.33	1733	47.33
West Craven High	75.0	48.7	1253	42.53	1253	42.53
Total High Schools	223.4	168.2	4,126.0	131	4,126	131
Other Educational						
Craven Early College (CCC Property)	100.2	Na	218	Na	218	Na
Early College East High (CCC Property) *	24.4	Na	201	Na	201	Na
Total Other Schools	Na	Na	419	Na	419	Na
Other Parcels						
Administration Building	2.9	2.9	Na	Na	Na	Na
Bus Garage and J.T. Barber		4.5	Na	Na	Na	Na
Maintenance Department	10.5	5.0	Na	Na	Na	Na
Vacant Lot on N B Street - waterfront	6.5	6.5	Na	Na	Na	Na
Parcel West of Church off SR 1160	1.1	0.8	Na	Na	Na	Na
West Street School	2.5		Na	Na	Na	Na
Total Other Parcels	23.4	19.6	0	0	0	0
Subtotals						
Educational Subtotal	825.1	552.2	14,747	462.5	15,922	474
Other Subtotal	23.4	19.6	419	0.0	419	0
System Totals	848.5	572	15,166	462	16,341	474

Capacity Calculations

The number of students in a school is directly related to its attendance boundary. If you change the capacity of a school by creating additional classrooms, you can increase the attendance boundary. Therefore, it is important to understand and have accurate numbers on how many students can be supported at a facility and still provide a complete program. Contained herein is a detailed analysis of the capacity of each school. It is broken down into various capacities to provide a full understanding of the calculations and the implications of attempting to operate schools at full capacity.

In 2013, the North Carolina General Assembly prescribed changes to the number of students allowed in individual classrooms from Kindergarten through the third grade. These mostly went unnoticed until 2017. As school systems began to understand the implication of the new legislation, they appealed to lawmakers for more time to address the changes and achieved this through HB-90. This law allows school systems four years to comply with 115C-301 by gradually reducing the number of K-3 students in each classroom with the ultimate date of transition being the start of the 2021-2022 school year.

NC Statute 115C-301. Allocation of teachers; class size.
(c) Maximum Class Size for Kindergarten Through Third Grade. - The average class size for kindergarten through third grade in a local school administrative unit shall at no time exceed the funded allotment ratio of teachers to students in kindergarten through third grade. At the end of the second school month and for the remainder of the school year, the size of an individual class in kindergarten through third grade shall not exceed the allotment ratio by more than three students. In grades four through 12, local school administrative units shall have the maximum flexibility to use allotted teacher positions to maximize student achievement.

The reductions in the number of students in Kindergarten-3 are:

	Old	New
Kindergarten	21	18
First Grade	21	16
Second Grade	21	17
Third Grade	21	17

These reductions have a significant impact to the school's ability to serve the elementary level population and potentially impact secondary classrooms and classroom capacities as well.

Capacity Calculations

Shown here are the capacities of each school for the start of the 2021 school year. At this point, HB-90 and GS 115C-301 will be in full effect and no additional changes to the number of students in each classroom have been indicated by the state legislature at this time.

The ADM Capacity counts every seat in every viable classroom.

Efficiency refers to how close the school can get to the Full ADM without one of the grade levels being over capacity.

The Operational Capacity is the number that should be used for planning purposes.

Core Capacity refers to the number of students that the Cafeteria and Media Centers can support.

Craven County Schools

Student Capacity

2021 Capacity Summary

Facility	ADM Capacity	Efficiency	Operational Capacity	Core Capacity
Elementary				
A. H. Bangert	386	80.8%	312	650
Arthur W. Edwards	626	92.0%	576	628
Ben D. Quinn	386	80.8%	312	728
Bridgeton	516	90.7%	468	695
Brinson Memorial	772	92.5%	714	813
Creekside	516	90.7%	468	695
Graham A. Barden	318	90.6%	288	720
Havelock	422	73.9%	312	699
J.T. Barber	376	83.0%	312	727
J.W. Smith	609	83.7%	510	728
Oaks Rd Academy	368	84.8%	312	536
Roger Bell New Tech	412	75.7%	312	728
Trent Park	376	83.0%	312	604
Vanceboro-Farm Life	516	90.7%	468	699
W.J. Gurganus	402	77.6%	312	728
Elementary Subtotal	7,001	84.70%	5,988	10,376
Middle				
Grover C. Fields - No Data	722	97.0%	700	1,021
H.J. MacDonald	888	97.0%	861	1,189
Havelock Middle	566	97.0%	549	769
Tucker Creek	686	97.0%	665	937
West Craven	758	97.0%	735	860
Middle Subtotal	3,620	97.00%	3,511	4,776
High				
Havelock	1,253	100%	1,253	1,254
New Bern	1,733	100%	1,733	1,871
West Craven	1,140	100%	1,140	1,254
Craven Early College	218	100%	218	Na
Early College East	201	100%	201	Na
High Subtotal	4,545	100.00%	4,545	4,379
Total	15,166	93.90%	14,044	19,532

Numerix Solutions LLC

Numerix Solutions has provided a ten year population forecast based on historic and current student data. This information will be useful in verifying that schools have sufficient capacity and for any redistricting which may occur. Population projections are given by campus, by year, for each of the next ten years. It also takes into account the reductions based on HB-90.

Craven County Schools Membership Forecast *DRAFT*

1. Historic Month-2 ADM supplied by NC DPI. 2019-20 Month-1 ADM supplied by NC DPI. Pre-K supplied by CCS.

2. Building capacities supplied by Smith-Sinnett Architecture, version 7/9/19.

3. Forecast generated by Numerix Cohort-Feeder model. Projected RLB annual gain = 1.50%, 2019 to 2024. K-12 average annual gain = 2.46%, 2019-20 to 2028-29.

DRAFT

	Grades	Capacities			Pre-K	Historic Month-2 ADM						Month-1	Forecasted Month-2 ADM									
		2019-20	2020-21	2021-22	2019-20	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
Elementary																					
Albert H Bangert Elementary	PK-5	342	324	312	16	323	425	432	428	442	**457**	450	440	433	419	414	404	402	400	403	408
Ben D Quinn Elementary	PK-5	355	336	312	24	519	476	466	438	433	**458**	468	452	444	430	419	414	411	410	412	418
Bridgeton Elementary	K-5	468	468	468		458	469	414	403	351	**352**	345	343	343	347	332	330	327	327	329	334
Brinson Memorial Elementary	K-5	780	756	714		665	679	689	687	593	**549**	541	550	538	537	535	545	542	541	545	553
Creekside Elementary	K-5	468	468	468		594	505	544	514	518	**514**	526	535	544	540	544	545	541	540	544	552
Vanceboro-Farm Life Elementary	PK-5	468	468	468	36	634	607	609	595	587	**591**	570	540	522	506	512	505	502	501	505	512
Graham A Barden Elementary	PK-5	356	357	288	18	302	283	311	273	274	**265**	273	276	285	292	288	291	290	289	292	296
Havelock Elementary	PK-5	342	324	312	11	388	343	332	350	320	**304**	318	341	357	360	376	382	380	379	382	387
J T Barber Elementary	PK-5	381	362	312	37	370	340	341	286	289	**240**	239	246	249	256	265	265	264	264	266	269
James W Smith Elementary	PK-5	570	540	510	49	604	440	433	441	408	**428**	399	384	364	363	358	355	353	353	356	360
Oaks Road Academy	K-5	342	324	312		425	425	425	416	397	**386**	371	349	342	326	327	323	322	321	324	328
Roger Bell New Tech Academy	K-5	342	324	312		331	361	386	362	340	**380**	404	403	421	417	439	432	429	427	430	436
Trent Park Elementary	K-5	342	324	312		418	459	450	432	432	**433**	434	435	427	411	396	390	388	387	389	395
W Jesse Gurganus Elementary	K-5	342	324	312		502	394	366	386	386	**407**	391	371	367	356	359	337	335	335	337	342
Arthur W Edwards Elementary	K-5	624	624	576		387	647	629	630	625	**588**	584	579	583	573	567	557	554	553	557	566
SubTotal		6521	6324	5988	191	6920	6853	6827	6641	6395	**6352**	6314	6243	6219	6133	6132	6076	6039	6028	6069	6157
Middle																					
Grover C Fields Middle	6-8	700	700	700		569	576	560	554	581	**563**	572	534	526	508	508	495	513	532	543	529
H J MacDonald Middle	6-8	861	861	861		936	761	793	814	847	**847**	789	776	769	783	750	747	722	720	700	680
Havelock Middle	6-8	549	549	549		443	375	392	382	400	**418**	409	403	383	402	386	419	439	477	481	467
Tucker Creek Middle	6-8	665	665	665		416	488	495	495	545	**520**	542	553	528	512	487	521	525	529	504	490
West Craven Middle	6-8	735	735	735		832	818	788	752	756	**758**	756	748	726	698	644	624	613	610	596	580
SubTotal		3510	3510	3510		3196	3018	3028	2997	3129	**3106**	3068	3013	2933	2902	2775	2807	2813	2869	2824	2747
High																					
Havelock High	9-12	1253	1253	1253		1113	1109	1086	1065	1007	**1036**	1078	1126	1214	1191	1223	1171	1165	1146	1161	1219
New Bern High	9-12	1733	1733	1733		1693	1690	1711	1712	1665	**1615**	1703	1748	1755	1759	1711	1656	1645	1610	1592	1589
West Craven High	9-12	1140	1140	1140		969	1014	967	971	935	**774**	764	779	802	806	818	786	754	721	685	667
SubTotal		4126	4126	4126		3775	3813	3764	3748	3607	**3425**	3545	3653	3770	3756	3752	3613	3565	3477	3438	3475
Special/Alternative																					
Craven Early College High	9-13	n/a	n/a	n/a		203	218	214	210	218	**218**	218	218	218	218	218	218	218	218	218	218
Early College EAST High	9-13	n/a	n/a	n/a		215	210	202	191	187	**201**	201	201	201	201	201	201	201	201	201	201
SubTotal		n/a	n/a	n/a		418	428	416	401	405	**419**	419	419	419	419	419	419	419	419	419	419
System Total (excluding Spec/Alt)		**14157**	**13960**	**13624**	**191**	**13891**	**13684**	**13619**	**13386**	**13131**	**12883**	**12927**	**12910**	**12922**	**12792**	**12659**	**12496**	**12416**	**12374**	**12331**	**12378**
System Total (inluding Spec/Alt)		n/a	n/a	n/a	**191**	**14309**	**14112**	**14035**	**13787**	**13536**	**13302**	**13346**	**13329**	**13341**	**13211**	**13078**	**12915**	**12835**	**12793**	**12750**	**12797**

Capacity Legend

< 50%	90% - 100%	100% - 110%	> 110%

Forecast generated by Numerix LLC

DRAFT: 11/26/19

Building Life Cycle

We typically think of buildings as permanent. However, buildings do not last forever and, in the United States, are typically razed at about seventy to eighty years of age. Buildings built in the 1930's to 1940's were usually well constructed. Buildings built during the baby boom were not built to the same standards and often do not last seventy years before demolition occurs.

The graphic below indicates the relative youthfulness of the buildings used by Craven County Schools. The green is youthful and will require some maintenance to keep in good operational condition. The orange indicates when the building is moving into a state where maintenance will become more critical, and the red section shows a higher level of maintenance is needed and building replacement should be considered.



The table to the right shows the number of square feet per decade of the buildings currently being used by Craven County Schools. Approximately half of the total square footage was constructed before 1980. A building built in 1980 would be about half way through its life cycle, when repair costs begin to increase dramatically.

No facilities have been constructed in the past ten years.

Craven County Schools

Age of Building Square Footage

11/25/2019

Year Range	Approximate Age	Square Footage	Percentage
1940-1950	> 70 yrs	0	0.00%
1950-1960	60-70 yrs	365,395	15.43%
1960-1970	50-60 yrs	235,085	9.93%
1970-1980	40-50 yrs	503,564	21.27%
1980-1990	30-40 yrs	204,050	8.62%
1990-2000	20-30 yrs	700,250	29.58%
2000-1010	10-20 yrs	359,003	15.16%
2010-2020	0-10 yrs	0	0.00%
Totals		2,367,347	

Flood Data

The North Carolina Floor Risk Information System (FRIS) uses topographic data and topographic information along with hydraulic and hydrologic models to create maps showing areas at risk of flooding. The information is updated when new topographic data is available and consensus is made on the impacts. Effective Base Flood Elevations (BFE) are the currently accepted flood zones. The Preliminary BFE's have yet to be fully vetted.

Flood Data												
Date	3/4/2019											
FRIS Data												
		Effective	Preliminary									
Facility	Building	**BFE**	BFE	BFE	**BFE**	BFE	Area of	Type	Flood	Other	BFE	Island
	Elevation	**100**	25	50	**100**	500	Impact		Source	Type	other	Potential
		1%		2%	**1%**	0.2%					max.	
Elementary												
AH Bangert Elem	14	12.3			9.6	11	Site	AE	Trent Tributary			Yes
AW Edwards Elem	27							X				Yes
Ben D Quinn Elem	27	8	6.5	7.8	9	12	Site	AE	Trent			Minimal
Bridgeton Elem	13	10			10.2	11	Site	AE	Mills Branch	Floodway		Yes
Brinson Memorial Elem	26		6.1	7.3	8	11	Site	X				Yes
Creekside Elementary School	22							X				Yes
G ABarden Elem	23							X				
Havelock Elem	25							X				Yes
J T Barber Elem	7	8	6.1	7.4	9	9	Building	AE	Neuse			Yes
J W Smith Elem	37							X				Yes
Oaks Road Elem	8	8		7.4	9	10	Building	AE	Neuse			Yes
Roger Bell Elem	27							X				Yes
Trent Park Elem	22							X				Minimal
Vanceboro Farm Life Elem	28							X				Yes
W J Gurganus Elem	30							X				Yes
Middle												
Grover C Fields Middle	18							X				Yes
H J MacDonald Middle	29							X				Yes
Havelock Middle	26							X				Yes
Tucker Creek Middle	28	8	5.6	6.7	8	8	Site	AE	Neuse			Yes
West Craven Middle	15	11.1	9.2	10.3	11.3	13.6	Site	AE	Neuse	Floodway	13.7	Yes
High												
HAVELOCK HS	28							X				Yes
Early College	28							X				Yes
Early College East	25							X				Yes
NEW BERN HS	25							X				Yes
WEST CRAVEN HS	10	11.2		10.3	11.3	13.6	Building	AE	Neuse			Yes
Other Facilities												
BOE	18						Site	X	Jimmies Creek			Yes
Bus Garage	6	8	6.1	7.4	9	9	Building	AE	Neuse			Yes
Child Nutrition Services	7	8	6.1	7.4	9	9	Building	AE	Neuse			Yes
FACILITIES SUPPORT SVCS												
GENERAL SVCS												
Preliminary information Date	6/30/2016											
Flood												
https://fris.nc.gov/fris/Index.aspx?FIPS=049&ST=NC&user=General%20Public#												

Deferred Maintenance

For this evaluation, a facility standard was created and used as the basis of comparison between the various schools. The standard established is based on the most recent schools which are now twenty years old. Even these facilities have potential improvements related to safety and security, as well as mechanical units which have aged out.

This chart is a summary of all potential improvements that have been identified at each campus and include a contingency of 10% for unforeseen changes and market fluctuations and 9% inflation, or 3% for 3 years.

The values are based on the most recent costs available at this time. **It is important to understand not every improvement at every school is necessary, and this does not represent a request for funds.** It is simply a tabulation of all items that should be considered when doing long range facility planning.

Craven County Schools	Deferred
Deferred Maintenance	Maintenance
12/17/2019	+ Contingency
	+ Inflation
Facility	+ Soft Costs
A. H. Bangert	$8,386,728
Arthur W. Edwards	$11,466,367
Ben D. Quinn	$4,842,383
Bridgeton	$2,267,079
Brinson Memorial	$11,645,020
Creekside	$2,287,478
Graham A. Barden	$5,419,131
Havelock	$1,657,151
J.T. Barber	$9,698,398
J.W. Smith	$4,728,564
Oaks Rd Academy	$6,319,761
Roger Bell New Tech	$4,914,468
Trent Park	$6,978,058
Vanceboro-Farm Life	$9,765,614
W.J. Gurganus	$4,995,502
Subtotal	$95,371,701
Grover C. Fields	$11,265,028
H.J. MacDonald	$21,087,484
Havelock Middle	$10,666,228
Tucker Creek	$6,305,134
West Craven	$10,372,723
Subtotal	$59,696,598
Havelock	$21,099,781
New Bern	$15,975,304
West Craven	$19,040,268
Early College	$37,131
Early College East	$153,887
Subtotal	$56,306,370
Central Offices	$1,725,232
Child Nutrition	$592,628
Bus Garage	$320,528
Facility Support	$467,957
Subtotal	$3,106,345
Total	$214,481,014

Facilities Condition Index (FCI)

Here each facility is reviewed by comparing the Deferred Maintenance costs to the cost of replacing the entire building at the same square footage. The replacement cost shown is based on a total project budget for replacement including all furniture, design, surveying and soil borings. The size of the buildings have the same overall building footprint as the existing in an effort to make an accurate comparison. This does not correct deficiencies in small rooms nor inadequacies in organization.

A higher FCI indicates the relative cost of improvements at a particular site are significant relative to replacing the building. As an example, A.H. Bangert at 41.40% indicates the cost to fix or repair all of the Deferred Maintenance items would be about 40% of the cost of a new building. This alone should not be taken as a definitive answer to retire the building. This should be closely compared with the age and overall condition of the building. In this case, about 78% of A.H. Banger's square footage is around 50 years of age, and spaces do not allow for modern education delivery methods.

Craven County Schools	Deferred Maintenance + Contingency + Inflation + Soft Costs	FCI As Same SF	Replacement at Same SF Total Project $348
12/17/2019			
Facility			
A. H. Bangert	$8,386,728	41.40%	$20,256,036
Arthur W. Edwards	$11,466,367	39.34%	$29,147,436
Ben D. Quinn	$4,842,383	23.24%	$20,839,980
Bridgeton	$2,267,079	7.99%	$28,378,356
Brinson Memorial	$11,645,020	30.91%	$37,674,828
Creekside	$2,287,478	7.73%	$29,609,232
Graham A. Barden	$5,419,131	27.29%	$19,856,532
Havelock	$1,657,151	6.68%	$24,793,260
J.T. Barber	$9,698,398	31.49%	$30,800,088
J.W. Smith	$4,728,564	17.25%	$27,416,832
Oaks Rd Academy	$6,319,761	35.64%	$17,730,600
Roger Bell New Tech	$4,914,468	22.62%	$21,730,512
Trent Park	$6,978,058	38.74%	$18,013,872
Vanceboro-Farm Life	$9,765,614	34.93%	$27,960,408
W.J. Gurganus	$4,995,502	23.97%	$20,839,980
Subtotal	$95,371,701		$375,047,952
Grover C. Fields	$11,265,028	26.04%	$43,255,008
H.J. MacDonald	$21,087,484	39.89%	$52,862,940
Havelock Middle	$10,666,228	33.61%	$31,730,640
Tucker Creek	$6,305,134	12.89%	$48,906,528
West Craven	$10,372,723	28.95%	$35,834,952
Subtotal	$59,696,598		$212,590,068
Havelock	$21,099,781	30.32%	$69,583,992
New Bern	$15,975,304	19.38%	$82,434,936
West Craven	$19,040,268	32.28%	$58,988,784
Early College	$37,131		
Early College East	$153,887		
Subtotal	$56,306,370		$211,007,712
Central Offices	$1,725,232	26.91%	$6,412,000
Child Nutrition	$592,628	17.94%	$3,303,440
Bus Garage	$320,528	5.95%	$5,390,280
Facility Support	$467,957	5.40%	$8,659,000
Subtotal	$3,106,345		$23,764,720
Total	$214,481,014		$822,410,452

Potential Additions and Renovations

The table to the right depicts potential square foot expansions and potential renovations at each of the existing facilities. The numbers are based on current construction costs per square foot and include three percent inflation for three years. A contingency is also included in the final numbers. In many ways this list is similar to the Deferred Maintenance list, in that it includes every potential expansion at every school, but in reality, expansions at every school are not needed. It is a list of how far it is reasonable to expand each individual school.

This and the Deferred Maintenance section must be carefully reviewed and combined to create an appropriate solution for Craven County and Craven County Schools.

Potential New / Other Facilities

The costs for potential new facilities are shown below. The numbers include some land costs, contingency and inflation numbers, furniture and equipment along with all design, testing, and legal costs.

Just like the Deferred Maintenance and Additions and Renovations numbers, these numbers constitute options that should be considered during any long range planning exercise. The first numbers indicate the Student Capacity, with the second being the Core Capacity. These are followed by the estimated cost for each school.

At this time a new high school is not one of the anticipated needs; several new high schools in the state are in the $70 million range.

Potential New Facilities	Student	Core	Total Project Budget
Elementary	600	700	$30,000,000
Elementary	800	900	$34,500,000
Middle	800	950	$46,500,000

Craven County Schools	
Addition / Rennovation Options	
12/17/2019	
	Additions
Facility	Renovations
A. H. Bangert	$8,388,415
Arthur W. Edwards	$3,093,776
Ben D. Quinn	$6,610,392
Bridgeton	$2,642,735
Brinson Memorial	$18,327,392
Creekside	$2,737,118
Graham A. Barden	$2,629,645
Havelock	$4,484,160
J.T. Barber	$1,414,187
J.W. Smith	$7,951,173
Oaks Rd Academy	$2,126,324
Roger Bell New Tech	$6,562,684
Trent Park	$20,694,931
Vanceboro-Farm Life	$3,140,820
W.J. Gurganus	$9,348,833
Subtotal	$100,152,584
Grover C. Fields	$10,931,883
H.J. MacDonald	$17,951,587
Havelock Middle	$8,527,109
Tucker Creek	$6,471,751
West Craven	$11,142,893
Subtotal	$55,025,223
Havelock	$11,179,869
New Bern	$27,884,812
West Craven	$13,070,848
Early College	
Early College East	
Subtotal	$52,135,529
Central Offices	
Child Nutrition	
Bus Garage	
Facility Support	
Subtotal	$0
Total	$207,313,336

Key Points of Consideration

It is often difficult to determine the overall value of a facility to the community. This report uses multiple evaluation criteria in order to help make decisions on what an appropriate solution is for each school. After reviewing multiple data points, several buildings continue to represent decision points. This still does not define the value of the building to the community, but it is a practical approach to ensure all understand the conditions at particular facilities. On the following pages are several key issues that contribute to making an informed decision on the state of the building. It is important to keep in mind that almost any facility can be renovated, adding years to its service.

The Numbers

After this section and the recommendations portion is a series of tables that describe much of what is presented here. It does not include every topic listed and may include other issues related to a particular site.

Energy Consumption

Some buildings are more energy efficient than others. Over the 50 to 70 year life of a building, the energy costs will far exceed the first cost of construction. Understanding which buildings are using the most energy is a reasonable data point to have in determining if a facility has an issue that can be fixed or if it will continue to use a disproportionate amount of resources.

Work Orders

Just like a car, buildings need repairs and some need more than others. By looking at the number of work order requests sent to the Maintenance Department, one can get an idea of which buildings need more care than others. Some schools will request repairs of minor issues while others will only ask for help on the largest issues, and that must be taken into account when considering this data.

Flood Plain

As a coastal community with multiple rivers and streams within the county, it is reasonable to assess the risks associated with low lying buildings. There are several buildings that are within the 100 year flood plain, and several more sites have a portion of the parcel within the same flood zone. All of the sites noted have seen significant damage in the last several decades related to major hurricane events (Floyd, Matthew, Florence), as well as typical flood events.

Age of Facilities

It is important to look at the overall age of a building in determining what a facility's future might be. Most buildings have a reasonable life span of between 50 to 80 years. Extensions to the life span can be made but will require significant investment to maintain and/or upgrade. It is also important to note that many schools have had additions added since the first building was placed on the site and each needs to be evaluated based on its function and appropriateness. This can be seen quickly as a ratio of the buildings' age in relation to an estimated life cycle. In this case, a standard of 70 years is used as the denominator.

Remaining Life

Not all buildings were built with the same materials, nor in the same way. Those two issues relate directly to how many years the building will last. Based on the construction type and age, a remaining life can be applied to each. Simply because a building has exceeded its numerical life cycle does not mean it is unfit for use, but it is an indication that a significant improvement is warranted.

NCDPI Evaluation Building and Site

Prior to demolition of any education facility in North Carolina, the NC Department of Public Instruction requires an evaluation of both the building and the site. This is not a suggestion that any building should be removed from service, but it does provide a basis of comparison.

For the building itself, a value of twelve (12) or less suggests the building is not appropriate in its existing state, nor would it be a reasonable asset if fully renovated and its continued use is not recommended. Additional investment in this facility in the form of a renovation would not be in the best use of the taxpayer, and an alternative solution should be explored.

If the site falls below a value of seven (7), NCDPI suggests moving to another location due to size or other environmental issues.

Square Footage

It is important to provide equity to both students and staff in each facility. Several of the older buildings have very limited square footage in the instructional spaces, while the newer buildings meet or exceed the Recommended Facility Standards. The shift to larger classrooms began in July of 1987 when the North Carolina General Assembly enacted legislation know as the Basic Education Program (BEP). This was administered by NCDPI and mandated larger classrooms to support technology and emerging changes to pedagogy. From that point forward, new schools had larger classrooms creating an inequity with the ones built just a few years before.

Student and Core Capacity

Craven County Schools has nine facilities that are considered “Smaller Schools”. These are schools with less than a 450 student ADM Capacity. The ADM Capacity counts every seat in every classroom, and as discussed elsewhere in this document, it is impossible to fully fill a school in this manner. The result is that all nine of these schools will only support around 300 students each. The downside of having this many small schools is related to operational costs where each must be fully staffed. A more economical approach would be to have somewhat larger schools to achieve an economy of scale with the goal being to create an equity of instructional and support services for all students.

The Core Capacity, which relates to the square footage of the Cafeteria and Media Center, is oversized at every facility. This is beneficial in preserving lunch periods should the population at a particular site grow quickly.

Facility Condition Index

This simple exercise divides the deferred maintenance by the value of the facility. When this value is high, it means the repair costs are nearing the total value of the building. Conversely, a low number means fewer funds are needed to bring the facility up to standards. There are several ways to view the value of the school, which is not typically found for sale in any community. The first is to compare the Deferred Maintenance against the insured value of the building. This will take some depreciation into consideration. Another way is to consider the replacement costs. In all cases, the evaluation criteria and the assessment methodology must be the same.

Educational Adequacy

Even twenty years ago, the classroom did not look like it does today. Technology has a lot to do with that change, but so does the way in which instruction is now aligned to match the workforce demands for graduates. Gone are the strict Lecture Learn environments where a teacher stood at a chalk board and students were expected to sit and take notes. Today every wall of the classroom is used for instruction. Students must work on individual, small group, and large group projects which requires additional square footage and the flexibility to adjust the classroom to expected learning outcomes. Additional space is needed for STEM classrooms across the grade levels, as well as College and Career Ready programs at the high school level.

This also applies to how students access classrooms. In several Craven County schools classrooms were designed with first costs in mind and required students to walk through an interior classroom to get to their classroom on the other side. These spaces are, for the most part, no longer used for instruction. They act as needed breakout rooms, but are much larger than needed constituting underutilized spaces.

Included in this category are spaces that are not designed to meet student needs. We know that in order to keep students engaged they need the proper environment. One known factor to improve student performance is to have natural light in each classroom. Temperature issues along with fresh air and the quality of the supplemental light all have impacts on the building occupants and on learning specifically.

Deferred Maintenance Cost / Student and Cost / Square Footage

Another set of indicators for the state of the facilities is to compare the cost of improvements to the number of students served by a particular building and the total square footage of the building. This is a relativistic comparison between the schools since there is no set cost per student nor cost per square foot that indicates future investment is not practical. The comparison is only reasonable between like facilities, meaning the values for an elementary school cannot be compared to a middle or high school.

Recommendations

The following is an impartial assessment of the facilities, if significant renovations and other investments are not made to the buildings and infrastructure in the near future. This is not an all inclusive list, but it hits the major issues related to each school. As noted elsewhere, any building can be rejuvenated but may require nearly the same funding as building a new facility with a longer useful life. Comments such as discontinue or retire do not mean a facility should be abandoned or demolished. Careful consideration to the future use, housing a different program, or enlisted to other public service may be a good use of community assets.

Elementary Schools

A.H. Bangert

Retire this building in the next several years.
Issues include:

- Excessive Work Orders
- 8 Years Remaining Life
- DPI Building score of 6 (12 or below, renovation is not recommended)
- DPI Site score of 7 (7 or below, renovation is not recommended)
- Average square footage of classrooms is only 78% of Standard
- School has an operational capacity of only 312 students
- Site is 97% of the appropriate square footage

A.W. Edwards

Retire the building in the next several years.
Issues include:

- DPI Building score of 6 (12 or below, renovation is not recommended)
- Excessive cost of Deferred Maintenance (floor settlement)

Ben D. Quinn

Continue operation and investment in this facility.
Issues:
Small School with Operational Capacity of only 312

Bridgeton

Continue operation and investment in this facility.

Brinson Memorial

Retire / Replace portions of this building in the next several years.

- Security related issues
- Excessive Work Orders
- Age of building 66 years, 94% of life cycle, -6 years left on life expectancy
- DPI Building score of 3 (12 or below, renovation is not recommended)
- DPI Site score of 11 (7 or below, renovation is not recommended)(11 is deceptive)

Creekside

Continue operation and investment in this facility.

Graham A. Barden

Retire this facility in the next several years.

Issues:

- Excessive energy consumption
- Age of building at 66 years, 94% of life expectancy, -6 years remaining on life expectancy
- DPI Building score of 10 (12 or below, renovation is not recommended)
- DPI Site score of 8 (7 or below, renovation is not recommended)
- Small school with Operational Capacity of only 288 students
- Site is only 71% of recommended

Havelock Elementary

Continue operation and investment in this facility.

J.T. Barber

Discontinue PK-5 operations at this school in next several years.

Issues:

- Historic Building (high costs related to renovation)
- High Energy Consumption
- High Work Order Count
- Building within the 100 year flood zone
- Age of Building at 68 years, 97% of life cycle, -8 years remaining on life expectance
- DPI Building score of 8 (12 or below, renovation is not recommended) (historic is 4 of the 8 points)
- DPI Site score of 7 (7 or below, renovation is not recommended)
- Small School with operational capacity of only 312 students

James W. Smith

Continue operation and investment in this facility

Oaks Road

Retire / Replace this school in the next several years

Issues:

- Excessive Work Orders
- Building is in the 100 year flood plain
- Age of building is 61 years, 87% of life cycle, -1 year remaining on life expectancy
- Small School with operational capacity of only 312 students

Roger Bell

Continue operation and investment in this facility

Trent Park

Retire this facility in the next several years.
Issues:

- Age of building is 65 years, 92% of life cycle, - 5 years remaining on life expectancy
- DPI Building score of 9 (12 or below, renovation is not recommended)
- Small School with operational capacity of only 312 students
- Site is only 87% of recommended

Vanceboro Farm Life

Retire / Replace portions of this facility in next several years.
Issues

- Age of building is 66 years, 94% of life cycle, -6 years remaining on life expectancy

W. J. Gurganus

Continue operation and investment in this facility.

Middle Schools

Grove C. Fields

Retire this facility in the next several years.
Issues:

- Excessive Work Orders
- Age of building is 64 years, 91% of life cycle, -4 years remaining on life expectancy
- DPI Building score of 5 (12 or below, renovation is not recommended)
- Average square footage of classrooms is only 74% of Standard

H.J. MacDonald

Retire this facility in the next several years.
Issues:

- Excessive Work Orders
- DPI Building score of 11 (12 or below, renovation is not recommended)
- Air Quality Issues

Havelock Middle

Retire / Replace / Repurpose this facility in the next several years
Issues:

- Age of building is 63 years, 90% of life cycle, -3 years remaining on life expectancy

Tucker Creek

Continue operation and investment in this facility.
Issues:

- High Energy Use

West Craven Middle

Continue operation and investment in this facility.

High Schools

Havelock High

Continue operation and investment in this facility.

New Bern High

Continue operation and investment in this facility.

West Craven High

Continue operation and investment in this facility.

Early College East

Continue operation and potential expansion into Havelock Middle.

Craven County Schools	Highest		Flood	Oldest	% of	Remaining	DPI Building	DPI Site
Executive Summary	Energy	Work	Total Ft	Portion of	Overall	Life	12 or less	7 or less
	Use /	Orders	Below	Building	Life	Earliest	Don't	Don't
	Month	Counted	BFE	Years	Used	Retire	Renovate	Renovate
System Summary	Highest Energy Use / Month	Work Orders Counted 2018	100 Year Flood Total Ft. Below BFE	Oldest Portion of Building in Years	Percent of Overall Life Used	Remaining Life Based on Construction Type	DPI Building Score 12 or less Renovation not Recommended	DPI Site Score 7 or less Renovation not Recommended
Building	2018		Effective		70	Years	Discontinue	Discontinue
Elementary							Building	Site
AH Bangert Elem	1	436		52	74.3%	8	6	7
AW Edwards Elem	0	192		58	82.9%	12	9	13
Ben D Quinn Elem	3	259		28	40.0%	42	19	11
Bridgeton Elem	2	261		16	22.9%	64	25	12
Brinson Memorial Elem	2	355		66	94.3%	-6	3	11
Creekside Elementary School	0	295		12	17.1%	68	25	12
G A Barden Elem	5	267		66	94.3%	-6	10	8
Havelock Elem	2	195		16	22.9%	64	21	12
J T Barber Elem	4	335	-1	68	97.1%	-8	8	7
J W Smith Elem	0	268		31	44.3%	39	19	12
Oaks Road Elem	0	321	0	61	87.1%	-1	13	8
Roger Bell Elem	0	241		33	47.1%	47	19	10
Trent Park Elem	3	229		65	92.9%	-5	9	10
Vanceboro Farm Life Elem	1	189		66	94.3%	-6	14	13
W J Gurganus Elem	1	214		28	40.0%	42	19	12
Subtotal Average or Total		4057		44	63.4%	24	15	11
Middle								
Grover C Fields Middle	0	519		64	91.4%	-4	5	13
H J MacDonald Middle	3	634		49	70.0%	21	11	12
Havelock Middle	0	156		63	90.0%	-3	11	11
Tucker Creek Middle	6	285		22	31.4%	58	22	12
West Craven Middle	3	366		41	58.6%	29	17	11
Subtotal Average or Total		1960		48	68.3%	20	13	12
High								
Havelock High	4	597		48	68.6%	22	19	12
New Bern High	0	809		28	40.0%	52	20	12
West Craven High	8	592	-1.2	48	68.6%	22	19	10
Early College	Na	Na		Na	Na	Na	Na	Na
Early College East	Na	Na		Na	Na	Na	Na	Na
Subtotal Average or Total		1998		41	59.0%	32	19	11
Other Facilities								
BOE Central Offices				51	72.9%	9	Na	Na
Child Nutrition Warehouse			-1	63	90.0%	-3	Na	Na
Bus Garage				11	15.7%	49	Na	Na
FACILITIES SUPPORT SVCS				68	97.1%	-8	Na	Na
Subtotal Average or Total				48.25	68.93%	11.75	Na	Na
Total or Avearge	Na	8015	Na	45	64.9%	22	16	11

Craven County Schools	Adequacy	Capacity	Capacity	Capacity		Deferred	Deferred
Executive Summary	Classroom	ADM	Operational	Core		Maintenance	Maintenance
	SF relative					Cost Per	Cost Per
	to					Student	Square Foot
System Summary	Adequacy of Classroom Compared to Square Footage of Standard	ADM Capacity which counts every seat in every classroom	Operational Capacity which considers Differential Class Sizes and First Need of Mobile units	Core Capacity related to the Cafeteria and Media Center Square Footage	Site Size relative to Standards (Entire Site Including Wetlands)	Deferred Maintenance Costs Per Student	Deferred Maintenance Costs Per Square Footage
Building	Standard				Site Size		
Elementary							
AH Bangert Elem	78.17%	386	312	650	97.3%	$21,727	$144
AW Edwards Elem	83.39%	626	576	628	94.2%	$18,317	$137
Ben D Quinn Elem	86.70%	386	312	728	455.2%	$12,545	$81
Bridgeton Elem	103.78%	516	468	695	162.6%	$4,394	$28
Brinson Memorial Elem	82.50%	772	714	813	193.3%	$15,084	$108
Creekside Elementary School	103.43%	516	468	695	193.9%	$4,433	$27
G A Barden Elem	83.44%	318	288	720	71.0%	$17,041	$95
Havelock Elem	102.80%	422	312	699	104.3%	$3,927	$23
J T Barber Elem	86.83%	376	312	727	121.5%	$25,794	$110
J W Smith Elem	93.77%	609	510	728	296.6%	$7,764	$60
Oaks Road Elem	87.27%	368	312	536	132.1%	$17,173	$124
Roger Bell Elem	85.44%	412	312	728	191.6%	$11,928	$79
Trent Park Elem	84.69%	376	312	604	86.9%	$18,559	$135
Vanceboro Farm Life Elem	85.75%	516	468	699	435.3%	$18,926	$122
W J Gurganus Elem	87.23%	402	312	728	232.6%	$12,427	$83
Subtotal Average or Total	89.01%	7,001	5,988	10,376	Na	$14,003	$90
Middle							
Grover C Fields Middle	74.42%	722	700	0	138%	$15,603	$91
H J MacDonald Middle	81.94%	888	861	1,021	226%	$23,747	$139
Havelock Middle	82.13%	566	549	1,189	104%	$18,845	$117
Tucker Creek Middle	89.22%	686	665	769	312%	$9,191	$45
West Craven Middle	83.98%	758	735	937	238%	$13,684	$101
Subtotal Average or Total	82.34%	3,620	3,511	3,916	Na	$16,214	$98
High							
Havelock High	92.08%	1,253	1,253	0	4253%	$16,839	$106
New Bern High	91.61%	1,733	1,733	0	4733%	$9,218	$67
West Craven High	90.42%	1,140	1,140	1,254	4140%	$16,702	$112
Early College	Na	201	201				
Early College East	Na	218	218				
Subtotal Average or Total	91.37%	4,126	4,126	1,254	Na	$14,253	$95
Other Facilities							
BOE Central Offices	Na	Na	Na			Na	Na
Child Nutrition Warehouse	Na	Na	Na			Na	Na
Bus Garage	Na	Na	Na			Na	Na
FACILITIES SUPPORT SVCS	Na	Na	Na			Na	Na
Subtotal Average or Total						Na	Na
Total or Avearge	87.6%	14,747	13,625	15,547	Na	$14,823	$95

Steps Following Completion of Long Range Facility Needs Assessment (Document)

From this point, there are various ways to come to a consensus of what actions should be taken based on the information found in this book. Several different approaches have been considered in the past to varying levels of success. The following is one option that has been used in similar school districts.

The next step after this document is published is to ensure that all key stakeholders are made fully aware of the information contained within this assessment. It often takes some time and additional meetings to explain the relationship of several critical data points. This may be a series of board workshops to review the document with staff and consultants or the creation of a Facilities Committee dedicated to Long Range Planning. The committee may consist of board members and key staff along with County Commissioners, the County Manager, and often the County Finance Officer. The result of these meetings is usually a prioritization of the proposed investments independent of cost.

The assessment team will then re-evaluate the series of priorities and develop several options for consideration, including the cost of each item. The options can then be vetted along with their associated costs in an effort to determine a best approach that aligns with funds available. The final result is a plan to address needs at the schools that supports the overall community and their needs.

A variety of funding methods exist and all should be entertained in an effort to realize the identified improvements.

Executive Summary Conclusion

The Long-Range Facility Needs Assessment relies on data collected and organized over the course of the past year. The data is objective and statistically sound. It is up to the Craven County Board of Education, Craven County Commissioners, and the greater community of Craven County itself to determine what steps, if any, will be taken to address the needs documented herein. Smith Sinnett Architecture and Numerix Solutions are prepared to provide clarification on the document and additional support as needed.

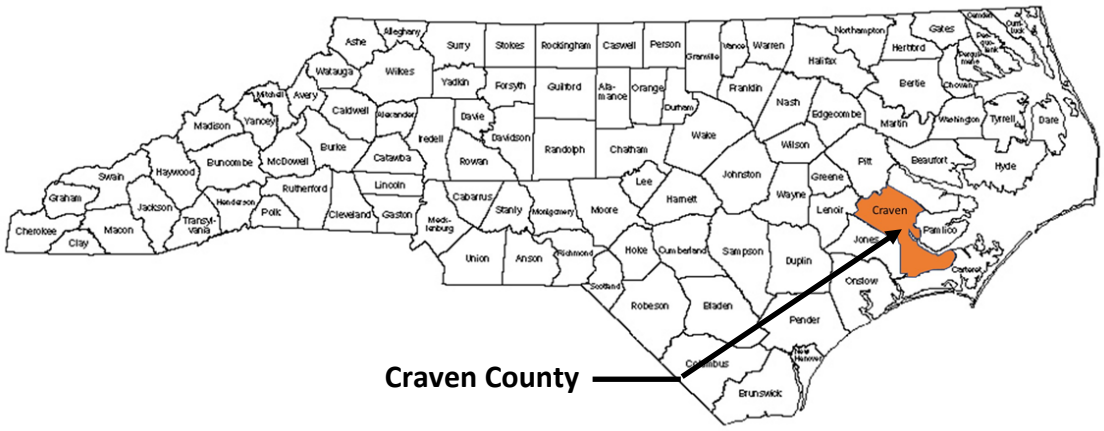
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Demographics Analysis

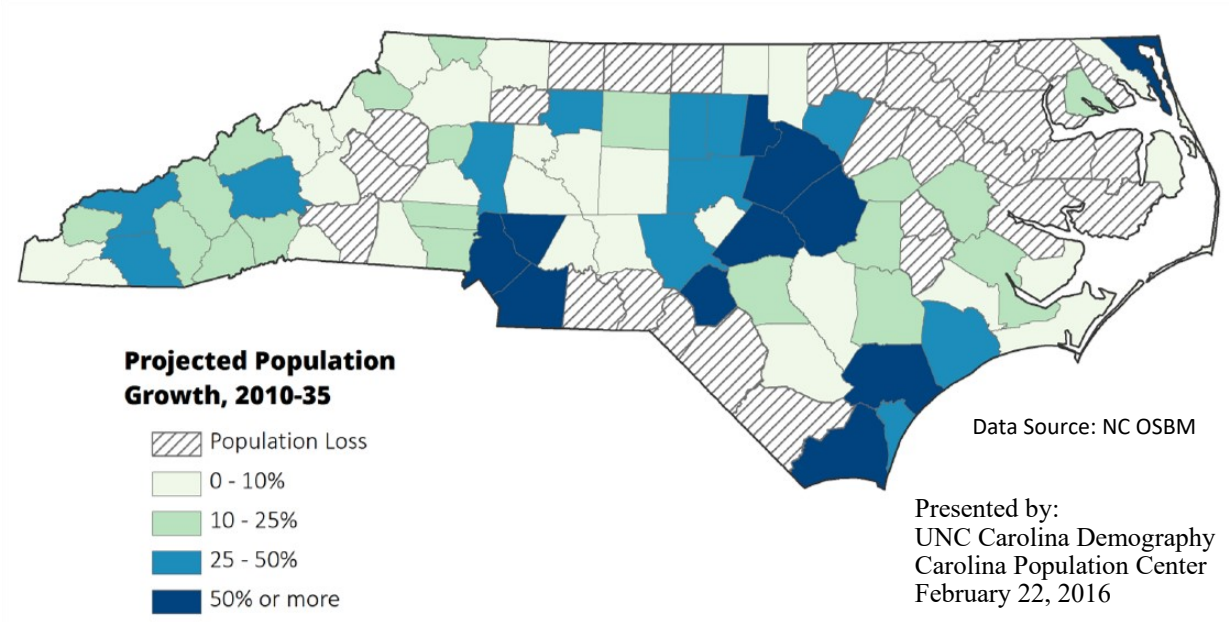
Regional and Local

Overview

Craven County was initially established as Archdale Precinct of Bath County in the 1700's. It was ultimately named Craven County in 1712. It is approximately 96,406 square miles and is home to MCAS New River.



Population growth has occurred in North Carolina somewhat unevenly. Major metropolitan areas continue to attract families as the overall population of the state continues to grow. The map below shows the projected population growth for approximately the next twenty years. The map was created by UNC Carolina Demography using data by the NC Office of State Budget and Management. The light green on Craven County shows anticipated growth.



Comparative Size of School District

Compared to the other 115 public school districts in NC, Craven County ranks 27th in overall K-12 ADM population. Ranked the 27th largest school system in the state, Craven County Schools was supporting 13,111 students at the end of the first month for the 2019-20 school year.

Reported ADM
2019-2020 (Month 1)

LEA Name	Month 1	Rank
Carteret	8,058	44
Craven	13,111	27
Duplin	9,596	37
Edgecombe	5,574	58
Greene	2,866	84
Jones	1,021	112
Lenoir	8,458	42
Nash-Rocky Mount	14,855	24
Onslow	26,598	11
Pamlico	1,240	108
Pender	9,513	38
Pitt	23,343	14
Wayne	17,847	21
Wilson	10,884	35

Components of Population Change

This table compares the projected population of 2020 to 2030 and describes where any potential growth or reduction in the population originates. The Numeric column describes the overall population change in the decade.

Projected Population Change in North Carolina Counties: 2020-2030

	Total Population		Population		Components of Change			
County	July 2020 Projection	July 2030 Projection	Numeric	Percent	Births	Deaths	Natural Increase	Net Migration
Beaufort	47,363	46,953	-410	-0.9	4,756	7,097	-2,341	1,931
Carteret	71,582	76,957	5,375	7.5	6,359	10,071	-3,712	9,087
Craven	103,588	103,616	28	0	13,981	11,252	2,729	-2,701
Duplin	59,234	57,655	-1,579	-2.7	7,580	6,158	1,422	-3,001
Edgecombe	52,696	51,165	-1,531	-2.9	5,836	7,017	-1,181	-350
Greene	21,301	21,300	-1	0	2,280	2,417	-137	136
Jones	10,100	10,100	0	0	991	1,410	-419	419
Lenoir	57,004	55,855	-1,149	-2	6,917	7,710	-793	-356
Nash	95,616	96,053	437	0.5	11,407	12,150	-743	1,180
Onslow	203,464	225,971	22,507	11.1	34,362	13,475	20,887	1,620
Pamlico	13,311	13,495	184	1.4	1,047	2,083	-1,036	1,220
Pender	64,820	76,632	11,812	18.2	7,736	7,463	273	11,539
Pitt	182,401	197,470	15,069	8.3	22,204	15,689	6,515	8,554
Wayne	126,560	134,448	7,888	6.2	16,742	13,752	2,990	4,898
Wilson	82,836	88,579	5,743	6.9	10,183	10,009	174	5,569

Source: North Carolina OSBM, Standard Population Estimates, Vintage 2017 and Population Projections, Vintage 2018
Sourced: 11/11/19

Long Range Population Projection

A longer range projection by the OSBM shows only a slight growth in Craven County by the year 2035. This is in contrast to many of the coastal counties which are projected to have significant population loss.

School age Students and Potential Population Growth

The chart below shows the breakdown of the population by age bracket. The darker green age groups are the typical school age populations. This age group is closely tied to the next two age brackets comprised of those individuals between nineteen and forty-four years of age, who are in their childbearing years. When looking at the Median Age, Craven has a relatively youthful population in relation to many of the other counties in the region.

Population Overview, 2010-2035

	Population				
County	July 2020	July 2025	July 2030	July 2035	Growth 2020-2035
Beaufort	47,363	47,161	46,953	46,751	-889
Carteret	71,582	74,244	76,957	79,674	9,951
Craven	103,588	103,609	103,616	103,620	405
Duplin	59,234	58,369	57,655	57,067	-2,875
Edgecombe	52,696	51,931	51,165	50,400	-3,910
Greene	21,301	21,298	21,300	21,301	252
Jones	10,100	10,099	10,100	10,099	-100
Lenoir	57,004	56,429	55,855	55,283	-3,008
Nash	95,616	96,019	96,053	96,059	1,766
Onslow	203,464	214,719	225,971	237,223	43,156
Pamlico	13,311	13,404	13,495	13,591	442
Pender	64,820	70,725	76,632	82,534	24,737
Pitt	182,401	189,936	197,470	205,004	29,414
Wayne	126,560	131,855	134,448	138,244	12,960
Wilson	82,836	85,610	88,579	91,573	10,230

Source: North Carolina OSBM, Standard Population Estimates, Vintage 2017 and Population Projections, Vintage 2018
11/11/2019

2020 Age Groups

	Age									
County	0-5	6-11	12-14	15-18	19-24	25-44	45-64	65-100	Total	Median Age
Beaufort	2,765	3,031	1,717	2,348	3,149	9,881	12,471	12,001	47,363	46.5
Carteret	3,585	4,008	2,210	2,993	4,478	15,892	20,073	18,343	71,582	48.4
Craven	8,591	9,712	4,517	5,133	11,048	23,656	22,865	18,066	103,588	36.4
Duplin	4,267	4,634	2,531	3,256	4,833	14,470	14,419	10,824	59,234	38.9
Edgecombe	3,536	3,942	2,197	2,896	3,677	11,590	13,918	10,940	52,696	42.4
Greene	1,269	1,433	843	1,058	1,617	5,579	5,847	3,655	21,301	41.2
Jones	607	660	380	415	577	2,645	2,566	2,250	10,100	42.5
Lenoir	3,883	3,963	2,297	2,940	4,134	13,365	14,797	11,625	57,004	41.5
Nash	6,436	6,326	3,465	4,935	6,912	22,423	26,484	18,635	95,616	42.5
Onslow	23,254	24,228	8,554	9,677	33,132	50,759	33,659	20,201	203,464	25.8
Pamlico	573	623	394	509	729	3,066	3,487	3,930	13,311	50.3
Pender	4,019	4,256	2,411	3,261	4,788	16,158	17,764	12,163	64,820	41.9
Pitt	12,585	13,301	6,899	10,337	28,880	45,433	40,007	24,959	182,401	32.7
Wayne	9,794	10,291	5,354	6,769	10,504	31,976	30,682	21,190	126,560	37.5
Wilson	5,831	6,103	3,341	4,342	5,963	20,820	21,047	15,389	82,836	39.9

Source: OSBM
11/11/2019

Student Population

Student Population

As one of the two key documents developed for the Long Range Plan, a school membership forecast was developed by Mike Miller of Numerix LLC out of Charleston, SC. Mr. Miller is a mathematician by trade and refined many of the processes currently used by North Carolina State University's Operations Research in Education Labs (OREd) at the Institute of Transportation Research and Education (ITRE). For over 25 years, OREd has provided population forecasts and other school planning tools for many NC and VA school systems. Mr. Miller's work expanded OREd's understanding of growth / decline and predictive analytics by integrating Geographic Information Systems (GIS) analysis into membership forecasting. Additionally, he has extensive knowledge and expertise with site selection and optimization of transportation routes.

His documents are based on data specific to Craven County and provide both a history and a snapshot of the student population growth / decline the school system will likely deal with during the next ten years. To develop this information, trends in historic cohorts by grade are analyzed and projected by attendance area. School-level data is aggregated and reconciled to system-wide trends for a final forecast. Connecting this statistical analysis with GIS data provides a spatial understanding of student population density and transportation constraints within the district.

The following tables show the forecast population at each school and is organized by the school's feeder patterns. The information is formatted in two different ways to help understand where surplus capacity or additional seats are needed.

The first shows how many students will be at a particular campus in a given year and is color coded to depict the school's percentage of its capacity. The second provides the number of open or, where applicable, needed seats at each school.

Reading the Population Forecast Tables (Following Pages)

The tables on the following pages depict the forecast population at every school in the system. The columns on the left side of the chart show the school's Student Capacity for a given year. Historically these numbers were stable, but over the course of the next couple of years will change as HB-90 is implemented. Post 2021, the numbers will again be stabilized. In every instance, the Operational Capacity was used . (See Capacity Calculations for a description of how that number is calculated.)

As you move right on the chart, you will see the forecast student population for a given year. These are color coded based on the percentage of the Operational Capacity.

The first chart (Historic Membership) shows the recent history of the school system and indicates that several facilities were exceeding their capacities. This is followed by the Membership Forecast, which due to HB-90 shows a completely different story. Next is the Utilization Forecast which provides a seat count showing how many additional seats are needed (-) or how many available or open seats (+) there are, and the last table ranks the schools with the most overcrowded at the top. The final page in this section is a map of the Attendance Boundaries for Craven County Schools.

Historic Membership (Bricks and Mortar Capacity)

The following table is a historic depiction of how full each school was in the recent past. This is based on historic ADM data as well as the capacity at that time. It uses the Operational Capacity for each school that aligns with that portion of HB-90.

The table shows West Craven Middle school and several elementary schools were over capacity. This aligns with temporary units at each campus once the population reaches 100% of the Operational Capacity. Those schools mostly in green don't have mobiles. In several cases some of the temporary spaces have been in place for some time.

For the most part, the middle and high school populations are below their stated capacity, and when looking at the totals for both, they appear to have sufficient reserves. The elementary schools have a fair number of schools that were overcrowded, and when taken as a group, they don't have as much excess capacity.

When looking at the ratio of students to capacity, all of the elementary schools for the 2014-15 school year totaled 97.9%. By the start of the 2018-19 school year that ratio was down to 94.0%.

Capacity Legend
< 90%
90% - 100%
100% - 110%
> 110%

	Capacities		Historic Month-2 ADM				
	Pre 2018	2018-19	2014-15	2015-16	2016-17	2017-18	2018-19
Elementary							
Albert H Bangert	378	360	323	425	432	428	442
Arthur W Edwards	630	624	387	647	629	630	625
Ben D Quinn	391	373	519	476	466	438	433
Bridgeton	504	468	458	469	414	403	351
Brinson Memorial	780	780	665	679	689	687	593
Creekside	504	468	594	505	544	514	518
Graham A Barden	353	351	302	283	311	273	274
Havelock E.	378	360	388	343	332	350	320
J T Barber	418	400	370	340	341	286	289
James W Smith	624	600	604	440	433	441	408
Oaks Road	378	360	425	425	425	416	397
Roger Bell New Tech	378	360	331	361	386	362	340
Trent Park	378	360	418	459	450	432	432
Vanceboro-Farm Life	504	468	634	607	609	595	587
W Jesse Gurganus	468	468	502	394	366	386	386
SubTotal	7,066	6,800	6,920	6,853	6,827	6,641	6,395
Middle							
Grover C Fields	700	700	569	576	560	554	581
H J MacDonald	861	861	936	761	793	814	847
Havelock M.	549	549	443	375	392	382	400
Tucker Creek	665	665	416	488	495	495	545
West Craven M.	735	735	832	818	788	752	756
SubTotal	3,510	3,510	3,196	3,018	3,028	2,997	3,129
High							
Havelock H.	1,253	1,253	1,113	1,109	1,086	1,065	1,007
New Bern	1,733	1,733	1,693	1,690	1,711	1,712	1,665
West Craven H.	1,140	1,140	969	1,014	967	971	935
SubTotal	4,126	4,126	3,775	3,813	3,764	3,748	3,607
Special/Alternative							
Early College	n/a	n/a	203	218	214	210	218
Early College EAST	n/a	n/a	215	210	202	191	187
SubTotal	n/a	n/a	418	428	416	401	405
System Total	**14,702**	**14,436**	**14,309**	**14,112**	**14,035**	**13,787**	**13,536**

Membership Forecast (Bricks and Mortar Capacity with HB 90)

Red on this chart indicates the school is more than 105% of its capacity and is severely over-crowded. Schools in this category will need additional space or programs will be sacrificed to comply with the new teacher student ratios.

Due to HB-90, the teacher to student ratios in K-3 continue to decrease over the next four years. These reductions in capacity are tracked and incorporated into this table.

Put succinctly, there will be capacity challenges at the elementary schools and only minimal issues at the middle and high school levels.

Capacity Legend
< 90%
90% - 100%
100% - 110%
> 110%

	Capacities			Month-1	Forecasted Month-2 ADM									
	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
Elementary														
Albert H Bangert	342	324	312	**457**	450	440	433	419	414	404	402	400	403	408
Arthur W Edwards	624	624	576	**588**	584	579	583	573	567	557	554	553	557	566
Ben D Quinn	355	336	312	**458**	468	452	444	430	419	414	411	410	412	418
Bridgeton	468	468	468	**352**	345	343	343	347	332	330	327	327	329	334
Brinson Memorial	780	756	714	**549**	541	550	538	537	535	545	542	541	545	553
Creekside	468	468	468	**514**	526	535	544	540	544	545	541	540	544	552
Graham A Barden	356	357	288	**265**	273	276	285	292	288	291	290	289	292	296
Havelock E.	342	324	312	**304**	318	341	357	360	376	382	380	379	382	387
J T Barber	381	362	312	**240**	239	246	249	256	265	265	264	264	266	269
James W Smith	570	540	510	**428**	399	384	364	363	358	355	353	353	356	360
Oaks Road	342	324	312	**386**	371	349	342	326	327	323	322	321	324	328
Roger Bell New Tech	342	324	312	**380**	404	403	421	417	439	432	429	427	430	436
Trent Park	342	324	312	**433**	434	435	427	411	396	390	388	387	389	395
Vanceboro-Farm Life	468	468	468	**591**	570	540	522	506	512	505	502	501	505	512
W Jesse Gurganus	342	324	312	**407**	391	371	367	356	359	337	335	335	337	342
SubTotal	6,521	6,324	5,988	**6,352**	6,314	6,243	6,219	6,133	6,132	6,076	6,039	6,028	6,069	6,157
Middle														
Grover C Fields	700	700	700	**563**	572	534	526	508	508	495	513	532	543	529
H J MacDonald	861	861	861	**847**	789	776	769	783	750	747	722	720	700	680
Havelock M.	549	549	549	**418**	409	403	383	402	386	419	439	477	481	467
Tucker Creek	665	665	665	**520**	542	553	528	512	487	521	525	529	504	490
West Craven M.	735	735	735	**758**	756	748	726	698	644	624	613	610	596	580
SubTotal	3,510	3,510	3,510	**3,106**	3,068	3,013	2,933	2,902	2,775	2,807	2,813	2,869	2,824	2,747
High														
Havelock H.	1,253	1,253	1,253	**1,036**	1,078	1,126	1,214	1,191	1,223	1,171	1,165	1,146	1,161	1,219
New Bern	1,733	1,733	1,733	**1,615**	1,703	1,748	1,755	1,759	1,711	1,656	1,645	1,610	1,592	1,589
West Craven H.	1,140	1,140	1,140	**774**	764	779	802	806	818	786	754	721	685	667
SubTotal	4,126	4,126	4,126	**3,425**	3,545	3,653	3,770	3,756	3,752	3,613	3,565	3,477	3,438	3,475
Special/Alternative														
Early College	n/a	n/a	n/a	**218**	218	218	218	218	218	218	218	218	218	218
Early College EAST	n/a	n/a	n/a	**201**	201	201	201	201	201	201	201	201	201	201
SubTotal	n/a	n/a	n/a	**419**	419	419	419	419	419	419	419	419	419	419
System Total	**n/a**	**n/a**	**n/a**	**13,302**	**13,346**	**13,329**	**13,341**	**13,211**	**13,078**	**12,915**	**12,835**	**12,793**	**12,750**	**12,797**

Forecast generated by Numerix LLC

Utilization Forecast (Seats needed)

Red on this chart indicates how many additional seats will be needed to support the student population. A negative number means additional seats will be needed, while a positive number indicates open seats are available.

	Month-1	Forecasted Month-2 ADM								
	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
Elementary											
Albert H Bangert	-115	-126	-128	-121	-107	-102	-92	-90	-88	-91	-96
Arthur W Edwards	36	40	-3	-7	3	9	19	22	23	19	10
Ben D Quinn	-103	-132	-140	-132	-118	-107	-102	-99	-98	-100	-106
Bridgeton	116	123	125	125	121	136	138	141	141	139	134
Brinson Memorial	231	215	164	176	177	179	169	172	173	169	161
Creekside	-46	-58	-67	-76	-72	-76	-77	-73	-72	-76	-84
Graham A Barden	91	84	12	3	-4	0	-3	-2	-1	-4	-8
Havelock E.	38	6	-29	-45	-48	-64	-70	-68	-67	-70	-75
J T Barber	141	123	66	63	56	47	47	48	48	46	43
James W Smith	142	141	126	146	147	152	155	157	157	154	150
Oaks Road	-44	-47	-37	-30	-14	-15	-11	-10	-9	-12	-16
Roger Bell New Tech	-38	-80	-91	-109	-105	-127	-120	-117	-115	-118	-124
Trent Park	-91	-110	-123	-115	-99	-84	-78	-76	-75	-77	-83
Vanceboro-Farm Life	-123	-102	-72	-54	-38	-44	-37	-34	-33	-37	-44
W Jesse Gurganus	-65	-67	-59	-55	-44	-47	-25	-23	-23	-25	-30
SubTotal	**169**	10	-255	-231	-145	-144	-88	-51	-40	-81	-169
Middle											
Grover C Fields	137	128	166	174	192	192	205	187	168	157	171
H J MacDonald	14	72	85	92	78	111	114	139	141	161	181
Havelock M.	131	140	146	166	147	163	130	110	72	68	82
Tucker Creek	145	123	112	137	153	178	144	140	136	161	175
West Craven M.	-23	-21	-13	9	37	91	111	122	125	139	155
SubTotal	**404**	442	497	577	608	735	703	697	641	686	763
High											
Havelock H.	217	175	127	39	62	30	82	88	107	92	34
New Bern	118	30	-15	-22	-26	22	77	88	123	141	144
West Craven H.	366	376	361	338	334	322	354	386	419	455	473
SubTotal	**701**	581	473	356	370	374	513	561	649	688	651
Special/Alternative											
Early College	0	0	0	0	0	0	0	0	0	0	0
Early College EAST	0	0	0	0	0	0	0	0	0	0	0
SubTotal	**0**	0	0	0	0	0	0	0	0	0	0
System Total	**1,274**	**1,033**	**714**	**702**	**832**	**965**	**1,128**	**1,208**	**1,250**	**1,293**	**1,246**

Total Elementary Capacity via redistricting only (post HB-90)

It is easy to look at the total number of seats available at the elementary level and compare that to the total number of students in those grades to see there is a problem. A school system is just like a school, and it cannot be fully utilized. Looking back to the 2014 thru 2018 school years, there were around five schools each year that were over 105% of their capacity. Again at that time, the elementary school ratio of students to capacity was between 94% to 97% .

In the Student Capacity section of this document we describe how and why a school cannot be operated at 100%, but the question remains, what is the right percentage when looking at all of the elementary schools together? Considering an average of the schools suggests that Craven County Schools would need to get the total elementary student to capacity ratio to around 84.7%.

This is not unreasonable, and some systems have been in these ranges at one time. The issue is that even if the school system was at this level it would still have some schools that are growing and some that are not. The ones that grow beyond their capacity will need temporary structures to house all students.

Percent of Capacity

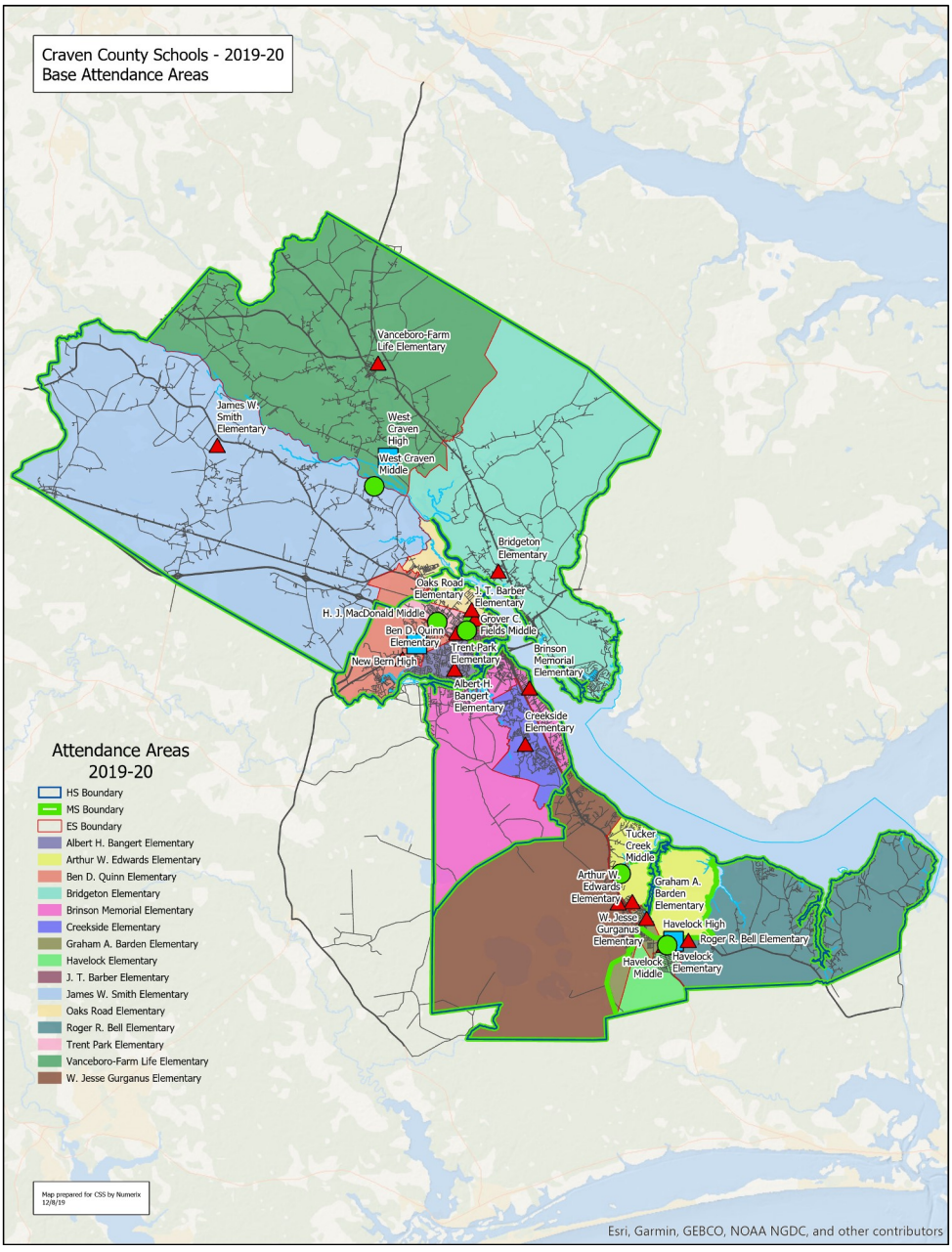
This table ranks the schools from the most overcrowded to the least for the start of the 2021-22 school year. This will be the last year the unfunded mandate known as HB-90 finishes reducing capacity at the elementary level. The result is that ten of the eleven schools that are over 100% of their capacity are elementary schools. In total, just under 50% of all of Craven County Schools will be at or above the 100% mark.

A redistribution of the population will be needed and likely take the form of redistricting. This will alleviate some issues for the elementary schools but redistricting alone will not solve the issue. Additional classrooms in the form of temporary structures will be needed until a more permanent solution is found.

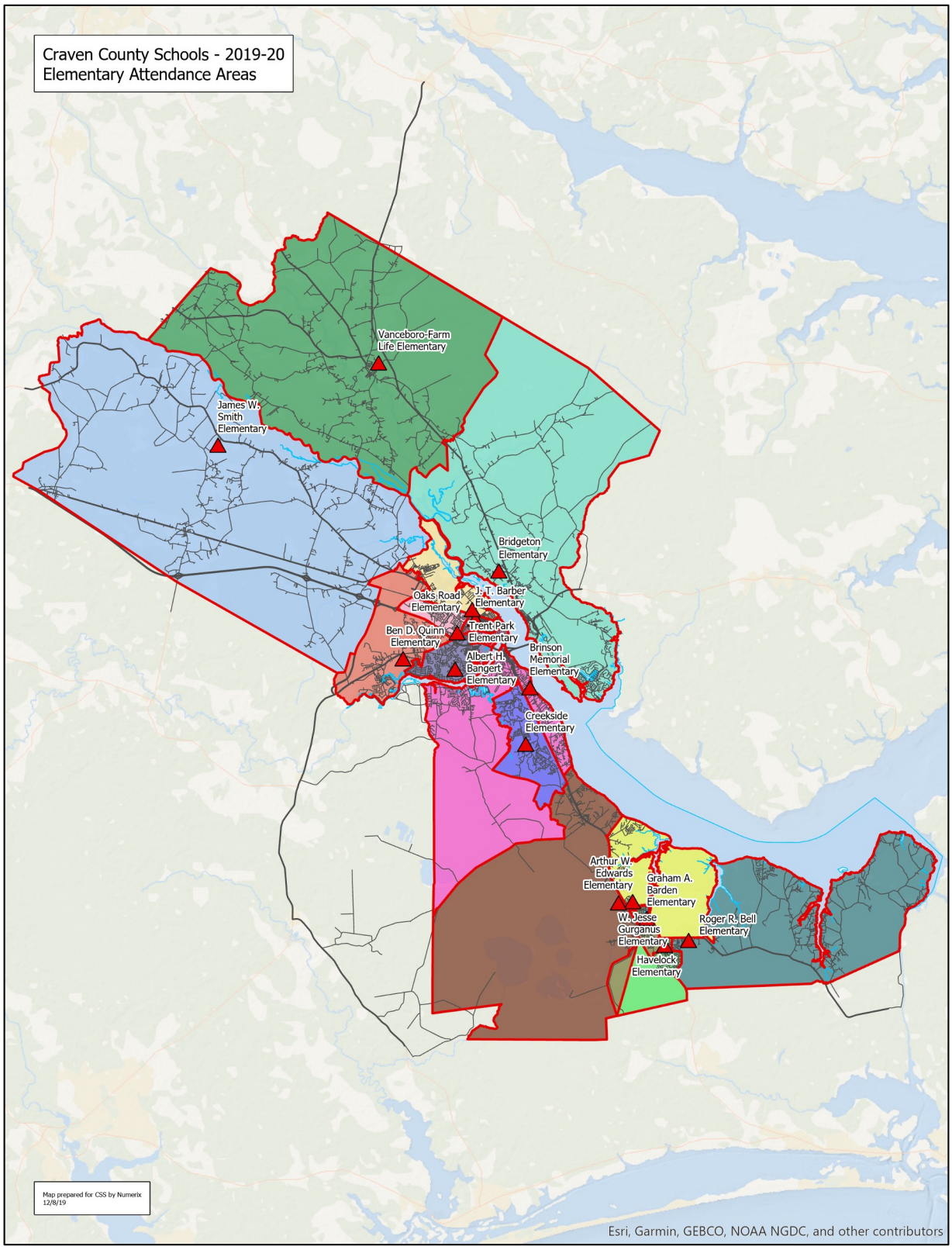
Facility	Grade Level	Percent of Capacity
		2021
Ben D Quinn	E	150.01%
Albert H Bangert	E	144.28%
Trent Park	E	139.18%
Roger Bell New Tech	E	129.57%
W Jesse Gurganus	E	125.36%
Vanceboro-Farm Life	E	121.76%
Oaks Road	E	118.87%
Creekside	E	112.42%
West Craven M.	M	102.86%
Havelock E.	E	101.79%
Arthur W Edwards	E	101.38%
New Bern	H	98.28%
Graham A Barden	E	94.87%
H J MacDonald	M	91.66%
Havelock H.	H	86.07%
Grover C Fields	M	81.71%
Tucker Creek	M	81.50%
James W Smith	E	78.29%
J T Barber	E	76.49%
Brinson Memorial	E	75.75%
Havelock M.	M	74.54%
Bridgeton	E	73.77%
West Craven H.	H	66.99%

Attendance Boundaries

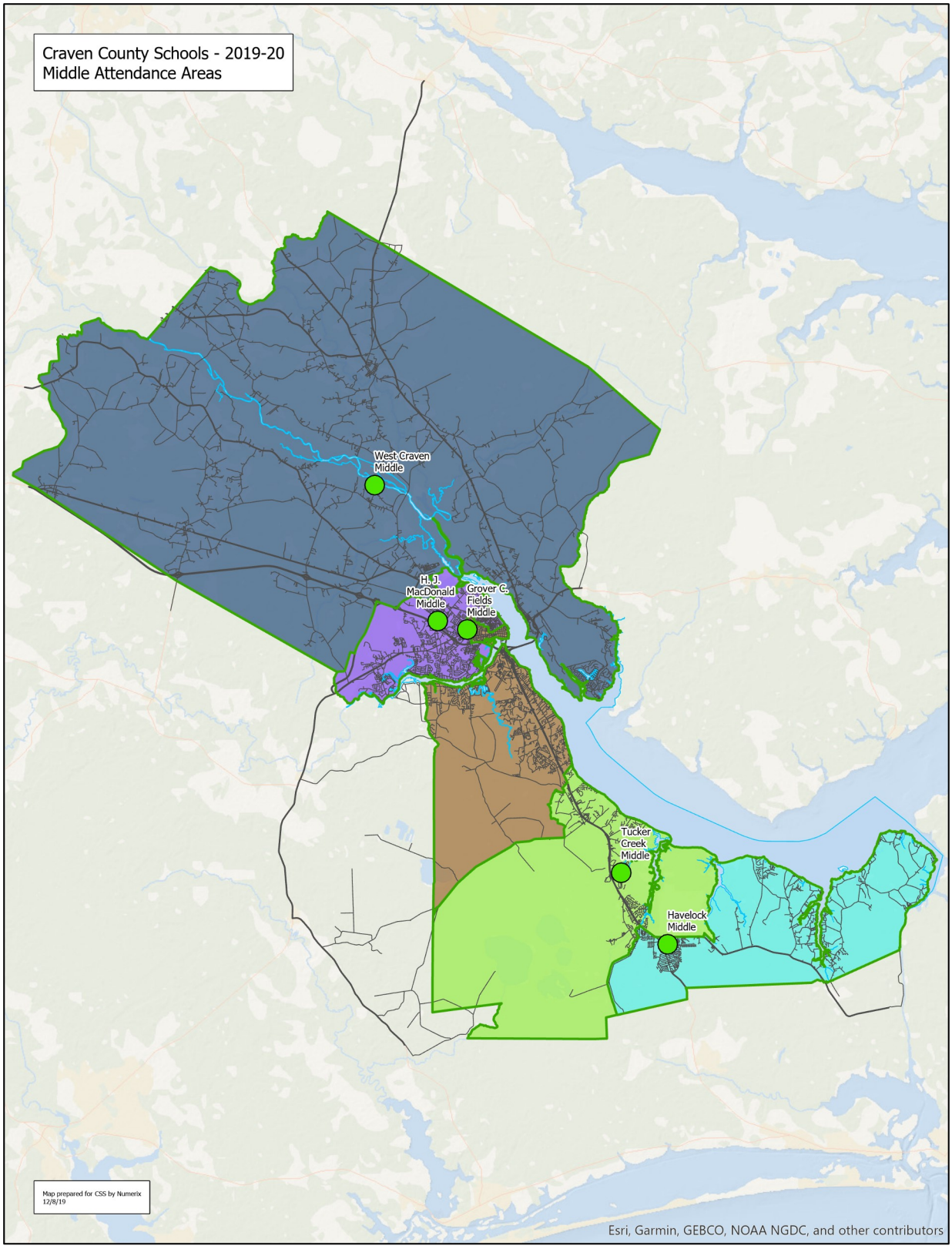
Attendance Boundaries are established using a variety of metrics to define their size and shape. Transportation costs are weighed against matching the boundary to the capacity of the school, and taking into account attempts to keep communities together and neighboring students going to the same facility. Mike Miller, of Numerix Solutions LLC, uses geographic information on each student to create an understanding of several key data points in creating the population forecasts, which is then used to generate an image of attendance boundaries. The map of the existing boundaries below is helpful in understanding travel distances and other spatial information should redistricting be required. Elementary, middle, and high school boundaries can be found on the following pages.



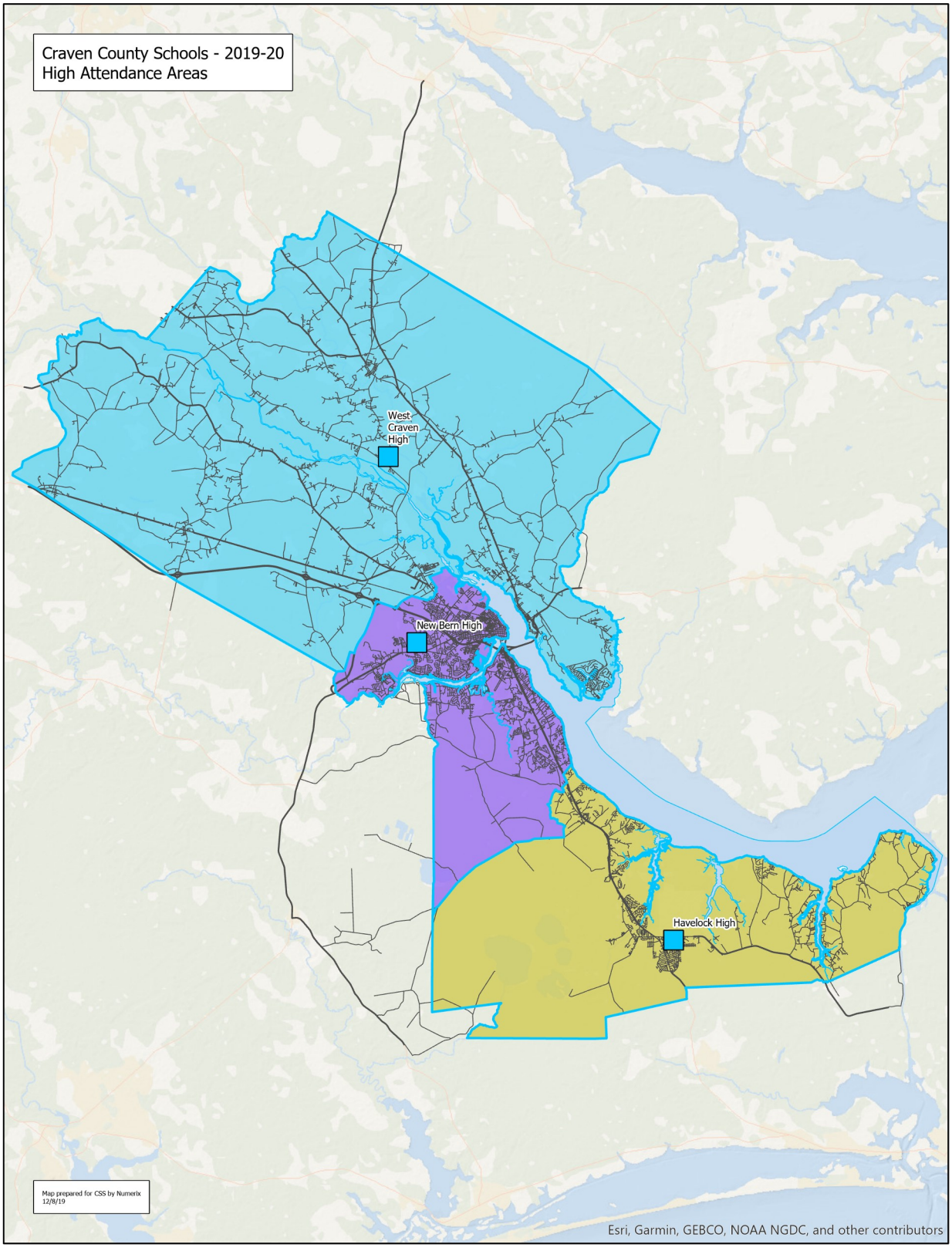
Elementary School Attendance Boundaries



Middle School Attendance Boundaries

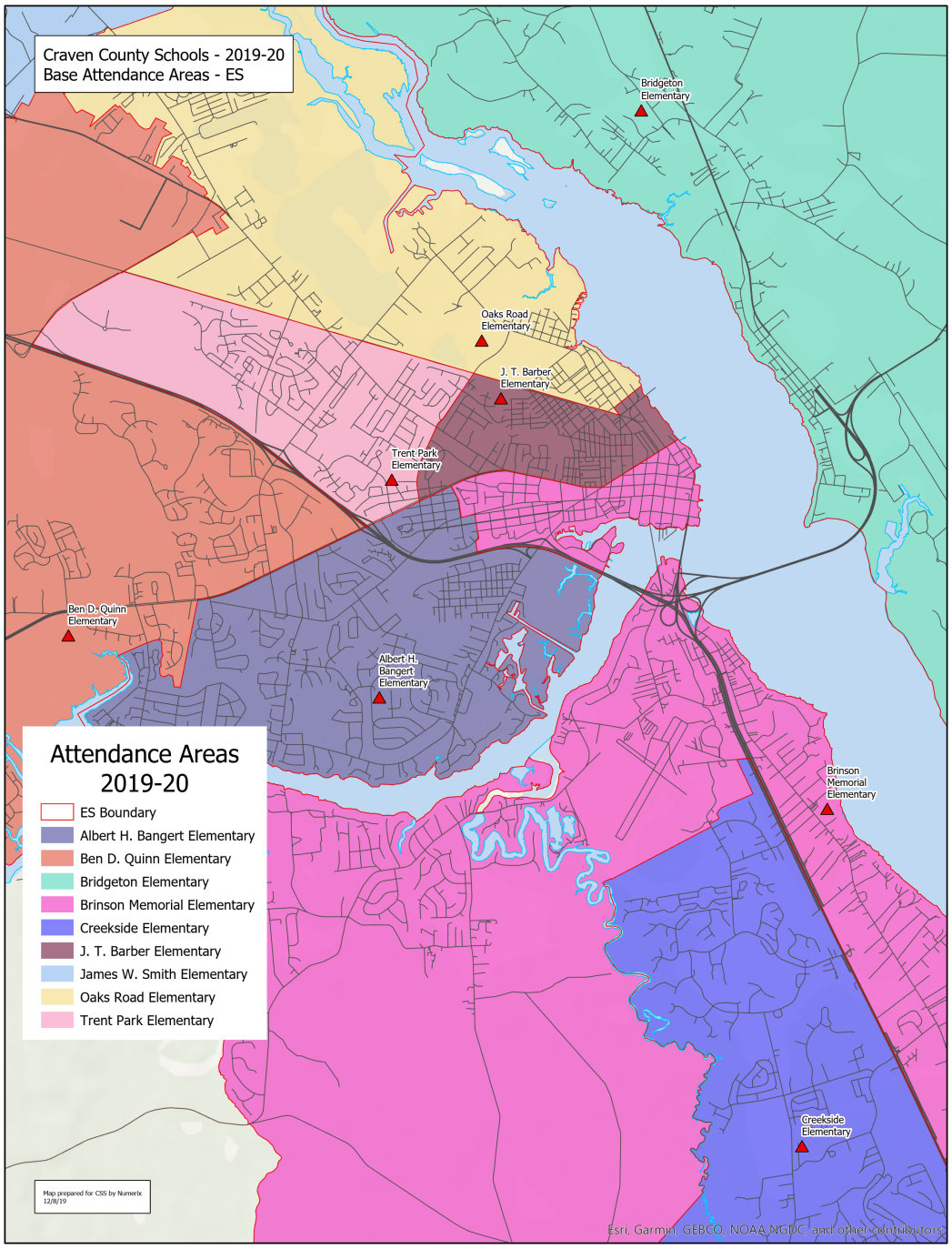


High School Attendance Boundaries



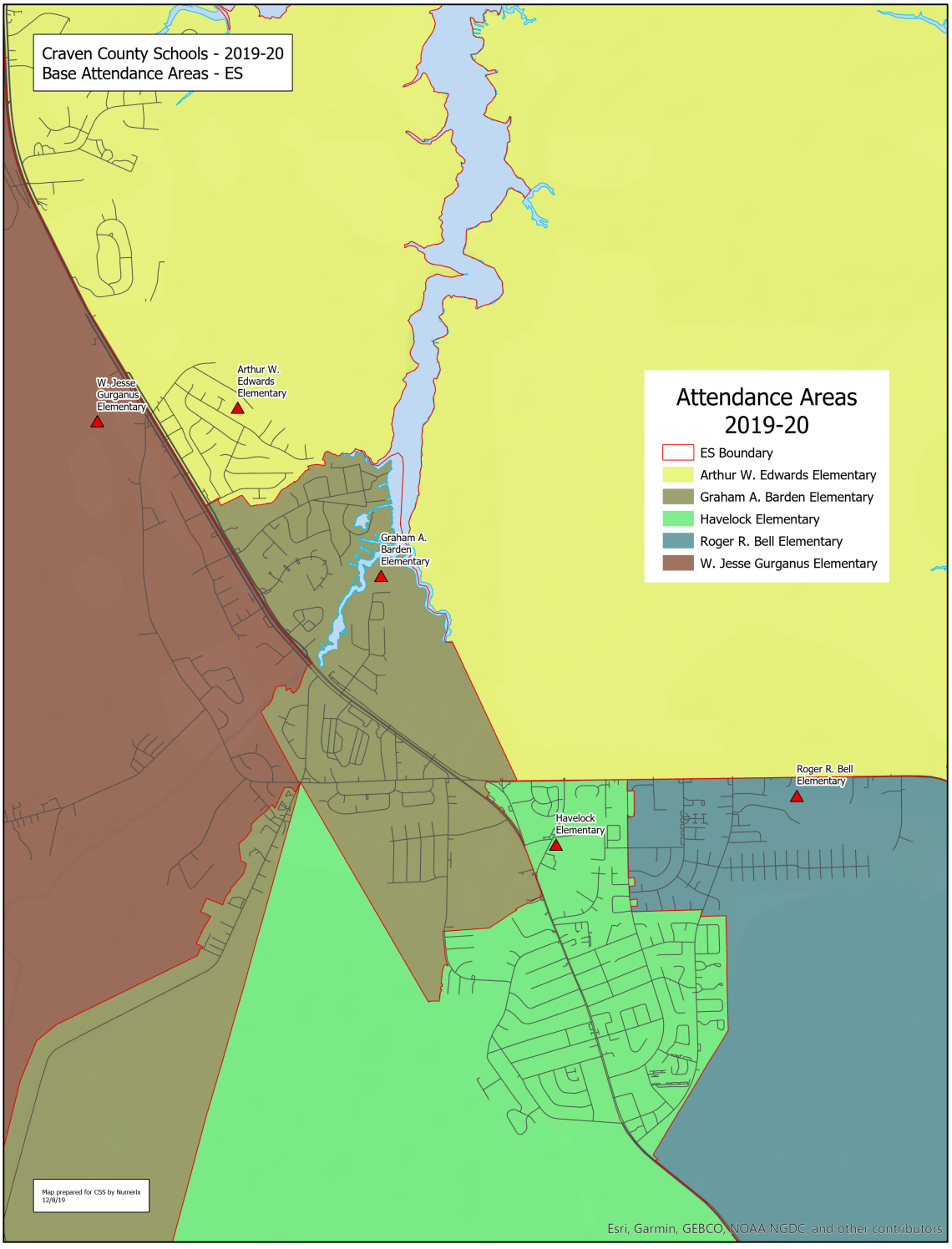
New Bern Elementary Attendance Boundaries

The result of schools with small student capacities at many of the elementary schools will result in small attendance boundaries that in the case of New Bern's population density are very close to each other. Without including Brinson Memorial and Bridgeton, there are five elementary schools within a 2.25 mile radius. Including all seven shown below and the radius is only 3.75 miles.



Havelock Elementary Attendance Boundaries

The Havelock area has several larger schools but they are closely packed together. All five of these schools are within a two mile radius of each other. Two of the schools have large attendance boundaries and cover a large area of lightly populated parcels.



Capacity Calculations

Capacity Calculations

Overview

It is the responsibility of the school system to provide quality education for every student in the district. In addition, taxpayers expect this goal is achieved in the most financially responsible manner possible. Schools must be run efficiently; therefore, the need to understand how many students a building or campus can support while still providing a quality program is imperative.

Over capacity or underutilized schools are inefficient and do not create equity for all students. When a school is overcrowded, student performance is affected and schedules must be adjusted to allow students time to eat or simply move about the building. Facilities are pushed to accommodate the population, which often results in mobile units or other temporary facilities. On the other hand, schools which are underpopulated gives those students a more beneficial teacher to student ratio, often resulting in greater student performance. When there are empty rooms, teachers spread out and storage expands into the otherwise unused space. Program expansion into otherwise unused spaces gives the appearance the school is fully utilized.

This section describes how the student capacity for each school was derived and defines the various numbers used to understand each school's ability to support students. The numbers are then used to determine the overall potential of the site and if additions are reasonable. It should be used as a guide for determining any new attendance boundaries and as an indicator of when a facility is overcrowded or underutilized.

Schools cannot operate at 100% of their capacity. For example, for any given year, the number of second grade students will vary from the previous year. The building, however, has a given number of second grade classrooms and a mandated maximum number of students in each space. Once the total number of students, in any grade level, exceeds that grade level's capacity, a new classroom is needed. Once that new classroom is open, the total second grade population is redistributed to all second grade classrooms and reduces the overall efficiency of the building.

When planning, it is important to understand how the overall size of the school contributes to the efficiency and towards determining what level of "full" is appropriate. The capacity of each school is described in a number of ways in order to fully understand the ability of each school to support the student population. When this is used system wide, as it is in Craven County, it creates equity in the student teacher ratio and staff needed at each facility.

It should also be noted that school capacity fluctuates every year when a new batch of students arrive. The numbers included here are based on an even distribution of students which will occur over time, but does not address the juggling principals must do every year in order to get all of the students into the proper classrooms.

Terminology

When discussing capacity, it is helpful to define the different terms used to describe the different portions and abilities of the school.

There are two primary numbers used to describe how many students can be housed at a school while still providing a complete program. The first is generically deemed the Student Capacity, which is an accounting of the number of instructional classroom spaces and the number of students permitted in each type of space. The second is the Core Capacity, which is a measure of shared spaces such as the Media Center and Cafeteria and is directly related to the square footage of the most restrictive space.

To fully understand the student capacity, it is broken into several different categories. The Building, ADM, Operational, and Campus Capacities are all used to describe a particular type of space and its instructional program.

Building Capacity— This number accounts for all of the rooms within the building, including those used for any PK students. This is calculated by multiplying the LEA Average Ratio of a particular grade by the number of classrooms of that level. This number is typically less stable than the ADM capacity because the PK programs are often federally funded and occasionally move off campus entirely.

ADM Capacity— This represents the number of students that can be supported within existing classrooms while still providing a complete program. It is a simple sum of the number of rooms multiplied by the number of students permitted in each type of room. The Average Daily Membership (ADM) includes only K - 12th grade. The number is again based on the LEA Average Ratio. This number is regulated by NCDPI and the state legislature. This number represents 100% of the seats being utilized at all times of the day and throughout the year.

Operational Capacity— This number represents the maximum number of students that a school can house before you would expect to see temporary units on the campus. It is a percentage of the Student Capacity with the PK program removed. This number should be used as the basis for determining any redistricting or planning purposes. It incorporates a consideration for inconsistent grade sizes, special programs that come and go, as well as some level of assurance that parents can predict what school the students will attend for the next several years. Different school sizes produce a variety of efficiencies before they exceed capacity in a particular grade level. Once out of capacity in a grade level, additional space is needed and the building is “Out of Capacity”.

Operational - Elementary Schools

For the elementary schools, each was evaluated based on the existing classroom spaces and an even distribution of students in each grade level. That distribution has changed based on HB 90 which will be in effect as of the start of school 2021. It requires more classrooms for the K-3 program than was previously apportioned and effectively lowers the overall student population at each school.

To completely explain each school’s Operational Capacity, the full ADM is shown next to a percentage for how full each school will be when the smallest grade level first goes out of capacity.

Operational - Elementary cont.
That percentage is then multiplied by the Full ADM to determine the Operational Capacity or approximately how many students will be in place when the additional space is needed.

Operational - Middle Schools
Middle Schools are more stable and have a consistent number of students per classroom at each grade level, with 26 students per classroom. Per current statutes, the 26 can be exceeded to accommodate as many students as needed. At this time, the calculations are based on 26 students per classroom with a 95% utilization to determine the Operational Capacity.

Operational - High Schools
Here we use the full ADM Capacity which includes all program spaces. In this case, the ADM is calculated using a Coefficient of Utilization which is specific to each type of space. Reductions in classroom size for critical programs, such as wood working or science, provide much needed increased supervision. Often there are specialized courses with little student interest. Add in the block schedule and the ADM numbers typically work without any further reduction.

Core Capacity - This represents the number of students that can be supported in the non-instructional spaces. These spaces include the Media Center, Cafeteria, Administration, and other supporting non-instructional spaces. NCDPI capacity only considers the size of the Cafeteria and the Media Center when establishing the Core Capacity. Both are based on four square feet per student, and the lesser of the two numbers is considered the maximum. This is a simplified calculation methodology and is used for the purpose of consistency.

The more accurate method, and the one used for this study, measures the core facilities on a sliding scale that is dependent upon the student capacity and the square footage. It may produce square footage needs as high as six square feet per student, but this is the standard method for programming per NCDPI. The capacity was also calculated using this second method and was compared to the four square feet per student numbers to determine the severity of any overcrowding. When these two methods are used in conjunction, they establish a bracket that can be used to determine the level of appropriate square footage for each school. It should be noted that these spaces cost considerably more to construct than classrooms and may be the limiting factor in a school's overall maximum capacity.

The capacity of the cafeteria is judged against a minimum standard of twelve square feet per student in the dining area. NCDPI recommends between twelve to fourteen square feet per student, for planning purposes this study uses 14 sf/student vs 12. However, twelve is used to calculate capacity, since it produces a higher number and establishes a true maximum. This is based on three seatings per day or (12 sq. ft. per student / 3 seatings = 4), thus the dining capacity equals the dining area size divided by four square feet per student.

The Media Center is assessed at the maximum of four to six square feet per student on a sliding scale per NCDPI calculation methods.

Calculation Process

In many cases it is difficult to determine the actual capacity of a school. All students within a given area or attendance boundary will attend a particular school. Principals cannot turn students away and must find space on campus for all students within that geographic area. The result is that students are placed in spaces never intended to serve as classrooms or schools give up programs due to a lack of viable options. Alternatively, the school is under populated and the teachers have spread into unused spaces for instruction or storage. As a result, a school can contain more or less students than it can actually handle, thus making it difficult to determine what the appropriate number of students should be.

In reality, this evaluation should be done every year so that a recorded history of how the building is being used and its resulting capacities can be documented. The result of this yearly analysis is that the capacity changes every year based on the grade level assignments at the time of the investigation. For example, the process involves counting the number of 4th grade classrooms that are being used at the time the assessment is taken. Quite often there will be a larger than normal 2nd or 3rd grade class, which requires additional classrooms. This variation causes the capacity of the school to bounce around from year to year making it difficult to determine how many students should be assigned to that school.

In order to establish a capacity that can be used for planning purposes, short term fluctuations must be understood and addressed. The method employed within this study takes an average distribution of students and spreads them over the grade levels. For example, a six hundred student elementary school will have one hundred students in each K-5 grade. The number of classrooms are then compared to what the average distribution of students requires. This method produces a student capacity that defines the appropriate number of students that should be assigned to the school and does not change from year to year.

The process begins with evaluating every space within the building. Every room, in every building, on every campus was labeled based on how the space is being used. Special programs and student needs were taken into consideration when offered on a particular campus. The varying capacities of each program (elementary, middle, and high) were then multiplied by the number of available spaces for that program, and the Student Capacities were tabulated.

This capacity was compared to the NCDPI / Craven County Minimum Standards to ensure all programs including Art, Music, and Resource Rooms were present, along with Administrative areas. Any empty or otherwise underused spaces were included to reach a “Maximum ADM Capacity”. Several iterations are required to ensure this is a maximum that includes all program spaces.

Core facilities are based on total square footage of the particular space. Each were measured based on existing or computer generated floor plans.

North Carolina Department of Public Instruction - School Planning Information on Capacity Calculations

The following section defines the student numbers that were assigned to each classroom. This is based on the LEA Average Ratio as defined by HB-90. For the Kindergarten through third grade classrooms, the number of students is being reduced. This is offset by the ability of a school to put as many students as needed into any grade level above fourth grade. This study holds the 4+ capacity as it was prior to the implementation of HB-90.

Elementary School capacity is calculated as follows:

(Pre-K classrooms)	x 16 students
(Kindergarten classrooms)	x 18 students
(1st grade classrooms)	x 16 students
(2-3 classrooms)	x 17 students
(4-5 classrooms)	x 26 students
(EC self-contained)	x 10 students

Specialized areas, such as art, music, computer labs, gymnasiums / multipurpose rooms and auditoriums are not added in the capacity formula for elementary schools, as these spaces are supplementary (used for pull-outs from the regular classrooms) and not primary teaching stations. Deductions of one classroom's worth of capacity is made for each missing program space for Art, Music, or other non-capacity space. This is done to ensure every school has a complete program.

Middle School capacity is calculated as follows:

(Language Arts, Social Studies, Math, and Science classrooms)	x 26 students
(Exceptional Children self-contained classrooms)	x 10 students

This formula considers middle school scheduling, whereby students in an entire team often leave their core classrooms during the same one or two periods of the day for special programs. As at the elementary level, specialized areas are not added in the capacity calculations. Deductions for missing spaces also occurs here to ensure complete programs.

High School capacity is calculated as follows:

(Regular, Science, and Business classrooms)	x 22 students
(Arts Education classrooms)	x 20 students
(Service Marketing / Workforce classrooms)	x 15 students
(Gymnasiums x (2 teaching stations per Gym))	x 25 students
Number of Exceptional Children Self-Contained classrooms)	x 10 students

Temporary Structures

Mobile units are excluded from the Student Capacity calculations for long-range planning, as they are considered temporary facilities. Mobile units are assessed at twenty students per unit regardless of program.

Capacity Summary

The adjacent table shows the different capacities in each location. For planning purposes the Operational Capacity should be used. By aligning attendance boundaries to the Operational Capacity, schools will have some flexibility to address larger than average grade levels and respond to some additional students throughout the school year.

The Full ADM Capacity can only be realized if every seat in every classroom is occupied. The only way to achieve 100% efficiency in elementary schools is to fill the school up by lottery based on each individual grade level's maximum capacity.

The Core Capacity is based on the square footage of the Media Center or Cafeteria, whichever is smaller. It is a standard practice to have an oversized Core Capacity should mobile or other temporary means of increasing the Student Capacity is required.

Craven County Schools
Student and Core Capacity
2021 Configuration

8/12/2019

Facility	Student ADM / Optimal	Student Operational	Core Capacity
A. H. Bangert	386	312	650
Arthur W. Edwards	626	576	628
Ben D. Quinn	386	312	728
Bridgeton	516	468	695
Brinson Memorial	772	714	813
Creekside	516	468	695
Graham A. Barden	318	288	720
Havelock	422	312	699
J.T. Barber	376	312	727
J.W. Smith	609	510	728
Oaks Rd Academy	368	312	536
Roger Bell New Tech	412	312	728
Trent Park	376	312	604
Vanceboro-Farm Life	516	468	699
W.J. Gurganus	402	312	728
Subtotal	7,001	5,988	10,376
Grover C. Fields	722	700	1,021
H.J. MacDonald	888	861	1,189
Havelock Middle	566	549	769
Tucker Creek	686	665	937
West Craven	758	735	860
Subtotal	3,620	3,511	4,776
Havelock	1,253	1,253	1,254
New Bern	1,733	1,733	1,871
West Craven	1,140	1,140	1,254
Early College East			
Craven Early College			
Subtotal	4,126	4,126	4,379
Total	14,747	13,625	19,532

Detailed Capacity Calculations

Elementary

Due to the passage of HB-90 and 115C-301(c), the elementary schools will have different capacities over the next several years. Starting in 2018 and continuing until 2021, the number of K-1 students will be decreased each year. The following pages show how the capacity was calculated for each year. This only affects elementary schools. Here, a greater number of K-3 classrooms is needed to house the same population and the distribution of classrooms per grade level often changes to maximize the capacity. In short, every elementary school will lose capacity.

The following tables show the school's capacity based on the maximum number of students per type of classroom permitted under HB-90 for K-3 and best practices for 4th-12th grades for the next four years. This counts every chair in every classroom to determine the greatest possible number of students in the school. The reality is that this will never be achieved as each elementary grade level has a different number of students in it, and each school will have a different number of classrooms at the different levels.

In order to establish the maximum number of students at a school, an even distribution of students is assumed per grade level. Although it is highly improbable that any given year will have a perfectly even distribution, over time the average in each grade level is relatively equal. Taking this longer view, an elementary school will have about 16.67% of the population in each grade level.

In reality, elementary schools have a greater proportion of students in the younger grades (up to 18%) and a reduction in the 4th and 5th grade population (down to 13% or 14%).

The Efficiency column looks at how the school will fill up and is related to the grade level with the smallest capacity. One classroom's capacity is then multiplied by six (6) to establish an even distribution when the first classroom is likely to exceed capacity. This number is then compared to the ADM Maximum (counting every seat) to create a percentage of when, on average, one grade level will need additional space, or, in other words, the school is over capacity.

Typically the larger schools can more readily deal with these issues due to the number of existing classrooms. Smaller schools have less flexibility to deal with an uneven distribution of the population and cannot easily make a 4th grade classroom into a K-3 space. Within Craven County Schools, the efficiency varies from a low of 73% to a high of 92%.

The state statute imposes a class size reduction on the Kindergarten through the third grade population but places no restriction on the number of students in fourth grade and above. As a result, the schools do not necessarily have to lose capacity, it simply means there are more classrooms needed for the K-3 population and less for the 4th and 5th grades. Although it varies depending on the size of the school, keeping the same population at the facility will require the number of 4th and 5th grade students in each classroom to increase up to somewhere between 35 to 50 students per classroom. This is an unreasonable scenario, and school systems are maintaining the 4th and 5th grade classroom sizes at 26 students per classroom.

Middle and high schools are not affected by this legislation.

Capacity Limitations

(First Out)

For years class size has been regulated by GS 115C-301. That legislation establishes the number of students per teacher at the level shown here for the 2021-22 school year. House Bill 90 modified that legislation by giving the schools time to adjust to the new class sizes by reducing the limits gradually over the course of four years. With the start of the 2021-22 school year, HB 90 will effectively be defunct, and we will revert back to GS 115C-301.

This makes schools less efficient at supporting a given attendance boundary. Within that student population, it would be normal to expect an even number of students in each grade level. There will be larger cohorts that work their way through the grade levels as years go by but statistically even that works out to an even distribution. The issue with the legislation is that it is impossible to create a school that has the right number of classrooms in each grade level to create an even distribution.

For example A.H. Bangert has 21 spaces that can be used as typical classrooms. The challenge is to designate each classroom to a grade level and have their total capacity match the even distribution of students. The distribution that comes the closest is shown below (Best Distribution). The ideal distribution of students per grade level is 16.667% of the students in each grade. Under this scenario at A.H. Bangert, the Kindergarten would have almost 19% of the population while the 4th and 5th grades would be under 14%. As students begin to enroll in school one at a time, each grade level will begin to fill up. The fourth and fifth grade classrooms will be full before the others since they can only accept 52 students in each one of those grade levels. In the case of A.H. Bangert, once more than 312 students are enrolled (6 grades x 52 students = 312 Operational Capacity), there is a one in six chance that the next student will be in the 4th or 5th grade, and that will be the first grade level out of capacity.

The spaces can be reclassified, like from a second grade to a fourth grade classroom, without much impact to the overall facility plan, but these classroom changes create a skewed distribution which diminishes efficiency.

Reclassifying a space is easy, but asking a second grade instructor to suddenly start teaching fifth grade is a larger request.

The section titled 20 Day ADM that looks at the actual population of the school on the 20th day of the 2019-20 school year. It shows there is a significantly large number of 4th and 5th grade students enrolled at that time.

Best Distribution	K	1	2	3	4	5	EC	Total
Number of Classrooms	4	4	4	4	2	2	1	21
Total Students	72	64	68	68	52	52	10	386
% of school	18.65%	16.58%	17.62%	17.62%	13.47%	13.47%	2.59%	100.00%

20 Day ADM								
Best Distribution	K	1	2	3	4	5	EC	Total
Total Students	75	69	74	70	81	79	0	448
% of school	16.74%	15.40%	16.52%	15.63%	18.08%	17.63%	0.00%	100.00%

Capacity Limitations

(First Out) - Continued

Looking more closely at A.H. Bangert, we see that if G.S. 115C-301 were in place today the school would be over capacity. The table below uses the same distribution of classrooms as noted on the previous page with a 72 student capacity in Kindergarten and 52 in the 4th and 5th grades.

The row labeled "20 Day ADM" is the actual number of students enrolled at A.H. Bangert as of the 20th day of the first month. When you add up each grade level, you come up with a total of 448 students.

The row labeled "Even Distribution" takes those 448 students and divides it by the six grade levels for an ideal distribution of 75 students per grade level (74.67 actual). Upon review, the actual number of students in each grade level match up fairly well.

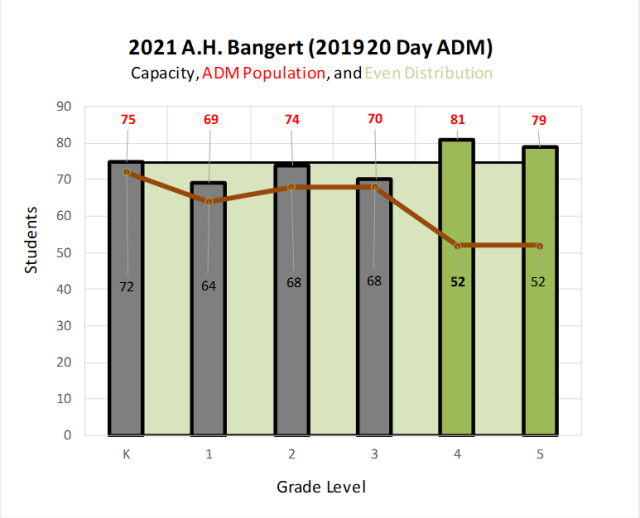
The "Capacity" is simply the result of the number of classrooms and capacity in each grade level as shown on the previous page.

The "Over / Under" row shows how many students each grade level is over capacity. The result is every grade is over capacity.

The numbers shown in red exceed G.S. 115C-301, while the numbers in black indicate a significant overage, as they are 4th and 5th grade classrooms and do not violate the legislation.

The next section shows how many students per classroom there would be, with the final section exploring an option of moving 4th and 5th grade classrooms to K and 1st.

The table below is a graphic description of A.H. Bangert's actual 20 day population (red numbers and bars) to the 2021 capacity restrictions (red line and black numbers). The green background is the even distribution expected at 75 students.



2021 A.H. Bangert (2019 20 Day ADM)									
	K	1	2	3	4	5	EC	ADM	Operational
20 Day ADM	75	69	74	70	81	79	Included	448	312
Even Distribution	75	75	75	75	75	75	Included	448	
Capacity	72	64	68	68	52	52	10	386	
Over / Under	-3	-5	-6	-2	-29	-27		-72	
2021 Results of same popualtion at this school									
Number of Classrooms	4	4	4	4	2	2	1	21	
Students / CR	18.75	17.25	18.5	17.5	40.5	39.5	10		
Resolution Cannot Occur, Reduce # of Students Assigned to this school									
Number of Classrooms	5	5	4	4	1	1	1	21	
Students / CR	15	13.8	18.5	17.5	81	79	10		

Detailed Capacity Calculations
Elementary - Cont.

The implications of HB-90 and 115C-301(c) is that elementary schools will lose population. The table below tracks the losses by year that the school system has already had to deal with and will continue to struggle with as the 2021 school year approaches.

At the individual school level, the implications are significant. Because each one of the schools has a different number of classrooms available, they will have different losses. As expected, the larger schools will have a greater loss, with Brinson Memorial losing around 120 seats while Graham Barden only loses about 50 seats.

When this is tallied up across the school system, the implication is monstrous. The total system loss of 1,200 seats is equal to about two new 600 student schools. School systems across the state are struggling with ways to manage their own individual circumstances, with many needing to build new facilities just to conform to the legislation requirements.

Craven County Schools

Class Size Reduction

Elementary Capacity Changes

2021 Configuration using ADM Only

Facility	Old	2018	2019	2020	2021	Total Loss
A. H. Bangert	460	446	432	418	386	-74
Arthur W. Edwards	727	698	674	650	626	-101
Ben D. Quinn	460	446	432	418	386	-74
Bridgeton	606	576	556	536	516	-90
Brinson Memorial	894	860	831	802	772	-122
Creekside	606	576	556	536	516	-90
Graham A. Barden	366	380	342	330	318	-48
Havelock	491	476	461	446	422	-69
J.T. Barber	450	436	422	408	376	-74
J.W. Smith	706	678	655	632	609	-97
Oaks Rd Academy	439	426	413	400	368	-71
Roger Bell New Tech	481	466	451	436	412	-69
Trent Park	450	436	422	408	376	-74
Vanceboro-Farm Life	606	576	556	536	516	-90
W.J. Gurganus	471	456	441	426	402	-69
Elementary Total	8,213	7,932	7,644	7,382	7,001	-1,212

Detailed Capacity Calculations

Middle

Middle schools have similar issues when dealing with the number of students in a particular grade level. However, due to instructional delivery with students grouped in pods or clusters with three or four teachers sharing students, there are greater potential efficiencies with less frequent over capacity populations in a particular grade level. This type of school can often deal with population fluctuations and large cohorts up to about 97% of their maximum seat count.

High

High schools are sufficiently flexible in their programs that a full seat count is a relatively good assessment of its capacity.

Capacity Tables

The following pages describe the changes to student capacity from about 2013 (Traditional), over the course of HB 90 and the full implementation of 115C-301(c) starting in the fall of 2021 . Note that the Middle and High School Student Capacities do not change.

Reading the Tables on the following pages (year at the top)

The top of the table indicates the grade level followed by the Students / Cr. The Students / Cr changes over the years and is followed by the "Previous Students / Cr" which is based on the traditional number of students permitted in each classroom.

Individual schools are listed along the left hand side with two subcategories in each. One is the capacity and the other is the number of rooms per grade level. In each case, an even distribution of students is assumed and maximized based on the population.

Moving to the right, there is a K-12 Total column which is the Maximum ADM capacity where the school still provides a complete program within the bricks and mortar portion of the campus. This means every seat in every classroom is used. No accommodations are made here for students moving into or within the district. It is a valid metric to use and understand but is not a number that can be used for long range planning.

To the very right is an area that is unshaded which is used as the basis for long range planning. The first column is "Students per Grade Even Distribution". This number takes the sum of the Maximum ADM and divides it by the number of grade levels served, thus producing an average number that should be anticipated in each grade level. Because we have different capacities per room and different numbers of rooms in each grade, one of the grade levels will reach capacity before the others.

The "Efficiency as Configured" is the point at which the smallest grade level goes out of capacity. It is the ratio of the smallest capacity for a given grade divided by the anticipated average or the "Students per grade level even distribution".

The "Optimal" column is what is used for long range planning. It is the "Efficiency as Configured multiplied by the Maximum ADM. Filling the school beyond this point will mean additional space is needed. The exception to this would be if the new student is a fourth or fifth grader or is in one of the other non critical grades. It constitutes a one in six chance each time a student is added above this level.

Craven County Schools
2019 Capacity
Capacity based on STD Profile
PK is shown but not included in ADM Numbers
PK Is counted in the total number of classrooms
12/21/2016

Traditional

Schools	2018		K-5 Capacity Building										Building	Students	Efficiency	Optimal
Grade Level		PK	K	1	2	3	4	5	6-8	9-12	EC	K-12	Capacity	per	as	
Students / Cr		16	21	21	21	21	26	26	26	Varies	10	Total	W/ PK	Grade	Configured	
Previous Students / CR		16	21	21	21	21	26	26			10			Even		
														Dist.		
Elementary Schools																
A. H. Bangert	Classrooms		4	4	3	3	3	3			1	21	21			
	Capacity	0	84	84	63	63	78	78			10	460	460	76.67	82.17%	378
Arthur W. Edwards	Classrooms	0	6	6	6	5	5	4			1	33	33			
	Capacity	0	126	126	126	105	130	104			10	727	727	121.17	86.66%	630
Ben D. Quinn	Classrooms	1	4	4	3	3	3	3			1	21	22			
	Capacity	16	84	84	63	63	78	78			10	460	476	76.67	82.17%	391
Bridgeton	Classrooms	0	5	5	4	4	4	4			2	28	28			
	Capacity	0	105	105	84	84	104	104			20	606	606	101.00	83.17%	504
Brinson Memorial	Classrooms	0	7	7	7	7	6	5			2	41	41			
	Capacity	0	147	147	147	147	156	130			20	894	894	149.00	87.25%	780
Creekside	Classrooms	0	5	5	4	4	4	4			2	28	28			
	Capacity	0	105	105	84	84	104	104			20	606	606	101.00	83.17%	504
Graham A. Barden	Classrooms	3	3	3	3	3	2	2			1	17	20			
	Capacity	48	63	63	63	63	52	52			10	366	414	61.00	85.25%	353
Havelock	Classrooms	0	4	4	4	3	3	3			2	23	23			
	Capacity	0	84	84	84	63	78	78			20	491	491	81.83	76.99%	378
J.T. Barber	Classrooms	3	4	4	3	3	3	3				20	23			
	Capacity	48	84	84	63	63	78	78				450	498	75.00	84.00%	418
J.W. Smith	Classrooms	0	6	6	5	5	5	4			1	32	32			
	Capacity	0	126	126	105	105	130	104			10	706	706	117.67	88.39%	624
Oaks Rd Academy	Classrooms	0	4	3	3	3	3	3			1	20	20			
	Capacity	0	84	63	63	63	78	78			10	439	439	73.17	86.10%	378
Roger Bell New Tech	Classrooms	0	4	4	4	3	3	3			1	22	22			
	Capacity	0	84	84	84	63	78	78			10	481	481	80.17	78.59%	378
Trent Park	Classrooms	0	4	4	3	3	3	3				20	20			
	Capacity	0	84	84	63	63	78	78				450	450	75.00	84.00%	378
Vanceboro-Farm Life	Classrooms	0	5	5	4	4	4	4			2	28	28			
	Capacity	0	105	105	84	84	104	104			20	606	606	101.00	83.17%	504
W.J. Gurganus	Classrooms	0	4	4	4	3	3	3			0	21	21			
	Capacity	0	84	84	84	63	78	78				471	471	78.50	99.36%	468
Elementary Total	Classrooms	7	69	68	60	56	54	51	0	0	17	375	382			
	Capacity	112	1,449	1,428	1,260	1,176	1,404	1,326	0	0	170	8,213	8,325	1368.83	84.70%	7066

Middle Schools														**Middle Schools**		Optimal
Grade Level		PK	K	1	2-3		4-5		6-8	9-12	EC	K-12	Capacity		0.97	
Students / Cr		18	18	16	17		26		26	Varies	10	Total	W/ PK	Cap	Optimal	
School Name																
Grover C. Fields	Classrooms								27		2	29	29			
	Capacity								702		20	722	722	722	700	700
H.J. MacDonald	Classrooms								33		3	36	36			
	Capacity								858		30	888	888	888	861	861
Havelock Middle	Classrooms								21		2	23	23			
	Capacity								546		20	566	566	566	549	549
Tucker Creek	Classrooms								26		1	27	27			
	Capacity								676		10	686	686	686	665	665
West Craven	Classrooms								28		3	31	31			
	Capacity								728		30	758	758	758	735	735
Middle Total	Classrooms								135		11	146	146			
	Capacity								3,510		110	3,620	3,620	3,620	3511	3511

High Schools														**Middle Schools**		
Grade Level		PK	K	1	2-3		4-5		6-8	9-12	EC	K-12	Capacity		1	
Students / Cr		18	18	16	17		26		26	Varies	10	Total	W/ PK	Cap	Optimal	
School Name																
Havelock	Classrooms									67	2	69	69			
	Capacity									1233	20	1,253	1,253	1,253	1253	1253
New Bern	Classrooms									92	3	95	95			
	Capacity									1703	30	1,733	1,733	1,733	1733	1733
West Craven	Classrooms									56	2	58	58			
	Capacity									1120	20	1,140	1,140	1,140	1140	1140
Early College East	Classrooms									NA	0	0	0			
	Capacity									201		201	201	201	201	201
Craven Early College	Classrooms									NA	0	0	0			
	Capacity									218		218	218	218	218	218
High Total	Classrooms									215	7	222	222			
	Capacity									4,475	70	4,545	4,545	4,545	4545	4545

		PK	K	1	2	3	4	5	6-8	9-12	EC	K-12	PK-12			
System Wide	Classrooms	7	69	68	60	56	54	51	135	215	35	743	750			
	Capacity	112	1,449	1,428	1,260	1,176	1,404	1,326	3,510	4,475	350	16,378	16,490			15,123

Craven County Schools
2019 Capacity
Capacity as currently configured
PK is shown but not included in ADM Numbers
PK Is counted in the total number of classrooms
12/21/2016

2018

Schools	2016		K-5 Capacity Building										Building	Students	Efficiency	Optimal
Grade Level		PK	K	1	2	3	4	5	6-8	9-12	EC	K-12	Capacity	per	as	
Students / Cr		16	20	20	20	20	26	26	26	Varies	10	Total	W/ PK	Grade	Configured	
Previous Students / CR		16	21	21	21	21	26	26			10			Even		
														Dist.		
Elementary Schools																
A. H. Bangert	Classrooms	0	4	4	3	3	3	3	0	0	1	21	21			
	Capacity	0	80	80	60	60	78	78			10	446	446	74.33	80.72%	360
Arthur W. Edwards	Classrooms	0	6	6	6	6	4	4			1	33	33			
	Capacity	0	120	120	120	120	104	104			10	698	698	116.33	89.40%	624
Ben D. Quinn	Classrooms	1	4	4	3	3	3	3			1	21	22			
	Capacity	16	80	80	60	60	78	78			10	446	462	74.33	80.72%	373
Bridgeton	Classrooms	0	5	5	5	5	3	3			2	28	28			
	Capacity	0	100	100	100	100	78	78			20	576	576	96.00	81.25%	468
Brinson Memorial	Classrooms	0	8	7	7	7	5	5			2	41	41			
	Capacity	0	160	140	140	140	130	130			20	860	860	143.33	90.70%	780
Creekside	Classrooms	0	5	5	5	5	3	3			2	28	28			
	Capacity	0	100	100	100	100	78	78			20	576	576	96.00	81.25%	468
Graham A. Barden	Classrooms	3	3	3	3	3	3	2			1	18	21			
	Capacity	48	60	60	60	60	78	52			10	380	428	63.33	82.11%	351
Havelock	Classrooms	0	4	4	4	3	3	3			2	23	23			
	Capacity	0	80	80	80	60	78	78			20	476	476	79.33	75.63%	360
J.T. Barber	Classrooms	3	4	4	3	3	3	3	0	0	0	20	23			
	Capacity	48	80	80	60	60	78	78				436	484	72.67	82.57%	400
J.W. Smith	Classrooms	0	6	6	6	5	4	4			1	32	32			
	Capacity	0	120	120	120	100	104	104			10	678	678	113.00	88.50%	600
Oaks Rd Academy	Classrooms	0	4	3	3	3	3	3			1	20	20			
	Capacity	0	80	60	60	60	78	78			10	426	426	71.00	84.51%	360
Roger Bell New Tech	Classrooms	0	4	4	4	3	3	3	0	0	1	22	22			
	Capacity	0	80	80	80	60	78	78			10	466	466	77.67	77.25%	360
Trent Park	Classrooms	0	4	4	3	3	3	3				20	20			
	Capacity	0	80	80	60	60	78	78				436	436	72.67	82.57%	360
Vanceboro-Farm Life	Classrooms	0	5	5	5	5	3	3			2	28	28			
	Capacity	0	100	100	100	100	78	78			20	576	576	96.00	81.25%	468
W.J. Gurganus	Classrooms	0	4	4	4	3	3	3	0	0	0	21	21			
	Capacity	0	80	80	80	60	78	78				456	456	76.00	102.63%	468
Elementary Total	Classrooms	7	70	68	64	60	49	48	0	0	17	376	383			
	Capacity	112	1,400	1,360	1,280	1,200	1,274	1,248	0	0	170	7,932	8,044	1322.00	84.07%	6800

Middle Schools														**Middle Schools**		Optimal
Grade Level		PK	K	1	2-3		4-5		6-8	9-12	EC	K-12			0.97	
Students / Cr		18	18	16	17		26		26	Varies	10	Total		Cap	Optimal	
School Name																
Grover C. Fields	Classrooms								27		2	29				
	Capacity								702		20	722		722	700	700
H.J. MacDonald	Classrooms								33		3	36				
	Capacity								858		30	888		888	861	861
Havelock Middle	Classrooms								21		2	23				
	Capacity								546		20	566		566	549	549
Tucker Creek	Classrooms								26		1	27				
	Capacity								676		10	686		686	665	665
West Craven	Classrooms								28		3	31				
	Capacity								728		30	758		758	735	735
Middle Total	Classrooms								135		11	146	0			
	Capacity								3,510		110	3,620	0	3,620	3511	3511

High Schools														**Middle Schools**		
Grade Level		PK	K	1	2-3		4-5		6-8	9-12	EC	K-12			1	
Students / Cr		18	18	16	17		26		26	Varies	10	Total		Cap	Optimal	
School Name																
Havelock	Classrooms									67	2	69	69			
	Capacity									1233	20	1,253	1,253	1,253	1253	1253
New Bern	Classrooms									92	3	95	95			
	Capacity									1703	30	1,733	1,733	1,733	1733	1733
West Craven	Classrooms									56	2	58	58			
	Capacity									1120	20	1,140	1,140	1,140	1140	1140
Early College East	Classrooms									NA	0	0	0			
	Capacity									201		201	201	201	201	201
Craven Early College	Classrooms									NA	0	0	0			
	Capacity									218		218	218	218	218	218
High Total	Classrooms									215	7	222	222			
	Capacity									4,475	70	4,545	4,545	4,545	4545	4545

		PK	K	1	2	3	4	5	6-8	9-12	EC	K-12	PK-12			
System Wide	Classrooms	7	70	68	64	60	49	48	135	215	35	744	751			
	Capacity	112	1,400	1,360	1,280	1,200	1,274	1,248	3,510	4,475	350	16,097	16,209			14,856

Craven County Schools
2019 Capacity

Capacity as currently configured

PK is shown but not included in ADM Numbers
PK Is counted in the total number of classrooms
12/21/2016

2019

Schools	2016		K-5 Capacity Building										Building	Students	Efficiency	Optimal
Grade Level		PK	K	1	2	3	4	5	6-8	9-12	EC	K-12	Capacity	per	as	
Students / Cr		16	19	19	19	19	26	26	26	Varies	10	Total	W/ PK	Grade	Configured	
Previous Students / CR		16	21	21	21	21	26	26			10			Even		
														Dist.		
Elementary Schools																
A. H. Bangert	Classrooms	0	4	4	3	3	3	3	0	0	1	21	21			
	Capacity	0	76	76	57	57	78	78			10	432	432	72.00	79.17%	342
Arthur W. Edwards	Classrooms	0	6	6	6	6	4	4			1	33	33			
	Capacity	0	114	114	114	114	104	104			10	674	674	112.33	92.58%	624
Ben D. Quinn	Classrooms	1	4	4	3	3	3	3			1	21	22			
	Capacity	16	76	76	57	57	78	78			10	432	448	72.00	79.17%	355
Bridgeton	Classrooms	0	5	5	5	5	3	3			2	28	28			
	Capacity	0	95	95	95	95	78	78			20	556	556	92.67	84.17%	468
Brinson Memorial	Classrooms	0	8	7	7	7	5	5			2	41	41			
	Capacity	0	152	133	133	133	130	130			20	831	831	138.50	93.86%	780
Creekside	Classrooms	0	5	5	5	5	3	3			2	28	28			
	Capacity	0	95	95	95	95	78	78			20	556	556	92.67	84.17%	468
Graham A. Barden	Classrooms	3	3	3	3	3	2	2			1	17	20			
	Capacity	48	57	57	57	57	52	52			10	342	390	57.00	91.23%	356
Havelock	Classrooms	0	4	4	4	3	3	3			2	23	23			
	Capacity	0	76	76	76	57	78	78			20	461	461	76.83	74.19%	342
J.T. Barber	Classrooms	3	4	4	3	3	3	3	0	0	0	20	23			
	Capacity	48	76	76	57	57	78	78				422	470	70.33	81.04%	381
J.W. Smith	Classrooms	0	6	6	6	5	4	4			1	32	32			
	Capacity	0	114	114	114	95	104	104			10	655	655	109.17	87.02%	570
Oaks Rd Academy	Classrooms	0	4	3	3	3	3	3			1	20	20			
	Capacity	0	76	57	57	57	78	78			10	413	413	68.83	82.81%	342
Roger Bell New Tech	Classrooms	0	4	4	4	3	3	3	0	0	1	22	22			
	Capacity	0	76	76	76	57	78	78			10	451	451	75.17	75.83%	342
Trent Park	Classrooms	0	4	4	3	3	3	3				20	20			
	Capacity	0	76	76	57	57	78	78				422	422	70.33	81.04%	342
Vanceboro-Farm Life	Classrooms	0	5	5	5	5	3	3			2	28	28			
	Capacity	0	95	95	95	95	78	78			20	556	556	92.67	84.17%	468
W.J. Gurganus	Classrooms	0	4	4	4	3	3	3	0	0	0	21	21			
	Capacity	0	76	76	76	57	78	78				441	441	73.50	77.55%	342
Elementary Total	Classrooms	7	70	68	64	60	48	48	0	0	17	375	382			
	Capacity	112	1,330	1,292	1,216	1,140	1,248	1,248	0	0	170	7,644	7,756	1274.00	83.20%	6521

Middle Schools														**Middle Schools**		Optimal
Grade Level		PK	K	1	2-3		4-5		6-8	9-12	EC	K-12			0.97	
Students / Cr		18	18	16	17		26		26	Varies	10	Total		Cap	Optimal	
School Name																
Grover C. Fields	Classrooms								27		2	29				
	Capacity								702		20	722		722	700	700
H.J. MacDonald	Classrooms								33		3	36				
	Capacity								858		30	888		888	861	861
Havelock Middle	Classrooms								21		2	23				
	Capacity								546		20	566		566	549	549
Tucker Creek	Classrooms								26		1	27				
	Capacity								676		10	686		686	665	665
West Craven	Classrooms								28		3	31				
	Capacity								728		30	758		758	735	735
Middle Total	Classrooms								135		11	146	0			
	Capacity								3,510		110	3,620	0	3,620	3511	3511

High Schools														**High Schools**		
Grade Level		PK	K	1	2-3		4-5		6-8	9-12	EC	K-12			1	
Students / Cr		18	18	16	17		26		26	Varies	10	Total		Cap	Optimal	
School Name																
Havelock	Classrooms									67	2	69	69			
	Capacity									1233	20	1,253	1,253	1,253	1253	1253
New Bern	Classrooms									92	3	95	95			
	Capacity									1703	30	1,733	1,733	1,733	1733	1733
West Craven	Classrooms									56	2	58	58			
	Capacity									1120	20	1,140	1,140	1,140	1140	1140
Early College East	Classrooms									NA	0	0	0			
	Capacity									201		201	201	201	201	201
Craven Early College	Classrooms									NA	0	0	0			
	Capacity									218		218	218	218	218	218
High Total	Classrooms									215	7	222	222			
	Capacity									4,475	70	4,545	4,545	4,545	4545	4545

		PK	K	1	2	3	4	5	6-8	9-12	EC	K-12	PK-12			
System Wide	Classrooms	7	70	68	64	60	48	48	135	215	35	743	750			
	Capacity	112	1,330	1,292	1,216	1,140	1,248	1,248	3,510	4,475	350	15,809	15,921			14,578

Craven County Schools
2019 Capacity
Capacity as currently configured
PK is shown but not included in ADM Numbers
PK Is counted in the total number of classrooms
12/21/2016

2020

Schools	2016		K-5 Capacity Building										Building	Students	Efficiency	Optimal
Grade Level		PK	K	1	2	3	4	5	6-8	9-12	EC	K-12	Capacity	per	as	
Students / Cr		16	18	18	18	18	26	26	26	Varies	10	Total	W/ PK	Grade	Configured	
Previous Students / CR		16	21	21	21	21	26	26			10			Even		
														Dist.		
Elementary Schools																
A. H. Bangert	Classrooms	0	4	4	3	3	3	3	0	0	1	21	21			
	Capacity	0	72	72	54	54	78	78			10	418	418	69.67	77.51%	324
Arthur W. Edwards	Classrooms	0	6	6	6	6	4	4			1	33	33			
	Capacity	0	108	108	108	108	104	104			10	650	650	108.33	96.00%	624
Ben D. Quinn	Classrooms	1	4	4	3	3	3	3			1	21	22			
	Capacity	16	72	72	54	54	78	78			10	418	434	69.67	77.51%	336
Bridgeton	Classrooms	0	5	5	5	5	3	3			2	28	28			
	Capacity	0	90	90	90	90	78	78			20	536	536	89.33	87.31%	468
Brinson Memorial	Classrooms	0	8	7	7	7	5	5			2	41	41			
	Capacity	0	144	126	126	126	130	130			20	802	802	133.67	94.26%	756
Creekside	Classrooms	0	5	5	5	5	3	3			2	28	28			
	Capacity	0	90	90	90	90	78	78			20	536	536	89.33	87.31%	468
Graham A. Barden	Classrooms	3	3	3	3	3	2	2			1	17	20			
	Capacity	48	54	54	54	54	52	52			10	330	378	55.00	94.55%	357
Havelock	Classrooms	0	4	4	4	3	3	3			2	23	23			
	Capacity	0	72	72	72	54	78	78			20	446	446	74.33	72.65%	324
J.T. Barber	Classrooms	3	4	4	3	3	3	3	0	0	0	20	23			
	Capacity	48	72	72	54	54	78	78				408	456	68.00	79.41%	362
J.W. Smith	Classrooms	0	6	6	6	5	4	4			1	32	32			
	Capacity	0	108	108	108	90	104	104			10	632	632	105.33	85.44%	540
Oaks Rd Academy	Classrooms	0	4	3	3	3	3	3			1	20	20			
	Capacity	0	72	54	54	54	78	78			10	400	400	66.67	81.00%	324
Roger Bell New Tech	Classrooms	0	4	4	4	3	3	3	0	0	1	22	22			
	Capacity	0	72	72	72	54	78	78			10	436	436	72.67	74.31%	324
Trent Park	Classrooms	0	4	4	3	3	3	3				20	20			
	Capacity	0	72	72	54	54	78	78				408	408	68.00	79.41%	324
Vanceboro-Farm Life	Classrooms	0	5	5	5	5	3	3			2	28	28			
	Capacity	0	90	90	90	90	78	78			20	536	536	89.33	87.31%	468
W.J. Gurganus	Classrooms	0	4	4	4	3	3	3	0	0	0	21	21			
	Capacity	0	72	72	72	54	78	78				426	426	71.00	76.06%	324
Elementary Total	Classrooms	7	70	68	64	60	48	48	0	0	17	375	382			
	Capacity	112	1,260	1,224	1,152	1,080	1,248	1,248	0	0	170	7,382	7,494	1230.33	83.34%	6324

Middle Schools														**Middle Schools**		Optimal
Grade Level		PK	K	1	2-3		4-5		6-8	9-12	EC	K-12			0.97	
Students / Cr		18	18	16	17		26		26	Varies	10	Total		Cap	Optimal	
School Name																
Grover C. Fields	Classrooms								27		2	29				
	Capacity								702		20	722		722	700	700
H.J. MacDonald	Classrooms								33		3	36				
	Capacity								858		30	888		888	861	861
Havelock Middle	Classrooms								21		2	23				
	Capacity								546		20	566		566	549	549
Tucker Creek	Classrooms								26		1	27				
	Capacity								676		10	686		686	665	665
West Craven	Classrooms								28		3	31				
	Capacity								728		30	758		758	735	735
Middle Total	Classrooms								135		11	146	0			
	Capacity								3,510		110	3,620	0	3,620	3511	3511

High Schools														**High Schools**		
Grade Level		PK	K	1	2-3		4-5		6-8	9-12	EC	K-12			1	
Students / Cr		18	18	16	17		26		26	Varies	10	Total		Cap	Optimal	
School Name																
Havelock	Classrooms									67	2	69	69			
	Capacity									1233	20	1,253	1,253	1,253	1253	1253
New Bern	Classrooms									92	3	95	95			
	Capacity									1703	30	1,733	1,733	1,733	1733	1733
West Craven	Classrooms									56	2	58	58			
	Capacity									1120	20	1,140	1,140	1,140	1140	1140
Early College East	Classrooms									NA	0	0	0			
	Capacity									201		201	201	201	201	201
Craven Early College	Classrooms									NA	0	0	0			
	Capacity									218		218	218	218	218	218
High Total	Classrooms									215	7	222	222			
	Capacity									4,475	70	4,545	4,545	4,545	4545	4545

		PK	K	1	2	3	4	5	6-8	9-12	EC	K-12	PK-12			
System Wide	Classrooms	7	70	68	64	60	48	48	135	215	35	743	750			
	Capacity	112	1,260	1,224	1,152	1,080	1,248	1,248	3,510	4,475	350	15,547	15,659			14,380

Craven County Schools

2019 Capacity

Optimal Capacity based on complete program

PK is shown but not included in ADM Numbers

PK Is counted in the total number of classrooms

12/17/2019

2021

Schools	2021-22		K-5 Capacity Building											Building	Students	Efficiency	Optimal
Grade Level		PK	K	1	2	3	4	5	6-8	9-12	EC	K-12		Capacity	per	as	
Students / Cr		16	18	16	17	17	26	26	26	Varies	10	Total		W/ PK	Grade	Configured	
Previous Students / CR		16	21	21	21	21	26	26			10				Even		
															Dist.		
Elementary Schools																	
A. H. Bangert	Classrooms	0	4	4	4	4	2	2	0	0	1	21		21			
	Capacity	0	72	64	68	68	52	52			10	386		386	64.33	80.83%	312
Arthur W. Edwards	Classrooms	0	6	6	6	6	4	4			1	33		33			
	Capacity	0	108	96	102	102	104	104			10	626		626	104.33	92.01%	576
Ben D. Quinn	Classrooms	1	4	4	4	4	2	2			1	21		22			
	Capacity	16	72	64	68	68	52	52			10	386		402	64.33	80.83%	312
Bridgeton	Classrooms	0	5	5	5	5	3	3			2	28		28			
	Capacity	0	90	80	85	85	78	78			20	516		516	86.00	90.70%	468
Brinson Memorial	Classrooms	0	7	8	7	7	5	5			2	41		41			
	Capacity	0	126	128	119	119	130	130			20	772		772	128.67	92.49%	714
Creekside	Classrooms	0	5	5	5	5	3	3			2	28		28			
	Capacity	0	90	80	85	85	78	78			20	516		516	86.00	90.70%	468
Graham A. Barden	Classrooms	3	3	3	3	3	2	2			1	17		20			
	Capacity	48	54	48	51	51	52	52			10	318		366	53.00	90.57%	288
Havelock	Classrooms	0	4	4	4	4	3	2			2	23		23			
	Capacity	0	72	64	68	68	78	52			20	422		422	70.33	73.93%	312
J.T. Barber	Classrooms	3	4	4	4	4	2	2	0	0	0	20		23			
	Capacity	48	72	64	68	68	52	52				376		424	62.67	82.98%	312
J.W. Smith	Classrooms	0	6	6	6	5	4	4			1	32		32			
	Capacity	0	108	96	102	85	104	104			10	609		609	101.50	83.74%	510
Oaks Rd Academy	Classrooms	0	3	4	4	4	2	2			1	20		20			
	Capacity	0	54	64	68	68	52	52			10	368		368	61.33	84.78%	312
Roger Bell New Tech	Classrooms	0	4	4	4	4	3	2	0	0	1	22		22			
	Capacity	0	72	64	68	68	78	52			10	412		412	68.67	75.73%	312
Trent Park	Classrooms	0	4	4	4	4	2	2				20		20			
	Capacity	0	72	64	68	68	52	52				376		376	62.67	82.98%	312
Vanceboro-Farm Life	Classrooms	0	5	5	5	5	3	3			2	28		28			
	Capacity	0	90	80	85	85	78	78			20	516		516	86.00	90.70%	468
W.J. Gurganus	Classrooms	0	4	4	4	4	3	2	0	0	0	21		21			
	Capacity	0	72	64	68	68	78	52				402		402	67.00	77.61%	312
Elementary Total	Classrooms	7	68	70	69	68	43	40	0	0	17	375		382			
	Capacity	112	1,224	1,120	1,173	1,156	1,118	1,040	0	0	170	7,001		7,113	1166.83	84.70%	5988

Middle Schools														**Middle Schools**		Optimal
Grade Level		PK	K	1	2-3		4-5		6-8	9-12	EC	K-12			0.97	
Students / Cr		18	18	16	17		26		26	Varies	10	Total		Cap	Optimal	
School Name																
Grover C. Fields	Classrooms								27		2	29				
	Capacity								702		20	722		722	700	700
H.J. MacDonald	Classrooms								33		3	36				
	Capacity								858		30	888		888	861	861
Havelock Middle	Classrooms								21		2	23				
	Capacity								546		20	566		566	549	549
Tucker Creek	Classrooms								26		1	27				
	Capacity								676		10	686		686	665	665
West Craven	Classrooms								28		3	31				
	Capacity								728		30	758		758	735	735
Middle Total	Classrooms								135		11	146	0			
	Capacity								3,510		110	3,620	0	3,620	3511	3511

High Schools														**High Schools**		
Grade Level		PK	K	1	2-3		4-5		6-8	9-12	EC	K-12			1	
Students / Cr		18	18	16	17		26		26	Varies	10	Total		Cap	Optimal	
School Name																
Havelock	Classrooms									67	2	69	69			
	Capacity									1233	20	1,253	1,253	1,253	1253	1253
New Bern	Classrooms									92	3	95	95			
	Capacity									1703	30	1,733	1,733	1,733	1733	1733
West Craven	Classrooms									56	2	58	58			
	Capacity									1120	20	1,140	1,140	1,140	1140	1140
Early College East	Classrooms									NA	0	0	0			
	Capacity									201		201	201	201	201	201
Craven Early College	Classrooms									NA	0	0	0			
	Capacity									218		218	218	218	218	218
High Total	Classrooms									215	7	222	222			
	Capacity									4,475	70	4,545	4,545	4,545	4545	4545

		PK	K	1	2	3	4	5	6-8	9-12	EC	K-12	PK-12			
System Wide	Classrooms	7	68	70	69	68	43	40	135	215	35	743	750			
	Capacity	112	1,224	1,120	1,173	1,156	1,118	1,040	3,510	4,475	350	15,166	15,278			14,044

Core Capacity—Traditional Method

As mentioned before, the Core Capacity is a result of measuring the square footage of the spaces and dividing by 4 sf/ student. This method is used throughout the state and is a relatively good indication of the adequacy of these spaces. Typically, the lower Core Capacity needs to be between 100 to 200 students higher than the ADM Capacity. This allows for some flexibility due to overcrowding should a quick population growth occur.

Implications of having an undersized cafeteria is that lunch starts earlier and ends later, while a limited Media Center has the potential to limit instruction.

Currently Core Capacities are sufficiently large related to the Student Capacity.

Craven County Schools

Core Capacity

Facility	Cafeteria	Capacity	Media	Capacity	Core Capacity
	Sf	4.67	SF	4.00	
A. H. Bangert	3,023	648	2,600	650	650
Arthur W. Edwards	4,386	940	2,511	628	628
Ben D. Quinn	3,966	850	2,911	728	728
Bridgeton	4,073	873	2,780	695	695
Brinson Memorial	4,073	873	3,252	813	813
Creekside	4,073	873	2,780	695	695
Graham A. Barden	3,330	714	2,881	720	720
Havelock	4,710	1,009	2,796	699	699
J.T. Barber	3,393	727	2,913	728	727
J.W. Smith	3,965	850	2,911	728	728
Oaks Rd Academy	2,500	536	3,279	820	536
Roger Bell New Tech	3,965	850	2,911	728	728
Trent Park	2,817	604	2,560	640	604
Vanceboro-Farm Life	3,262	699	3,037	759	699
W.J. Gurganus	3,965	850	2,912	728	728
Elementary Total	55,501	11,893	43,033	10,758	10,376

	Cafeteria	Capacity	Media	Capacity	Core Capacity
Grover C. Fields - No Data	4,947	1,060	4,084	1,021	1,021
H.J. MacDonald	6,258	1,341	4,757	1,189	1,189
Havelock Middle	3,589	769	3,606	902	769
Tucker Creek	5,682	1,218	3,747	937	937
West Craven	4,011	860	6,243	1,561	860
Middle Total	24,488	5,247	22,438	5,609	4,776

	Cafeteria	Capacity	Media	Capacity	Core Capacity
Havelock	5,853	1,254	7,902	1,976	1,254
New Bern	8,732	1,871	9,052	2,263	1,871
West Craven	5,853	1,254	7,902	1,976	1,254
Early College East					
Craven Early College					
High Total	20,438	4,379	24,856	6,214	4,379
Total	100,426	21,520	90,326	22,582	19,532

Capacity Diagrams

Capacity Diagrams

Current Configuration vs Optimized

Today, schools are designed to last between 50 to 80 years or longer. Pedagogies have much shorter lives and are often packed into a building that was designed with a different delivery method. Most of Craven County's schools were built before computers were widely available and, in some cases, air conditioning. Principals and instructors have had to do the best they can to align new teaching methods and approaches to buildings that were designed with a different logic. Often, the solution is less than perfect.

Over the course of a building's life, some 24,000 to 110,000 students will pass through its doors. Each school will see fluctuations in their population over that time with some years being overcrowded and others having empty rooms. Often one grade level will have more students in it than another grade level, and additional space is needed to support that larger class size. As the cohorts proceed through the grade levels, additional classroom space needs to be reapportioned, making room assignments a creative endeavor. Although undesirable, mid-year adjustments must also be made. Once again, the principal and instructors must find a way to reconfigure the existing spaces to support all students, all the time.

With all these variables, it is rare that a facility can be used to its maximum efficiency. Each year brings a new student population and unique solutions to address everyone's needs. The following pages depict each facility's maximum capacity based on an even distribution of students through the grade levels served. This is based on the Maximum ADM population served, meaning every single seat in every single classroom is being used.

The following pages are visual representations of how the Student Capacity was calculated. This is accompanied by a table showing the number of a particular type of room along with the maximum number of students planned for the space and the resulting total of all the students in that grade level.

Color Coding

Green spaces are those that contribute to the Student Capacity of the school. The rules change between the elementary level and the high school level. In the lower grades, spaces such as the Art Room do not contribute to capacity, while at the upper grades it is considered a "home room" and a coefficient of utilization is applied to allow for its near continual use.

Yellow indicates supporting spaces, such as a Resource Room that serves multiple purposes ranging from hearing impaired to small group work rooms that can be checked out by an instructor. Again, the applicability of these to be capacity bearing spaces changes from the elementary to the high school level where the Gymnasium is counted for the high schools, but is not for the elementary level.

Orange represents Administration and Staff along with the Media Center, Cafeteria, and Storage Areas. Grey shows Hallways, Toilets, and Mechanical or Electrical Spaces.

A.H. Bangert

The configuration of the spaces at this school present an issue with privacy. Students and teachers must walk through the Resource Rooms, potentially disturbing the activities there. These transition spaces are large but cannot be considered classrooms, especially at the elementary level. The Core Spaces are relatively centralized with reasonable distribution of other staff and storage spaces.



Operational = 312

K	4 (18) = 72
1st	4 (16) = 64
2nd	4 (17) = 68
3rd	4 (17) = 68
4th	2 (26) = 52
5th	2 (26) = 52
EC-SC	1(10) =10
Total	21 = 386
R=8 (4 per 400)	

A.W. Edwards

The double loaded corridor to the left is a relatively modern and efficient means of optimizing access and square footage. The square pods along the top are more restrictive and do not address modern safety and security concerns. Core Spaces are centralized with an Administrative Suite located near the front door.

Operational = 576

K	6 (18) = 108
1st	6 (16) = 96
2nd	6 (17) = 102
3rd	6 (17) = 102
4th	4 (26) = 104
5th	4 (26) = 104
EC-SC	1(10) =10
Total	33 = 626
R=7 (5 per 650)	



Ben D. Quinn

The central core of this building is fixed with little to no expansion potential, thus limiting the Core Capacity to what it was when originally built. Two of the wings have very wide corridors where smaller groups can work together, however privacy in these areas is limited. As with the other schools of the same design, the Core Facilities are centralized with an Administrative wing at the main entrance.

Operational = 325

K 4 (18) = 72
1st 4 (16) = 64
2nd 4 (17) = 68
3rd 4 (17) = 68
4th 2 (26) = 52
5th 2 (26) = 52
EC-SC 1(10) =10
Total 22 = 386
R=7 (3 per 400)
PK 1(16) = 16
W/ PK 23
W/ PK = 402



Bridgeton

This modern facility uses the double loaded corridor to great efficiency. Resource Rooms are of a reasonable size and are in a reasonable combination of centralized locations with some distributed among the classroom wings. The Core Spaces align with best practices in an Elementary School.

Operational = 468

K 5 (18) = 90
1st 5 (16) = 80
2nd 5 (17) = 85
3rd 5 (17) = 85
4th 3 (26) = 78
5th 3 (26) = 78
EC-SC 20(10) =20
Total 28 = 516
R=6 (5 per 600)



Brinson Memorial

There are two sides to Brinson. The first is a relatively modern double corridor configuration, while the other section is single loaded with a mix of enclosed and exterior hallways. Due to the room sizes, full size classrooms must be used for Resource Programs. All of this combines to create a facility that does not have correctly sized rooms and has security issues. Core Spaces are concentrated in the newest section. The sprawling nature of this campus may be better suited with an additional distribution of Administration.



Operational = 714

K	7 (18) = 126
1st	8 (16) = 128
2nd	7 (17) = 119
3rd	7 (17) = 119
4th	5 (26) = 130
5th	5 (26) = 130
EC-SC	2(10) =20
Total	41 = 772
R=7 (7 per 800)	

Creekside

This is a mirror image of Bridgeton. The same efficiency applies.

Operational = 468

K	5 (18) = 90
1st	5 (16) = 80
2nd	5 (17) = 85
3rd	5 (17) = 85
4th	3 (26) = 78
5th	3 (26) = 78
EC-SC	20(10) =20
Total	28 = 516
R=6 (5 per 600)	



Graham A. Barden

As the smallest school, this school will suffer from an inability to deal with grade level fluctuations. The wings were not designed with resource room size spaces, and as such, what should be a classroom must be used for non-capacity space. Core Spaces are focused in one area with classroom wings being dedicated solely to capacity space.

Operational = 288

K 3 (18) = 54
1st 3 (16) = 48
2nd 3 (17) = 51
3rd 3 (17) = 51
4th 2 (26) = 52
5th 2 (26) = 52
EC-SC 1(10) =10
Total 17 = 318
R=4 (3 per 400)
PK 3(16) = 48
W/ PK total 21
W/ PK = 366

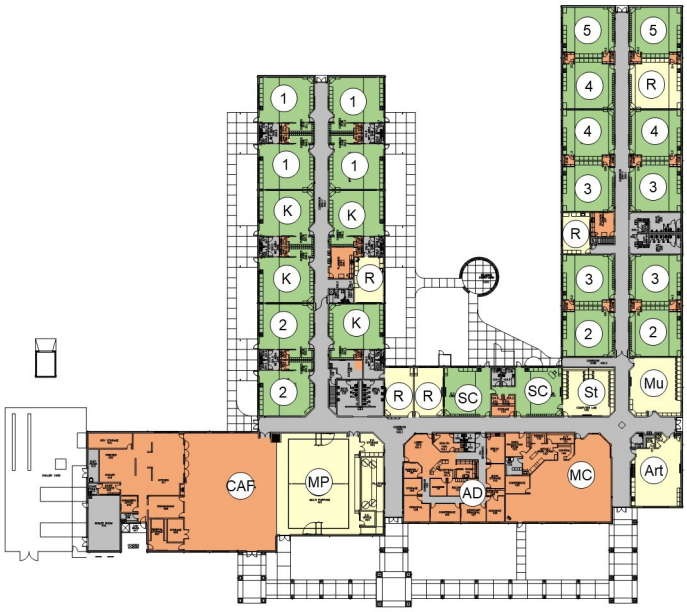


Havelock Elementary

This particular school, although not the smallest, suffers greatly from its size and distribution. This modern design has relatively good size spaces, with only one classroom size room needed as a resource type space. Core Spaces are located near the main entrance and provide good communication between teachers and staff.

Operational = 312

K 4(18) = 72
1st 4 (16) = 64
2nd 4 (17) = 68
3rd 4 (17) = 68
4th 3 (26) = 78
5th 2 (26) = 52
EC-SC 2(10) =20
Total 24 = 422
R=5 (4 per 500)



J.T. Barber

This older school does not have the smaller resource type spaces and requires full size classrooms to be used for non-capacity purposes. The main entrance provides quick access to almost all Core Spaces. The Administrative Suite is reasonable and well organized.

Operational = 312

K	4 (18) = 72
1st	4 (16) = 64
2nd	4 (17) = 68
3rd	4 (17) = 68
4th	2 (26) = 52
5th	2 (26) = 52
EC-SC	(10) =0
Total	20 = 376
R=5	(3 per 400)
PK	3(16) = 48
W/ PK	23
W/ PK	= 424

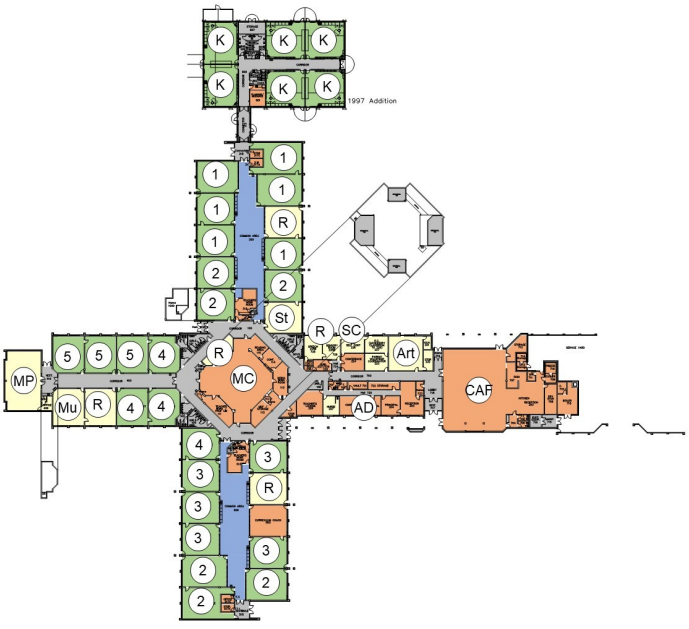


J.W. Smith

The floor plan has a relatively modern design with double loaded corridors. Two of these are sufficiently wide to use as pull out spaces for student group work. A limited number of true Resource Room size spaces means that several full size classrooms are needed for this purpose. The core spaces are relatively central and in an appropriate location.

Operational = 510

K	6 (18) = 108
1st	6 (16) = 96
2nd	6 (17) = 102
3rd	5 (17) = 85
4th	4 (26) = 104
5th	4 (26) = 104
EC-SC	1(10) =10
Total	32 = 609
R=6	(5 per 600)



Oaks Road

As with other double loaded corridors this is a relatively efficient use of space. There are several resource size spaces and only one full size classroom is needed as a Resource Room. The Administration is distributed throughout this building, more so than in most locations and is not ideal for an elementary school. Reconfiguring the main administration would improve overall communication and service.

Operational = 312

K	3 (18) = 54
1st	4 (16) = 64
2nd	4 (17) = 68
3rd	4 (17) = 68
4th	2 (26) = 52
5th	2 (26) = 52
EC-SC	1(10) =10
Total	20 = 368
R=5 (3 per 400)	

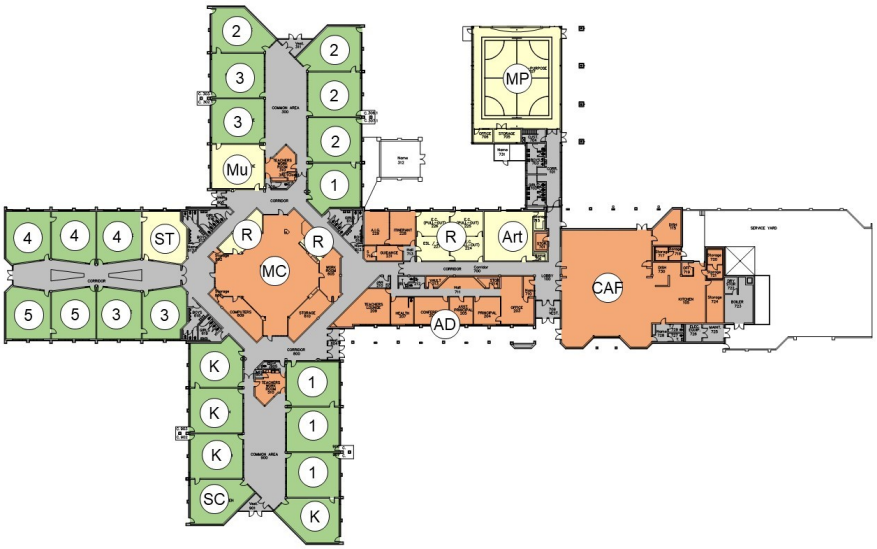


Roger Bell

Similar to the other schools of this design, there are several resource size spaces along with the wide corridor which can be used as a group work room. Core Spaces are centralized and based on the size of the school, appropriately located.

Operational = 312

K	4 (18) = 72
1st	4 (16) = 64
2nd	4 (17) = 68
3rd	4 (17) = 68
4th	3 (26) = 78
5th	2 (26) = 52
EC-SC	1(10) =10
Total	22 = 412
R=6 (3 per 400)	



Trent Park

This is another small school where the size limits the facility's ability to deal with population fluctuations. There are several resource size spaces allowing all classroom size spaces to be used for capacity. The main Administration Space is centralized and located at the main entrance.

Operational = 312

K	4 (18) = 72
1st	4 (16) = 64
2nd	4 (17) = 68
3rd	4 (17) = 68
4th	2 (26) = 52
5th	2 (26) = 52
EC-SC	0(10) =0
Total	20 = 376
R=7 (3 per 400)	

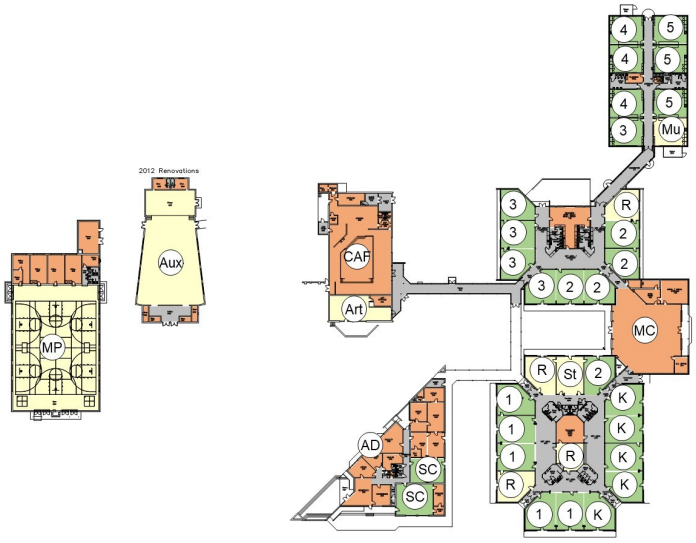


Vanceboro—Farm Life

This school does not have sufficient resource size spaces, and as such, capacity classrooms are needed for Resource Rooms. Core Space is distributed around campus. The Administration Space is isolated and requires students to exit and re-enter the facilities for these services.

Operational = 468

K	5 (18) = 90
1st	5 (16) = 80
2nd	5 (17) = 85
3rd	5 (17) = 85
4th	3 (26) = 78
5th	3 (26) = 78
EC-SC	2(10) =20
Total	28 = 516
R=4+ (4 per 500)	

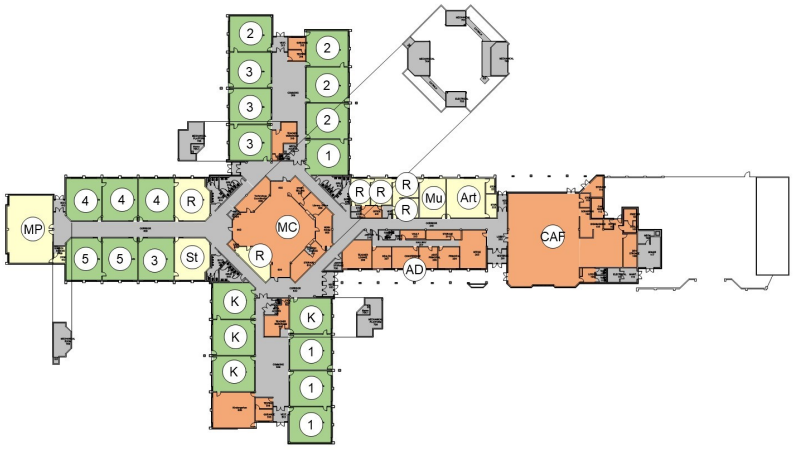


W.J. Gurganus

As with the other schools with the same floor plan, this building only needs one classroom size space to be used as a Resource Room. The Core Spaces are distributed reasonably with the Administration located near the main entrance.

Operational = 312

K	4 (18) = 72
1st	4 (16) = 64
2nd	4 (17) = 68
3rd	4 (17) = 68
4th	3 (26) = 78
5th	2 (26) = 52
EC-SC	0(10) =0
Total	22 = 402
R=5 (3 per 400)	

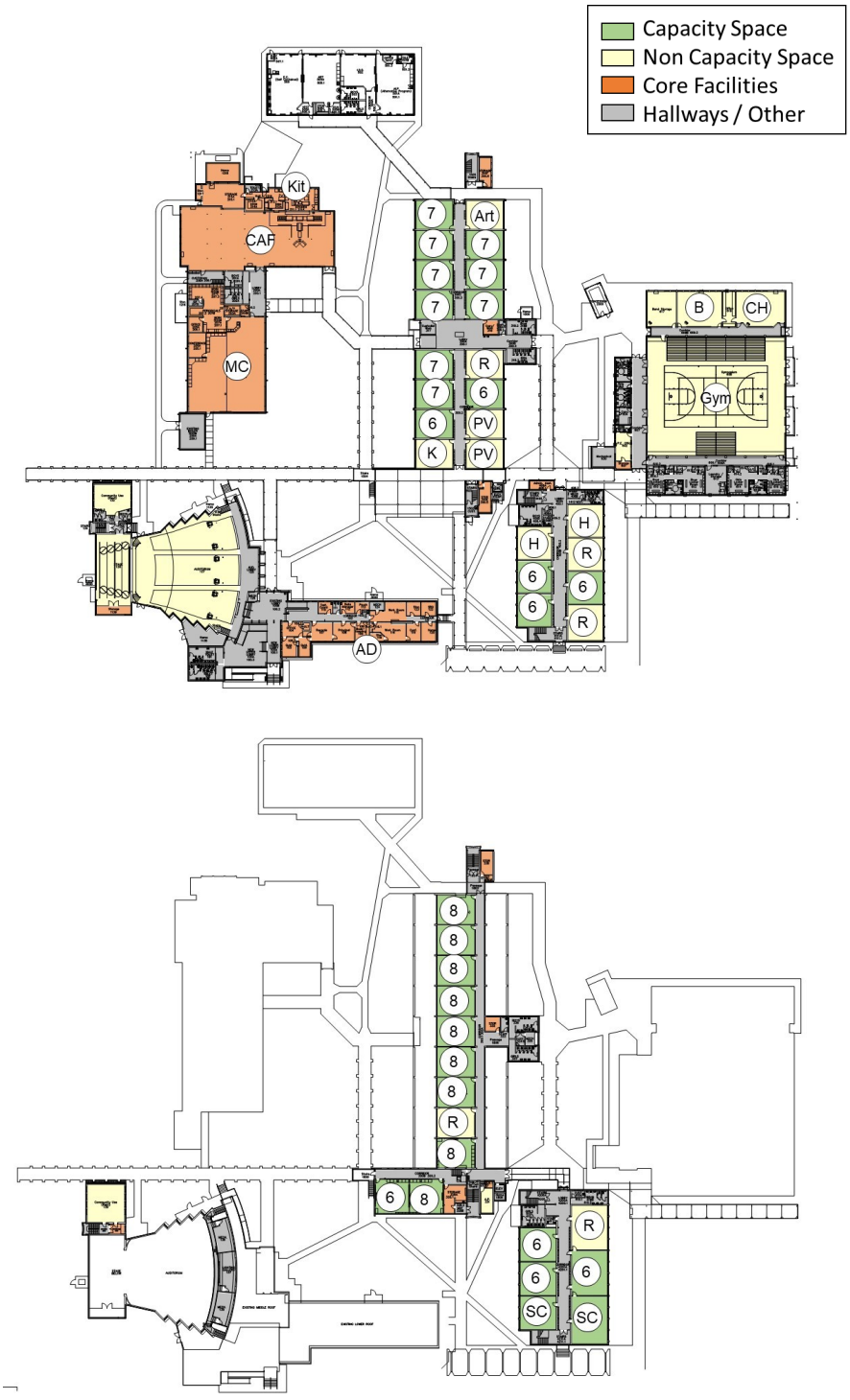


Grover C. Fields

Here, there are not resource size spaces, and they must use full size classrooms for non-capacity use. As is the case in the other middle schools, the Pre-Vocational and Health Classrooms do not contribute to capacity. Core spaces are centralized around the main entry, Cafeteria and Media Center. This sprawling campus might be better served with some increased distribution of Administrative Offices.

Operational = 700

6th 9 (26) = 234
7th 9 (26) = 234
8th 9 (26) = 234
EC-SC 2(10) =20
Total 29 = 722
R=5+ (5 per 700)

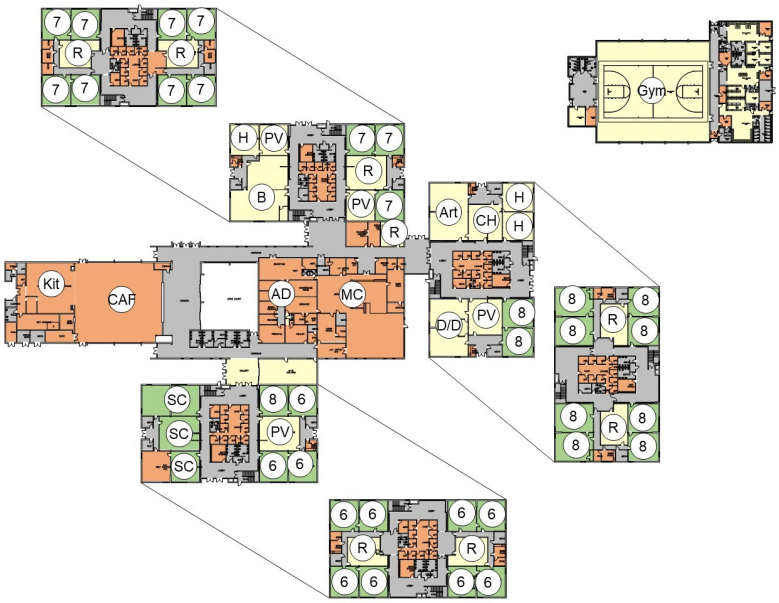


H.J. MacDonald

The classrooms are designed around a core for administration, with a secondary grouping of classrooms around another central classroom space. This is best used as a resource space; however, it does not provide privacy needed for such programs as speech and other one-on-one type instruction. Core Space here is excessive and relates to the office spaces located in each pod. These spaces are under-used and improving their utilization is unreasonable based on what they are. Other Administrative and Core Spaces distributed throughout the building.

Operational = 861

6th 11 (26) = 286
7th 11 (26) = 286
8th 11 (26) = 286
EC-SC 3(10) =30
Total 36 = 888
R=8+ (7 per 900)



Havelock Middle

The smallest middle school does not have small resource size spaces and full size classrooms must be used. Administrative space is relatively centralized around the main entrance with the Cafeteria and Media Center being distal.

Operational = 549

6th 7 (26) = 182
7th 7 (26) = 182
8th 7 (26) = 182
EC-SC 2(10) =20
Total 23 = 566
R=4+ (4 per 700)



Tucker Creek

This modern double loaded corridor design has sufficient resource size spaces that all classrooms can be counted as capacity spaces. The administration area is concentrated at the front door with other Core spaces distributed throughout the facility.

Operational = 665

6th 9 (26) = 234
7th 9 (26) = 234
8th 9 (26) = 234
EC-SC 1(10) =10
Total 27 = 686
R=7+ (5 per 700)



West Craven Middle

As with other older schools, there are not sufficient numbers of smaller spaces that can be dedicated to resource rooms. Full size classrooms are being used for this purpose. Core Facilities are centralized with the Administration Area being incongruous.

Operational = 735

6th 10 (26) = 260
7th 9 (26) = 234
8th 9 (26) = 234
EC-SC 3(10) =30
Total 31 = 758
R=7+ (7 per 800)



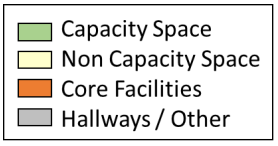
Havelock High

At the high school level, almost every space contributes to capacity. The exception being the Resource Rooms. There is a coefficient of utilization based on a block schedule employed here that takes teacher work periods into consideration. It should be noted that interior class-rooms are not recommended and the amount of time spent in these spaces should be limited. Core Spaces are distributed appropriately.

Operational = 1,253

9-12	26(22)	= 572
Sci	8(22)	=176
EC-SC	2(10)	= 20
Art	2(20)	= 40
Band	1(22)	= 22
Chorus	1(20)	= 20
D/D	2(20)	= 40
Bus/Off	4(22)	= 88
Srv/ Mrkt	5(15)	= 75
Workforce	6(15)	= 90
Gym	1(50)	= 50
Aux Gym	0(25)	= 0
Health	3(20)	= 60
		61 = **1,253**
Wt (0) 1		
Res(0) 8 (5 per 1,300)		





New Bern High

There are sufficient numbers of smaller spaces so that no full size classrooms are needed as Resource Rooms. Portions of the building are single loaded corridors while other areas use the interior two-story space below to create efficiency in design and layout. The Core Spaces are well distributed, but the main administration is slightly isolated.

Operational = 1,733

9-12	41(22)	= 902
Sci	12(22)	=264
EC-SC	3(10)	= 30
Art	2(20)	= 40
Band	1(22)	= 22
Chorus	1(20)	= 20
D/D	2(20)	= 40
Bus/Off	5(22)	= 110
Srv/ Mrkt	5(15)	= 75
Workforce	8(15)	= 120
Gym	1(50)	= 50
Aux Gym	0(25)	= 0
Health	3(20)	= 60
	84	= **1,733**
Wt 1 (0)		
Res 9+ (7 per 1,800)		



West Craven High

As with its sister school, Havelock, there are numerous smaller spaces for resource and only a limited number of classroom size spaces are needed for these programs. The Core Facilities are a reasonable combination of large areas being centralized, with smaller spaces distributed throughout the building.

Operational = 1,140

9-12	24 (22)	= 528
Sci	7 (22)	= 154
EC-SC	2 (10)	= 20
Art	1 (20)	= 20
Band	1 (22)	= 22
Chorus	1 (20)	= 20
D/D	2 (20)	= 40
Bus/Off	3 (22)	= 66
Srv/ Mrkt	5 (15)	= 75
Workforce	7(15)	= 105
Gym	1 (50)	= 50
Aux Gym	0 (25)	= 0
Health	2 (20)	= 40
		56 = **1,140**
Wt 1 (0)		
Res 4+ (5 per 1,200)		



Curriculum Requirements

Curriculum Requirements

Recognizing that the needs of individual school districts vary depending on characteristics of different geographic and demographic concerns, the North Carolina Department of Public Instruction (NCDPI) has created a set of recommendations known as the "North Carolina Public Schools Facility Guidelines". This document helps school systems and architects understand the minimum requirements for the various parts of public schools in North Carolina. This document is not a checklist; rather, it is a guide to help LEA's understand minimum facility requirements for the various grade levels.

Accompanying this document are the "Typical Space Profiles," a series of Excel data files that further define the NCDPI recommended minimum square footages and programs for schools in North Carolina. Again, these are recommendations from NCDPI to the LEA and architect. There are numerous areas where the Facility Guidelines and the Typical Space Profile cannot fully address a program's needs, and the additional requirements must be defined by the needs of the curriculum and the LEA. In order to create a set of facility standards that are appropriate for Craven County Schools, a number of questions must be answered.

Two major components for developing these standards are required. First, an inventory of existing spaces must be conducted to determine the historical standard. Second, a discussion must occur with current teachers, staff, and/or board members to deliberate the minimum requirements, assess where additional square footage may be required and ensure community needs are addressed.

The following sections define the NC / Craven Facility Standards. As a general rule, the North Carolina Facility Guidelines and Typical Space Profiles developed by NCDPI are used. It must be understood that these are the minimum standards established by NCDPI. Where additional information is required by the LEA or non-minimum standards have been incorporated, it is outlined on the following pages.

School Size

What is the ideal size for a school? Answering this question is one of the most important elements in the planning of a school system. There is much debate about the appropriate size at each of the different grade levels, and each community must come to a consensus of what is appropriate for their school system. The sizes determined for Craven County are based on existing conditions and discussions of the NCDPI suggestions. Core Capacity is also listed here and provides a guide to the largest intended size for the schools.

School Size (Cont.)

School Type

	Student Capacity	Core
Elementary:	450-700	700
Middle:	600-800	800
High:	800-1,200	1,200

These are general notions based on historic school sizes in Craven County that take into consideration the economy of larger schools. Several existing facilities are larger than the ideal maximum sizes noted above. The existing schools should be populated based on their existing capacity and still provide a complete program.

Grade Level Configuration

School configuration has changed dramatically in this country since the inception of the one room schoolhouse. Current trends favor the PK-5, 6-8, and 9-12 breaks. There are educational advantages and disadvantages to any grouping. Craven County Schools maintains an elementary, middle, high school arrangement in all schools. An alternative to the standard and traditional configuration used by CCS is a PK-8 school. This has been an effective way to provide quality education at an efficient cost in more rural areas and should be discussed prior to final planning.

Schedules

There are two types of schedules to be considered. One refers to the school calendar, the other refers to the duration of individual classes, or periods, throughout the day. The school calendar can be further broken down into two different approaches. The first is the traditional calendar where students and teachers begin in the fall and end the school year in the spring. The calendar is based on the traditional practice of no school throughout summer, which is predominant in most areas of the United States. Some districts have gone to what is known as a year-round calendar where students and teachers get small two to three week breaks throughout the school year. Arguments have been made for year round-schools suggesting that less re-educating is required due to the shorter duration of breaks. All Craven County Schools will proceed under the traditional calendar.

The second schedule concerns the duration of individual classes. A traditional schedule seats students for approximately one hour sessions (50 minutes with a 5-10 minute transition). This works out to about seven (7) classes per day. Students in elementary schools do not transition between classes but have “periods” where they move to different locations within the building for specialized instruction such as music, art, physical education, lunch, or other programs.

Middle and high school students are moving between the classrooms for different subjects. Most middle schools in the nation use the traditional seven period schedule. However, many high schools have moved to what is known as a block schedule, where students have longer periods of approximately ninety minutes with fewer transitions. In Craven County, the traditional schedule is used for middle schools and the block schedule for high schools. The NCDPI Capacities have been modified to align with the appropriate schedule.

Classroom Size

Since the Industrial Revolution, classrooms have been getting larger. A major increase in size came with the Basic Education Plan (BEP) developed by NCDPI in conjunction with the Council of Education Facility Planners International (CEFPI) in the 1980's. With some minor changes over time, these square footages have become the standard room sizes that NCDPI recommends and are used by many of the school systems across the nation.

The recommended sizes are designed to provide adequate space for the students and the instructor to move around the classroom as needed. In completing the NCDPI / Craven Standards, the NCDPI minimum square footages will be used, unless otherwise noted. Although minor reductions in the larger spaces (above 900 sq. ft.) can be tolerated, reducing the smaller classrooms (below 900) will not provide adequate instructional space.

Many of the buildings in Craven County predate these standards and are smaller than the newer classrooms. This inequity is not a problem, to a certain point. When the spaces are less than ninety percent of these standards, students become crowded beyond a reasonable amount.

By 2021, the new classroom capacities will be in full effect at the elementary school level. This is good news for the older schools with smaller classrooms because they will see a reduction in stress due to the limited square footage. For example, in the past a 1st grade classroom supported 21 students and was 1,200 sf for a total of 57 sf/student. Holding the 57 sf/student as a constant, the new 1st Grade Classroom would only need to be 914 sf or about 75% of what was previously needed. These changes will only occur in the K-3 grade levels, but they should bring some relief to our older schools with limited classroom space.

NCDPI Historical sf/Student

K-3

Grade	SF/Cr	Students	SF/Student
Kindergarten	1,200	21	57.14
Grade 1	1,200	21	57.14
Grade 2-3	1,000	21	47.62
Average	1,133	21	53.97

2021 sf/Student

K-3

Grade	SF/Cr	Students	SF/Student	% Reduction
Kindergarten	1,029	18	57.14	85.71%
Grade 1	914	16	57.14	76.19%
Grade 2-3	810	17	47.62	80.95%
Average	917	17	53.97	80.95%

The average classroom sizes of all planned or proposed Craven County Schools will follow the old NCDPI minimum recommended square footages for typical classroom spaces. The new legislation does not provide sufficient flexibility to switch classrooms from year to year and reducing the square footage of a space at this time may create issues when the new requirements are withdrawn.

Typical Classrooms (Varies 1,200 sf to 750 sf)
This refers to a non-specialized classroom that can be used for instruction on subjects such as English, Social Studies or Math. Specialized spaces will have similar characteristics, but will be outfitted to support the specific type of instruction required. The newest existing schools are good examples of appropriate finishes for the classrooms and special spaces based on NCDPI recommendations. Hard surfaced walls, appropriate carpeting or tile, appropriate windows, and acoustic ceilings dominate the facilities. Other items important to the success of each classroom include: good air quality, low noise transmission, adequate storage, state-of-the-art instructional equipment, desirable furniture and other miscellaneous equipment.

Specifics within the Standard:

- Flooring of VCT or polished concrete where vapor barrier is in failure.
- Carpet for specific programs and in limited areas for elementary classrooms.
- Lighting based on full spectrum (similar to natural light) via LED fixtures.
- Windows shall be thermally broken and sealed with an appropriate shading factor.
- Air quality shall meet or exceed industry standards.
- Furniture shall be flexible with areas of casual seating as appropriate.

Technology
The ever-changing world of technology makes it difficult for schools to keep up with current best practices on delivery methods and upgraded infrastructure to support new hardware and software. The standards currently used by NCDPI were developed in the 1980's. These have been modified over the years and the most recent iteration of NCDPI guidelines suggests separating computer rooms from the Media Center. The new standardized curriculum and assessments rely more heavily on technology than it has in the past. Keeping up with changes to both delivery and infrastructure will be ongoing challenges. Fortunately, there are several methods for addressing dynamic technology programs.

Craven County will soon be One-to-One from K-12. Younger students leave their computers at the school. As they get older and more responsible, they transition to taking the computers home.

Pre Kindergarten Programs (1,200 sq. ft.)
There are several options for consideration, with one of those being the creation of a PK Center. Currently, there are PK programs at JT Barber, Brinson, and Ben D. Quinn Elementary schools.

Exceptional Children Self-Contained (1,200 sf)

There are many types of Exceptional Children's (EC) programs in schools today. This particular category concerns students that are not able to take full advantage of a school's facilities, due to mental, physical, social, emotional or other learning differences. Inclusion programs, where students attend traditional classrooms are not included in this category. The students in this type of environment learn in a protected setting or Self Contained (SC) classroom with a high teacher to student ratio. The diverse ability of these students makes it impractical to offer support for every exception at every location. Centralized EC-SC centers are used to concentrate efforts for these students. To promote efficiency and proper support, students with similar abilities will be supported by a centralized location for improved service.

As in many school systems, Craven County Schools is dealing with facilities that were not designed for this program. Where there are older schools with smaller classrooms, the program is often broken up into a suite or group of rooms that are in a centralized location to take advantage of the existing spaces. NCDPI's minimum recommendation is that for every 10 students, one 1,200 sf room is needed with an adjacent toilet facility. That works out to approximately 120 sf/student. Best practices suggests that a large space is needed along with adjacent smaller break out spaces. This is also appropriate since the student to teacher ratio changes depending on the students needs.

The number of spaces at each school varies with the population of the program at the school. The smallest populations will have one large room of 1,200 sf along with a Toilet / Changing Area / and wash area. As the population increases, more dedicated spaces are needed. In the middle and high school programs, an additional space will be designated as a Teaching Kitchen. The table on the following page shows the needs at each school.

Exceptional Children Self-Contained Matrix

The table below depicts the approximate population of EC-SC students at each facility along with the required square footage to serve that cohort. The larger populations obviously need more square footage and the "Idea Shared" is to place a standard Resource Room near the EC-SC program as an overflow, should the needs of the EC-SC population require a higher teacher to student ratio in any given year. As noted previously the NCDPI Minimum Recommendation is for 120 sf/student and based on best practices having the smaller breakout spaces is warranted.

Craven County Schools

EC Program Spaces

7/30/2019

Facility	# CR	Students	Main Room	Toilet	2nd Rm	3rd Rm	Teaching Kitchen	Total SF	Ideal Shared	SF / Student
Elementary		10								
AH Bangert	1	10	1,200	250				1,450	850	145.0
AW Edwards	1	10	1,200	250				1,450	850	145.0
Ben D. Quinn	1	10	1,200	250				1,450	850	145.0
Bridgeton	2	20	1,200	250	850	450		2,750	450	137.5
Brinson Memorial	2	20	1,200	250	850	450		2,750	450	137.5
Creekside	2	20	1,200	250	850	450		2,750	450	137.5
GA Barden	1	10	1,200	250				1,450	850	145.0
Havelock Elementary	2	20	1,200	250	850	450		2,750	450	137.5
JT Barber										
JW Smith `	1	10	1,200	250				1,450	850	145.0
Oaks Road Academy	1	10	1,200	250				1,450	850	145.0
Roger Bell New Tech Academy	1	10	1,200	250				1,450	850	145.0
Trent Park										
Vancebor-Farm Life Elementary	2	20	1,200	250	850	450		2,750	450	137.5
W.J. Gurganus										
Subtotal	17	170								141.9
Middle										
Grover C. Fields	2	20	1,200	250	850		450	2,750	450	137.5
H.J. McDonald Middle	3	30	1,200	250	1200	850	450	3,950	450	131.7
Havelock Middle	2	20	1,200	250	850		450	2,750	450	137.5
Tucker Creek Middle am	1	10	1,200	250			450	1,900	850	190.0
West Craven Middle	3	30	1,200	250	1200	850	450	3,950	450	131.7
Subtotal	11	110								145.7
High										
Havelock High	2	20	1,200	250	850		650	2,950	450	147.5
New Bern High	3	30	1,200	250	1200	850	650	4,150	450	138.3
West Craven High	2	20	1,200	250	850		650	2,950	450	147.5
Subtotal	7	70								144.4

Science Classrooms (1,200 or 1,400 - 1,500 sf)
There are several different programs under this classification and each has its own specific arrangement. In many cases, the diverse needs are related to how instruction can best be facilitated in relation to the discipline and the space available. Depending on the subject, it is advantageous to teach both lecture and lab work in the same space. The NCDPI, through general statute, has approval authority over middle and high school science room plans. Additional requirements are based on the NCDPI document "School Science Facilities Planner", which was the basis of all recent science classrooms for middle and high schools in Craven County.

Elementary Schools
This is a unique type of "Science Classroom" where Science, Technology, Engineering, and Math (STEM) will be presented. The room will ideally be around 1,200 square feet and be equipped with multiple sinks and outfitted with casework appropriate for a "light" science classroom. Students here will work on project based learning instruction with each of the disciplines, gaining an understanding of how they relate to each other.

Middle Schools (1,300 sf)
We have dedicated Science Classrooms with storage and prep areas meeting NCDPI standards, and should have approximately 1,200 square feet of lecture/lab space available along with about 100 sf of storage / prep to be shared between two classrooms. Gas and fume hood connections are not necessary at this level, but arrangements should be made for an instructor's desk that is equipped with a propane burner or other apparatus that can be used for demonstration purposes, if needed. Desks shall be on casters or another similar method that allows for quick reconfiguration of the classroom. The room will have multiple sinks and electrical outlets for students to work on projects as well as casework appropriate for this type of instruction.

High School Science Classrooms (1,200 — 1,500 sf)
Here there is a greater diversity in the types of Science Programs offered which directly relates to the square footage and general requirements of each. Great detail can be found in the NCDPI School Science Facilities Planner (see NCDPI Prototype website under "Publications and Guides / School Planning"). These programs have very specific requirements based on subject matter and associated safety precautions that must be incorporated into any new design or existing facility. Again, the instruction may be in a lecture only or a lecture/lab configuration. The minimum suggested square footage for all disciplines is 1,200 sf., with Chemistry at 1,500 sf. Prep and Storage rooms should be located adjacent to the Science Classrooms and adjusted to match the program served.

Classrooms will have multiple sinks, appropriate casework and lab tables where needed. Safety features include eye wash and showers along with entire room evacuation systems.

The square footage for each is listed below:

- Physical Science @ 1,200 sf
- Biology @ 1,200 sf
- Chemistry @ 1,500 sf
- Physics @ 1,200 sf
- Other Sciences @ 1,200 sf
- Prep Rooms @ 250 sf

In School Suspension (ISS) (450 to 850 sf)
This program is targeted to support middle and high school students. Its required square footage and the concept of multiple subjects being taught makes this similar to a standard Resource Room. Additionally if not used for ISS , it can become a true resource or pull out room. In a high school situation, it can work as the yearbook or medium sized group project room.

Art Classrooms (Visual) **(1,350 or 1,450 or 1,600 sf)**
All art classrooms should be outfitted for the development of pottery skills and have an operable kiln in at least one properly vented room at the school. The square footage indicated includes between one hundred-fifty and two hundred square feet of storage and kiln space. As school size increases, additional art classrooms will become appropriate.

Music / Band (1,000 or 1,750 or 2,000 sq. ft.)
The square footage for these rooms will be per NCDPI recommendations. The suggestions are from between 23-35 square feet per student. Additionally, these spaces require high ceilings to reduce sound pressures that may be capable of damaging hearing over prolonged periods and should be tuned via sound absorption materials on walls and or ceilings, often post construction. Carpet is appropriate in these rooms as a means of deadening the space so instructors can hear the individual student play. The carpet must be replaced on a regular basis.

Elementary School Music Rooms should be approximately one thousand square feet (1,000 sf), with a portion of that square footage (150 sf) dedicated to storage of instruments and equipment.

Middle School Band Rooms for a school of eight hundred fifty students should be approximately seventeen hundred square feet (1,700 sf) based on the NCDPI Space Profile. This space would accommodate between fifty and seventy students, but even at this size, may not have sufficient square footage to support the entire program and additional sessions may be required. Special consideration must also be given to storage of instruments and uniforms.

High School Band Rooms, for 1,400 to 1,600 students maximum population, should be between 2,200 and 2,450 square feet. Based on these numbers, the space could provide for approximately sixty to eighty-five students. Permanent risers are not recommended for this space and other special spaces must be addressed for storage of larger instruments and uniforms. Often the band program is sufficiently large that providing a single room for all band members becomes unreasonable and several sessions will be needed. In many cases the band rooms do not have sufficient volume, sound absorption, and storage space.

Vocal / Choral Music (1,200 or 1,400 sq. ft.)
This program will be offered at the middle and high school levels. Standard NCDPI suggestions of ten to eighteen square feet per student will be used, based on the Space Profile that results in twelve hundred (1,200 sf) at the middle school program and fourteen hundred (1,400 sf) for the high school program.

Dance/Drama Classroom (1,800 sq. ft.)
This will occur at the high school level and at any school currently providing the program as well as those middle schools that are of sufficient size to support this program. At the middle and high school levels, schools of 800 students or more will have a dedicated space. For populations near or above 1,200, one space for each program is the recommended minimum. Although these programs can be taught without an Auditorium, performances are impractical without one. A full size Auditorium at the high school level would be necessary to create the appropriate space for the completion of this program.

Career Tech Ed (CTE) Programs (varies per program)
Numerous programs fall under this umbrella, formerly known as Vocational Classes. The programmatic and classroom requirements are diverse and have significant infrastructural requirements. The NCDPI standard square footages will be used as a guide for the CTE Programs. However the number of spaces needed for the "College or Career Ready" concept has not been updated by NCDPI. The standard will be to continue to provide the current programs and add sufficient number of classrooms to meet each school's population.

Middle School programs will align primarily with the exploratory nature of vocational programs geared mostly toward computer applications. The current programs are:

Middle Schools

Program	Capacity	Sq Ft
Business Computers	26	1000
STEM Computers	26	1400
Health Sciences Classroom	26	950
Agriculture Classroom	26	950

High School programs will be diverse and the square footage for these will align closely with the NCDPI recommendations. Each space has its own special requirements and various sizes are practical. In some cases, significant infrastructure is required for particular programs, such as the automotive program which requires exhaust systems, lifts, tool storage, and appropriate safety systems.

Capacity in these rooms is also a consideration where students may be working with power equipment or need special instruction to ensure safety of students and staff. The reductions are based on research and on NCDPI recommended minimums where the numbers shown err on the side of caution.

At this point there are known needs and a long range plan for increasing programs for the Career Ready graduates. The rollout of these programs must be aligned with the availability of qualified instructors, as well as facilities for instruction. Programs anticipated are included as well as those projected beyond ten years. The 10+ year items are not included in cost estimates or proposed plans.

The programs here are various and are shown in the table on the following page.

Auditorium (800 seats or 11,200 sq. ft. seating / stage)

This space is intended for public performances and any function where an audience should be protected from the elements. Although the ability exists to create seating adequate for graduation, the cost to create larger spaces increases exponentially to the point where the required space will exceed nearly any budget. Comparing the cost to the amount of use indicates it is impractical to build excessively large auditoriums.

Elementary Schools

At this level, a Multipurpose Room is appropriate for all of the functions where performances occur or where a stage for large gatherings is required. Placing the cafeteria next to the Multipurpose Room as in several of Craven County Schools buildings, gives the school greater flexibility to address special programs.

Middle School

Auditoriums are not recommended by NCDPI Minimum Standards until the school population reaches nine hundred fifty students. At this time, two middle schools have auditoriums, while three do not. Two of those are of appropriate size for an Auditorium. Havelock Middle is the only school sufficiently small enough that an Auditorium is not warranted. Any future middle schools should align with this standard and should be reviewed with a qualified education facility planner to determine the appropriate size based on population.

High School

Auditoriums are recommended once the population reaches about eight hundred. The size for an auditorium varies, but current NCDPI recommendations are for seating somewhere between 1 and 2 grade levels. In this case, we are talking about a population of almost 1,500 students and should be sized for between 640 to 750 seats. The outstanding facility is New Bern High, which has what is most appropriately labeled as a Lecture Hall. It is approximately 1/2 the appropriate size.

High School CTE

The table indicates the program along with the campus where it is located. As population increases, the number and diversity of offerings increases. Square footages reflect recommended, not what is currently provided. In many cases, the existing spaces are significantly smaller than the recommended minimums.

The known additional needs are included in the cost estimates and master plans for each school. In most cases the larger spaces are not present. In this case, the addition of the larger space will be proposed and other programs backfilling the vacated spaces as practical.

It is anticipated that the Career Ready programs will expand, requiring even more space dedicated to these programs. The grey section to the right depicts that increase, but due to the longer range nature of this information, it is not included in cost estimates.

High Schools

	Program	Capacity	Sq Ft	HHS	NBS	WCH
Business / Office Education						
	Drafting / Computer App	20	1,000	1		
	Computer Programming	20	1,000		1	
	Engineering	20	1,200		1	
	Business	20	1,000	3	5	3
Service / Marketing						
	Family & Consumer Science	15	1,400	1	1	1
	Cullinary	15	1,400		1	1
	Health Sciences 1	15	1,400	1	1	1
	Health Sciences 2	15	1,400		1	1
	Public Safety 1	15	1,400	1	1	1
	Public Safety 2	15	1,400	1		
Workforce Development Lab						
	Automotive	15	3,000	1		
	Agriculture 1	15	3,000	1	1	1
	Agriculture 2	15	2,000			1
	Manufacturing	15	2,500		1	1
	Tech Engineering 2 Trade ind	15	2,500	1		
	Tech Engineering 1	15	2,000	1	1	
	Shop / Carpentry 1	15	3,000	1	1	1
	Shop / Carpentry 2	15	2,500			
	Mechatronics	15	2,000			1
	Existing Total			13	16	13
				HHS	NBS	WCH
Known Additional Needs under 10 yrs						
	Masonry - Workforce	15	3,000	1	1	1
	Marketing - Service Mrktg	15	1,200	1		
	Agriculture - Workforce	15	3,000		1	
	Welding - Workforce	15	2,500			1
	Added for next 5-10 yrs			2	2	2
	Total within 10 yrs			**15**	**18**	**15**
Future 10+ Years Anticipated - Not included in Cost Estimates						
	Health Sciences - Service Mrktg	15	1,400	1	1	
	Carpentry 2 - Workforce	15	2,500		1	
	Computer Programming - Business	20	1,000	1		1
	Automotive - Workforce	15	3,000		1	1
	Engineering 1 - Business	20	1,000			1
	Total added 10-15 yrs			2	3	3
	Total at 10-15 yrs			17	21	18

Multipurpose / Gymnasium (E - 5,000 / M - 9,000 / H - 15,000 sq. ft.)
Typically, a Multipurpose room is provided for all elementary schools and aligns with the NCDPI minimums. This space is approximately half the size of a basketball court. A stage from between six hundred and eight hundred fifty square feet should be associated with the Multipurpose space, when a Music Room is not planned for the facility. At middle schools and high schools, a full size gymnasium outfitted with bleachers and the ability to have two cross court basketball courts is typical. Middle school gyms should be equipped with a full size court, sufficient seating to house the entire student body, lockers, showers, and storage of at least 300 sf. High schools have similar requirements and should have sufficient seating for the entire student body. Seating for both middle school and high school will include some floor seating.

Auxiliary Gym
At the middle school level, a 5,000 sf Auxiliary Gym is recommended once the population exceeds 800 students. For the High School approximately 6,500 sf is appropriate once the student population is above 1,200 students.

Locker Rooms and Showers / associated Storage and Training(8,600 sq. ft.)
Although not heavily used today, locker rooms with showers are needed for both the middle school and high school programs. These must be based on the size of the programs and as needed for a community shelter upon returning from an evacuation scenario. The square footage indicated here is for a twelve hundred student high school.

Weight Rooms (1,600 sq. ft.)
The Facility Guidelines do not recommend a weight room for the middle school program, however several are present throughout the system. For this investigation, they are counted as additional Resource Rooms. At the high school level, weight rooms should be a minimum of sixteen hundred square feet or greater to provide additional space between machines. Additionally, it should have rubber or other appropriate flooring and mirrors to support student learning related to muscle isolation.

Wrestling Rooms (2,000 sq. ft.)
For the high school program, a wrestling room is appropriate once the school reaches a certain population. A Wrestling Room currently exists at each facility.

Athletics and After School Programs
The NC Department of Public Instruction has a limited set of standards for athletic facilities and fields. The combined CCS / NCDPI standard will be based on a combination of existing Craven County facilities and recommendations available from NCDPI. Currently the high schools are rated either AA , AAA, or AAAA.

Athletic Programs

There are numerous athletic programs offered throughout the year, with many of them placing demands on the fields and gymnasium at the same time. Scheduling for all practices and events must be done carefully to avoid conflicts. The schedule often does not include time for proper maintenance of fields where grass needs time to rest and regrow. In all cases, an Auxiliary Gymnasium is warranted based on the student capacity of the schools. In the case of New Bern High, it is reasonable to discuss a synthetic turf field due to the number of students who use the field.

NCHSAA Seasons				HHS	NBH	WCH
Athletics Calendars				AAA	AAAA	AA
2018-2019						
	Start	Finish	Playoffs			
	Practice	Games	Finished			
Fall						
Cross Country	30-Jul	19-Oct	3-Nov			
Men's Soccer	30-Jul	6-Oct	17-Nov			
Men's JV Soccer	30-Jul	6-Oct	17-Nov			
Women's Tennis	30-Jul	15-Oct	27-Oct			
Volleyball	30-Jul	20-Oct	3-Nov			
Women's Golf	30-Jul	10-Oct	23-Oct			
Varsity Football	1-Aug	8-Nov	14-Dec			
JV Football	1-Aug	8-Nov	14-Dec			
Winter						
Men's Basketball	31-Oct	23-Feb	16-Mar			
Men's JV Basketball	31-Oct	23-Feb	16-Mar			
Women's Basketball	31-Oct	23-Feb	16-Mar			
Women's JV Basketball	31-Oct	23-Feb	16-Mar			
Indoor Track and Field	31-Oct	2-Feb	9-Feb			
Swimming and Diving	31-Oct	26-Jan	9-Feb			
Spring						
Wrestling	30-Oct	1-Feb	8-Feb			
Men's Varsity Baseball	13-Feb	6-May	1-Jun			
Men's JV Baseball	13-Feb	6-May	1-Jun			
Men's Golf	13-Feb	1-May	14-May			
Men's Lacross	13-Feb	29-Apr	18-May			
Women's Lacross	13-Feb	29-Apr	18-May			
Women's Soccer	13-Feb	6-May	25-May			
Softball	13-Feb	6-May	31-May			
Men's Tennis	13-Feb	29-Apr	11-May			
Track and Field	13-Feb	4-May	18-May			
Year Round						
Cheerleading			1-Dec			

Core Facilities

Media Centers (Core Capacity Varies per square footage)

The Media Centers should be designed and constructed to the NCDPI minimum standards. They should be equipped with a modicum of computers, between six and twelve, dedicated to Media Center activities and research. At this time, there is no direct relationship needed between a computer room and the Media Center. The role of the Media Center is changing due to our ever growing dependence on technology and the internet. Libraries across the country are dedicating more space to computers and less to stacks and book volumes. As such, the role of the Media Center will continue to evolve.

Elementary Schools

Here, the standard maintains a fairly traditional ratio of books to computer research areas, where the Reading and Listening Volume are preserved. It is important for this age group to develop their tactile appreciation and understanding of books along with an understanding of how to research using the Dewey Decimal System. Computer proficiency should be developed concurrently with reading proficiency and should not be a deterrent to developing good reading habits.

Middle Schools

Middle schools are unique since it is a transitional time for most students from high teacher support to learning how to research on their own. This is a time when they begin to develop the skills necessary to be successful at high school and beyond. These students are typically computer savvy and have a world of media at their fingertips, thus reducing the need for an associated Computer Classroom. The transition to a more conventional library organization is occurring in a number of existing facilities and is becoming standard in new construction. Additional space should be included in the library for an entire classroom to use the media center, but additional square footage for computers and other media is not needed.

High School

Here, students are expected to be proficient in computer technology and to complete significant portions of their research and some reading online. The trend is to create what would traditionally be called a library with an attached cyber café. This supports the group learning scenario where students work in various sized groups on project based learning. They need additional flexibility in seating and study areas.

Cafeterias (varies per Core Capacity)
Cafeterias should be designed based on the stated Core Capacity and should be sized based on fourteen square feet per student for all schools. Additionally, many students also eat breakfast at the school, with grant funding this program may be extended to serve all K-5 students. This will put more stress on the kitchen staff. Using the 14 sf, in lieu of the smaller 12 sf per student, reduces congestion and makes spills easier to clean.

Kitchens
These will be based on NCDPI recommendations to support the new nutrition standards. Floors, walls, and ceilings will all be durable surfaces which are easily cleaned. Any new facilities will be designed to accommodate the current trends in nutrition and designed with flexibility in mind when the program changes. Additionally in some locations, the kitchens are undersized. They have been used for years. Prior to increasing the size of them, the nutrition specialist and kitchen staff should be interviewed to fully understand deficiencies and hardships based on a particular layout.

Administrative Areas
These areas are one of the first places the public sees. Appropriate finishes and layout are needed to ensure safety and good efficiency of the operations of the facility. They should be easily identified and adjacent to the public entryway as well as provide for security of the school.

Guidance
Similar in finishes to the Administrative suite, these spaces are a secondary focus for parents and students. They should have good sound isolation for private conversations and be located remotely from the Administration Area.

Staff Support
Again similar finishes are appropriate for most of these spaces. This is where instructors come to share ideas on what is working and what is not. The area is used to discuss individual students success and what can be done to help each student.

Storage
Storage space is often neglected in school design. Without this much needed space, classrooms become cluttered with items that are used infrequently, which reduces the effective size of classrooms. With more and more reliance on technology, book storage requirements have diminished, but primarily only in the upper grades. The square footage that NCDPI suggested for Book Storage is still needed, but is considered under General Storage as appropriate.

Typical Classrooms (Varies 850 to 1,200 sf)
This refers to a non-specialized classroom that can be used for instruction on subjects such as English, Social Studies, or Math. Specialized spaces will have similar characteristics, but will be outfitted to support the specific type of instruction required. The existing schools are good examples of appropriate finishes for the classrooms and special spaces based on NCDPI suggestions. Hard surfaced walls, good carpeting or tile, appropriate windows, and acoustic ceilings dominate the facilities. Other items important to the success of each classroom are related to: good air quality, low noise transmission, adequate storage, state-of-the-art instructional equipment, durable furniture and other miscellaneous equipment.

Of special note:

- Flooring of VCT or other more durable material such as terrazzo or LVCT in corridors.
- In older schools where the vapor barrier is compromised, polishing the existing concrete is a good long term solution.
- Lighting based on full spectrum (similar to natural light) via LED fixtures.
- Windows shall be thermally broken and sealed with an appropriate shading factor.
- Air quality shall meet or exceed industry standards.
- Furniture shall be flexible with areas of casual seating as appropriate.

Technology (Computer Room 850 or 1,000 sq. ft.)
The ever changing world of technology makes it difficult for schools to keep up with current best practices on delivery methods and upgraded infrastructure to support new hardware and software. The standards currently used by NCDPI were developed in the 1980's. These have been modified over the years and the most recent iteration of NCDPI guidelines suggests separating computer rooms from the Media Center. The new standardized curriculum and assessments rely more heavily on technology than in the past. Keeping up with changes to both delivery and infrastructure will be an ongoing battle. Fortunately, there are several methods for addressing dynamic technology programs.

Craven County uses a variation of the One-to-One in all of its schools. Younger students leave their computers at the school. As they get older and more responsible they transition to taking the computers home. This has eliminated the need for a dedicated computer classroom, thus reducing the cost of this space.

Pre Kindergarten Programs (1,200 sq. ft.)
Only a few schools currently support the county's PK age students. Expansion to these services is appropriate, and there is a desire from CCS staff to do so. Funding for both instruction and facilities has not been sufficient to make these programs more available.

Mobile Units
Mobile units are intended for short term housing of students or programs when the population of the school exceeds its capacity. Although their use is a common and practical solution for overcrowding, prolonged or over-use of these facilities negatively impacts the remainder of the school.

Administration Offices (system wide)
Although this is not a portion of the standards that will be applied to the schools, the design and effectiveness of these offices will impact the entire system. Currently, the main administrative offices are centralized at the intersection of S. Glenburnie and Trent Road. Although the current configuration is working, investigations into placing all departments under one roof will improve collaboration between different departments.

Maintenance Department
These offices and workshops are located toward the northwest of the bulk of the schools. Response times increase as you travel south into the Havelock area schools. A more central location would be appropriate.

Bus Garage
The existing bus garage and fleet repair shop are in good condition. They are well equipped and one of the more modern structures in the school system. Bus parking is an issue with many buses being parked at schools during the day as well as over the summers when much repair is done. Response times to Havelock are again an issue. There is potential to create a small repair or warehouse area near Havelock to improve response times and provide parking for buses over the year.

Green Philosophies / Energy Efficiency

In the past, energy costs have increased and are expected to continue to become a greater proportion of the overall operating budget for schools. The most recent code change in North Carolina will impact the initial construction costs for most buildings in the state. These changes call for additional energy saving features and increased insulation values for most components on any new building. These changes will increase the "first costs" of buildings, but based on anticipated increases in future energy prices, they will reduce the energy bill over the life of the school. By complying with this new code, the school system will mitigate some of the increases in energy costs.

There are several systems that support the notion of creating more energy efficient facilities. The most notable are the Leadership in Energy and Environmental Design (LEED), Green Globes, the Collaborative for High Performance Schools (CHPS), and Energy Star. Although these programs have a cost efficient component as well as educational value, pursuing the label is not a priority. Continuing the energy efficient programs already in place and building upon them will provide significant life cycle savings and reduce overall energy consumption and costs at each facility.

Energy Savings

The school system has been working to create more energy efficient buildings for the past several years. When existing equipment fails or becomes substantially deficient, it is replaced with new, more energy efficient equipment. This plan can be seen in new air conditioning equipment and new high efficiency lighting throughout the county. This energy saving philosophy is evident in several other design elements of Craven County Schools. The maintenance department has been replacing old T-12 and T-8 fluorescent lighting with energy efficient LED lighting as time and funds allow. The anticipated return on investment for lighting is three years or less depending on the type of fixture being replaced.

Energy Production

There are a great proliferation of energy related companies and strategies targeted at creating energy that will offset current utility usage and rates. Craven County has the potential to take advantage of both solar energy and the growing demand for harvesting this type of resource. Although the payback on solar panels has come down over the past several years, it is not a quick return on investment and in most cases requires a private partner to make the financing work.

Sharing of Facilities

Craven County Schools and Craven County already share a great portion of their assets, especially when considering athletic fields. The schools are used as emergency shelters in the event of a natural disaster.

Classroom Square Footage

Classroom Square Footage

Reading the Square Footage Tables (Following Pages)

There are distinct types of classrooms that match up with particular programs. Each has an optimal size tailored to instruction and the number of students in each. The sizes that were established in the Curriculum Requirement section are primarily based on NCDPI's Recommended Minimums, with only a few exceptions where it has been found appropriate to modestly enlarge the space, such as cafeterias and certain science classrooms. (Details of specific space can be seen in the Curriculum Requirements section.)

The standards were developed by NCDPI in the mid 1980's and have not changed significantly since then. Buildings built before that time often have rooms that are significantly smaller. Even today most schools are below these minimums by a small portion, in an effort to save construction costs. Rooms that are within 5% to 10% of the recommended size often function well; it is when spaces are less than 90% of their suggested size that real instructional issues arise.

The following pages depict the average sf per student for each type of classroom in Craven County and compares it to the NCDPI / CCS Minimum Recommended Standards for that type of space. They use the maximum ADM Capacity as the basis for their configuration. Where possible, the spaces are depicted as they are being used today.

A.H. Bangert Elementary is a prime example of an older school where classrooms are significantly smaller than current minimum standards. At an average of only 78% of a full size classroom, it represents an inequity in the amount of room each student has available when compared to the newest elementary schools. The result is that teachers are limited in the projects and type of instruction they can engage in every day.

The reduction in the number of students per classroom under HB-90 helps the schools with smaller classrooms by increasing the square footage available to each student. This does nothing to create equity among the schools and still does not bring the sf/student ratio up to the point where modern educational methods of instruction can be employed.

Craven County Schools 2019 Average Classroom Size	Elementary Schools											NCDPI / CCS Minimum Standard
	AHB	AWE	BDQ	BRE	BSE	CSE	GAB	Total SF	Total # Rooms	Average SF	% Above or Below NCDPI Min	
Student Capacity												
Core Capacity												
ACADEMIC CLASSROOMS	24,196	32,328	24,345	35,218	41,730	34,868	20,208	423,678	508	834		
Pre-K Clsrms			864				1,091	6,308	7	901	75.1%	1,200
Kindergartens	811	958	859	1,164	952	1,164	1,091	59,984	59	1,017	84.7%	1,200
Grades 1-3 Clsrms	812	864	890	1,101	787	1,109	854	167,571	185	906	90.6%	1,000
Grades 4-5 Clsrms	800	812	898	1,075	948	1,073	735	90,037	98	919	96.7%	950
4-8 LA/SS/Math/Sci Clsrms												950
Grades 6-8 Math/Sci Clsrms												950
Grades 5-8 Science Clsrms												950
(9-12) Eng. / F-Lang. / SS / Math												0
Exceptional (self contained)	859	958	867	856	776	1,113	1,092	17,707	24	738	61.5%	1,200
Instructional Kitchen					175			350	2	175		200
Resource	716	623	445	604	818	559	537	80,938	132	613	136.3%	450
Computer												850
ISS								783	1	783	174.0%	450
H.S. SCIENCE	0	0	0	0	0	0	0	0	0			
Physical /Bio /Chem /Physics /O												1,200
Prep Rooms												250
Math/Sci Computer Lab												850
ARTS EDUCATION	1,131	2,537	1,789	2,449	1,918	2,562	1,502	29,765	38	783		
Visual Arts	1,131	790	925	1,287	1,053	1,287	735	15,775	15	1,052	87.6%	1,200
Art Project						56		56	1	56	5.6%	1,000
Art Sto. Kiln				56		121		540	6	90	60.0%	150
General Music		958	864	997	865	989	767	9,726	10	973	97.3%	1,000
Instrumental Music (Band)												0
Vocal Music (Chorus) + Sto.												0
Ensemble / Practice												0
Band Uniform Sto.												0
Instrument Sto.				109		109		219	2	109		0
Office / Library												0
Dance/Drama								3,449	4	862	47.9%	1,800
VOCATIONAL	0	0	0	0	0	0	0	0	0			
Keyboarding Labs												0
Exploratory Labs												0
Computer Applications												0
Business/Office Ed.												0
Cons/Occ Home Economics												0
Service/Marketing												0
Health Occupations												0
Agri/Trade & Industry (Heavy)												0
Trade & Industry (Medium)												0
Technology (Light)												0
Communications/Misc												0
Vocational Clsrms												0
PHYSICAL EDUCATION	1,448	6,072	2,089	6,385	5,057	6,449	4,270	69,091	42	1,645		
Multi/Main Gymnasium	1,448	4,674	1,858	3,671	3,795	3,659	3,190	53,970	15	3,598		
Stage		1,214		833	1,099	833	1,080	8,390	8	1,049		
Boys/Girls Locker												
Boys/Girls Showers												
Coaches off./ Showers												
Training												
Laundry												
Storage / Office				104	82			1,419	10	142		
Officials/showers												
Lobby/cons./commons				1,777		1,777		4,046	3	1,349		
Auxiliary Gym												
Weight Room												
Wrestling												
Health/P.E. Clarms		185	231			180		1,266	6	211		
MISC SPACES	0	0	0	0	0	0	0	0	0			
ROTC												
Media Center	3,298	2,799	4,022	2,976	3,716	3,223	4,570	52,543	56	938		
Media Center (Library)	2,600	2,511	2,911	2,800	3,252	2,800	2,881	42,490	18	2,361		
Support	699	288	1,111	176	463	423	1,690	10,054	38	265		
Computer								0	0			
FOOD SERVICE	5,364	6,944	5,982	6,897	6,033	6,687	4,675	85,578	92	930		
Serving	0	0	0	0	620	0	0	1,063	1	1,063		
Dining	3,756	4,845	4,011	4,073	4,073	4,034	3,403	58,081	15	3,872		
Kitchen	1,608	2,099	1,971	2,824	1,341	2,653	1,273	26,435	76	348		
AUDITORIUM	0	0	0	0	0	0	0	0	0			
Auditorium	0	0	0	0	0	0	0	9,504	2	4,752		
Stage / Dress / Sto.	0	0	0	0	0	0	0	213	2	107		
Lobby	0	0	0	0	0	0	0	0	0			
ADMINISTRATION	2,066	2,157	2,111	2,728	2,766	4,698	3,542	41,034	181	227		
BOOK STORAGE	198	958	100	0	1,444	0	0	4,144	9	460		
STORAGE	1,996	858	904	2,615	2,412	2,416	856	29,273	282	104		
STAFF SUPPORT	0	917	1,509	1,519	409	832	801	13,224	41	323		

Varies per size of school

Craven County Schools 2019 Average Classroom Size	Elementary Schools												NCDPI / CCS Minimum Standard
	HE	JTB	JWS	OAK	RBE	TPE	VFL	WJG	Total SF	Total # Rooms	Average SF	% Above or Below NCDPI Min	
Student Capacity													
Core Capacity													
ACADEMIC CLASSROOMS	29,990	24,574	34,990	25,142	20,898	22,263	29,901	23,028	423,678	508	834		
Pre-K Clsrms		724							6,308	7	901	75.1%	1,200
Kindergartens	1,165	1,262	1,098	1,271	904	877	933	908	59,984	59	1,017	84.7%	1,200
Grades 1-3 Clsrms	1,114	734	931	854	898	870	878	898	167,571	185	906	90.6%	1,000
Grades 4-5 Clsrms	1,075	976	1,009	793	857	853	853	896	90,037	98	919	96.7%	950
4-8 LA/SS/Math/Sci Clsrms													950
Grades 6-8 Math/Sci Clsrms													950
Grades 5-8 Science Clsrms													950
(9-12) Eng. / F-Lang. / SS / Math													0
Exceptional (self contained)	981		307	797	880		398		17,707	24	738	61.5%	1,200
Instructional Kitchen									350	2	175		200
Resource	868	676	555	597	505	291	835	295	80,938	132	613	136.3%	450
Computer													850
ISS									783	1	783	174.0%	450
H.S. SCIENCE	0	0	0	0	0	0	0	0	0	0			
Physical /Bio /Chem /Physics /O													1,200
Prep Rooms													250
Math/Sci Computer Lab													850
ARTS EDUCATION	2,618	5,963	1,006	1,482	1,864	0	1,391	1,554	29,765	38	783		
Visual Arts	1,310	1,245	925		927		1,201	925	15,775	15	1,052	87.6%	1,200
Art Project									56	1	56	5.6%	1,000
Art Sto. Kiln	48		81		45		190		540	6	90	60.0%	150
General Music	1,260	1,506			892			629	9,726	10	973	97.3%	1,000
Instrumental Music (Band)													0
Vocal Music (Chorus) + Sto.													0
Ensemble / Practice													0
Band Uniform Sto.													0
Instrument Sto.									219	2	109		0
Office / Library													0
Dance/Drama		984		741					3,449	4	862	47.9%	1,800
VOCATIONAL	0	0	0	0	0	0	0	0	0	0			
Keyboarding Labs													0
Exploratory Labs													0
Computer Applications													0
Business/Office Ed.													0
Cons/Occ Home Economics													0
Service/Marketing													0
Health Occupations													0
Agri/Trade & Industry (Heavy)													0
Trade & Industry (Medium)													0
Technology (Light)													0
Communications/Misc													0
Vocational Clsrms													0
PHYSICAL EDUCATION	4,678	5,917	1,742	3,613	3,480	4,019	11,760	2,111	69,091	42	1,645		Varies per size of school
Multi/Main Gymnasium	3,532	4,247	1,649	3,525	3,384	3,601	9,880	1,858	53,970	15	3,598		
Stage	663	1,517					1,151		8,390	8	1,049		
Boys/Girls Locker													
Boys/Girls Showers													
Coaches off./ Showers													
Training													
Laundry													
Storage / Office	151	153	93	88	96	418			1,419	10	142		
Officials/showers													
Lobby/cons./commons							492		4,046	3	1,349		
Auxiliary Gym													
Weight Room													
Wrestling													
Health/P.E. Clarms	181						237	253	1,266	6	211		
MISC SPACES	0	0	0	0	0	0	0	0	0	0			
ROTC													
Media Center	3,224	3,896	3,080	2,285	3,624	2,761	5,257	3,813	52,543	56	938		
Media Center (Library)	2,796	2,913	2,547	1,704	2,921	2,561	4,382	2,912	42,490	18	2,361		
Support	428	983	533	581	703	201	875	901	10,054	38	265		
Computer									0	0			
FOOD SERVICE	7,667	5,153	5,804	3,670	5,512	4,357	4,819	6,014	85,578	92	930		
Serving	0	443	0	0	0	0	0	0	1,063	1	1,063		
Dining	4,710	3,393	4,060	2,787	3,878	3,219	3,828	4,011	58,081	15	3,872		
Kitchen	2,957	1,317	1,743	883	1,634	1,138	991	2,002	26,435	76	348		
AUDITORIUM	0	4,776	0	0	0	0	4,728	0	0	0			
Auditorium	0	4,776	0	0	0	0	4,728	0	9,504	2	4,752		
Stage / Dress / Sto.	0	0	0	0	0	0	0	0	213	2	107		
Lobby	0	0	0	0	0	0	0	0	0	0			
ADMINISTRATION	1,818	2,925	4,193	1,581	3,409	1,194	2,716	3,131	41,034	181	227		
BOOK STORAGE	194	327	0	0	0	0	923	0	4,144	9	460		
STORAGE	1,634	3,092	1,311	2,464	2,037	1,591	3,443	1,647	29,273	282	104		
STAFF SUPPORT	1,114	530	1,767	300	1,154	455	1,918	0	13,224	41	323		

Craven County Schools 2019 Average Classroom Size	Middle School									
	GRO	HJM	HAM	TCM	WCM	Total SF	Total # Rooms	Average SF	% Above or Below NCDPI Min	NCDPI Minimu
Student Capacity										
Core Capacity										
ACADEMIC CLASSROOMS	28,432	43,148	17,727	31,665	34,440	129,995	160	812		
Pre-K Clsrms										1,200
Kindergartens										1,200
Grades 1-3 Clsrms										1,000
Grades 4-5 Clsrms										850
4-8 LA/SS/Math/Sci Clsrms	737	813	805	874	842	73,824	91	811	85.4%	950
Grades 6-8 Math/Sci Clsrms										950
Grades 5-8 Science Clsrms	726	789	944	959	799	26,491	31	855	90.0%	950
(9-12) Eng. / F-Lang. / SS / Math										850
Exceptional (self contained)	1,049	1,204	1,052	803	772	11,980	12	998	83.2%	1,200
Instructional Kitchen		446				891	2	446	222.8%	200
Resource	765	979	793	650	719	12,690	17	746	165.9%	450
Computer										850
ISS	725	788		493	403	4,119	7	588	130.8%	450
H.S. SCIENCE	0									0
Physical /Bio /Chem /Physics /Ot										1,200
Prep Rooms										250
Math/Sci Computer Lab										850
ARTS EDUCATION	5,738	7,601	4,018	2,809	5,342	25,509	32	797		0
Visual Arts	933	1,995	1,117	1,044	1,143	7,166	6	1,194	99.5%	1,200
Art Project										1,000
Art Sto. Kiln	384			48	123	939	4	235	117.4%	200
General Music										0
Instrumental Music (Band)	1,047	2,689	1,546	1,605	955	8,798	6	1,466	104.7%	1,400
Vocal Music (Chorus) + Sto.	1,082	1,089	1,020		685	3,876	4	969	80.8%	1,200
Ensemble / Practice					48	191	4	48		0
Band Uniform Sto.	678		335			1,013	2	507	506.5%	100
Instrument Sto.					171	171	1	171	170.6%	100
Office / Library	296			112	264	671	3	224	#DIV/0!	0
Dance/Drama		1,828			856	2,684	2	1,342	74.5%	1,800
VOCATIONAL	700	2,745	2,943	1,143	2,511	10,043	11	913		0
Keyboarding Labs										1,000
Exploratory Labs	700	915	981	1,143	837	10,043	11	913	65.2%	1,400
Computer Applications										0
Business/Office Ed.										0
Cons/Occ Home Economics										0
Service/Marketing										0
Health Occupations										0
Agri/Trade & Industry (Heavy)										0
Trade & Industry (Medium)										0
Technology (Light)										0
Communications/Misc										0
Vocational Clsrms										0
PHYSICAL EDUCATION	12,944	14,777	11,826	14,725	11,145	65,417	54	1,211		Varies per size of school
Multi/Main Gymnasium	10,752	10,164	6,366	9,774	7,117	44,173	5	8,835		
Stage										
Boys/Girls Locker	335	370	737	513	815	8,792	18	488		
Boys/Girls Showers		21				21	1	21		
Coaches off./ Showers						724	5	145		
Training										
Laundry	399	129		250		778	3	259		
Storage / Office						1,406	6	234		
Officials/showers		193				578	3	193		
Lobby/cons./commons	170	507	337	372		2,265	6	377		
Auxiliary Gym										
Weight Room			1,054	1,503	1,148	3,705	3	1,235		
Wrestling			840			840	1	840		
Health/P.E. Clarms			691	634	811	2,136	3	712		
MISC SPACES										
ROTC										
Media Center	5,528	5,296	4,450	4,924	6,562	26,760	19	1,408		
Media Center (Library)	4,084	4,757	3,607	3,747	6,243	22,438	5	4,488		
Support	1,444	539	843	1,176	319	4,322	14	309		
Computer	0	0	0	0	0	0	0			
FOOD SERVICE	6,182	7,326	3,189	6,312	4,235	10,417	0			
Serving	0	670	0	417	0	1,087	2	544		
Dining	5,806	6,258	1,958	5,682	4,011	23,716	5	4,743		
Kitchen	376	397	1,231	212	223	8,882	25	355		
AUDITORIUM	10,248	0	0	5,058	0	5,830	9,487	1		
Auditorium	6,296	0	0	3,184	0	5	9,480	0		
Stage / Dress / Sto.	2,882	0	0	948	0	3,830	5	766		
Lobby	1,070	0	0	925	0	1,995	2	998		
ADMINISTRATION	4,012	4,847	3,704	4,296	3,088	19,948	85	235		
BOOK STORAGE	0	825	556	0	0	1,381	5	276		
STORAGE	3,474	8,549	2,170	1,882	1,090	17,165	164	105		
STAFF SUPPORT	3,474	8,549	2,170	1,882	1,090	17,165	42	409		

Craven County Schools 2019 Average Classroom Size	High School							
	HAH	NBH	WCH	Total SF	Total # Rooms	Average SF	% Above or Below NCDPI Min	NCDPI Minimu
Student Capacity								
Core Capacity								
ACADEMIC CLASSROOMS	28,428	40,975	23,972	93,413	127	736		
Pre-K Clsrms								1,200
Kindergartens								1,200
Grades 1-3 Clsrms								1,000
Grades 4-5 Clsrms								850
4-8 LA/SS/Math/Sci Clsrms								950
Grades 6-8 Math/Sci Clsrms								950
Grades 5-8 Science Clsrms								950
(9-12) Eng. / F-Lang. / SS / Math	787	745	769	69,446	91	763	89.8%	850
Exceptional (self contained)	768	1,165	755	10,008	11	910	75.8%	1,200
Instructional Kitchen								200
Resource	478	474	664	12,262	23	533	118.5%	450
Computer								1,000
ISS	772		885	1,657	2	829	184.2%	450
H.S. SCIENCE	8,141	13,900	7,625	29,667	33	899		
Physical /Bio /Chem /Physics /Ot	873	1,075	924	26,355	27	976	65.1%	1,500
Prep Rooms	1,155	250	1,155	3,311	6	552	220.7%	250
Math/Sci Computer Lab								850
ARTS EDUCATION	4,485	7,820	5,926	18,240	37	493		0
Visual Arts	1,142	1,203	1,236	4,784	4	1,196	85.4%	1,400
Art Project								
Art Sto. Kiln	107	62	144	564	5	113	56.4%	200
General Music								1,000
Instrumental Music (Band)	1,476	1,734	1,811	5,021	3	1,674	93.0%	1,800
Vocal Music (Chorus) + Sto.	926	1,139	929	2,994	3	998	83.2%	1,200
Ensemble / Practice		110	53	932	10	93	62.1%	150
Band Uniform Sto.	180		179	359	2	179	59.8%	300
Instrument Sto.	247		251	498	2	249	83.0%	300
Office / Library	100		100	598	6	100	66.4%	150
Dance/Drama		1,707	776	2,482	2	1,241	69.0%	1,800
								0
VOCATIONAL	18,093	21,007	17,678	56,795	53	1,072		0
Keyboarding Labs								0
Exploratory Labs								0
Computer Applications		756		2,268	3	756	63.0%	1,200
Business/Office Ed.	947	1,054	879	15,528	16	971	97.1%	1,000
Cons/Occ Home Economics		1,229	1,147	7,212	6	1,202	85.9%	1,400
Service/Marketing	968			3,873	4	968	69.2%	1,400
Health Occupations		1,329	1,128	7,369	6	1,228	87.7%	1,400
Agri/Trade & Industry (Heavy)	1,829	2,070	1,746	12,793	7	1,828	60.9%	3,000
Trade & Industry (Medium)			1,228	2,456	2	1,228	49.1%	2,500
Technology (Light)	1,226			1,226	1	1,226	61.3%	2,000
Communications/Misc	847			847	1	847	56.5%	1,500
Vocational Clsrms	488	480	395	3,205	7	458	61.1%	750
PHYSICAL EDUCATION	25,938	27,418	25,209	1	0			Varies per size of school
Multi/Main Gymnasium	12,329	12,390	12,321	37,039	3	12,346		
Stage								
Boys/Girls Locker	670	720	547	17,691	28	632		
Boys/Girls Showers	190	170	126	1,967	12	164		
Coaches off./ Showers				2,512	4	628		
Training	214	512	289	1,954	6	326		
Laundry		154	234	694	4	174		
Storage / Office				469	2	234		
Officials/showers	237			237	1	237		
Lobby/cons./commons			273	273	1	273		
Auxiliary Gym								
Weight Room	1,021	1,823	1,237	9,184	7	1,312		
Wrestling	1,807	1,047	1,708	5,610	4	1,402		
Health/P.E. Clarms	467			934	2	467		
MISC SPACES	2,025	2,724	1,645	6,393	8	799		
ROTC	1,012	908	548	6,393	8	799		
Media Center	5,556	11,054	7,032	23,642	11	2,149		
Media Center (Library)	4,590	9,052	7,032	20,673	5	4,135		
Support	966	2,003	0	2,969	6	495		
Computer								
FOOD SERVICE	6,942	14,639	6,172	6,942	0			
Serving	1,017	1,201	0	2,218	2	1,109		
Dining	5,765	13,094	5,853	24,711	3	8,237		
Kitchen	161	345	319	6,507	22	296		
AUDITORIUM	32	31	28	12,549	11,979	1		
Auditorium	3	0	3	6	11,971	0		
Stage / Dress / Sto.	1	0	1	7,227	6	1,205		
Lobby	28	31	24	5,316	2	2,658		
ADMINISTRATION	5,661	6,513	4,766	16,941	83	204		
BOOK STORAGE	0	0	639	639	2	320		
STORAGE	3,563	5,387	2,984	11,934	70	170		
STAFF SUPPORT	3,095	2,536	2,125	7,756	14	554		

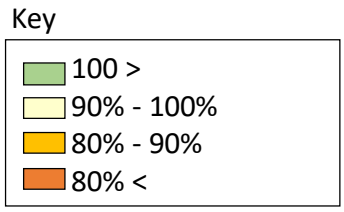
Square Footage Diagrams

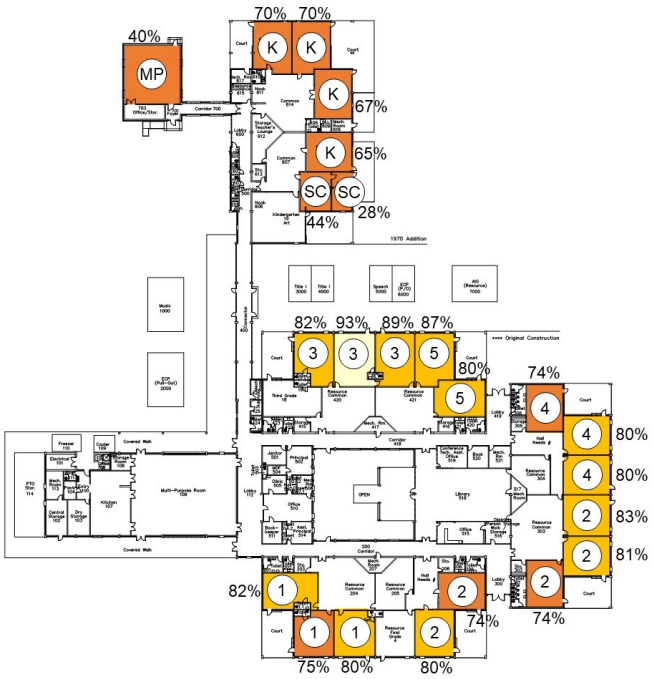
The previous charts show the average square footage of the various spaces but do not provide sufficient information to determine individual rooms that fall below these standards. The following pages depict the various classrooms as configured in 2018 and show how closely they come to achieving the NCDPI Recommended Minimum Standards.

It is often difficult to tell if a classroom is undersized just by looking at it or working in it. Spaces that are 95% of the standard often don't make a significant impact to instruction. As might be expected, the more undersized a space is the more difficult it is on both students and instructors. Once a classroom is below 80%, instructors must compromise the way they deliver instruction, which often is not to the benefit of the student. These issues are more profound in the science programs, CTE, and the Exceptional - Self Contained classrooms.

A.H. Bangert

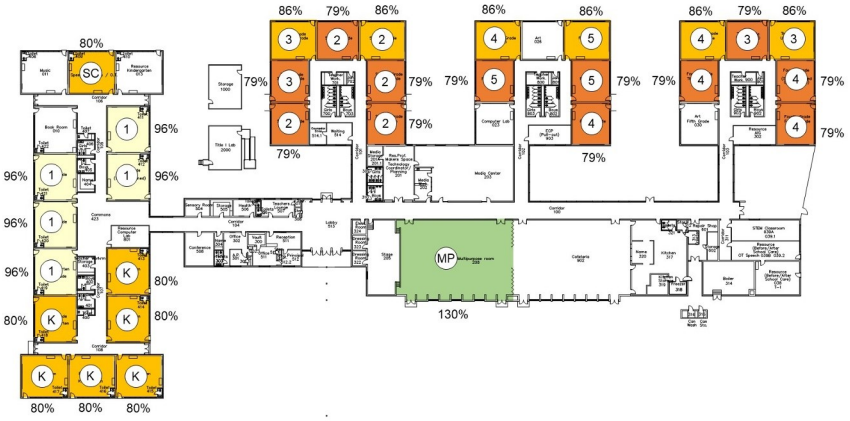
No rooms are the appropriate size. Many are in or below the 70% mark. This school's Multipurpose room is significantly undersized at 40% of what it ought to be.





A.W. Edwards

A majority of these spaces are below 90% of what they should be, with nearly half at 80%. The Multipurpose Room is the only individual space that is at or above its recommended size.

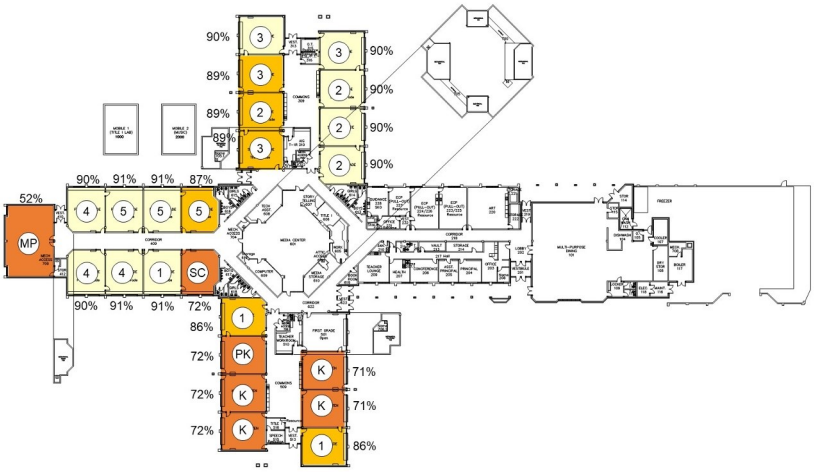


Ben D. Quinn

The largest rooms here are about 90% of what they should be. Most are below 80%, with about a quarter of them at 70%. Here, there is another significantly undersized Multipurpose Room.

Key

- 100 >
- 90% - 100%
- 80% - 90%
- 80% <



Bridgeton

Bridgeton has many spaces that are at or above the recommended minimums. The exceptions are still in the high 90% and should not create significant issues related to a small classroom.



Brinson Memorial

There is a great mix of room sizes here. Most of the old classrooms are below 80% of the recommendations, and even some of the newer classrooms are less than 90%. There are several green spaces in the new section and the Multipurpose Room has good square footage.

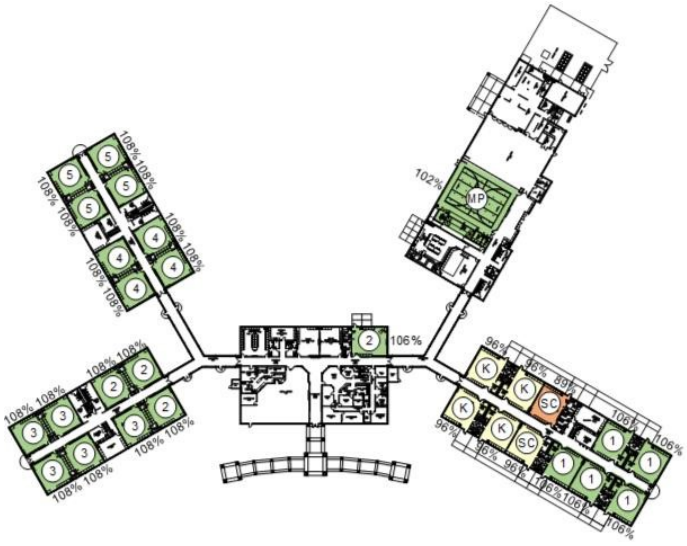


Creekside

Creekside is like Bridgeton with a majority of the spaces meeting the minimum requirements for square footage.

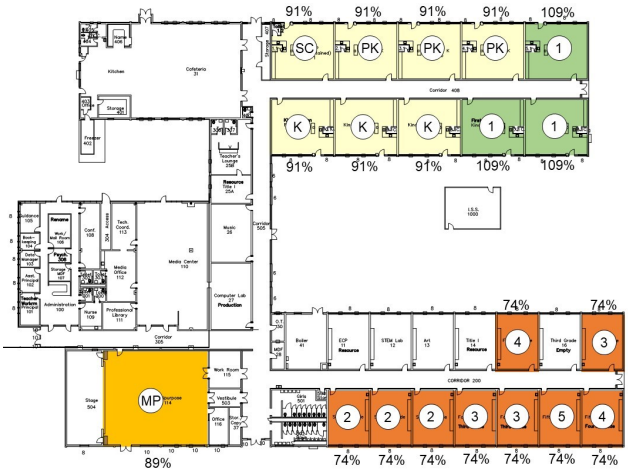
Key

- 100 >
- 90% - 100%
- 80% - 90%
- 80% <



Graham A. Barden

This school is split with about half of the classrooms near or at the minimums, with the southern wing having spaces that are only 74% of the minimums.



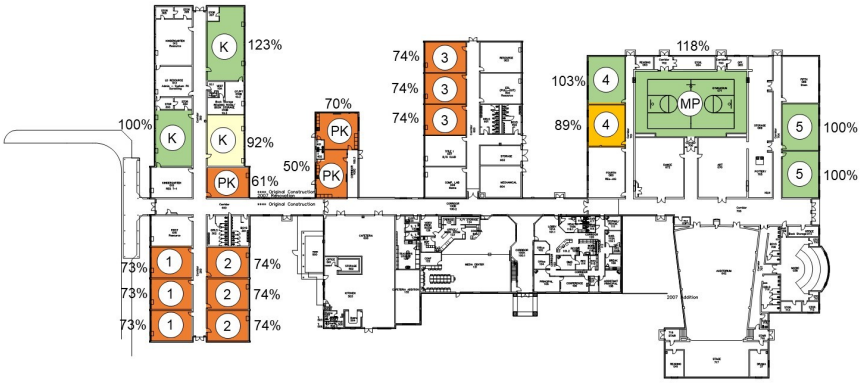
Havelock Elementary

Here many of the spaces are at or above the recommended minimums. Those that are below are around 96%. In the case of the EC-SC classrooms, they work in conjunction with each other to create sufficient square footage so that programs are not significantly affected.



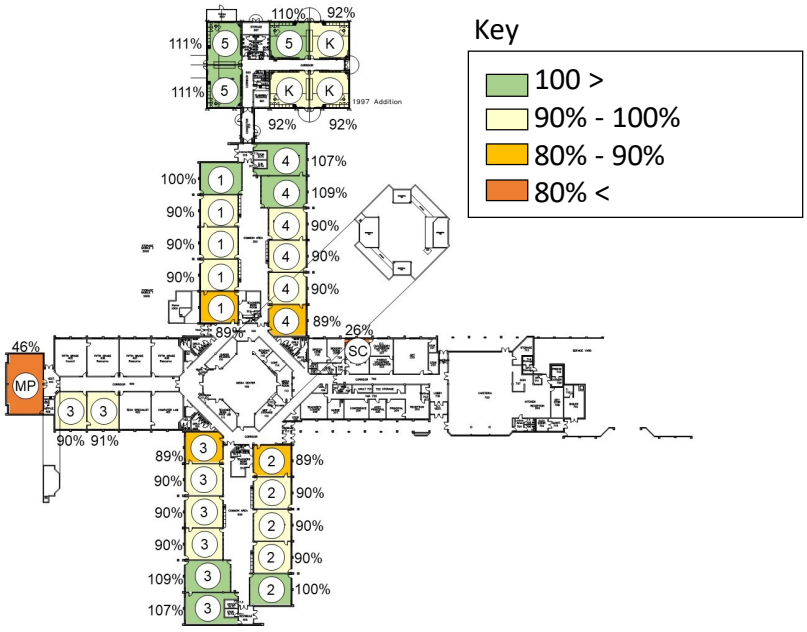
J.T. Barber

There are some spaces that meet the requirement, but most are less than 80% of the recommended minimums. The PK classrooms are very small, with one at only 50% of the recommended space.



J.W. Smith

Due to the organization of the programs in this building, most spaces are within reach of the minimum standards. The major exception is the Multipurpose Room, which is only 46% of what it should be.



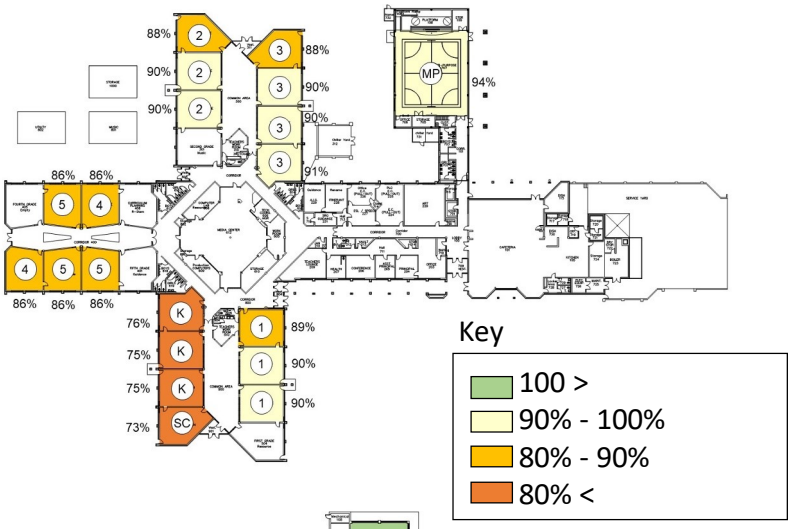
Oaks Road Academy

Here, there are many small classrooms with little opportunity to reconfigure the school to improve the issue.



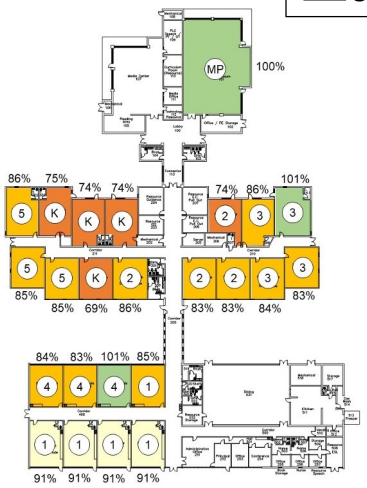
Roger Bell New Tech

Although similar in plan to some other buildings, about half of the rooms are less than 90% of what is recommended. Although this building does have a larger Multipurpose room, at 94% of the recommended square footage, it still does not meet the minimum standards.



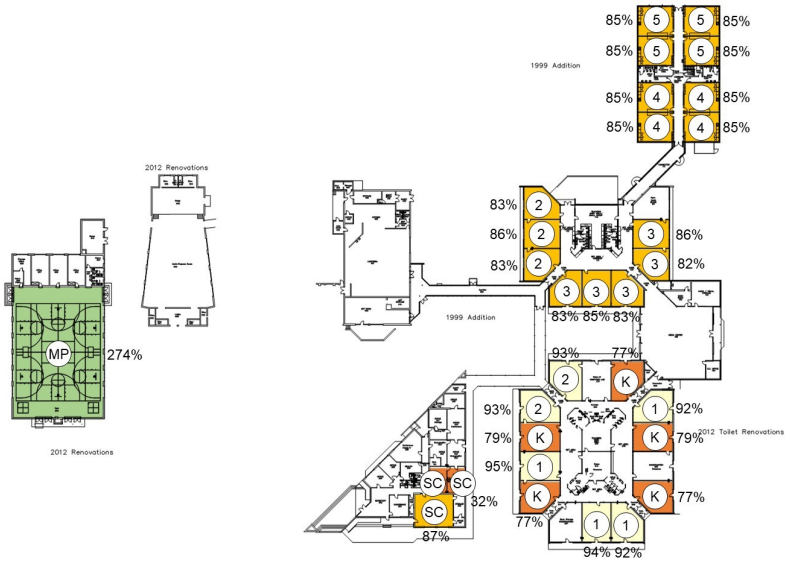
Trent Park

As with many of the other small elementary schools in the system, there are a large number of classrooms significantly below the minimum square footage suggested.



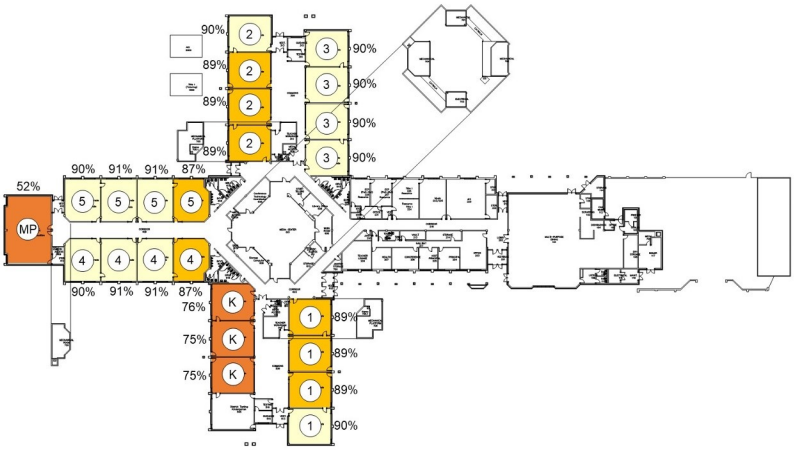
Vanceboro Farm Life

This school has a mix, with all but six classrooms below 90%. The EC-SC classrooms are below the standard but are working together to improve the smaller spaces available.



W.J. Gurganus

Similar to several other floor plans with the same issues related to smaller classrooms.

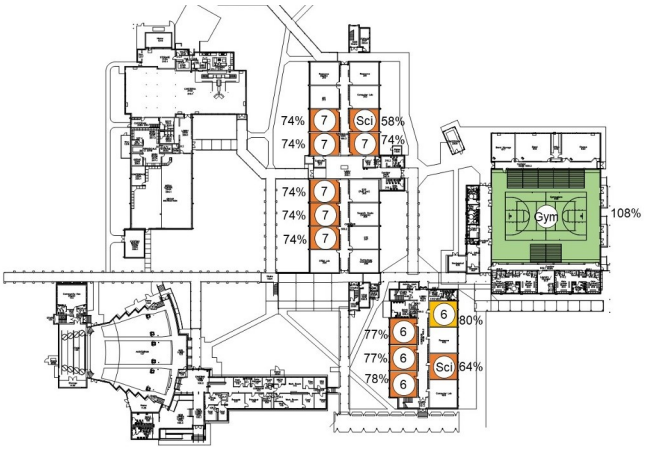


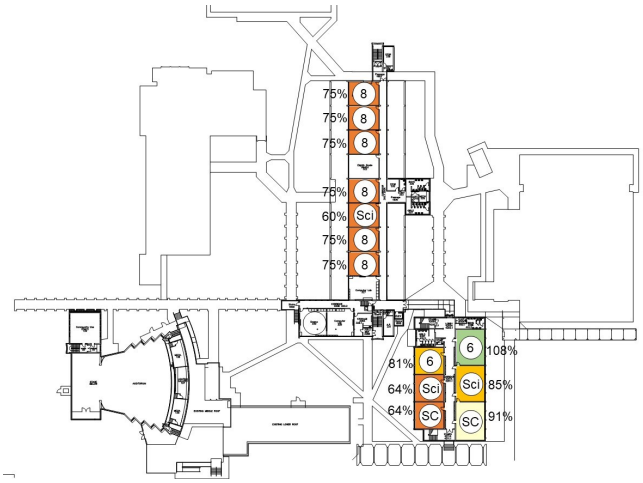
Key

- 100 >
- 90% - 100%
- 80% - 90%
- 80% <

Grover C. Fields

This facility has severely undersized classrooms, with only one exception in the sixth grade. Most are about 75% of what they should be. The science programs are the most severely undersized, as low as 58% of the recommended minimum standards.



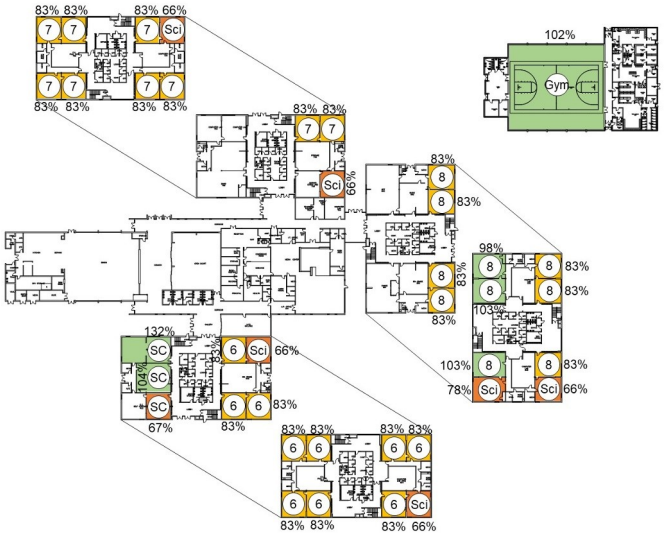


Key

- 100 >
- 90% - 100%
- 80% - 90%
- 80% <

H.J. MacDonald

At this school there is great similarity between all classrooms. Most are in the low 80th percentile. Again, the science classrooms are suffering the most with some as low as 66% of the minimum standards.



Havelock Middle

This relatively small middle school suffers from the same issues as other locations; there are small classrooms, with significantly small Science Rooms.



Key

- 100 >
- 90% - 100%
- 80% - 90%
- 80% <

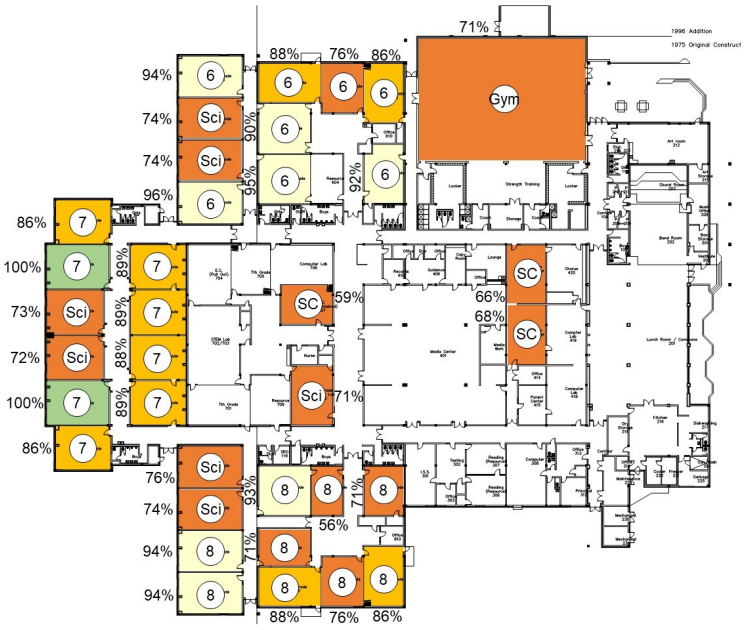
Tucker Creek

Most of the classrooms here are around 90% of the minimum standards. As in the other schools, the science classrooms are smaller than suggested, with the smallest at only 70% of the recommendation.



West Craven Middle

As can be seen by the large amount of red, many of the classrooms are below the 80% mark. As in other schools, the science classrooms are under-sized, but the issues spread to other spaces with some class-rooms being only 56% of the recommended size.

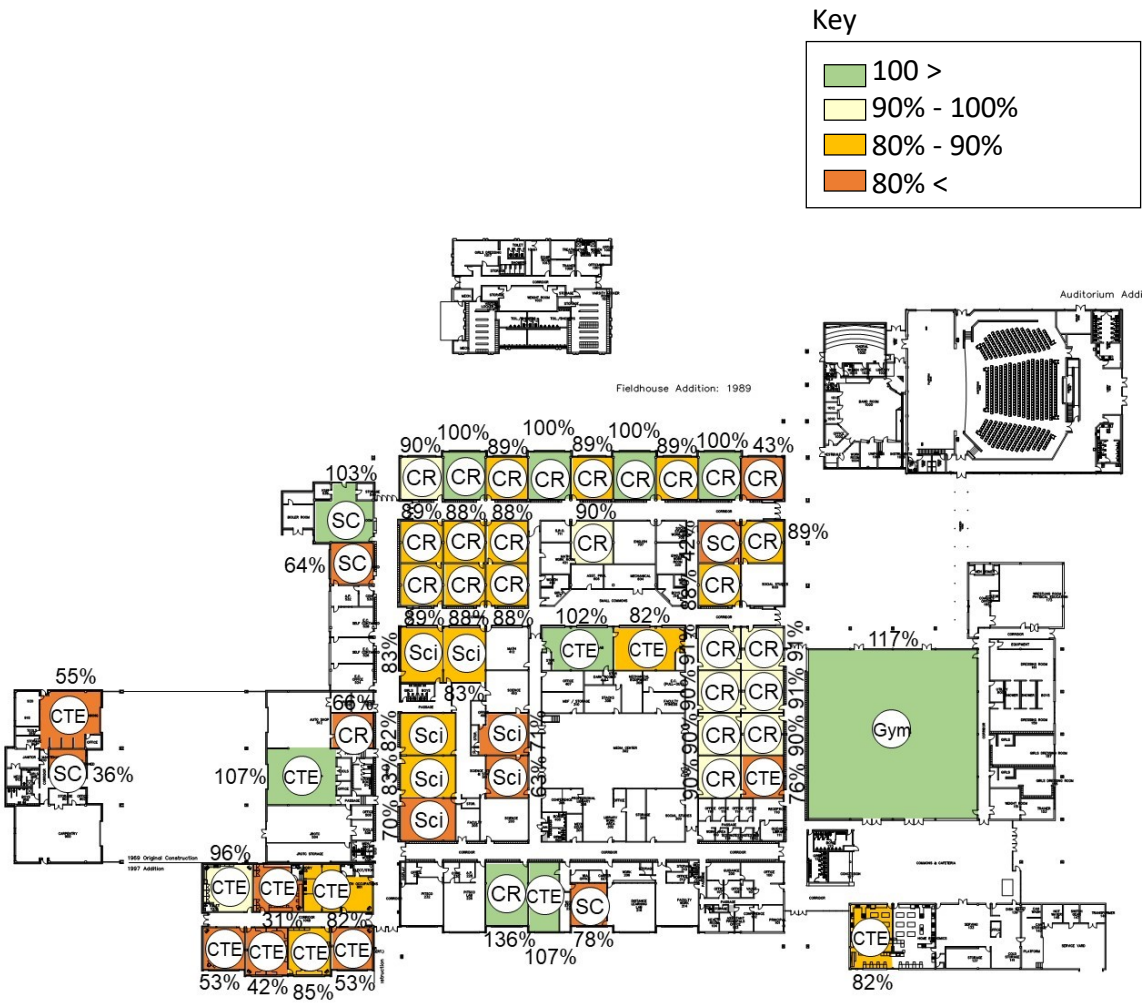


Key

- 100 >
- 90% - 100%
- 80% - 90%
- 80% <

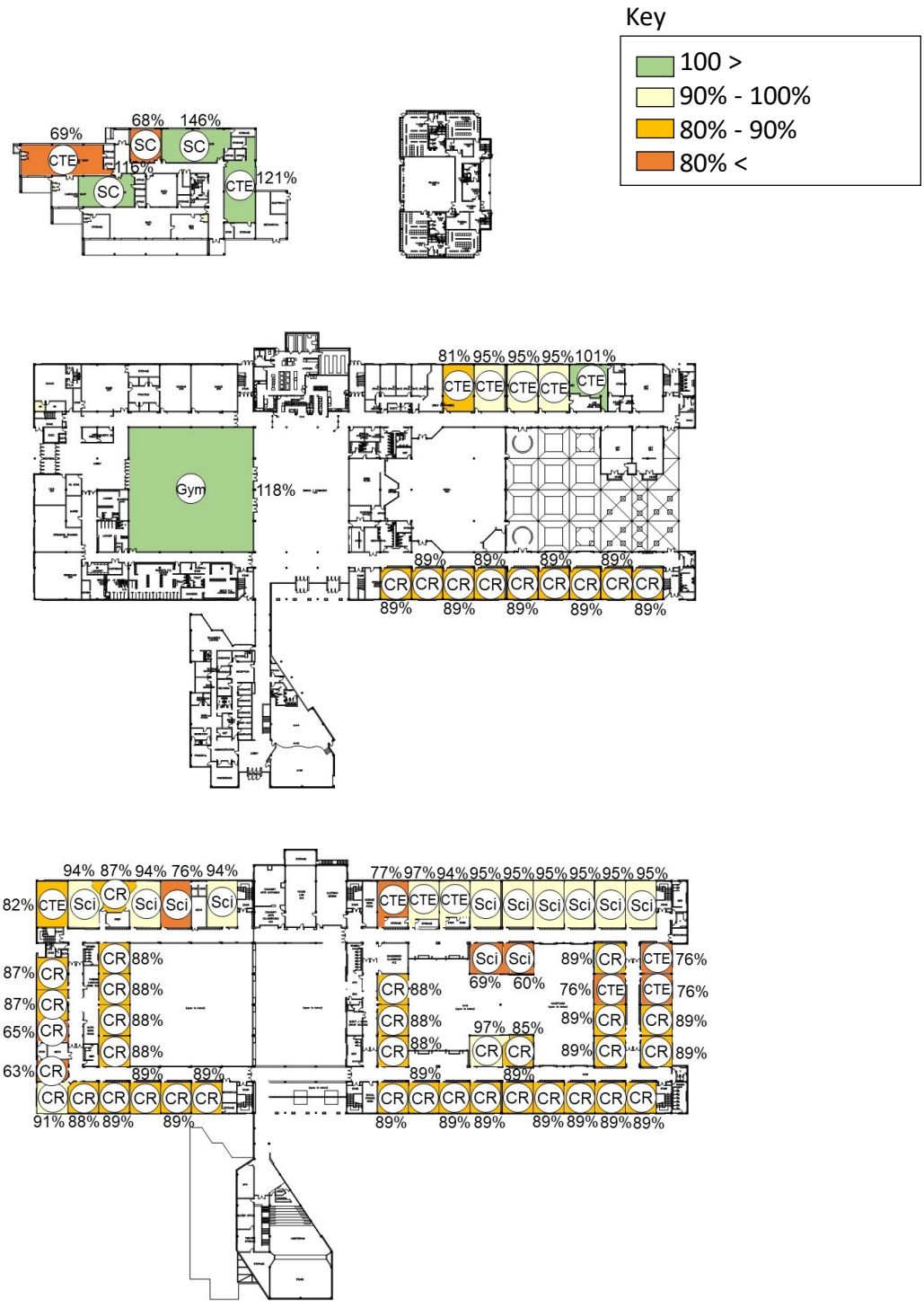
Havelock High

This school has a mix of appropriately sized classrooms and some that are very small. As with the middle schools, there are some undersized Science Classrooms, all the way down to 63%. The programs that are shorted the most are the CTE Classrooms; some of these are as low as 31% of what is recommended for the space.



New Bern High

Although only a few spaces meet or exceed the minimum standards, the shortage is not significant in most spaces. Most, even those in orange, are near 90% of the minimum size. The exceptions are again related to the Sciences and CTE programs. Both have spaces that are in the 60th percentile related to the standard.



West Craven High

West Craven and Havelock High have similar floor plans, and as a result, they have the same concerns related to classrooms being smaller than suggested in several programs, with the greatest deficiency in square footage related to the sciences and CTE programs.



Life Cycle Analysis (Building)

Life Cycle Overview

Buildings don't last forever. Materials wear, surfaces become more absorbent, and roofing, mechanical and electrical equipment fail. Joints weaken, and eventually, even the foundations of buildings will deteriorate to the point that they can no longer support the weight above them. Most buildings in the United States which are demolished are between seventy to eighty years of age.

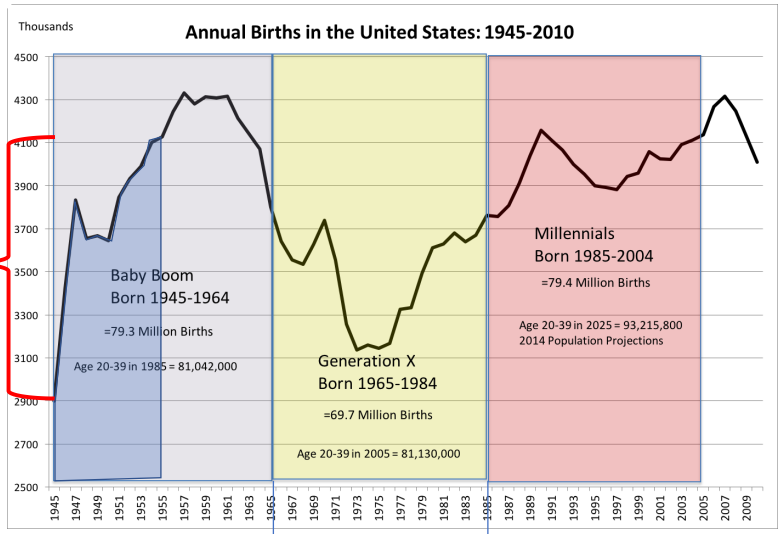
From 1950-1965, the baby boom created the need for more housing and community infrastructure. Some buildings were built quickly and were not built for the long term; they were constructed as a stop gap measure to get through the next thirty to forty years. Many of the buildings constructed during this period have reached or are nearing the end of their life cycle. Extensive renovations can bring life back to these schools; however, many of these older schools were not designed to support a twenty-first century educational program, were not designed for air conditioning, and have other limitations with respect to security that may make them undesirable as a long term solution. The question of whether to rebuild or renovate involves consideration of the historical value of a particular structure, its value to the community, and renovation costs versus replacement

This section deals with the projected life cycle of the overall building, not its component parts. Items such as replacement of HVAC units or roofing are addressed as deferred maintenance items located with the individual school and are based on actual observations. When there is a major renovation of a building with respect to its structure, the building life cycle can be partially reset but may require additional renovations to truly extend its useful life.

Life Cycle Analysis

Population related to Construction Means and Methods

1.25 M Additional Students in 10 years



Excerpt from NCES on Building Life Cycle

"In 1998, the average public school building in the United States was 42 years old. The mean age ranged from 46 years in the Northeast and Central states to 37 years in the Southeast (table 1). On average, schools located in the Northeast and Central regions of the country were older than those located in the Southeast and the West. Many of America's schools may be at an age where frequent repairs are necessary. According to Ornstein (1994), when a school is 20 to 30 years old, frequent replacement of equipment is needed. Between 30 and 40 years old, the original equipment should have been replaced, including the roof and electrical equipment. After 40 years, a school building begins rapid deterioration, and after 60 years most schools are abandoned.

About one-fourth (28 percent) of all public schools were built before 1950, and 45 percent of all public schools were built between 1950 and 1969 (table 1). Seventeen percent of public schools were built between 1970 and 1984, and 10 percent were built after 1985. The increase in the construction of schools between 1950 and 1969 corresponds to the years during which the Baby Boom generation was going to school."

Source: National Center for Education Statistics, January 1999
http://nces.ed.gov/surveys/FRSS/publications/1999048/

Table 1.—Year of school construction and mean age of school, by school characteristics

School characteristic	Year built: Before 1950	1950-1969	1970-1984	1985 or after	Mean age
	(Percent of schools)				
All public schools	**28**	**45**	**17**	**10**	**42**
Instructional level					
Elementary	29	46	15	11	43
Secondary	24	46	23	8	40
Size of enrollment					
Less than 300	40	39	14	8	48
300 to 999	24	48	17	11	40
1,000 or more	23	44	22	11	39
Locale					
City	34	44	13	9	46
Urban fringe	20	53	17	10	40
Town	24	47	20	9	40
Rural	32	38	17	12	42
Region					
Northeast	30	49	15	6	46
Southeast	23	43	20	14	37
Central	33	46	14	8	46
West	25	44	19	13	39
Percent of students eligible for free or reduced-price school lunch					
Less than 20 percent	20	48	20	11	39
20 to 49 percent	29	44	16	11	41
50 percent or more	34	42	14	10	44

NOTE: Percentages may not sum to 100 due to rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Survey on Advanced Telecommunications in U.S.

Building Life Cycle Graphic / Table

The following is a graphic representation of the buildings on individual campuses depicting their projected overall life cycle. Data is used from NCDPI and other documents for dates and construction methods, as well as materials of the individual buildings themselves. The graphic and the associated charts do not fit nicely onto the standard 8 1/2 x 11 inch paper, so only the graphic is depicted in this section. The table relating to the dates, age, and expected remaining life of the individual buildings are shown with the campus information.

Building Life Cycle Summary

Craven County Schools

Summary - Table

2019

All building systems or components have a designed life expectancy or estimated number of years of service. When the life expectancy is

The chart below shows that the majority of the Pioneer's key building components are in service long past their designed life expectancy or

- Length of Life Expectancy,in Years
- Variations in Life Expectancy
- Exceeds Life Expectancy, in Years
- Life Cycle may be reduced due to environmental issues.

Item	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075	2080	2085
Elementary Schools															
BANGERT ES															
MAIN BUILDING - 1967															
MAIN BUILDING - 1978															
MULTIPURPOSE - 1997															
EDWARDS ES															
MAIN BUILDING - 1961															
QUINN ES															
MAIN BUILDING - 1991															
BRIDGETON ES															
MAIN BUILDING - 2003															
BRINSON ES															
MAIN BUILDING - 1979															
MAIN BUILDING - 1996															
MAIN BUILDING - 2001															
BLOCK 3 BLDG - 1965															
NEW BOILER BUILDING - 1993															
BARTLING BLDG #2 - 1959															
EAST TMD BLDG #2 - 1955															
WEST BARTLING BLD #1 - 1953															
WEST TMD BLDG #1 - 1955															
GYMNASIUM BLDG - 1961															
TECHNOLOGY CENTER -1963															
TECHNOLOGY CENTER -1998															
CREEKSIDE ES															
MAIN BUILDING - 2007															
BARDEN ES															
MAIN BUILDING - 1953															
MAIN BUILDING - 2001															
HAVELOCK ES															
MAIN BUILDING - 2003															
BARBER ES															
MAIN BUILDING - 1951															
Media Admin - 2008															
Cafeteria / Kitchen - 1952															
Double Loaded West Corriror - 1954															
Auditorium / Gym - 1954															
2 Classroom Pod - 1954															
MAINT DEPT BLDG - 1966															
SMITH ES															
MAIN BUILDING - 1988															
MAIN BUILDING - 1998															

Building Life Cycle Summary

Craven County Schools

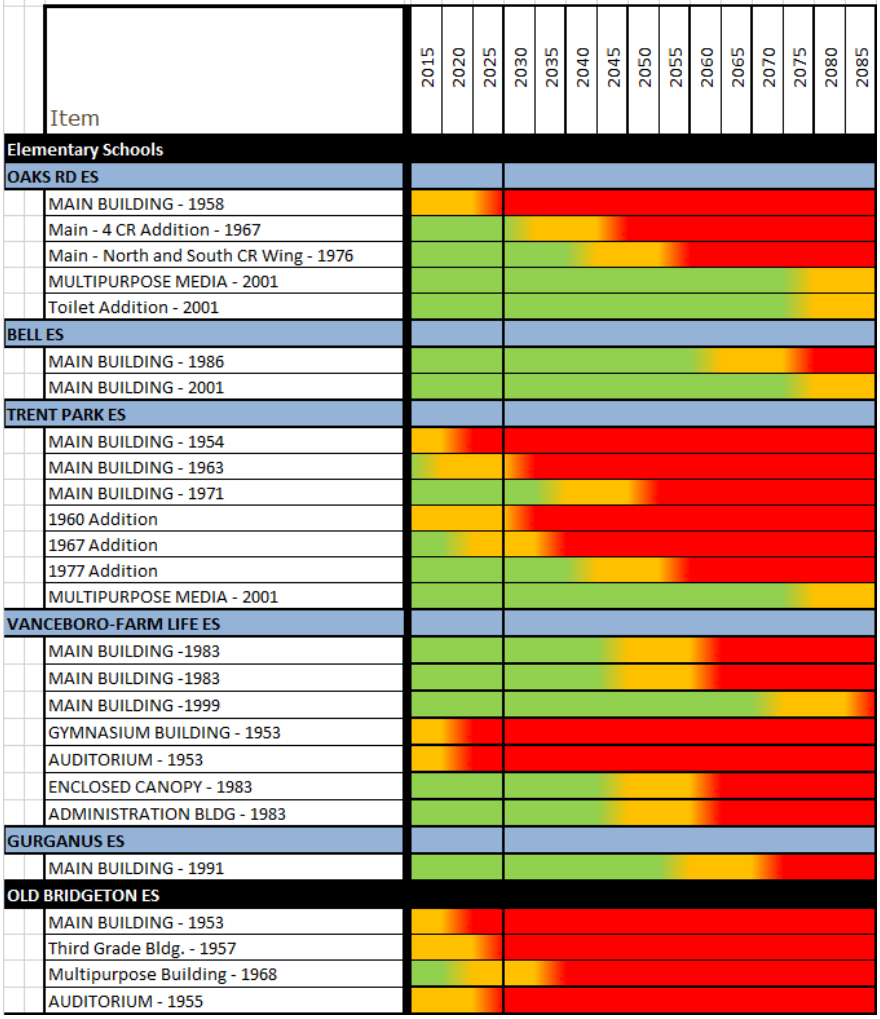
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Building Life Cycle Summary

Craven County Schools

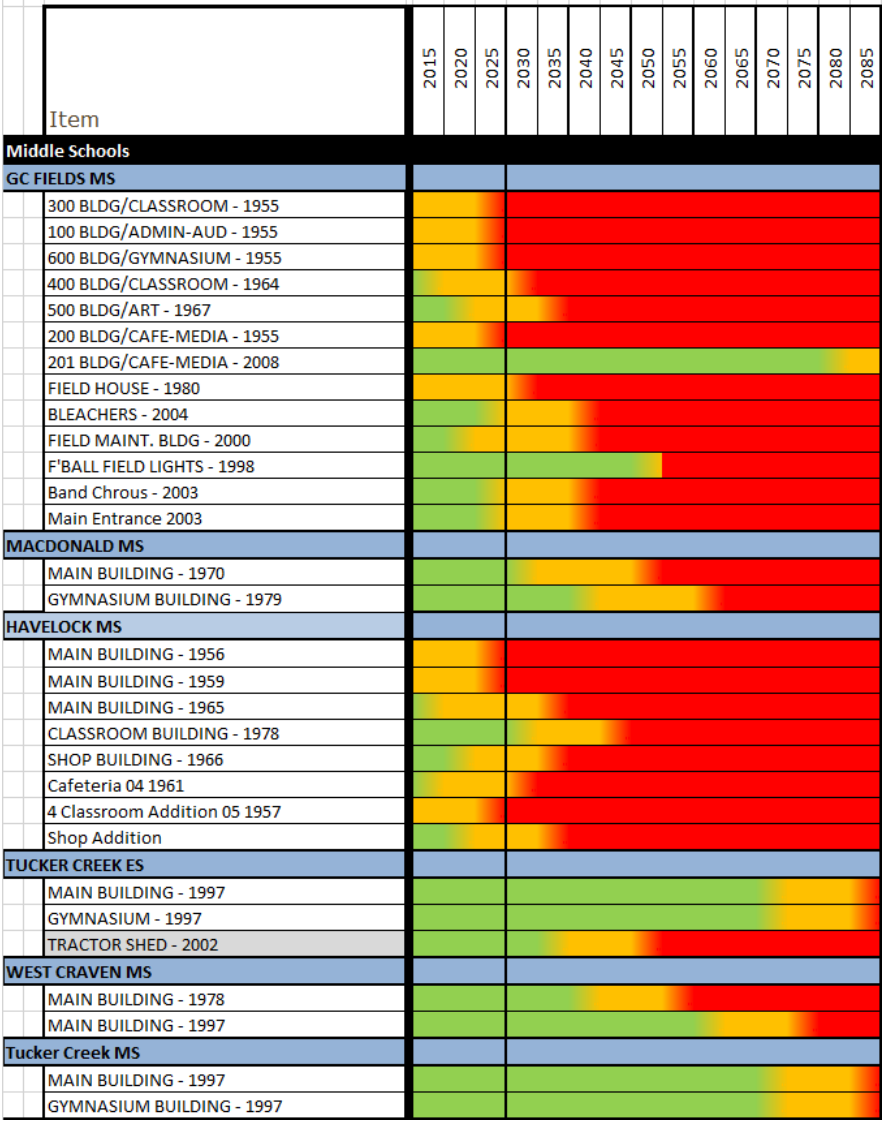
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Building Life Cycle Summary

Craven County Schools

Summary - Table

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Item	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075	2080	2085
High Schools															
HAVELOCK HS															
MAIN BUILDING - 1971															
MAIN BUILDING - 1990															
MAIN BUILDING - 1998															
ATHLETIC FIELD HOUSE - 1990															
PRESSBOX/BLEACHERS - 1992															
ATHLETIC FIELD LIGHT - 2004															
TRACTOR SHED - 2004															
FOOTBALL CONCESSION - 2004															
BASEBALL CONCESSION - 2004															
BAND/CHORUS BLDG - 1990															
CARPENTRY SHOP - 1990															
AUDITORIUM - 2003															
NEW BERN HS															
MAIN BUILDING - 1991															
VOCATIONAL BUILDING - 1991															
FTBL CONCESSION STND - 1992															
PRESSBOX/BLEACHERS - 2004															
ATHLETIC FIELD LGHTS - 2004															
FIELD HOUSE - 1997															
TRACTOR SHED - 2001															
WEST CRAVEN HS															
MAIN BUILDING - 1971															
MAIN BUILDING - 1990															
MAIN BUILDING - 1998															
FIELD HOUSE - 1970															
FIELD HOUSE - 2008															
LARGE GREENHOUSE - 2004															
PRESSBOX/BLEACHERS - 2004															
ATHLETIC FIELD LGHTS - 2004															
FTBL CONCESSION STND - 2004															
AUDITORIUM - 2003															

Life Cycle Summary

The graph below shows a system wide view of Craven County Schools. This is the mathematical average of the ages of all instructional facilities operated by the school system. Although there are some buildings that are approaching the end of their useful life, the many additions over the past thirty years have contributed to the youthful profile of the buildings within the school system. This shows a rough view of the overall nature of the system. The mean average of all buildings is 38 years old; however, this does not show a realistic view, as nearly half of the square footage is 40 to 50 years old.



Square Footage of Buildings Related To Age of Facility

Below and on the following pages are data related to the square footage and age of all facilities currently in use by Craven County Schools. The first information is broken down into relative age for every ten years of the building's age. The chart indicates each addition, the approximate date of completion, the age and square footage, along with an estimated cost to replace the square footage noted using 2019 construction costs. At this time there are no building portions older than seventy years of age.

Craven County Schools

Age of Building Square Footage

4/27/2019

Campus	Building Name	Year Built	Age	Bldg SF	Bldg Rep. Cost
> 70 yrs			0		0
60-70 yrs				365,395	$68,614,221
J.T. BARBER ES	MAIN BUILDING	1/1/1951	68	75516	$13,369,349
FACILITIES SUPPORT SVCS	MAIN BUILDING	1/1/1951	68	23304	$3,496,739
J.T. BARBER ES	Cafeteria / Kitchen	1/1/1952	67		
BRINSON ES	WEST BARTLING BLD #1	1/1/1953	66	4,932	$740,042
VANCEBORO-FARM LIFE ES	GYMNASIUM BUILDING	1/1/1953	66	6021	$903,444
VANCEBORO-FARM LIFE ES	AUDITORIUM	1/1/1953	66	7687	$1,153,425
BARDEN ES	MAIN BUILDING	1/1/1953	66	47709	$8,561,639
J.T. BARBER ES	Double Loaded west corr	1/1/1954	65		
J.T. BARBER ES	Auditorium / Gym	1/1/1954	65		
J.T. BARBER ES	2 CR Pod	1/1/1954	65		
TRENT PARK ES	MAIN BUILDING	1/1/1954	65	20750	$6,182,015
BRINSON ES	EAST TMD BLDG #2	1/1/1955	64	2,244	$336,708
BRINSON ES	WEST TMD BLDG #1	1/1/1955	64	4,932	$740,042
FIELDS MS	300 BLDG/CLASSROOM	1/1/1955	64	31400	$4,711,535
FIELDS MS	100 BLDG/ADMIN-AUD	1/1/1955	64	22646	$3,398,008
FIELDS MS	600 BLDG/GYMNASIUM	1/1/1955	64	21691	$3,254,709
FIELDS MS	200 BLDG/CAFE-MEDIA	1/1/1955	64	8648	$2,675,371
HAVELOCK MS	MAIN BUILDING	1/1/1956	63	32350	$10,882,297
GENERAL SVCS	MAINTENANCE BUILDING 56	1/1/1956	63	7078	$1,462,402
HAVELOCK MS	4 Classroom Addition 05	1/1/1957	62		
OAKS RD ES	MAIN BUILDING	1/1/1958	61	19550	$6,182,015
HAVELOCK MS	Main - Media Center	1/1/1959	60	25175	
BRINSON ES	BARTLING BLDG #2	9/6/1959	60	3,762	$564,481

Baby Boom Response

Although current thought is that the Baby Boom ended in 1964, those births would not be felt at the school level for another five or more years, when the babies had grown to school age. There was also a delay in reacting to this increased population, and many of the schools built 40 to 60 years ago still fall into this category of reaction to the increased need for education facilities.

Campus	Building Name	Year Built	Age	Bldg SF	Bldg Rep. Cost
50-60 yrs				235,085	$31,849,994
BRINSON ES	GYMNASIUM BLDG	1/1/1961	58	10,509	$1,576,865
HAVELOCK MS	Cafeteria 04	1/1/1961	58		
EDWARDS ES	MAIN BUILDING	1/1/1961	58	83757	$12,567,645
BRINSON ES	TECHNOLOGY CENTER	1/1/1963	56	5,350	$1,104,360
TRENT PARK ES	Main - 8 CR at front	1/1/1963	56	10700	
FIELDS MS	400 BLDG/CLASSROOM	1/1/1964	55	17900	$2,685,876
HAVELOCK MS	Main North Classroom Building	1/1/1965	54	15000	
FACILITIES SUPPORT SVCS	GARAGE	1/1/1965	54	1232	$184,859
BRINSON ES	BLOCK 3 BLDG	9/6/1965	54	3,098	$464,851
J.T. BARBER ES	MAINT DEPT BLDG	1/1/1966	53	4260	$528,042
BANGERT ES	MAIN BUILDING	1/1/1967	52	45,415	$8,386,984
FIELDS MS	500 BLDG/ART	1/1/1967	52	6094	$914,398
OAKS RD ES	4 CR Addition	1/1/1967	52	4150	
TRENT PARK ES	Addition	1/1/1967	52		
GENERAL SVCS	MAINTENANCE BUILDING 67	1/1/1967	52	4720	
BOE	MAIN BUILDING	1/1/1968	51	22900	$3,436,114
40-50 yrs				503,564	$95,830,317
MACDONALD MS	MAIN BUILDING	1/1/1970	49	133835	$20,081,797
WEST CRAVEN HS	FIELD HOUSE	1/1/1980	39	5639	$858,491
FACILITIES SUPPORT SVCS	YARDS & GRNDS BLDG	1/1/1970	49	6389	$791,939
HAVELOCK HS	MAIN BUILDING	1/1/1971	48	103093	$23,911,945
TRENT PARK ES	Main - Cafeteria	1/1/1971	48	9750	
WEST CRAVEN HS	MAIN BUILDING	1/1/1971	48	103093	$21,455,944
OAKS RD ES	North and South CR Wings	1/1/1976	43	17500	
TRENT PARK ES	Addition	1/1/1977	42		
BANGERT ES	Main - East Section	1/1/1978	41	10,480	
HAVELOCK MS	CLASSROOM BUILDING	1/1/1978	41	16155	$2,424,040
WEST CRAVEN MS	MAIN BUILDING	1/1/1978	41	77680	$15,451,137
BRINSON ES	MAIN BUILDING	1/1/1979	40	17,450	$10,545,139
HAVELOCK MS	SHOP BUILDING	1/1/1979	119	2500	$309,885

Post Baby Boom

The 1980's and 1990's saw the emergence of what has been termed the Baby Boom Echo. This is when the large baby boom population matured to the point when they were having children. Again, there were significant births during these decades, which resulted in the need for additional educational square footage.

Campus	Building Name	Year Built	Age	Bldg SF	Bldg Rep. Cost
30-40 yrs				204,050	$34,782,495
FIELDS MS	FIELD HOUSE	1/1/1980	39	4705	$705,981
MACDONALD MS	GYMNASIUM BUILDING	1/1/1980	39	18070	$2,711,383
VANCEBORO-FARM LIFE ES	MAIN BUILDING - Cafeteria	1/1/1983	36	7630	$8,772,610
VANCEBORO-FARM LIFE ES	Main - Cafeteria	1/1/1983	36	40356	
VANCEBORO-FARM LIFE ES	ENCLOSED CANOPY	1/1/1983	36		$175,065
VANCEBORO-FARM LIFE ES	ADMINISTRATION BLDG	1/1/1983	36	8173	$1,226,349
BELL ES	MAIN BUILDING	1/1/1986	33	56354	$9,369,654
SMITH ES	MAIN BUILDING	1/1/1988	31	68762	$11,821,453
20-30 yrs				700,250	$78,338,791
HAVELOCK HS	Main - East Addition	1/1/1990	29	45878	
HAVELOCK HS	ATHLETIC FIELD HOUSE	1/1/1990	29	7830	$1,174,883
HAVELOCK HS	BAND/CHORUS BLDG	1/1/1990	29	6518	$978,019
HAVELOCK HS	CARPENTRY SHOP	1/1/1990	29	5663	$849,725
WEST CRAVEN HS	CR addition/ Voc / Band	1/1/1990	29	30719	
QUINN ES	MAIN BUILDING	1/1/1991	28	59,885	$8,985,679
NEW BERN HS	MAIN BUILDING	1/1/1991	28	205205	$30,790,787
NEW BERN HS	VOCATIONAL BUILDING	1/1/1991	28	17248	$2,588,042
GURGANUS ES	MAIN BUILDING	1/1/1991	28	59885	$8,985,679
HAVELOCK HS	PRESSBOX/BLEACHERS	1/1/1992	27	1	$348,154
NEW BERN HS	FTBL CONCESSION STND	1/1/1992	27	2579	$386,976
BRINSON ES	NEW BOILER BUILDING	1/1/1993	26	1,146	$171,953
BRINSON ES	Cafeteria and Admin	1/1/1996	23	49,098	
BANGERT ES	MULTIPURPOSE	1/1/1997	22	2,312	$346,913
NEW BERN HS	FIELD HOUSE	1/1/1997	22	11700	$1,554,874
TUCKER CREEK ES	MAIN BUILDING	1/1/1997	22	120437	$18,071,440
TUCKER CREEK ES	GYMNASIUM	1/1/1997	22	19259	$2,889,792
WEST CRAVEN MS	Main - South Addition	1/1/1997	22	25294	
FIELDS MS	F'BALL FIELD LIGHTS	1/1/1998	21		$215,875
HAVELOCK HS	Main - West Addition	1/1/1998	21	10390	
SMITH ES	Main - 6 Cr Addition	1/1/1998	21	10022	
WEST CRAVEN HS	6 Cr Addition	1/1/1998	21	9181	

Recent Growth

By all accounts birth rates have begun to drop and the need for adding additional square footage quickly has lessened. Most of the construction done in the past twenty years was completed with an eye toward longevity. Better materials and construction methods were employed, creating buildings with longer life expectancy. The last category shows that no new construction has occurred in the past ten years.

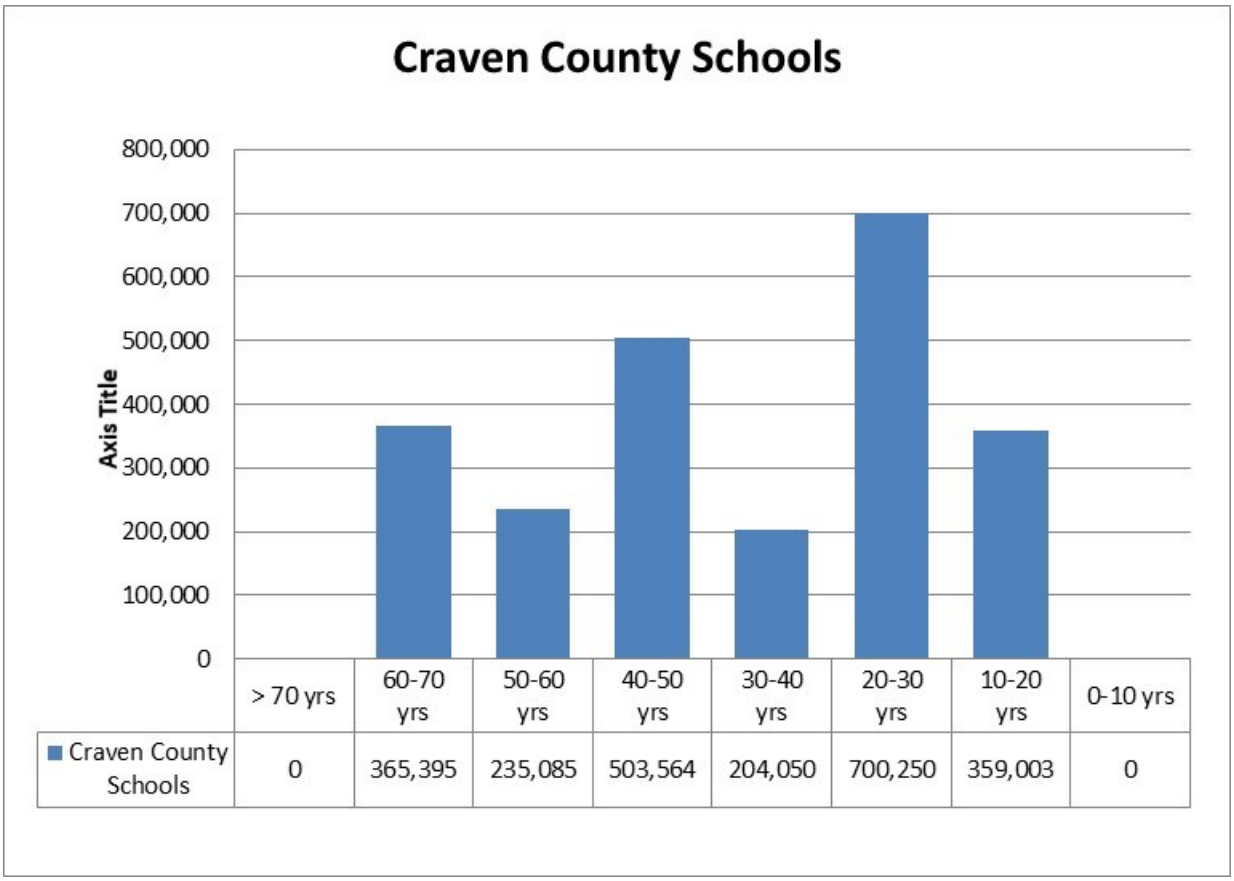
Campus	Building Name	Year Built	Age	Bldg SF	Bldg Rep. Cost
10-20 yrs				359,003	$51,159,482
FIELDS MS	FIELD MAINT. BLDG	1/1/2000	19	2030	$119,190
NEW BERN HS	TRACTOR SHED	1/1/2001	18	150	$36,714
BELL ES	Main - Gym Addition	1/1/2001	18	6090	
BRINSON ES	Toilet Rooms	9/1/2001	18	3,730	
BARDEN ES	Media Center	9/1/2001	18	9350	
OAKS RD ES	MULTIPURPOSE MEDIA	9/1/2001	18	9750	$1,462,977
OAKS RD ES	Toilet Addition	9/1/2001	18		
TRENT PARK ES	MULTIPURPOSE MEDIA	9/1/2001	18	10564	$1,462,977
TUCKER CREEK ES	TRACTOR SHED	1/1/2002	17	840	$49,321
BRIDGETON ES	MAIN BUILDING	1/1/2003	16	81,547	$12,236,038
FIELDS MS	Band / Chorus	1/1/2003	16		
FIELDS MS	Main Entrance	1/1/2003	16		
HAVELOCK ES	MAIN BUILDING	1/1/2003	16	71245	$10,690,234
HAVELOCK HS	AUDITORIUM	1/1/2003	16	16030	$2,405,284
WEST CRAVEN HS	AUDITORIUM	1/1/2003	16	16030	$2,405,284
FIELDS MS	BLEACHERS	1/1/2004	15		$297,523
HAVELOCK HS	ATHLETIC FIELD LIGHT	1/1/2004	15	1	$692,206
HAVELOCK HS	TRACTOR SHED	1/1/2004	15	800	$46,972
HAVELOCK HS	FOOTBALL CONCESSION	1/1/2004	15	1875	$232,412
HAVELOCK HS	BASEBALL CONCESSION	1/1/2004	15	1875	$232,412
NEW BERN HS	PRESSBOX/BLEACHERS	1/1/2004	15		$453,780
NEW BERN HS	ATHLETIC FIELD LGHTS	1/1/2004	15		$649,092
WEST CRAVEN HS	LARGE GREENHOUSE	1/1/2004	15	1000	$58,742
WEST CRAVEN HS	PRESSBOX/BLEACHERS	1/1/2004	15	1	$323,078
WEST CRAVEN HS	ATHLETIC FIELD LGHTS	1/1/2004	15	1	$595,968
WEST CRAVEN HS	FTBL CONCESSION STND	1/1/2004	15	1200	$70,457
CREEKSIDE ES	MAIN BUILDING	8/1/2007	12	85,084	$12,767,167
FIELDS MS	Media addition	7/1/2008	11	9182	
GENERAL SVCS	NEW BUS GARAGE	7/1/2008	11	19251	$3,623,747
GENERAL SVCS	NEW REFRIGERATION	7/1/2008	11	3	$247,907
J.T. BARBER ES	Media / Admin	9/1/2008	11	8730	
WEST CRAVEN HS	Field House Addition	9/1/2008	11	2644	
HAVELOCK MS	Shop Addition - Hite 06	1/0/1900			
0-10 yrs				0	$0

Square Footage of Buildings Related To Age of Facility

To the right is a table charting out the construction dates for the existing facilities. The result is that about half of the square footage of the buildings is forty to fifty years of age. The largest portion of buildings still in use are between twenty and thirty years of age. Again, there has been no new construction in the past ten years.

The chart below uses the same data to visually depict the amount of square footage that was built in a given year.

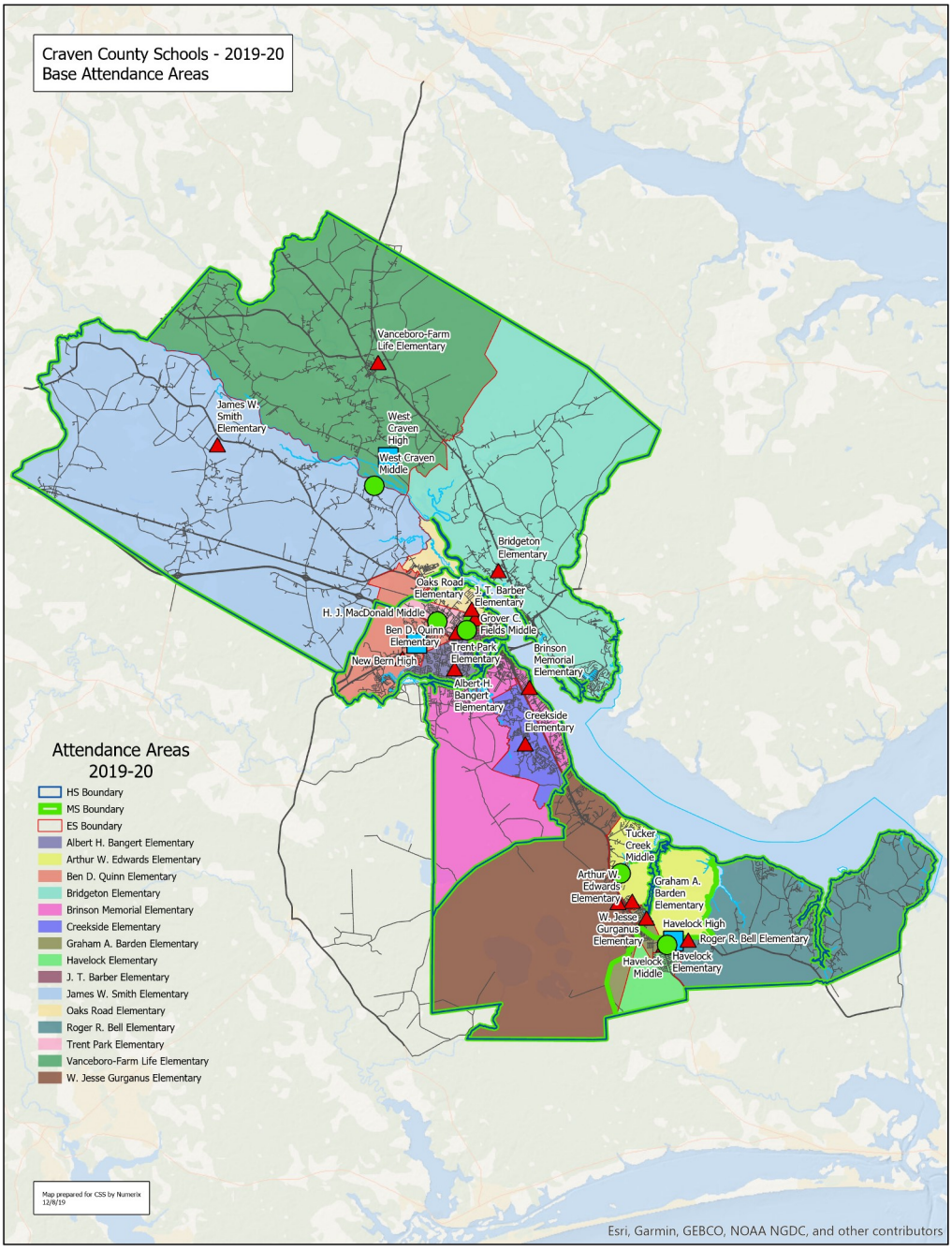
Craven County Schools			
Age of Building Square Footage			
11/25/2019			
Year Range	Approximate Age	Square Footage	Percentage
1940-1950	> 70 yrs	0	0.00%
1950-1960	60-70 yrs	365,395	15.43%
1960-1970	50-60 yrs	235,085	9.93%
1970-1980	40-50 yrs	503,564	21.27%
1980-1990	30-40 yrs	204,050	8.62%
1990-2000	20-30 yrs	700,250	29.58%
2000-1010	10-20 yrs	359,003	15.16%
2010-2020	0-10 yrs	0	0.00%
Totals		2,367,347	



District Wide Overview

Attendance Boundaries

The following pages describe the different schools in generalities. They cannot be used to determine need at a particular school or across the system. One school may be overcrowded, while another is under utilized. The least expensive method for addressing this issue is to redistrict students from one school to another. Leapfrogging of students from attendance boundary number one to attendance boundary two, and consequently, moving some boundary two students into a third area must occur in order to alleviate pressure at the overcrowded school. This method has been used by many school districts and continues to be cost effective and equitable. However in many cases, the fix is not that simple, as it may not alleviate all concerns.



Construction Costs

This information is based on the North Carolina Department of Public Instruction. They track the cost of school construction every year. In the table, the Great Recession is shown in Grey. The Yellow section indicates an estimate for this year (based on 11/5/2019) and a strictly mathematical projection for 2020.

The two graphs show the increased overall construction cost per square foot and below it the relative increase in the inflation rate for that year. Note: 2019 rates will not be finalized until the middle of 2020.

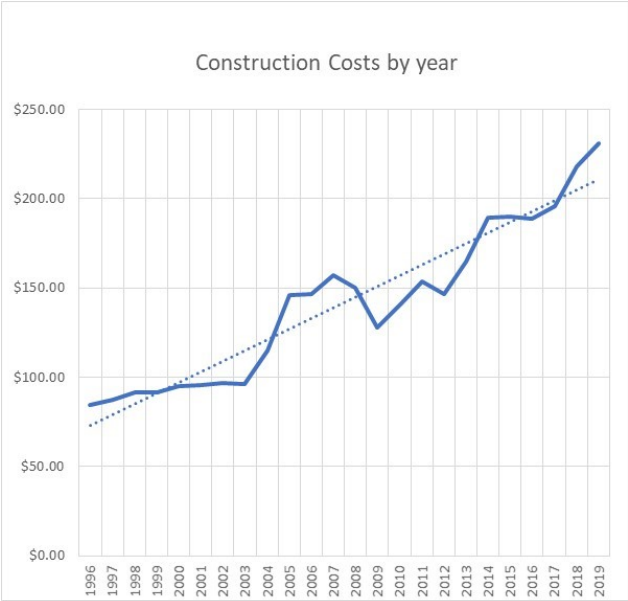
Historical construction inflation rates have been around 3%. Since 1996, that rate has been volatile and is a total of 3.89%

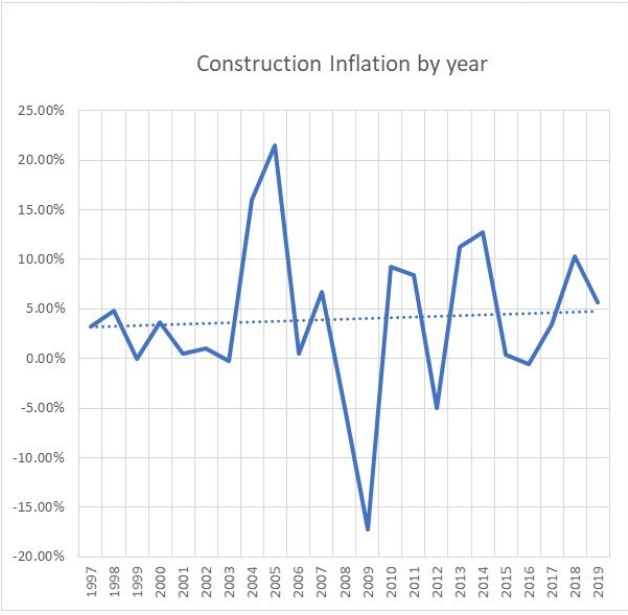
Construction Costs by Year

Source: NCDPI

Elementary through High

Year	Cost / SF	Inflation Per Yr	Tally
1996	$84.43		
1997	$87.28	3.27%	3.27%
1998	$91.70	4.82%	8.09%
1999	$91.69	-0.01%	8.07%
2000	$95.14	3.63%	11.70%
2001	$95.59	0.47%	12.17%
2002	$96.62	1.07%	13.24%
2003	$96.42	-0.21%	13.03%
2004	$114.80	16.01%	29.04%
2005	$146.18	21.47%	50.51%
2006	$146.89	0.48%	50.99%
2007	$157.43	6.70%	57.69%
2008	$149.90	-5.02%	52.66%
2009	$127.92	-17.18%	35.48%
2010	$140.91	9.22%	44.70%
2011	$153.81	8.39%	53.09%
2012	$146.52	-4.98%	48.11%
2013	$165.08	11.24%	59.35%
2014	$189.21	12.75%	72.11%
2015	$189.93	0.38%	72.49%
2016	$188.89	-0.55%	71.93%
2017	$195.61	3.44%	75.37%
2018	$218.00	10.27%	85.64%
2019	$231.00	5.63%	91.27%
2020	$250.00	7.60%	98.87%





Facility Appraisal

As soon as a building is complete, it begins to deteriorate. Bearings begin to wear out, and the sun starts damaging roofing membranes. Once occupied, the building starts getting scuffed and finishes begin to fade. As the building ages, the maintenance staff routinely lubricates pumps and changes the oil, in order to keep the system operating as it should. There are known items that must be done on a regular basis like replacing filters and lubricating motors and fans. These items are quantified and addressed by the Maintenance Department. Items in this category are not itemized, since they are already being addressed and funds have already been allocated to them. This report looks at items that exceed the budget for a given year due to their cost or difficulty in replacing them.

Capital Renewal items involve systems which have definitive life spans and must eventually be replaced. Examples of these systems include but are not limited to: roofs, painting, and resurfacing of roads. Typically, these are long life cycle systems that cannot fit in a yearly maintenance budget and get pushed off or deferred to a subsequent budget, effectively defining the deferred maintenance list.

Deferred Maintenance refers to entire building systems or significant portions of a building that are antiquated or otherwise beyond the end of their life cycle and must be replaced in their entirety. These systems may still be operational, but over time will become either prohibitively expensive to operate or completely nonfunctional. Often replacement parts are no longer available and a total system replacement is needed. Routine maintenance budgets are not designed to handle these items but have been used in the past to support the added expenses associated with operating older systems.

In an article printed by American School and University magazine 2002, John Oualline and Carl Rabenaldt looked at the expenses associated with deferred maintenance on fifty million square feet of higher education facilities across the United States. The study found that over a five year period, the average cost of deferred maintenance, plus capital modernization, was $45 per square foot for the life of the building. This generalization cannot be directly related to individual circumstances and must be taken as a statistical average. However, it does give us a clear indication of what we should expect in maintenance costs to sustain a school system. Based on Craven County Schools nearly 2,400,000 square feet of space (2,379,833), this formula would result in approximately $2,141,849 annually for improvements to facilities, based on a fifty year building life cycle.

(2,379,833 sf x $45/sf) = $39,792,735
/ 50yrs = $2,141,849.70 annual budget

That study was completed nearly twenty years ago and adjusting for inflation at about 4% / year, increases the cost to $88 / sf in 2020. The 4% (3.89% actual) is based on actual NCDPI school construction data.

(2,379,833 sf x $86/sf) = $204,886,188.21
/ 50yrs = $4,097,723.76 annual budget

The reality lies somewhere between the two annual budgets and with 50% of the buildings being around fifty years of age, should realistically favor the higher number. This will require future adjustments to keep up with inflation. Again, this is a recommended minimum, and if historic funding was not maintained at this level, additional funding will need to be adjusted upwards for the previous allotments.

Deferred Maintenance Cont.

It is important to note that when the building exceeds its fifty year life span, maintenance and modernization will cost more with each passing year and with ever diminishing returns. Many of Craven County's schools are at or over that age bracket and additional investment in these facilities will be required over the coming years if they are to be preserved.

Improvements

Added to the deferred maintenance category are items such as lighting replacement or other systems that quickly pay for themselves. Many older schools operated a fluorescent light system that supports what is known as a T-12 bulb. These were developed in the mid 1900's and were adopted as a cost effective way to light our schools. About ten years ago, school systems started using more energy efficient T-8 and T-5 bulbs. Today most schools are moving toward LED bulbs. In each transition, the payback is about three years.

The cost of LED lighting has only recently come down to make that three year payback a reality. The Maintenance Department has already started to transition to LED fixtures as the older bulbs burn out. Craven County Schools is currently transitioning from the T-8 to LED. Funding for this has come from the yearly maintenance budget.

Smith Sinnett Architecture and the Craven County Schools Maintenance Department surveyed every school in the district and reviewed each for its suitability, life safety, ADA compliance and ability to be maintained. Building systems were reviewed and deficiencies documented. These, along with significant facility upgrades, constitute a large portion of the assessment.

Comparative Analysis

Several methods have been developed over the years to help us understand a building's relative health. One very helpful measure is the Facility Condition Index (FCI) which allows schools to be compared to each other using a standard measure. Since all buildings were assessed based on a single standard, and the buildings are insured via another standard metric, each can be compared to the other.

The FCI is a simple division of the Deferred Maintenance costs identified, divided by the current value of the building or its replacement cost. This simple ratio provides a quick comparison of the state of the building against the investment that would be needed to bring the facility up to the minimum standards. A low score represents a building that comes close to the minimum standards and is in overall good condition while a high score suggests the building requires a greater investment to meet the minimums.

The following pages contain the FCI data. This was completed in two different ways in an effort to depict the actual condition. In both cases, the capacity of the school is held to the same number.

The first compares the Deferred Maintenance values to the NCDPI Adjusted Building Value from July 2, 2019. This is the value the building is insured for as of the date noted. The value of each campus varies depending on anticipated damage and age of structure. The average cost per square foot is $145, which will not allow for a complete replacement.

The second compares the Deferred Maintenance cost to the reconstruction of the entire building and uses a Total Project Budget as the standard. This holds the student capacity at the same level, but provides a school with the appropriate square footage in every space. Although the cost per square foot of an elementary school and a high school are different, they are held to the same $348 / sf in each example. This number appears elevated because it includes three years of inflation, contingency, soft costs and legal fees related to securing the bonds that will be needed.

NCDPI tracks the costs of schools across the state. Currently the cost of construction is $231.28 per square foot and includes site preparations, but it does not include furniture and kitchen equipment, nor other soft costs such as Surveying, Engineering, Architectural, and other code required services.

Again, this is a comparative analysis. The fact that an FCI could exceed 1.00 does not indicate the building should be replaced. It simply indicates that if all of the improvements identified were to be completed it would exceed the current value of the facilities. Implementing some of the improvements should theoretically increase the value of the building, so not all improvements will be necessary to improve the rating at a particular facility.

Additional information on individual schools can be found with that particular school's assessment later in this document.

Facilities Condition Index (NCDPI)

In this case, the identified Deferred Maintenance values are compared to the North Carolina Department of Public Instruction "Adjusted Building Value". The values are consistent and appropriate only as a tool for the basis of comparison.

For their estimates, they assess the buildings at an average of around $145 per square foot. This only considers the construction of the building itself. There is nothing included for furniture, technology, or design and testing services.

A.H. Bangert tops the scale at 96% while Havelock Elementary holds the bottom slot at only 15%. This is only a comparative analysis and does not take issues like flood plain, site size, and the value the community places on a building like J.T. Barber, which is also listed as an historic building. This is just one part of determining where it is reasonable to invest in existing facilities.

Craven County Schools	Deferred		NCDPI
	Maintenance	FCI	Building
12/17/2019	+ Contingency	As	Replacement
	+ Inflation	Percentage	Cost
Facility	+ Soft Costs	NCDPI	$/sf Varies
A. H. Bangert	$8,386,728	96.03%	$8,733,897
Arthur W. Edwards	$11,466,367	91.24%	$12,567,645
Ben D. Quinn	$4,842,383	53.89%	$8,985,679
Bridgeton	$2,267,079	18.53%	$12,236,038
Brinson Memorial	$11,645,020	71.69%	$16,244,441
Creekside	$2,287,478	17.92%	$12,767,167
Graham A. Barden	$5,419,131	63.30%	$8,561,639
Havelock	$1,657,151	15.50%	$10,690,234
J.T. Barber	$9,698,398	69.79%	$13,897,391
J.W. Smith	$4,728,564	40.00%	$11,821,453
Oaks Rd Academy	$6,319,761	82.67%	$7,644,992
Roger Bell New Tech	$4,914,468	52.45%	$9,369,654
Trent Park	$6,978,058	91.28%	$7,644,992
Vanceboro-Farm Life	$9,765,614	79.84%	$12,230,893
W.J. Gurganus	$4,995,502	55.59%	$8,985,679
Subtotal	$95,371,701		$162,381,794
Grover C. Fields	$11,265,028	59.36%	$18,978,466
H.J. MacDonald	$21,087,484	92.52%	$22,793,180
Havelock Middle	$10,666,228	78.33%	$13,616,222
Tucker Creek	$6,305,134	30.01%	$21,010,553
West Craven	$10,372,723	67.13%	$15,451,137
Subtotal	$59,696,598		$91,849,558
Havelock	$21,099,781	68.35%	$30,872,012
New Bern	$15,975,304	43.82%	$36,460,265
West Craven	$19,040,268	73.89%	$25,767,964
Early College	$37,131		
Early College East	$153,887		
Subtotal	$56,306,370		$93,100,241
Central Offices	$1,725,232	50.21%	$3,436,114
Child Nutrition	$592,628	40.52%	$1,462,402
Bus Garage	$320,528	8.85%	$3,623,747
Facility Support	$467,957	1513.20%	$30,925
Subtotal	$3,106,345		$8,553,188
Total	$214,481,014		$355,884,781

Facilities Condition Index (Total Project Budget)

Here each facility is reviewed by comparing the Deferred Maintenance costs to the cost of replacing the entire building. The replacement cost shown is based on a total project budget for replacement including the building and site, all furniture, design fees, surveying and soil borings. The size of the buildings have increased to match what they should be to keep the student capacity the same as the existing facility.

A higher FCI indicates that the relative cost of improvements at a particular site are significant relative to replacing the building. As an example, A.H. Bangert at 41.40% indicates the cost to fix or repair all of the Deferred Maintenance items would be about 40% of the cost of a new building. This alone should not be taken as a definitive answer to retire the building. This should be closely compared with the age and overall condition of the building. In this case, nearly 78% of A.H. Banger's square footage is near fifty years of age and spaces do not allow for modern education delivery methods. In this scenario, the spaces would be appropriate and the building would have seventy or so years of remaining life vs the ten to twenty it has now.

Craven County Schools	Deferred Maintenance + Contingency + Inflation + Soft Costs	FCI As Same SF	Replacement at Same SF Total Project $348
12/17/2019			
Facility			
A. H. Bangert	$8,386,728	41.40%	$20,256,036
Arthur W. Edwards	$11,466,367	39.34%	$29,147,436
Ben D. Quinn	$4,842,383	23.24%	$20,839,980
Bridgeton	$2,267,079	7.99%	$28,378,356
Brinson Memorial	$11,645,020	30.91%	$37,674,828
Creekside	$2,287,478	7.73%	$29,609,232
Graham A. Barden	$5,419,131	27.29%	$19,856,532
Havelock	$1,657,151	6.68%	$24,793,260
J.T. Barber	$9,698,398	31.49%	$30,800,088
J.W. Smith	$4,728,564	17.25%	$27,416,832
Oaks Rd Academy	$6,319,761	35.64%	$17,730,600
Roger Bell New Tech	$4,914,468	22.62%	$21,730,512
Trent Park	$6,978,058	38.74%	$18,013,872
Vanceboro-Farm Life	$9,765,614	34.93%	$27,960,408
W.J. Gurganus	$4,995,502	23.97%	$20,839,980
Subtotal	$95,371,701		$375,047,952
Grover C. Fields	$11,265,028	26.04%	$43,255,008
H.J. MacDonald	$21,087,484	39.89%	$52,862,940
Havelock Middle	$10,666,228	33.61%	$31,730,640
Tucker Creek	$6,305,134	12.89%	$48,906,528
West Craven	$10,372,723	28.95%	$35,834,952
Subtotal	$59,696,598		$212,590,068
Havelock	$21,099,781	30.32%	$69,583,992
New Bern	$15,975,304	19.38%	$82,434,936
West Craven	$19,040,268	32.28%	$58,988,784
Early College	$37,131		
Early College East	$153,887		
Subtotal	$56,306,370		$211,007,712
Central Offices	$1,725,232	26.91%	$6,412,000
Child Nutrition	$592,628	17.94%	$3,303,440
Bus Garage	$320,528	5.95%	$5,390,280
Facility Support	$467,957	5.40%	$8,659,000
Subtotal	$3,106,345		$23,764,720
Total	$214,481,014		$822,410,452

Facility Appraisal

As previously noted, as buildings age they become more costly to maintain unless significant upgrades are made on a regular basis. Many of the Craven County School facilities are more than halfway through their anticipated life cycle. Although there are some relatively new facilities, only eighteen years old, the average age of all buildings is forty-two years. Many life cycle analysts estimate the life cycle of a new facility at fifty years. Although there is currently not a hard and fast rule as to when it becomes prohibitively expensive to maintain and operate a school, several factors must be taken into consideration.

The first is to determine if the facility is of historic nature and must be preserved based on its registration with the National Historic Society. J.T. Barber is the only school in the system currently registered as an historic building.

Secondly, a determination of a building's value to the community beyond being a historic site must be considered. In some cases, the community has such an attachment to a building that its emotional value exceeds its real estate value. In these cases, it may be appropriate to repair the buildings back to its original condition. While this can be done, it is often much more expensive to do, than it would be to demolish the building and start over.

First Cost is a major factor to be considered and often renovations can be less expensive. Selective demolition, repairs and additions can often rejuvenate a facility and add years onto its anticipated end of life cycle. Several considerations must be weighed in making that decision. Questions of Life Safety and Security must be incorporated into any plan. Additionally, decisions must be weighed against issues such as air quality, utility costs, and compliance with current codes such as the Americans with Disabilities Act and the new North Carolina Energy Code.

Roofing

As previously noted, as buildings age they become more costly to maintain unless significant upgrades are made on a regular basis. Many of the Craven County School facilities are more than halfway through their anticipated life cycle. Although there are some relatively new facilities, only eighteen years old, the average age of all buildings is forty-two years. Many life cycle analysts estimate the life cycle of a new facility at fifty years. Although there is currently not a hard and fast rule as to when it become prohibitively expensive to maintain and operate a school, several factors must be taken into consideration.

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Roof Life Cycle Summary

Craven County Schools

Building Designation

All roofs have a designed life expectancy or estimated number of years of service. The (Green/Yellow) border is when watertightness issues will likely arise while the (Yellow/Red) suggests total membrane will be in failure.

135000 145000 rubber track

Roof Identification	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
A. H. Bangert						
East	7	22.5	20	25	2001	18
Middle East	7	22.5	20	25	2001	18
South	7	22.5	20	25	2001	18
West	7	22.5	20	25	2001	18
North	7	22.5	20	25	2001	18
Low East	7	22.5	20	25	2001	18
Metal	48	60	50	70	1997	22
Low Building	7	22.5	20	25	2001	18
AW Edwards						
CR Building	-1	17.5	15	20	2003	16
Ben D Quinn						
MAIN BUILDING - 1991	15	27.5	25	30	2004	15
Bridgeton						
Roof 1	55	60	50	70	2004	15
Roof 2	55	60	50	70	2004	15
Roof 3	55	60	50	70	2004	15
Roof 4	55	60	50	70	2004	15
Roof 5	55	60	50	70	2004	15
Admin	55	60	50	70	2004	15
Hall Roof 1	55	60	50	70	2004	15
Hall Roof 2	55	60	50	70	2004	15
Brinson Memorial						
Cafeteria CR Wing	1	17.5	15	20	2000	19
Media Admin	11	17.5	15	20	2010	9
Roof 57 South	6	22.5	20	25	2000	19
walkway roof	6	22.5	20	25	2000	19
hallway roof	6	22.5	20	25	2000	19
roof 7	6	22.5	20	25	2000	19
Roof 53 North	6	22.5	20	25	2000	19
Toilets Metal	7	22.5	20	25	2001	18
Roof 79 South	6	22.5	20	25	2000	19
Technology Building	6	22.5	20	25	2000	19
Multipurpose	6	22.5	20	25	2000	19
Metal West	49	60	50	70	1998	21
Roof 55 South	6	22.5	20	25	2000	19
Roof 59 North	6	22.5	20	25	2000	19
Roof 79 North	6	22.5	20	25	2000	19
Kitchen	6	22.5	20	25	2000	19
Boiler Room	12	17.5	15	20	2011	8
Cafeteria	6	22.5	20	25	2000	19
Canopy East / West	6	22.5	20	25	2000	19
Canopy North South	6	22.5	20	25	2000	19
Metal at Tech Building	60	60	50	70	2009	10
Creeekside						
Roof 1	54	60	50	70	2003	16
Roof 2	54	60	50	70	2003	16
Roof 3	54	60	50	70	2003	16
Roof 4	54	60	50	70	2003	16
Roof 5	54	60	50	70	2003	16
Admin	54	60	50	70	2003	16
Hall Roof 1	54	60	50	70	2003	16
Hall Roof 2	54	60	50	70	2003	16
GA Barden						
Low West Right	14	25	20	30	2003	16
Low West Left	14	25	20	30	2003	16
Low East Right	14	25	20	30	2003	16
Low East Left	14	25	20	30	2003	16
High North	14	25	20	30	2003	16
Cafeteria	14	25	20	30	2003	16
Media Center	11	25	20	30	2000	19
MP Room	14	25	20	30	2003	16

Roof Identification	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
Havelock																							
Main Building																		54	60	50	70	2003	16
Walkway Canopy																		54	60	50	70	2003	16
JT Barber																							
West Left Loow																		12	25	20	30	2001	18
West High																		12	25	20	30	2001	18
West Low Right																		12	25	20	30	2001	18
East Low Left																		12	25	20	30	2001	18
East High																		12	25	20	30	2001	18
East Low Right																		12	25	20	30	2001	18
Northwest Classrooms																		12	25	20	30	2001	18
2 CR Pod																		12	25	20	30	2001	18
Cafeteria																		12	25	20	30	2001	18
Freezer Canopy																		12	25	20	30	2001	18
Gym Metal																		16	19.5	17	22	2001	18
Around Gym																		12	25	20	30	2001	18
Auditorium																		12	25	20	30	2001	18
Admin-Media																		59	60	50	70	2008	11
Hallways																		12	25	20	30	2001	18
Bus Canopy																		12	25	20	30	2001	18
JW Smith																							
Main Building																		-1	40	30	50	1988	31
1998 Addition																		49	60	50	70	1998	21
Oaks Road																							
Kitchen Roof																		4	20	15	25	2003	16
Dining																		9	22.5	20	25	2003	16
Main Classroom Wing																		9	22.5	20	25	2003	16
Lobby Roof																		9	22.5	20	25	2003	16
North Hall																		9	22.5	20	25	2003	16
Multipurpose Roof																		52	60	50	70	2001	18
Corridor Roof																		9	22.5	20	25	2003	16
Kindergarten Roof																		9	22.5	20	25	2003	16
Toilet Addition																		2	17.5	15	20	2001	18
Roger Bell																							
Main Roof																		37	60	50	70	1986	33
Multipurpose																		52	60	50	70	2001	18
Trent Park																							
dining roof																		-10	16	11	21	1997	22
Raised Back North																		-10	16	11	21	1997	22
Raised Back South																		-10	16	11	21	1997	22
Front Roof																		-10	16	11	21	1997	22
Back Roof																		-10	16	11	21	1997	22
Multipurpose																		52	60	50	70	2001	18
Vanceboro																							
8 CR Wing West																		50	60	50	70	1999	20
Media Center																		34	60	50	70	1983	36
West Wedge																		34	60	50	70	1983	36
North Shed West																		34	60	50	70	1983	36
West Connector																		34	60	50	70	1983	36
South Shed west																		34	60	50	70	1983	36
West Flat TPO																		18	17.5	15	20	2017	2
North Shed East																		34	60	50	70	1983	36
South Shed East																		34	60	50	70	1983	36
East Wedge																		34	60	50	70	1983	36
Middle Wedge																		34	60	50	70	1983	36
East Flat TPO																		18	17.5	15	20	2017	2
Admin																		34	60	50	70	1983	36
Canopy Old																		34	60	50	70	1983	36
1999 Connector																		50	60	50	70	1999	20
Cafeteria																		34	60	50	70	1983	36
Auditorium West Low																		2	20	15	25	2001	18
Auditorium East Low																		2	20	15	25	2001	18
Auditorium																		2	20	15	25	2001	18
Gym Low Roof																		2	20	15	25	2001	18
Gym - Metal with Coating																		4	60	50	70	1953	66
1999 Connector TPO																		18	17.5	15	20	2017	2
WJ Gurganus																							
Main Building - PVC Roof																		2	12.5	10	15	2011	8

Roof Identification	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
Grover C Fields																							
Auditorium							25											1	20	15	25	2000	19
Lobby Entry		20																-9	15	10	20	2000	19
walkway roof		20																1	17.5	15	20	2000	19
Half Story Roof												30						11	25	20	30	2000	19
boiler room roof										20								9	17.5	15	20	2008	11
media center roof																		59	60	50	70	2008	11
cafeteria roof							25											1	20	15	25	2000	19
Gym roof - Metal w/ Coating			20															12	17.5	15	20	2001	18
side gym roof 1		20																-9	15	10	20	2000	19
gym side roof 2		20																-9	15	10	20	2000	19
South Cr 2 Story							25											1	20	15	25	2000	19
Aspire																		-9	30	20	40	2000	19
West Walkway Roof		20																1	17.5	15	20	2000	19
West Central Walkway Roof		20																1	17.5	15	20	2000	19
North Stair Roof		20																-9	15	10	20	2000	19
Canopy East of 1 1/2 Story		20																1	17.5	15	20	2000	19
Canopy at Gym		20																1	17.5	15	20	2000	19
Main Low East -N							25											1	20	15	25	2000	19
Main Low Roof East-S							25											1	20	15	25	2000	19
Main Low West		20																-9	15	10	20	2000	19
2nd floor spine							25											1	20	15	25	2000	19
Administration							25											1	20	15	25	2000	19
Auditorium Lobby												30						11	25	20	30	2000	19
HJ MacDonald																							
2 story South		20																-4	17.5	15	20	2000	19
2 Story East		20																-4	17.5	15	20	2000	19
2 Story North		20																-4	17.5	15	20	2000	19
Main Building		20																-4	17.5	15	20	2000	19
Gym Lobby		20																-4	17.5	15	20	2000	19
Gym		20																-4	17.5	15	20	2000	19
Locker Rooms		20																-4	17.5	15	20	2000	19
North TPO		20																-4	17.5	15	20	2000	19
East TPO		20																-4	17.5	15	20	2000	19
South TPO		20																-4	17.5	15	20	2000	19
Havelock Middle																							
6th grade wing											25							10	22.5	20	25	2004	15
Lockers			17															-6	14.5	12	17	2004	15
Gym									23									6	20.5	18	23	2004	15
Main - Includes Early College Wing								20										0	17.5	15	20	2004	15
Kitchen Cafeteria			17															-6	14.5	12	17	2004	15
Tucker Creek																							
Metal Central																		49	60	50	70	1998	21
Metal West																		49	60	50	70	1998	21
Metal East																		49	60	50	70	1998	21
Auditorium Roof														20				13	17.5	15	20	2012	7
Walkway Canopy																		49	60	50	70	1998	21
Band														20				13	17.5	15	20	2012	7
Admin Roof														20				13	17.5	15	20	2012	7
West Wing														20				13	17.5	15	20	2012	7
Central Wing														20				13	17.5	15	20	2012	7
East Wing														20				13	17.5	15	20	2012	7
Mechanical														20				13	17.5	15	20	2012	7
Main Gym														20				13	17.5	15	20	2012	7
Lower Gym														20				13	17.5	15	20	2012	7
West Craven Middle																							
Main Roof							25											6	22.5	20	25	2000	19
Classroom Addition																		-2	17.5	15	20	1997	22
Boiler Room																		-2	17.5	15	20	1997	22

District Wide Overview

Roof Identification	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
Havelock High																							
Gym Metal																		55	60	50	70	2004	15
Gym Canopy Metal																		55	60	50	70	2004	15
Band											25							10	22.5	20	25	2004	15
Field House																		24	22.5	20	25	2018	1
Gym Roof											25							10	22.5	20	25	2004	15
Low Around Gym											25							10	22.5	20	25	2004	15
South Gym Canopy																30		15	25	20	30	2004	15
North Gym Canopy											25							10	22.5	20	25	2004	15
Media Clerestory											25							10	22.5	20	25	2004	15
Commons Clearestory											25							10	22.5	20	25	2004	15
2003 Addition EPDM										25								9	22.5	20	25	2003	16
Auto - Art												20						11	17.5	15	20	2010	9
Freestanding CTE Building											25							10	22.5	20	25	2004	15
Main Building											25							10	22.5	20	25	2004	15
New Bern																							
Main Building																	20	16	17.5	15	20	2015	4
Administration																	20	16	17.5	15	20	2015	4
Fieldhouse																		50	60	50	70	1999	20
CTE Building																	20	16	17.5	15	20	2015	4
Cafeteria Skylights																	20	16	17.5	15	20	2015	4
Northeast Mechanical																		42	60	50	70	1991	28
Southeast Mechaical																		42	60	50	70	1991	28
NorthSouth Mechanical																		42	60	50	70	1991	28
Lobby Skylights - not Standards 10 yrs																		-8	17.5	15	20	1991	28
West Craven																							
West Clearstory											20							1	17.5	15	20	2005	14
East Clearstory											20							1	17.5	15	20	2005	14
Gym											20							1	17.5	15	20	2005	14
Auditorium																		54	60	50	70	2003	16
CTE Area											20							1	17.5	15	20	2005	14
6 CR Addition											20							7	17.5	15	20	2006	13
Main Building											20							1	17.5	15	20	2005	14
Fieldhouse															25			14	22.5	20	25	2008	11
Band											20							1	17.5	15	20	2005	14
Chorus											20							5	17.5	15	20	2004	15
Auditorium Canopy											20							0	17.5	15	20	2004	15
Auditorium Porch																		55	60	50	70	2004	15
Early College East																							
Early College East Building (other w/ HMS)															25			13	22.5	20	25	2007	12
Early College																							
Maintained by CCC																		1	17.5	15	20	2000	19
Central Administration																							
Main Building																		-19	40	30	50	1970	49
Patched Main Building																		0	2.5	0	5	2019	0
Addition																		-19	40	30	50	1970	49
Child Nutrition																							
Main Building											25							6	22.5	20	25	2000	19
North Shingle											25							6	22.5	20	25	2000	19
New Refrigeration																		9	17.5	15	20	2008	11
Bus Garage / Transportation																							
Main Building																		59	60	50	70	2008	11
Facility Support / Maintenance																							
Low Section											20							1	17.5	15	20	2005	14
Warehouse Section																		6	20	15	25	2005	14
North Building											25							5	22.5	20	25	1999	20
Canopy											20							1	17.5	15	20	2005	14

Queue Length

This table uses NCDOT calculations to determine how long the queue needs to be at the different schools based on their capacity. The old method created shorter queues.

Craven County Schools

Queue Length Calculations

8/12/2019

Facility	2021 ADM / Optimial Capacity	Existing Queue	MSTA Rainy Day Queue	New Min Rainy Day - Insufficient
Elementary			New Min	- = Under
AH Bangert	386	800	827	-27
AW Edwards	626	720	1,351	-631
Ben D. Quinn	386	840	827	13
Bridgeton	516	830	1,115	-285
Brinson Memorial	772	1,147	1,654	-507
Creekside	516	1,020	1,115	-95
GA Barden	318	596	683	-87
Havelock Elementary	422	701	905	-204
JT Barber	376	420	813	-393
JW Smith `	609	730	1,312	-582
Oaks Road Academy	368	828	800	29
Roger Bell New Tech Academy	412	500	892	-392
Trent Park	376	75	813	-738
Vancebor-Farm Life Elementary	516	680	1,115	-435
W.J. Gurganus	402	1,016	867	149
Subtotal		10,903	15,087	-4,184
Middle				
Grover C. Fields	722	954	1,561	-607
H.J. McDonald Middle	888	1780	1,929	-149
Havelock Middle	566	590	1,225	-635
Tucker Creek Middle am	686	204	1,485	-1,281
Tucker Creek Middle pm		882	0	882
West Craven Middle	758	500	1,638	-1,138
Subtotal		4,910	7,838	-2,928
High				
Havelock High	1253	315	954	-639
New Bern High	1733	578	1,326	-748
West Craven High	1140	500	884	-384
Subtotal		1,393	3,164	-1,771

Athletic Schedule

This table lists the different programs at the high schools in an effort to understand demand on the Gymnasium, as well as the exterior athletic fields.

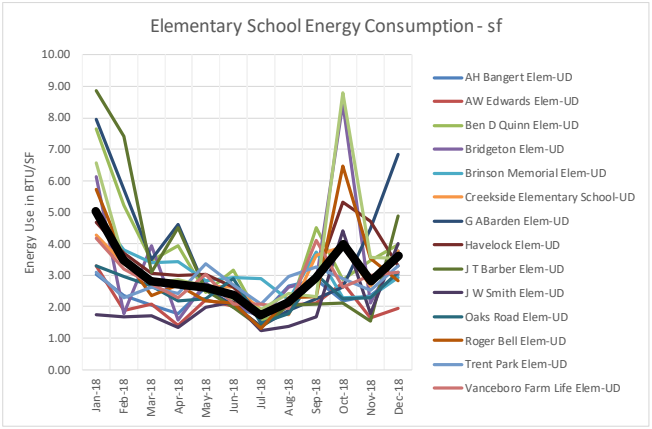
NCHSAA Seasons				HHS	NBH	WCH
Athletics Calendars				AAA	AAAA	AA
2018-2019						
	Start Practice	Finish Games	Playoffs Finished			
Fall						
Cross Country	30-Jul	19-Oct	3-Nov			
Men's Soccer	30-Jul	6-Oct	17-Nov			
Men's JV Soccer	30-Jul	6-Oct	17-Nov			
Women's Tennis	30-Jul	15-Oct	27-Oct			
Volleyball	30-Jul	20-Oct	3-Nov			
Women's Golf	30-Jul	10-Oct	23-Oct			
Varsity Football	1-Aug	8-Nov	14-Dec			
JV Football	1-Aug	8-Nov	14-Dec			
Winter						
Men's Basketball	31-Oct	23-Feb	16-Mar			
Men's JV Basketball	31-Oct	23-Feb	16-Mar			
Women's Basketball	31-Oct	23-Feb	16-Mar			
Women's JV Basketball	31-Oct	23-Feb	16-Mar			
Indoor Track and Field	31-Oct	2-Feb	9-Feb			
Swimming and Diving	31-Oct	26-Jan	9-Feb			
Spring						
Wrestling	30-Oct	1-Feb	8-Feb			
Men's Varsity Baseball	13-Feb	6-May	1-Jun			
Men's JV Baseball	13-Feb	6-May	1-Jun			
Men's Golf	13-Feb	1-May	14-May			
Men's Lacross	13-Feb	29-Apr	18-May			
Women's Lacross	13-Feb	29-Apr	18-May			
Women's Soccer	13-Feb	6-May	25-May			
Softball	13-Feb	6-May	31-May			
Men's Tennis	13-Feb	29-Apr	11-May			
Track and Field	13-Feb	4-May	18-May			
Year Round						
Cheerleading			1-Dec			

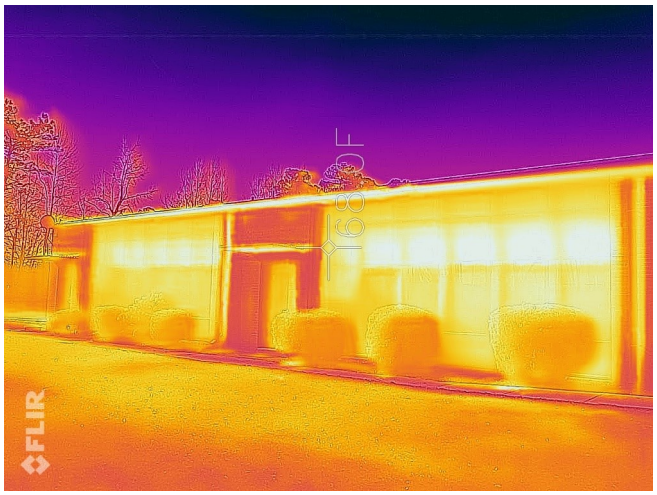
Energy Consumption - Sf

As noted in the summary, all buildings were not created equally. Some have increased insulation, while others leak energy. Some use energy efficient lighting and mechanical systems, while other schools have not been upgraded.

The information here looks at total British Thermal Units per square foot (Btu/sf) for all of 2018. The anomaly in September and October is due to Hurricane Florence, where significant effort was put into drying the schools out.

Elementary schools don't use the same amount of energy as a high school does and comparisons between the two should not be made, but within each category several schools stand out as less energy efficient.
Graham A. Barden, J.T. Barber, Tucker Creek, and West Craven High are the least efficient in each group.



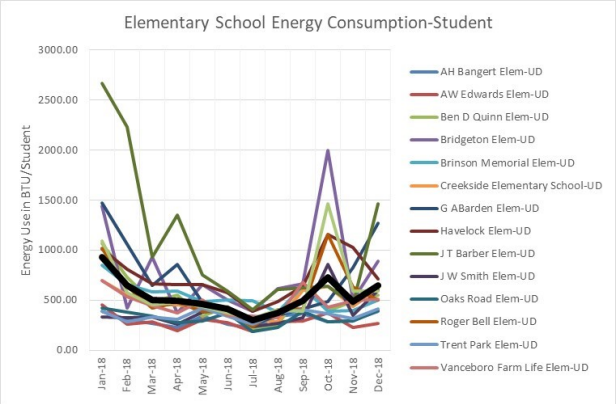


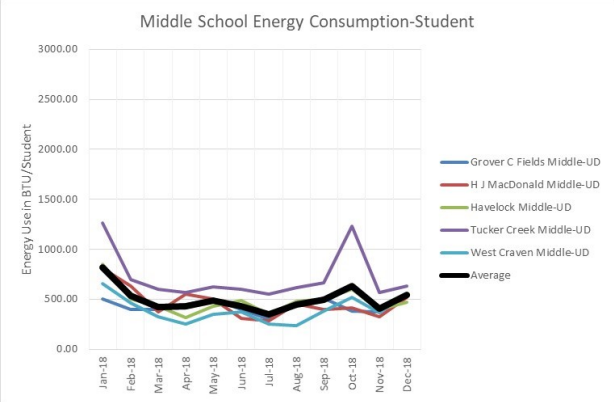
Energy Consumption
Energy use / total building sf
Calendar Year 2018

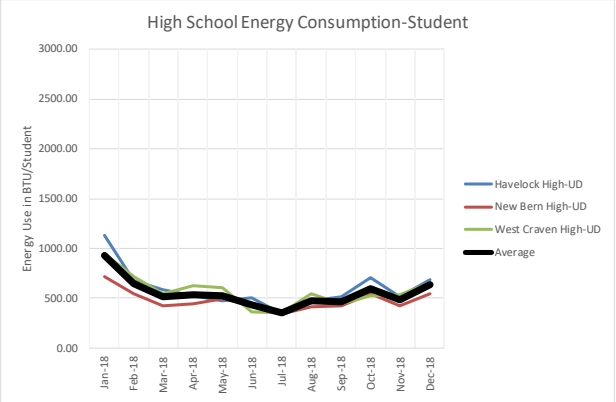
Building	Notes	*	Calendar Total 2018	Use/ft² Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Elementary															
AH Bangert Elem-UD	E	1	28.64	3.04	2.37	2.07	1.78	2.63	1.99	1.72	2.67	2.84	2.18	2.34	3.02
AW Edwards Elem-UD	E	0	24.85	3.31	1.89	2.09	1.42	2.22	2.03	1.36	2.05	2.13	2.74	1.64	1.96
Ben D Quinn Elem-UD	E,N	3	44.08	7.66	5.21	3.48	3.93	2.46	3.15	1.57	1.83	4.50	2.86	3.47	3.97
Bridgeton Elem-UD	E,P,4	2	39.84	6.12	1.79	3.95	1.59	2.77	2.14	1.65	2.63	2.84	8.47	2.12	3.78
Brinson Memorial Elem-UD	N	2	37.70	4.95	3.80	3.39	3.44	2.82	2.94	2.88	2.23	3.74	2.28	2.33	2.92
Creekside Elementary School-UD	N,4	0	36.16	4.28	3.38	2.84	2.79	2.64	2.62	1.90	1.74	3.65	3.89	2.65	3.78
G ABarden Elem-UD	N,S	5	45.81	7.95	5.71	3.50	4.60	2.56	2.05	1.37	1.89	2.25	2.63	4.47	6.84
Havelock Elem-UD	N,4	2	40.35	4.67	3.72	3.05	3.00	3.02	2.63	1.79	2.22	2.93	5.32	4.73	3.29
J T Barber Elem-UD	N,S	4	42.37	8.87	7.43	3.10	4.51	2.51	1.97	1.35	2.03	2.08	2.12	1.54	4.88
J W Smith Elem-UD	F	0	25.06	1.73	1.68	1.70	1.35	1.98	2.15	1.23	1.39	1.66	4.42	1.78	4.00
Oaks Road Elem-UD	E	0	30.13	3.30	2.96	2.64	2.17	2.27	2.89	1.49	1.78	3.02	2.24	2.29	3.09
Roger Bell Elem-UD	E,N	0	37.37	5.72	3.57	2.35	2.67	2.20	2.12	1.31	2.28	2.33	6.47	3.53	2.82
Trent Park Elem-UD	E	3	33.52	3.10	2.27	2.62	2.43	3.36	2.70	2.09	2.97	3.26	2.90	2.51	3.31
Vanceboro Farm Life Elem-UD	E,N	1	34.35	4.19	3.21	2.72	2.28	3.01	2.09	2.08	1.96	4.10	2.61	3.01	3.09
W J Gurganus Elem-UD	N	1	43.05	6.56	3.47	2.71	2.85	2.65	2.24	1.90	2.42	2.33	8.81	3.57	3.53
Average			36.22	5.03	3.50	2.81	2.72	2.61	2.38	1.71	2.14	2.91	3.99	2.80	3.62
Middle															
Grover C Fields Middle-UD	E	0	25.41	2.48	1.96	1.95	2.19	2.47	1.94	1.46	2.18	2.52	1.87	1.81	2.60
H J MacDonald Middle-UD	N	3	31.30	4.55	3.53	2.10	3.12	2.85	1.74	1.59	2.54	2.22	2.34	1.81	2.90
Havelock Middle-UD	E	0	26.56	3.87	2.30	1.95	1.45	1.98	2.24	1.59	2.20	2.29	2.74	1.81	2.15
Tucker Creek Middle-UD	N	6	38.34	5.62	3.11	2.66	2.52	2.79	2.66	2.46	2.74	2.94	5.49	2.53	2.83
West Craven Middle-UD	P	3	35.39	4.90	3.46	2.42	1.91	2.60	2.77	1.87	1.76	2.88	3.90	2.74	4.20
Average			31.40	4.28	2.87	2.21	2.24	2.54	2.27	1.79	2.28	2.57	3.27	2.14	2.93
High															
Havelock High-UD	N	4	40.85	6.47	3.88	3.36	3.02	2.72	2.86	1.96	2.71	2.96	4.04	2.95	3.92
New Bern High-UD	N	0	35.40	4.39	3.35	2.60	2.73	3.02	2.69	2.14	2.56	2.59	3.37	2.59	3.39
West Craven High-UD	N	8	43.88	6.05	4.56	3.49	3.98	3.85	2.35	2.26	3.50	2.87	3.37	3.39	4.22
Average			40.04	5.64	3.93	3.15	3.24	3.20	2.63	2.12	2.92	2.81	3.59	2.98	3.84

Energy Consumption - Student

The energy use was also reviewed based on a per student basis (Btu/S). In this case, J.T. Barber, Tucker Creek, and West Craven High stand out.







Energy Consumption

Energy use / School Population Spring 2019

Calendar Year 2018

Building	Notes	#	Calendar Total 2018	Use/Student Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Elementary															
AH Bangert Elem-UD	E	0	3308.06	392.43	305.47	266.59	229.78	339.43	257.29	222.60	**344.56**	367.12	281.20	301.58	390.45
AW Edwards Elem-UD	E	0	3142.38	454.58	259.40	287.56	195.31	304.55	278.88	187.09	280.90	292.54	376.51	225.07	269.72
Ben D Quinn Elem-UD	E,N	0	5586.67	1067.17	725.91	**484.10**	547.62	342.88	**438.30**	218.96	254.71	**626.01**	398.24	482.77	552.77
Bridgeton Elem-UD	E,P,4	5	8486.31	1439.29	420.81	929.91	373.42	652.07	504.22	388.59	617.95	667.24	1994.28	498.53	889.03
Brinson Memorial Elem-UD	N	1	5973.60	849.41	652.47	582.63	590.16	484.26	**504.05**	494.69	382.56	642.90	391.14	399.31	501.03
Creekside Elementary School-UD	N,4	0	5296.86	699.46	552.24	464.15	455.96	431.92	429.04	311.15	284.95	597.34	636.60	434.05	618.66
G ABarden Elem-UD	N,S	4	**7230.40**	**1475.61**	1059.58	649.06	853.74	474.81	379.52	253.84	350.30	417.12	487.61	829.21	1268.59
Havelock Elem-UD	N,4	3	8063.95	1015.19	808.99	662.65	653.07	657.15	571.52	388.35	483.65	638.05	1156.68	1028.65	716.00
J T Barber Elem-UD	N,S	9	11267.86	2666.72	2231.45	932.46	1353.90	753.86	590.42	404.77	611.10	624.17	636.59	462.43	1465.02
J W Smith Elem-UD	F	0	4077.63	335.33	325.27	328.63	261.56	382.28	415.81	238.09	268.27	321.92	855.10	345.39	600.00
Oaks Road Elem-UD	E	0	3464.99	423.08	378.64	338.69	278.45	290.40	369.67	190.25	228.51	386.71	286.58	294.00	395.63
Roger Bell Elem-UD	E,N	0	6164.45	1020.60	636.55	418.41	477.11	392.55	378.13	234.25	407.39	414.90	1154.54	630.02	503.76
Trent Park Elem-UD	E	0	3792.55	388.68	285.48	329.08	304.78	**421.77**	339.45	**261.81**	**373.03**	409.22	363.94	315.30	415.90
Vanceboro Farm Life Elem-UD	E,N	1	5170.43	693.19	531.19	449.32	376.70	498.32	346.03	344.50	324.72	677.93	431.01	497.51	510.30
W J Gurganus Elem-UD	N	1	6573.91	1091.21	577.37	451.28	474.23	441.24	372.90	316.44	402.02	387.53	1465.69	593.99	587.94
Average			5840.00	934.13	650.06	504.97	495.05	457.83	411.68	297.03	374.31	498.05	727.71	489.19	645.65
Middle															
Grover C Fields Middle-UD	E		4671.47	507.03	400.50	398.94	448.22	505.08	398.08	298.02	446.99	515.29	382.53	370.80	533.25
H J MacDonald Middle-UD	N		5061.20	811.21	**629.83**	373.26	**555.03**	**507.11**	310.69	283.58	453.27	396.50	417.49	323.22	516.47
Havelock Middle-UD	E		5348.84	847.23	503.76	427.18	317.95	434.65	490.24	348.94	481.61	501.50	599.67	396.10	469.92
Tucker Creek Middle-UD	N	12	7978.67	1261.67	698.17	597.83	566.92	626.48	597.15	551.52	615.28	661.20	1234.27	568.17	635.70
West Craven Middle-UD	P		4173.30	654.87	462.21	323.07	255.19	347.14	**370.40**	250.72	235.59	385.61	522.41	**366.07**	**561.31**
Average			5446.69	816.40	538.90	424.05	428.66	484.09	433.31	346.56	446.55	492.02	631.27	404.87	543.33
High															
Havelock High-UD	N	4	6474.72	1134.12	679.94	**589.76**	528.96	477.29	500.94	344.19	475.25	518.58	708.87	516.83	687.90
New Bern High-UD	N	0	5201.42	712.96	544.20	421.93	442.73	489.84	437.57	346.88	416.10	421.23	547.68	420.31	550.18
West Craven High-UD	N	8	6207.72	947.34	713.21	546.85	622.19	602.93	367.31	354.37	547.23	448.45	526.77	531.05	**660.68**
Average			5961.28	931.47	645.79	519.51	531.29	523.35	435.27	348.48	479.53	462.75	594.44	489.40	632.92

Craven County Schools

District Wide Site Analysis

Smith Sinnett Architecture

Site Acreage Analysis

With all schools, the site is a dominant component of the campus. When looking at school sites, NCDPI has recommendations for minimum acreage that should be considered. These numbers do not necessarily apply to city schools where site selection is limited and probably expensive. Many of the schools in the system cannot, for various reasons, take advantage of the site savings noted below, but a comparison to these standards is still appropriate at several of the schools in the Craven County School System.

Below is an excerpt from the NCDPI Facility Guidelines that discusses school sites.

Grade	*Developable Acreage*
K-6	*10+ 1/100 ADM*
5-8	*15+ 1/100 ADM*
7-9	*20+ 1/100 ADM*
9-12	*30+ 1/100 ADM*

A high school may need an additional area of ten acres or more if a stadium and spectator parking are anticipated.

The above guidelines assume a rural or suburban area with a one story building, room for expansion, desirable outdoor play areas and all parking, queuing and buses located on site.

Source: NCDPI Facility Guidelines

Site Analysis

The NCDPI Acreage recommendations are intended as a guideline for rural schools across the state. These generic numbers cannot be used to definitively determine that a school site is too small, but they do support the notion that a deeper investigation is warranted and additional acreage may be needed. A few of the sites are below the standard.

The shortages are obvious at most of the small parcels with insufficient space for queueing on site or congested outdoor spaces. Graham A. Barden is significantly low, and it would be appropriate to secure additional land at this location.

Craven County Schools 2019

Acreage Comparison to NCDPI Recommendations

Having the appropriate acreage for a school depends on many factors. Issues range from multistory configurations to restrictions within a watershed and many other site specific conditions. The end result is that many sites have unusable acreage. The following comparison is used only as a general reference.	Existing				%
	Existing Acres	Cleared Acres	2021 ADM Capacity	NCDPI Sugg. Acres	Percent of NCDPI Acreage
Elementary					
Bangert Elementary	13.5	7.8	386	13.86	97.28%
Aurthur Edwards Elementary	15.3	13.9	626	16.26	94.21%
Ben D. Quinn Elementary	63.1	17.2	386	13.86	455.17%
Bridgeton Elementary	24.6	22.9	516	15.16	162.58%
Brinson Memorial Elementary	34.2	21.3	772	17.72	193.26%
Creekside Elementary	29.4	23.5	516	15.16	193.93%
Graham A. Barden Elementary	9.4	5.6	318	13.18	71.04%
Havelock Elementary and Havelock Middle *	31.2	10.0	422	14.22	219.16%
J.T. Barber Elementary and Bus Garage *	16.7	10.6	376	13.76	121.52%
James W. Smith Elementary	47.7	33.4	609	16.09	296.64%
Oaks Road	18.1	9.0	368	13.68	132.10%
Roger Bell Elementary	27.1	16.4	412	14.12	191.58%
Trent Park Elementary	12.0	7.7	376	13.76	86.94%
Vanceboro Farm Life Elementary	66.0	30.4	516	15.16	435.28%
W.J. Gurganus Elementary-All Parcels	32.6	16.6	402	14.02	232.55%
Total Elementary Schools	440.8	246.4	7,001.0	220	
Middle					
Grover C. Fields Middle	23.7	22.9	722	22.22	106.65%
H.J. MacDonald Middle	42.7	31.8	888	23.88	178.68%
Havelock Middle *		9.3	566	20.66	0.00%
Tucker Creek Middle	52.7	37.8	686	21.86	241.02%
West Craven Middle	41.9	35.9	758	22.58	185.50%
Total Middle Schools	160.9	137.7	3,620.0	111	
High					
Havelock High School	53.1	51.2	1140	41.4	128.26%
New Bern High	95.2	68.3	1733	47.33	201.25%
West Craven High	75.0	48.7	1253	42.53	176.36%
Total High Schools	223.4	168.2	4,126.0	131	
Other Educational					
Craven Early College (CCC Property)	100.2	Na	218	Na	Na
Early College East High (CCC Property) *	24.4	Na	201	Na	Na
Total Other Schools	Na	Na	419	Na	Na
Other Parcels					
Administration Building	2.9	2.9	Na	Na	Na
Bus Garage, Nutrition, J.T. Barber		4.5	Na	Na	Na
Maintenance Department	10.5	5.0	Na	Na	Na
Vacant Lot on N B Street - waterfront	6.5	6.5	Na	Na	Na
Parcel West of Church off SR 1160	1.1	0.8	Na	Na	Na
West Street School	2.5		Na	Na	Na
Total Other Parcels	23.4	19.6	0	0	Na
Subtotals					
Educational Subtotal	825.1	552.2	14,747	462.5	Na
Other Subtotal	23.4	19.6	419	0.0	Na
System Totals	848.5	572	15,166	462	Na

* School has additional parcel(s) associated with property.

Acreage noted is for multiple schools
Good
Between 100 and 75% of appropriate site
Less than 75% of the appropriate site

Site Analysis - GIS Data

The following information is from the Craven County's GIS database on parcels either owned by the school system, or where a school is located, but the property is under the ownership of Craven County. The Early College programs' ownership is with Craven Community College. There are also several properties owned by CCS, without a building on the parcel.

Craven County Schools

Tax Data 3/8/2019

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-203 -019	Bangert Elementary	BOE	10.3	$195,320	$195,320
8-203 -051	Bangert Elementary-South Lot	NB-C BOE	3.2	$60,800	$60,800
		Total	13.5	$256,120	$256,120
8-020 -005	J.T. Barber E.	BOE	11.0	$251,750	$251,750
8-020 -006	J.T. Barber E. West Parcel off Cobb	BOE	0.1	$6,000	$6,000
8-020 -008	J.T. Barber E. Center Parcel off Cobl	BOE	0.1	$6,000	$6,000
8-020 -012	J.T. Barber E. East Parcel off Cobb	BOE	0.1	$6,000	$6,000
8-021 -072	J.T. Barber Partial and Bus Garage	BOE	5.5	$138,750	$138,750
		Total	16.7	$408,500	$408,500
6-049 -3000	Graham A. Barden Elementary	BOE	9.4	$151,600	$151,600
6-222 -033	Roger Bell Elementary	BOE	27.1	$676,250	$676,250
2-039 -4000	Bridgeton Elementary	BOE	24.6	$295,680	$295,680
7-017 -027	Brinson Memorial Elementary	NB-C BOE	34.2	$1,769,240	$1,769,240
7-104 -11001	Creekside Elementary	CRAVEN COUNTY	29.4	$570,000	$570,000
6-216 -008	Aurthur Edwards Elementary	BOE	15.3	$381,750	$381,750
6-216 -10001	W.J. Gurganus Elementary-Both	CRAVEN COUNTY	32.6	$463,820	$463,820
6-066 -005	Havelock E. and Havelock M. Fields	BOE	11.5	$306,850	$287,250
6-066 -9000	Havelock E. and Havelock M. Drive	BOE	1.3	$33,500	$33,500
6-066 -002	Havelock E. and Havelock M.	BOE	18.3	$458,250	$458,250
		Total	31.2	$798,600	$779,000

Craven County Schools

Tax Data 3/8/2019

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-240 -013	Oaks Road	BOE	15.6	$390,000	$390,000
8-240 -8000	Oaks Road Field out Front	BOE	2.5	$98,800	$98,800
		Total	18.1	$488,800	$488,800
8-206 -141	Ben D. Quinn Elementary	NB-C BOE	63.1	$2,697,100	$2,697,100
3-023 -072	James W. Smith Elementary	BOE	40.6	$122,100	$122,100
3-023 -071	James W. Smith Elementary Across	BOE	7.1	$42,840	$42,840
		Total	47.7	164,940.0	164,940.0
8-035 -013	Trent Park Elementary	NB-C BOE	10.0	$279,500	$279,500
8-035 -019	Trent Park Elementary-North Lot	NB-C BOE	2.0	$53,750	$53,750
		Total	12.0	$333,250	$333,250
1-V-07 -001	Vanceboro Elementary-Main	BOE	59.9	$476,960	$476,960
1-045 -1008	Vanceboro Elementary-North	BOE	0.6	$30,000	$30,000
1-V-07 -005	Vanceboro Elementary-Large South	BOE	3.0	$46,030	$46,030
1-V-07 -12001	Vanceboro Elementary-Center 5	BOE	0.2	$3,000	$3,000
1-V-07 -12002	Vanceboro Elementary-Center 4	BOE	0.2	$3,000	$3,000
1-V-07 -12003	Vanceboro Elementary-Center 3	BOE	0.2	$3,000	$3,000
1-V-07 -12004	Vanceboro Elementary-Center 2	BOE	0.3	$3,000	$3,000
1-V-07 -12005	Vanceboro Elementary-Center 1	BOE	0.3	$3,000	$3,000
1-V-07 -12006	Vanceboro Elementary-West 5	BOE	0.2	$3,000	$3,000
1-V-07 -12007	Vanceboro Elementary-West 4	BOE	0.2	$3,000	$3,000
1-V-07 -12008	Vanceboro Elementary-West 3	BOE	0.2	$3,000	$3,000
1-V-07 -12009	Vanceboro Elementary-West 2	BOE	0.3	$3,000	$3,000
1-V-07 -12010	Vanceboro Elementary-West 1	BOE	0.3	$3,000	$3,000
		Total	66.0	$582,990	$582,990
8-027 -105	Grover C. Fields Middle	BOE	23.7	$2,369,980	$2,369,980
8-212 -018	H.J. MacDonald Middle	BOE	42.7	$1,621,460	$1,621,460
See HES	Havelock Middle				
6-215 -013	Tucker Creek Middle	BOE	52.7	$556,920	$556,920
9-047 -030	West Craven Middle	BOE	41.9	$457,010	$457,010

Craven County Schools

Tax Data 3/8/2019

Parcel #	Name	Owner	Acreage	Total Value	Land Value
1-038 -001	West Craven High	BOE	74.4	$992,850	$992,850
1-038 -110	West Craven High- across Streets F	BOE	0.6	$5,000	$5,000
		Total	75.0	$997,850	$997,850
6-220 -004	Havelock High and across Webb Bl	BOE	52.7	$1,318,750	$1,318,750
6-220 -005	Havelock High School inset	BOE	0.3	$17,000	$17,000
		Total	53.1	$1,335,750	$1,335,750
8-211 -043	New Bern High	NB-C BOE	95.2	$963,200	$963,200
6-065 -008	Early College East High	CCC-TRUSTEES	24.4	$608,750	$608,750
8-212-020	Craven Early College	CCC-TRUSTTES	100.2	$56,196,100	$3,807,600
8-212 -032	Craven Early College-East Lot	CCC-TRUSTTES	1.9	$272,180	$272,180
8-212 -045	Craven Early College-East CE	CCC-TRUSTTES	2.0	$2,263,840	$753,740
		Total	3.9	$2,536,020	$1,025,920
8-208 -011	Administration Building	NB-C BOE	2.9	$3,136,600	$820,800
See J.T. Barber	Bus Garage				
8-222 -078	Maintenance Department	BOE	10.2	$508,500	$508,500
8-222 -104	Maintenance Department- East Lot	NB-C BOE	0.3	$6,000	$6,000
			10.5	$514,500	$514,500
2-002 -001	Vacant Lot on N B Street - waterfron	BOE	5.8	$578,990	$578,990
2-002 -031	Vacant Parcel on N B Street NE	BOE	0.7	$6,900	$6,900
		Total	6.5	$585,890	$585,890
6-011 -001	Parcel West of Church off SR 1160	BOE	1.1	$112,000	$112,000
8-007 -298	West Street School	NB-C BOE	2.4	$82,250	$82,250
8-007 -299	West Street School Northwest Parc	NB-C BOE	0.1	$4,550	$4,550
		Total	2.5	$86,800	$86,800
Total CCS			977.0	$79,214,820	$21,490,320

Guide for Space Inventory Worksheets

Overview of the following Sections

Information specific to each school is listed in the following section. Rather than repeat the same information redundantly, the following is an explanation of what to expect for each sheet.

The first page includes Craven County Global Information System (GIS) data and an aerial of the campus. It also includes information on the building value from the insurance division at NCDPI. The second page includes information on the building life cycle of each addition, as well as any flood mapping information if the building or site are within a flood zone. This is followed by details about the square footage of the buildings along with how the building is organized, details about the school and several images depicting the campus.

Space Inventory

This table is an accounting of the number of spaces or square footage of the individual spaces in the building. The following pages describe what each section means.

Potential Improvements and Deferred Maintenance

This table uses general headings per the NCDPI five year Facility Needs Survey. Subcategories with greater detail are combined for an individual topic, for example every door is broken into needs, meaning the newest doors only need upgraded locks while some of the older doors need to be replaced wholesale.

Inflation and a contingency are included for each category. Traditionally, 15% is recommended for a contingency, but based on our understanding of the market and our history with estimating, we have reduced that to 10%. Historically, construction inflation increases at about 3% per year and it often takes up to three years to bring a project to market, plus soft costs that would be needed to bring the projects to the market.

Description of Renovations and Additions plus PME information

A brief description of each addition or renovation investigated is presented along with information on the state of the infrastructure. Steve Campbell, President of Progressive Design Collaborative, visited the schools and provided cost estimates as well as a brief description of the status of each school's system. Mr. Campbell is a licensed Engineer and has been designing the PME systems on schools throughout the state for more than twenty years.

Cost Estimate Worksheet

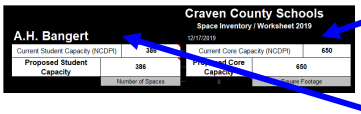
Here the costs for any improvements are tabulated. This only includes information for additions and renovations and any associated expenses related to bringing the project to market in the next nine years.

Existing / Proposed Site Plans

Each school has an existing and proposed site plan that is provided as a proof of concept.

Guide for Utilizing the Space Inventory / Worksheets

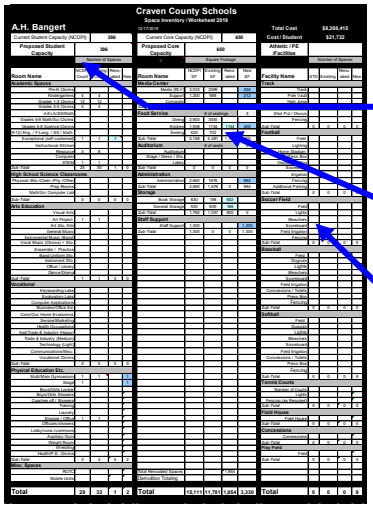
The charts are broken down into three major categories, shown as major columns on the worksheet. The first column deals primarily with the teaching stations, the second column deals with Core Facilities, and the third column deals with the athletic fields at each school. Items at the top of the page describe the school in general.



General Layout

Owner and Year: At the top is the name of the group that has commissioned the study and year the study was conducted. This is significant when determining the cost of inflation, at the date this information is being used.

School : This section contains the name of the school.



Major Columns

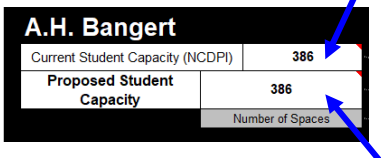
The three major column headings describe the contents. Under each is a series of sub columns that will be discussed later.

Student Capacity: Under this major column heading is a series of sub-columns and rows that describes the current and proposed student capacity, along with how many of what type of instruction space being considered.

Core Capacity: Under this major column heading is a series of sub-columns and rows that describes how many square feet of each type of "Core Facilities" space are under investigation.

Athletics / PE / Facilities: Under this major column heading is a series of sub-columns and rows that describes how many square feet of each type of "Core Facilities" space are under investigation.

Implication of Individual Cells

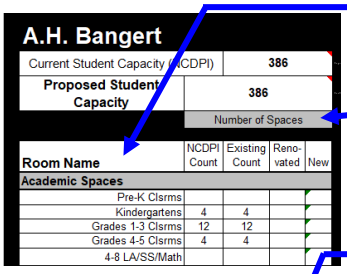


Current Student Capacity (NCDPI): This number is the full ADM Capacity or maximum number of students that can be served by the existing facilities. It is based on a complete program and in order to ensure it is accurate, the calculation process is iterative. Once above this number, any additional student in any classroom will put the school over capacity. Individual grade levels will likely be out of capacity prior to reaching this number.

Proposed Student Capacity: This number is the recommended maximum size of the school based on site size, configuration, and policy. This is again the ADM Capacity which counts every seat in every classroom. This is not a suggestion that an increase is warranted, simply it is the highest capacity recommended.

Sub Categories - Student Capacity

Spaces under this category are the primary teaching stations. They are further broken down into general types of instruction (Academic, Arts Education, Vocational, etc.). They are further broken down into specific types of instruction for the various grade levels. The number of rooms for a given type of space is listed und the NCDPI Count, followed by an actual count of the rooms in the school.



A.H. Bangert

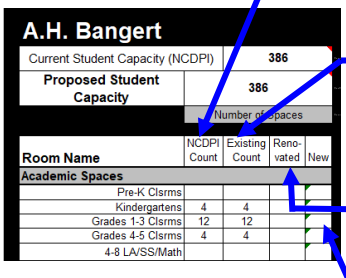
Current Student Capacity (NCDPI)	386
Proposed Student Capacity	386

	Number of Spaces			
Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	4	4		
Grades 1-3 Clsrms	12	12		
Grades 4-5 Clsrms	4	4		
4-8 LA/SS/Math				

Room Name: Refers to the primary name of the space and the type of instruction conducted there.

Number of Spaces: This column, which is further sub-divided into four sub-categories, is the total number of spaces of that type of instructional space.

NCDPI: This column refers to the number of each type of instructional space each school should have. This is based on the NCDPI / Craven County Minimum Facility Standards which closely follow the NCDPI minimums.



A.H. Bangert

Current Student Capacity (NCDPI)	386
Proposed Student Capacity	386

	Number of Spaces			
Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	4	4		
Grades 1-3 Clsrms	12	12		
Grades 4-5 Clsrms	4	4		
4-8 LA/SS/Math				

Existing Facilities: This section catalogs the existing facilities as to how many rooms are dedicated to a particular type of instruction.

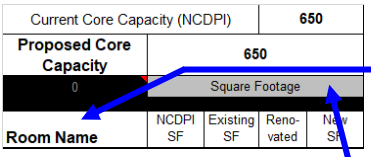
Renovated: This section allows for the tracking of spaces that change in type and require physical modifications. The cost of changing a classroom from one type to another varies and only the ones that have cost implications are tracked here. Spaces which are simply swapped to another program without cost are tracked but not shown.

New: Any new spaces that are needed to achieve the proposed capacity will be listed here along with how many of that type of space. Costs are tracked on the following pages.

Note: This Facility Planning sheet is utilized to specifically identify need and to convert need to cost. It does not show information on the re-allocation of existing spaces, if there are no costs associated with the re-allocation.

Sub Categories Under Core Capacity

Spaces under this category are required spaces that are not dedicated as teaching stations. They are further broken down into general types of instruction (Media Center, Food Service, Administrative, etc.). Since these are primarily larger spaces, it is important to look at the square footage of the space rather than a single tally of spaces. It is also appropriate to look at Administrative Suites, in this manner.

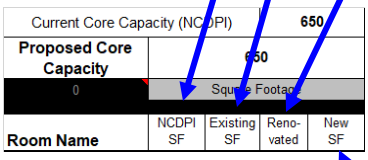


Room Name: Refers to the primary name of the space and the type of instruction conducted.

Square Footage: This column is sub-divided into four sub-categories, that are similar in nature to the student capacity calculations.

NCDPI: This column refers to the number of square feet of each type of space that each school should have per NCDPI Minimum Standards to achieve the listed Core Capacity.

Existing Facilities: This section catalogs the existing facilities and shows how many square feet are dedicated to a particular type of space.



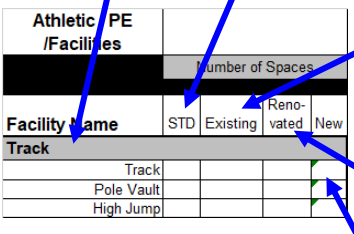
Renovated: This section allows for the tracking of spaces that change in type of use and impact cost. If the number in the Renovated column is a positive number, the space is being reallocated from another type of space within the school and has cost implications. If the number is negative, it is being allocated to another use within the school. If costs are associated with a space, a number will show up in the Sub-Total row; if no number is there, there will be only minimal costs associated with the change in function.

New: Any new spaces that must be added to provide appropriately for the type of school and the number of students proposed will appear in this column.

Special Note: Current Core Capacity (NCDPI) is based on standards discussed in the Capacity Calculations section of this book. For this investigation, the four students / sf is used in calculating both the Media Center and Cafeteria areas.

Sub Categories Under Athletic / PE / Facilities

Spaces under this category are not prescribed by state standards. Each LEA (Local Education Authority) must create a set of standards for each type of school or set standards unique to each school in the system. These requirements are established by your precedents.



Athletic / PE /Facilities				
	Number of Spaces			
Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				

Facility Spaces: Refers to the primary name of the space and the type of instruction conducted there.

Standard: This column refers to the number of the particular type of space that is required to meet the county standard.

Existing Facilities: This section catalogs the existing facilities, as to how many of that particular type of space exist on a campus.

Renovated: As the athletic fields age, renovations or changes in code may require substantial work to bring those particular fields or items to the appropriate levels.

New: Any new fields or items that are required to meet the county standard.

Renovations do not include improvements, such as stadium replacement, if it is to continue serving the same program or function. Items in the renovated list here are changing from one type of use to another.

Cost Summary Worksheet

This section delineates the costs of individual pieces of the program that are to be completed. The costs are in current dollars and are based on the type of construction or renovation required.

Craven County Schools
Cost Estimate Worksheet: 2019
A.H. Bangert

Additions / Renovations		Proposed Student Capacity		386
		Proposed Core Capacity		650
Student Capacity				
Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Academic Spaces	0	0	0.00	$0
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	2	4,400	288.60	$1,269,840
Misc. Spaces (to enlarge Classrooms)		5,601	221.00	$1,243,422
Renovations		37,148	38.48	$1,429,500
Core Capacity				
Media Center		646	251.67	$162,576
Food Service		400	333.00	$133,200
Auditorium		0	0.00	$0
Administration		984	222.00	$218,448
Storage		0	0.00	$0
Staff Support		1,300	222.00	$288,600
Renovations		1,954	127.05	$248,260
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		7,730	$428.99	$3,316,086
Circulation/ Mechanical/Toilets/Walls	38.00%	2,937	$428.99	$1,260,113
Subtotal Renovated		39,102	$42.91	$1,677,760
Athletics				$0
Site Improvements				$0
Other (Parent Drop Canopy / walk)				$42,600
Sub Total				$6,296,558
Inflation (3% for 3 years)	9.00%			$566,690
Contingency (%)	10.00%			$686,325
Sub Total				$7,549,574
A-E Fees (%)	10.00%			$754,957
Financing Charges	1.00%			$83,884
Other Fees and Services				$0
Site	0			$0
Owners Contingency (furn., equipment)				$0
Total				**$8,388,415**

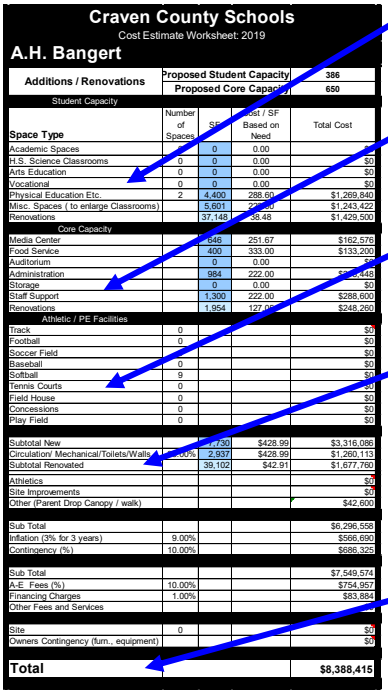
Space Type: List of the major headings of the types of spaces listed on the previous page. To determine the particular type of space listed under the major heading, such as classroom, resource room, or computer room, the previous page must be consulted.

Number of Spaces: This column is the total number of spaces within that particular major heading. The Space Inventory sheet (previous page) must be consulted to confirm what and how many of the types of spaces are listed.

SF: The number of square feet that are required to complete the projects as noted.

Cost / SF Based on Need: Athletics directly associated with the potential expansion of the school.

Craven County Schools
Cost Estimate Worksheet: 2019
A.H. Bangert



Top Section: This shows the teaching stations of the school. They are the same as the first section on the previous page.

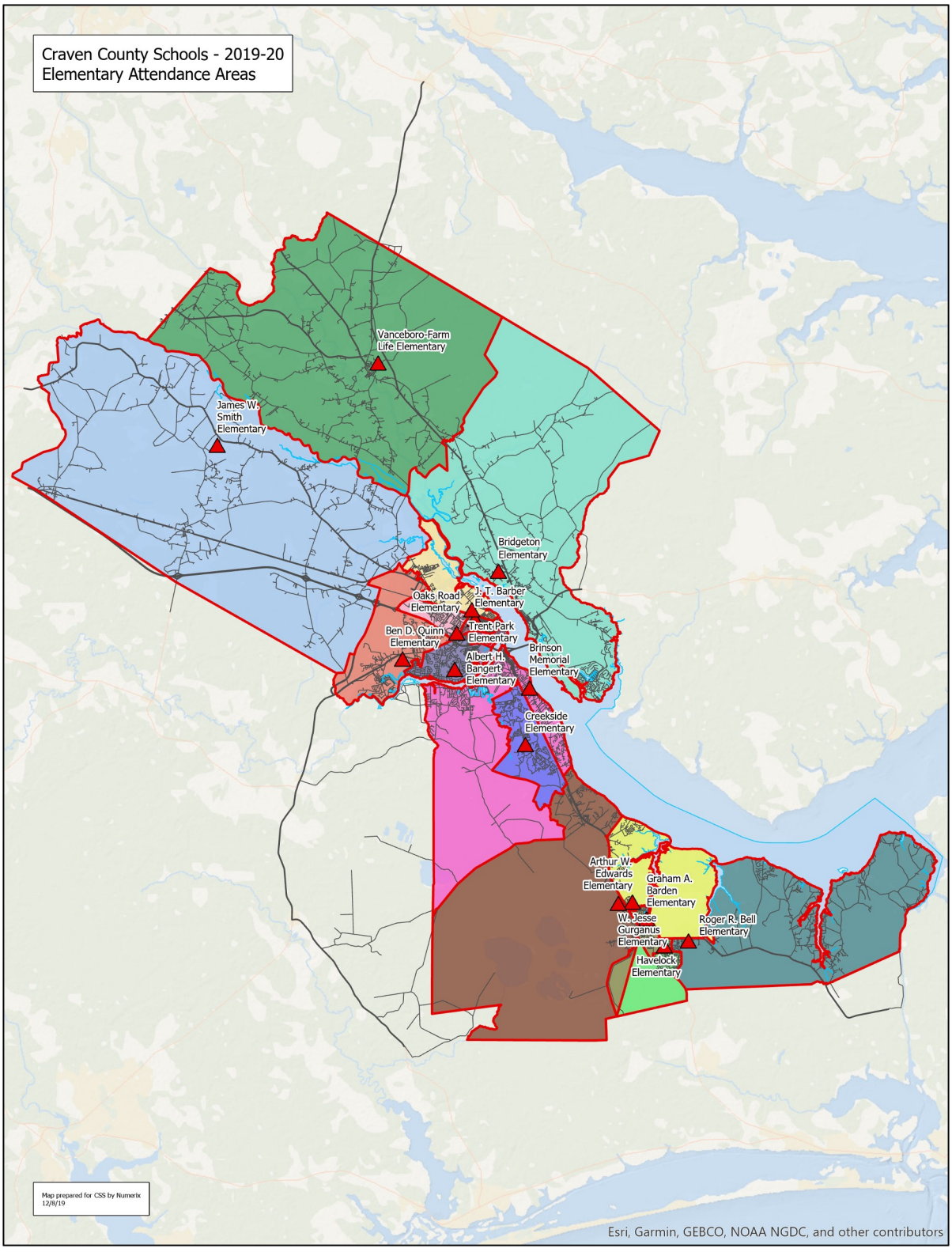
Middle Section: This area is dedicated to the Core Facilities and includes any administrative spaces affected.

Bottom: Listing of the major categories under Athletic / PE Facilities.

Circulation / Mechanical / Walls: The work up to this point is based on net square footage or only the size of the classroom. Additional spaces are needed to make a school function properly including corridors, mechanical rooms, and restroom facilities.

Total Cost: This is not an indication that these funds are required. It is a tabulation of the above options and not all may be required for the comprehensive improvement plan.

Elementary Schools



A.H. Bangert Elementary School

There have been two expansions to this facility since it was first constructed in 1967. Several improvements to roofing and the mechanical systems have occurred during that time. The overall site is small and the area is congested during pickup and drop-off times. This is a low lying building with flooding potential on most of the site. Inside, the floor plan does not lend itself to modern educational delivery methods and will be difficult to correct.





Craven County GIS 7.83 Acres Cleared

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-203 -019	Bangert Elementary	BOE	10.3	$195,320	$195,320
8-203 -051	Bangert Elementary-South Lot	NB-C BOE	3.2	$60,800	$60,800
		Total	13.5	$256,120	$256,120

Insurance Data

BANGERT ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25030401	MAIN BUILDING	NC1	1/1/1967	52	45,415	$8,386,984
	Main - East Section	NC1	1/1/1978	41	10,480	
25030402	MULTIPURPOSE	NC1	1/1/1997	22	2,312	$346,913
	Totals / Average $/sf				58,207	$8,733,897
	Average Construction Date		1980			
	Average Age			38		

Insurance / GIS Data

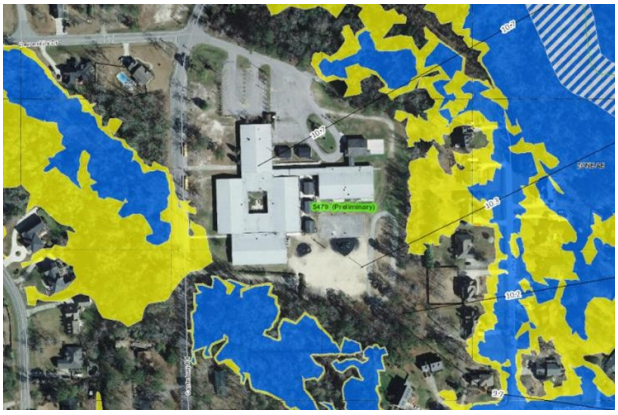
At 58,207 square feet this one story building takes up a large portion of the nearly eight acre cleared site. Significant expansion will not be practical.

Flood Data

With a building floor elevation of 14 ft ASL it is just outside of the 12.3 ft BFE of the 100 year flood (Effective). A good portion of the site and the southern parcel will be under water and throughout the duration of the flood, the building will become an island.



Effective



Preliminary

Life Cycle Analysis

At 58 years of age, this building is nearing its planned life cycle. This building was built during the baby boom and has several different materials around the school. The two additions still have significant useful life, but are configured inefficiently and don't provide sufficient square footage.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
BANGERT ES						
MAIN BUILDING - 1967	8	60	50	70	1967	52
MAIN BUILDING - 1978	39	80	70	90	1978	41
MULTIPURPOSE - 1997	48	70	60	80	1997	22

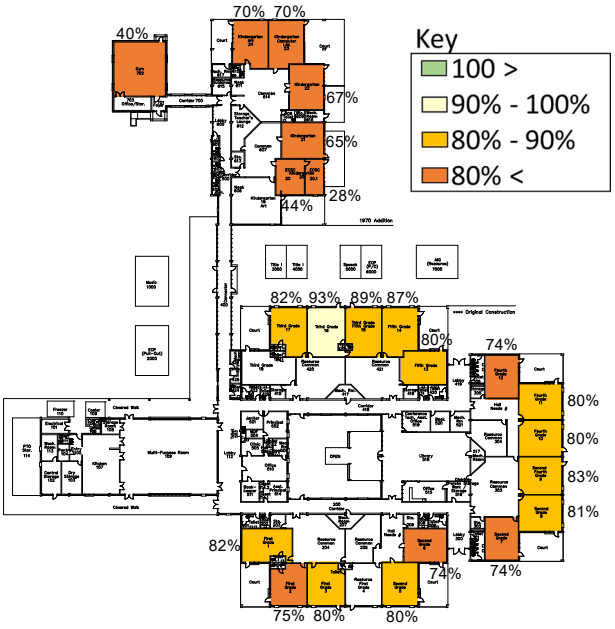
Utility Providers

Electrical	City of New Bern
Sewer	City of New Bern
Water	City of New Bern
Natural Gas	Piedmont Natural Gas

Square Footage per Program (Based on Use)

This school does not have any rooms that meet the Minimum Facility Standards. The largest are 93% of what they should be with the smallest in the 40% range.

The Multipurpose Room is sufficiently small that the name is a misnomer. Programs are limited here and students do not have sufficient room to do standard physical activities.



Program Sf Diagram

Capacity / Use Diagram (Optimized for 2021)

The utilization diagram is a graphical representation of how the school could be organized to meet the maximum capacity. Due to the size of the classrooms, students will be crowed together.

The distribution of administrative and core spaces around the school is a standard practice and provides support spaces around the campus.

The noisy Multipurpose Room is located away from classrooms, which is standard. However, it is very isolated due to the design and size of the space.



Utilization Diagram

Facility Details

As one of the older schools in the system, this facility has numerous spaces that are smaller than recommended. The room organization also fails to meet current instructional standards, as well as inefficient use of the existing square footage. All of this is located in the middle of a residential neighborhood on a small site making traffic an issue for the entire area.

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.

Building Images

Below are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the building ranging from limited parking to ADA compliance. These are only a few that have a large impact to the deferred maintenance.



Cracked Terrazzo



Thermal Envelope



Old Aluminum Windows



Humidity issues

Potential Improvements

This is considered a small school in building size, classroom size and parcel size. The site is very limited and the southern parcel is very wet as it is in the 100 year flood zone, making it unsuitable for development. With an operating capacity of around 300 students it will be more expensive to continue to operate this school on a cost per student basis when compared to a typical size school of 600 to 800. Substantial additions to this campus will not be practical. Even with the school being relatively small, it reports a large number of work orders and is relatively expensive to operate when considering energy consumption.

Starting at the street edge there is insufficient queue space to get cars off the street. By adding a queue along the southern edge of the main site the NCDOT minimum length can be constructed to get parents off the road efficiently and separate bus and parent traffic conflicts.

On the exterior there are several materials that have aged out and need to be replaced, including roofing and fascia panels. Once inside the building it is obvious the mechanical system has issues with dehumidification and should be replaced. After reviewing the size and overall configuration of the spaces it became apparent that to bring this facility up to the minimum standards, walls, ceilings, and floors would need to be drastically revised. The result of this would be the existing structure would remain, but nearly all interior and exterior surfaces would be replaced.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

A.H. Bangert Elementary

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$34,000	$3,400	$3,060	$5,100	$45,560
2	Site Utilities	$12,000	$1,200	$1,080	$1,800	$16,080
3	Parking / Drives	$540,772	$54,077	$48,669	$81,116	$724,634
4	Sewer System	$47,640	$4,764	$4,288	$7,146	$63,838
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$30,000	$3,000	$2,700	$4,500	$40,200
7	Canopy (cov. Walks)	$94,680	$9,468	$8,521	$14,202	$126,871
8	Other Site	$189,480	$18,948	$17,053	$28,422	$253,903
9	Roofing	$1,207,550	$120,755	$108,680	$181,133	$1,618,118
10	Structural	$0	$0	$0	$0	$0
11	Windows	$395,020	$39,502	$35,552	$59,253	$529,327
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$66,000	$6,600	$5,940	$9,900	$88,440
14	Partition/Wall Const	$7,290	$729	$656	$1,094	$9,769
15	Ceilings	$336,723	$33,672	$30,305	$50,508	$451,208
16	Flooring	$724,716	$72,472	$65,224	$108,707	$971,119
17	Painting	$108,643	$10,864	$9,778	$16,296	$145,581
18	Other Building Interior	$400,775	$40,078	$36,070	$60,116	$537,039
19	Mechanical	$550,000	$55,000	$49,500	$82,500	$737,000
20	Electrical	$492,000	$49,200	$44,280	$73,800	$659,280
21	Lighting	$115,000	$11,500	$10,350	$17,250	$154,100
22	Technology	$55,428	$5,543	$4,989	$8,314	$74,274
23	Plumbing	$61,634	$6,163	$5,547	$9,245	$82,590
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$10,500	$1,050	$945	$1,575	$14,070
26	ADA Ramps	$47,450	$4,745	$4,271	$7,118	$63,583
27	ADA Toilets	$106,496	$10,650	$9,585	$15,974	$142,705
28	Fire Alarm	$128,000	$12,800	$11,520	$19,200	$171,520
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$42,500	$4,250	$3,825	$6,375	$56,950
31	Abatement	$161,455	$16,146	$14,531	$24,218	$216,350
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$30,000	$3,000	$2,700	$4,500	$40,200
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$176,000	$17,600	$15,840	$26,400	$235,840
37	Kitchen Equipment	$87,000	$8,700	$7,830	$13,050	$116,580
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**8,386,728**

Renovations
This school has substandard rooms than those recommended by NCDPI's Minimum Standards. Reconfiguring the walls can increase the size of the spaces to within a reasonable level. This will be a major renovation and require the relocation of most infrastructure and toilet facilities. Without additions into the covered areas, the capacity will need to be reduced.

Additions
Several additions will be needed to maintain the capacity of this school once renovations are completed. The additions noted would occur where slab and roof already exist in an effort to reduce overall costs. As with the renovation, this will be a major undertaking and once completed will not create any additional capacity at this campus.

Site
The two combined parcels are only 97% of the recommended size. With only 7.8 of the 13.5 acres to work with, this site is very tight. The queue uses several stacked lanes and the traffic mixes with the bus traffic. Additionally, parents will park along Canterbury Rd since the parking and queue are limited.

Mechanical System
Currently, the building has a mix of BARD and split system heat pumps that were installed in 1999. This equipment is at the end of its useful life. It has a vented attic with humidity issues and the systems do not have dehumidification. The system is poorly zoned with much of the issue being related to the addition of wall to what was an open floor plan. The building's DDC system is 2 years old.

Fire Alarm
The Fire alarm system is old. These systems have a life expectancy of twenty years. This is mainly due to the lack of availability of parts for repair or replacement. Due to recent code changes, all educational facilities will now require a voice evacuation fire alarm system resulting in a complete system replacement.

Electric
The original switchgear and transformers are still in operation and have exceeded the 30 year life expectancy. These and other major panels should be replaced.

Lighting
T12 and T8 lights should be replaced with new LED fixtures.

Potential Additions and Renovations

A.H. Bangert

Craven County Schools

Space Inventory / Worksheet 2019

A.H. Bangert

12/2/2019

Current Student Capacity (NCDPI)	386	Current Core Capacity (NCDPI)	650
Proposed Student Capacity	386	**Proposed Core Capacity**	650
	Number of Spaces	0	Square Footage

Total Cost $8,388,415
Cost / Student $21,732
Athletic / PE /Facilities — Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	4	4		
Grades 1-3 Clsrms	12	12		
Grades 4-5 Clsrms	4	4		
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1	1	1	
Instructional Kitchen				
Resource	3	8		
Computer				
STEM	1	1		
Sub-Total	25	30	1	0
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts				
Art Project	1	1		
Art Sto. Kiln				
General Music				
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	1	1	0	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		1
Stage	1			1
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1	1		
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	2	0	2
Misc. Spaces				
ROTC				
Mobile Units				
Total	**29**	**33**	**1**	**2**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,033	2599		434
Support	1,200	988		212
Computer				
Sub-Total	4,233	3,587	0	646
Food Service	# of seatings			3
Dining	2,600	3045		
Kitchen	1,938	1734	1134	400
Serving	620	702		
Sub-Total	5,158	5,481	1,134	400
Auditorium	# of seats			0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	2,660	1676		984
Sub-Total	2,660	1,676	0	984
Storage				
Book Storage	830	198	632	
General Storage	930	839	188	
Sub-Total	1,760	1,037	820	0
Staff Support				
Staff Support	1,300			1,300
Sub-Total	1,300	0	0	1,300
Total Renovated Spaces			1,954	
Demolition Totaling				
Total	**15,111**	**11,781**	**1,954**	**3,330**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field				
Sub-Total	0	0	0	0
Total	**0**	**0**	**0**	**9**

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at A.H. Bangert in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

A.H. Bangert

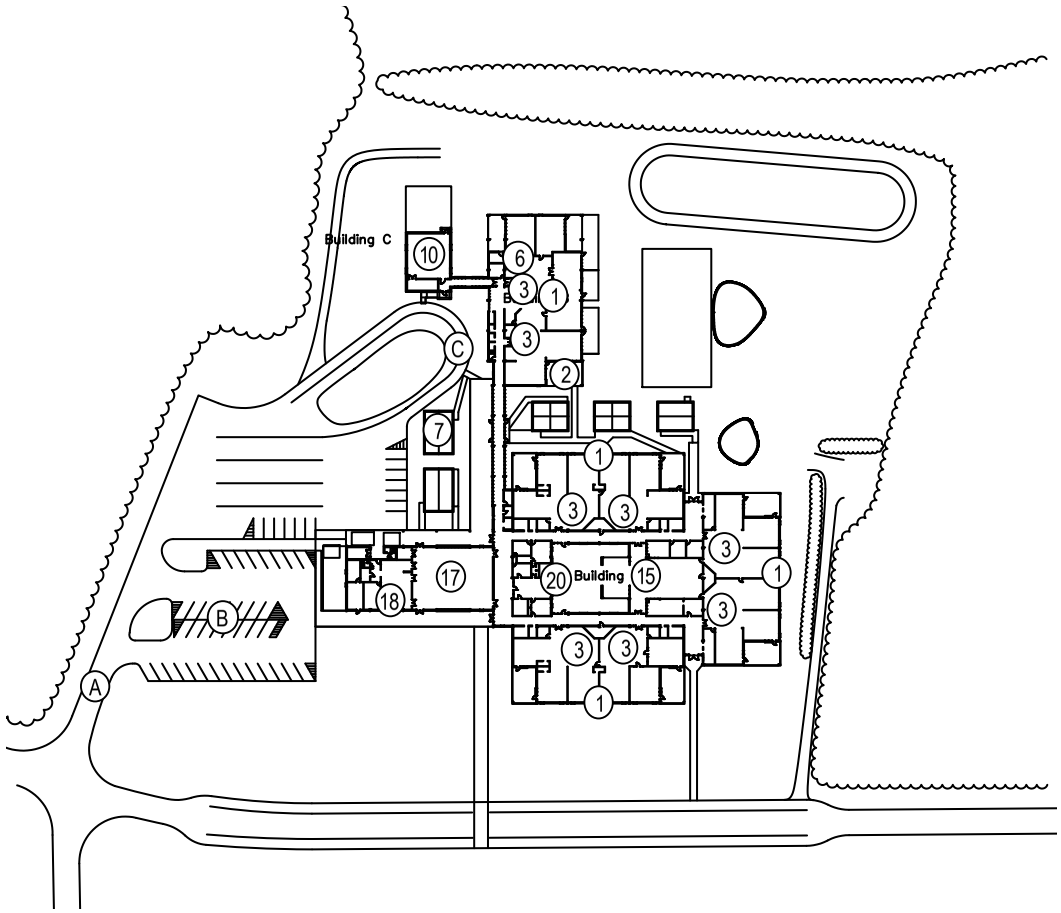
Additions / Renovations	Proposed Student Capacity	386
	Proposed Core Capacity	650

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	0	0	0.00	$0
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	2	4,400	288.60	$1,269,840
Misc. Spaces (to enlarge Classrooms)		5,601	222.00	$1,243,422
Renovations		37,148	38.48	$1,429,500
Core Capacity				
Media Center		646	251.67	$162,576
Food Service		400	333.00	$133,200
Auditorium		0	0.00	$0
Administration		984	222.00	$218,448
Storage		0	0.00	$0
Staff Support		1,300	222.00	$288,600
Renovations		1,954	127.05	$248,260
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		7,730	$428.99	$3,316,086
Circulation/ Mechanical/Toilets/Walls	38.00%	2,937	$428.99	$1,260,113
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Athletics				$0
Site Improvements				$0
Other (Parent Drop Canopy / walk)				$42,600
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Contingency (%)	10.00%			$686,325
Sub Total				$7,549,574
A-E Fees (%)	10.00%			$754,957
Financing Charges	1.00%			$83,884
Other Fees and Services				$0
Site	0			$0
Owners Contingency (furn., equipment)				$0
Total				**$8,388,415**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

A.H. Bangert Elementary School | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

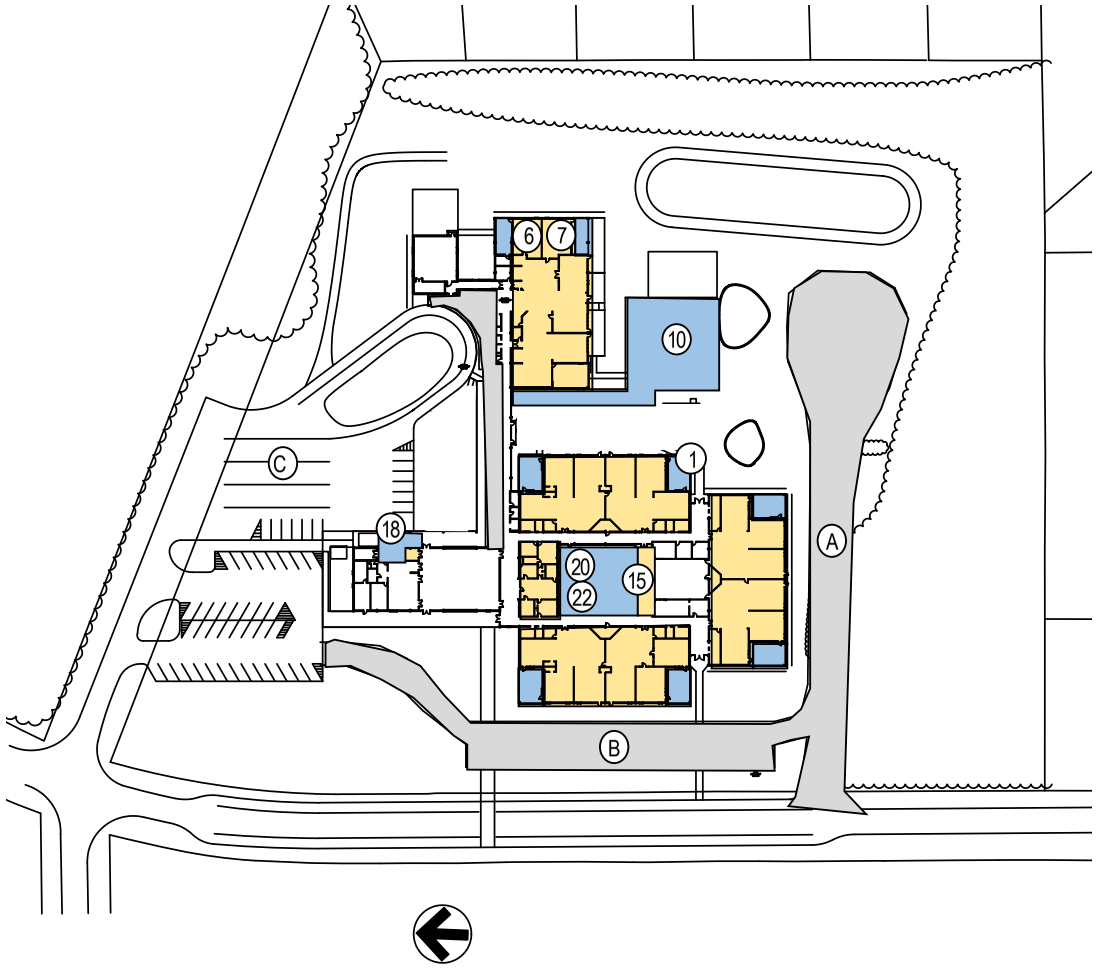
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

A.H. Bangert Elementary School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Arthur W. Edwards Elementary School

There have been no expansions to this facility since it was first constructed nearly sixty years ago. The site is relatively small and sandwiched between a residential neighborhood and military property. The site was improved in 2017 when a bus drop lane was created. This is a very flat site with standing water in numerous areas. Drainage will continue to be an issue until the downstream swales are improved. The building itself has issues related to wet soils and differential settlement of the floors.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
6-216 -008	Aurthur Edwards Elementary	BOE	15.3	$381,750	$381,750

Insurance Data

EDWARDS ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25038001	MAIN BUILDING	NC2	1/1/1961	58	83757	$12,567,645
	Totals / Average $/sf				83757	$12,567,645
	Average Construction Date		1961			
	Average Age			58		

Insurance / GIS Data

At almost 84,000 square feet this one story building covers much of the site. Even with much of the site being wet, there is little chance of flooding. It is very close to the flight paths at MCAS Cherry Point where air traffic noise is a daily occurrence.

Life Cycle Analysis

At 58 years of age, this building is nearing the end of its planned life cycle. With issues such as numerous breaks in water lines under the slab, it is evident that portions of the building are currently in failure with more anticipated in the near future.

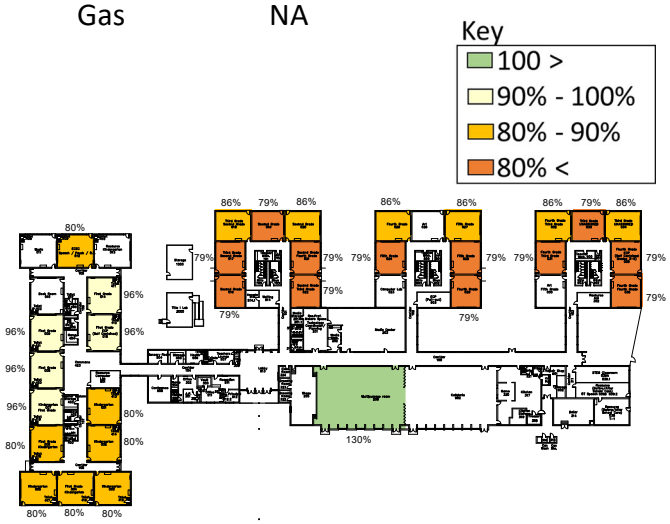
Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
EDWARDS ES						
MAIN BUILDING - 1961	12	70	60	80	1961	58

Utility Providers

Electrical	Duke /Progress Energy
Sewer	City of Havelock
Water	City of Havelock
Gas	NA

Square Footage Per Program (Based on Use)

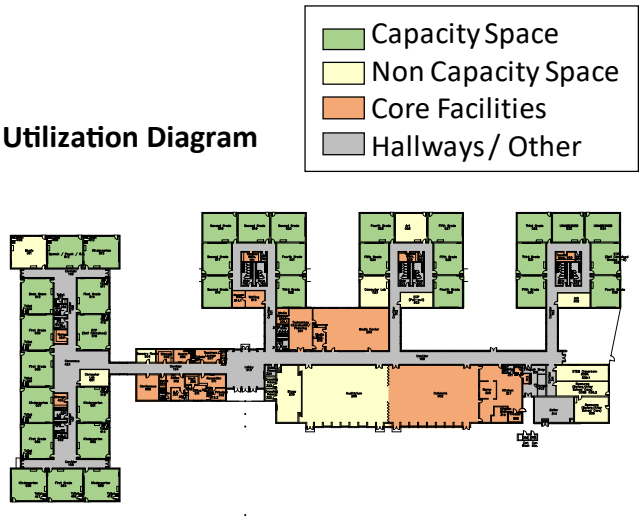
As with many of the older schools this facility has a large number of rooms that are below today's minimum standards. The exception to this is the Multipurpose space which is well positioned next to the cafeteria. An old accordion wall can be moved to open the combined spaces to each other.



Capacity / Use Diagram (Optimized for 2021)

The organization shown here is based on the maximum capacity in 2021. Most of the staff and supporting spaces are centralized with some distribution of resource type spaces in amongst the classrooms.

Utilization Diagram



Facility Details

As noted elsewhere several building components are currently in failure. Windows are not insulated and the water lines are cracking. The floors in the building are settling and in some places cracking due in part to the water table and the failed vapor barrier under the slab. This building was constructed during the baby boom and has cinder block walls and other materials with shorter life cycles than we use today.

Building Images

Below are several images of the facility depicting some potential improvements. Also included is an image from MCAS Cherry Point's flight pattern. The red circle is A.W. Edwards. Flight paths have been carefully designed to negate sound issues and provide safety to civilians.



Flight Pattern



Windows in Thermal Failure



High Water Table



Water Line Replacement



Failed Vapor Barrier



Floor Settlement

Potential Improvements

This school's capacity aligns with best practices related to efficiency of operation and on first construction costs is a very efficient cost per student. However, the site is smaller than suggested and is not a good candidate for increasing capacity. There are some areas that do need additional space, specifically related to core facilities in need of staff support. Additional space should be considered for the Media Center.

There are several improvements that should be considered. Starting with the site, a reconfiguration of the queue will allow traffic to get off of Education Land and reduce the potential to block some of the residences along the road. It would also be appropriate to improve the drainage on campus, further reducing water pressures under the building itself.

The exterior of the building needs improvement with respect to differential settlement, thermal insulation and sound isolation. A good portion of the floor will need to be removed to replace existing water lines or to relocate the lines. The failure of the vapor barrier under the slab will require removal of the asbestos flooring and polishing which will allow water vapors to escape. That additional water vapor will mean the building will need additional mechanical work to remove the water that will now be entering the building. Additionally, a significant investment will be needed to bring the building into ADA compliance.



Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as "Soft Costs" include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

A.W. Edwards

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$1,100	$110	$99	$165	$1,474
2	Site Utilities	$48,000	$4,800	$4,320	$7,200	$64,320
3	Parking / Drives	$231,944	$23,194	$20,875	$34,792	$310,805
4	Sewer System	$21,400	$2,140	$1,926	$3,210	$28,676
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$113,900	$11,390	$10,251	$17,085	$152,626
7	Canopy (cov. Walks)	$165,000	$16,500	$14,850	$24,750	$221,100
8	Other Site	$26,827	$2,683	$2,414	$4,024	$35,948
9	Roofing	$1,452,232	$145,223	$130,701	$217,835	$1,945,991
10	Structural	$0	$0	$0	$0	$0
11	Windows	$889,089	$88,909	$80,018	$133,363	$1,191,379
12	Walls	$45,000	$4,500	$4,050	$6,750	$60,300
13	Other Building Exterior	$25,000	$2,500	$2,250	$3,750	$33,500
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$137,946	$13,795	$12,415	$20,692	$184,848
16	Flooring	$1,427,537	$142,754	$128,478	$214,131	$1,912,899
17	Painting	$158,539	$15,854	$14,269	$23,781	$212,443
18	Other Building Interior	$45,620	$4,562	$4,106	$6,843	$61,131
19	Mechanical	$775,000	$77,500	$69,750	$116,250	$1,038,500
20	Electrical	$552,000	$55,200	$49,680	$82,800	$739,680
21	Lighting	$152,000	$15,200	$13,680	$22,800	$203,680
22	Technology	$52,863	$5,286	$4,758	$7,929	$70,837
23	Plumbing	$168,500	$16,850	$15,165	$25,275	$225,790
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$14,000	$1,400	$1,260	$2,100	$18,760
26	ADA Ramps	$71,750	$7,175	$6,458	$10,763	$96,145
27	ADA Toilets	$831,390	$83,139	$74,825	$124,709	$1,114,063
28	Fire Alarm	$170,000	$17,000	$15,300	$25,500	$227,800
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$188,000	$18,800	$16,920	$28,200	$251,920
31	Abatement	$176,353	$17,635	$15,872	$26,453	$236,312
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$30,000	$3,000	$2,700	$4,500	$40,200
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$280,000	$28,000	$25,200	$42,000	$375,200
37	Kitchen Equipment	$216,000	$21,600	$19,440	$32,400	$289,440
38	Media Center Furniture	$90,000	$9,000	$8,100	$13,500	$120,600
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$11,466,367**

Renovations
After the Deferred Maintenance items there are only a few areas that should undergo renovations that will require additional funds. The area that needs additional space is the kitchen and it, along with the serving line can come out of the oversized Cafeteria.

Additions
The Media Center and Media Support Spaces are limited at this school. There is also limited space for Administrative Services, Storage, and Teacher Workrooms. Although these additions seem minor and focused on staff needs, they will benefit all building occupants.

Site
One major issue is the queue that forms at a school for parent pickup. In the case of AWE, traffic backs up and blocks several residential homes. By reconfiguring the drive at the front, a queue of sufficient length can be created to get all parents off the public street.

Mechanical System
This building has a mix of BARD and split system heat pumps that were installed in 1999. Equipment is now 20 years and is at the end of its life cycle. The attic is vented creating humidity issues that will need to be resolved to control mildew growth. These two issues mean the system does not have the ability to dehumidify makeup air and all of the controls for the system are out of date and replacement parts are difficult to find.

Plumbing
Over the past several years there have been numerous water line breaks. These are supply lines that run under the existing floor slab. Most of the failures are in the Kitchen area, but these are also occurring in various places around the school. Based on these failures the supply and sanitary lines need to be replaced.

Fire Alarm
Fire alarm is old and replacement parts are again difficult to find resulting in the entire system should be replaced.

Electric
The main electrical equipment and sub panels have outlived their life expectancy and should be replaced along with branch circuits.

Lighting
The school has a mix of old T12 and T8 lights that use more energy than new LED fixtures. All should be replaced with new LED fixtures.

Craven County Schools

Space Inventory / Worksheet 2019

Arthur W Edwards

12/2/2019

Current Student Capacity (NCDPI)	626	Current Core Capacity (NCDPI)	628
Proposed Student Capacity	**626**	**Proposed Core Capacity**	**628**
	Number of Spaces	0	Square Footage

Total Cost	**$3,093,776**
Cost / Student	**$4,942**
Athletic / PE /Facilities	
	Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	6	6		
Grades 1-3 Clsrms	18	18		
Grades 4-5 Clsrms	8	8		
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1	1		
Instructional Kitchen				
Resource	7			
Computer				
STEM	1	1		
Sub-Total	41	34	0	0
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project			1	
Art Sto. Kiln	1			
General Music	1	1		
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	3	2	1	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage	1	1		
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1	1		
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	3	0	0
Misc. Spaces				
ROTC				
Mobile Units				
Total	**47**	**39**	**1**	**0**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	2,983	2511		472
Support	1,200	850		350
Computer				
Sub-Total	4,183	3,361	0	822
Food Service	# of seatings			3
Dining	2,512	4386	-162	
Kitchen	1,938	2014	2014	
Serving	620	458	162	
Sub-Total	5,070	6,858	2,176	0
Auditorium	# of seats			0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	2,660	2361	2016	299
Sub-Total	2,660	2,361	2,016	299
Storage				
Book Storage	810			810
General Storage	910	396		514
Sub-Total	1,720	396	0	1,324
Staff Support				
Staff Support	1,200	1077		123
Sub-Total	1,200	1,077	0	123
Total Renovated Spaces			4,192	
Demolition Totaling				
Total	**14,833**	**14,053**	**4,192**	**2,568**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3	3		
Sub-Total	3	3	0	0
Total	**0**	**0**	**0**	**9**

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Arthur W. Edwards in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

Arthur W Edwards

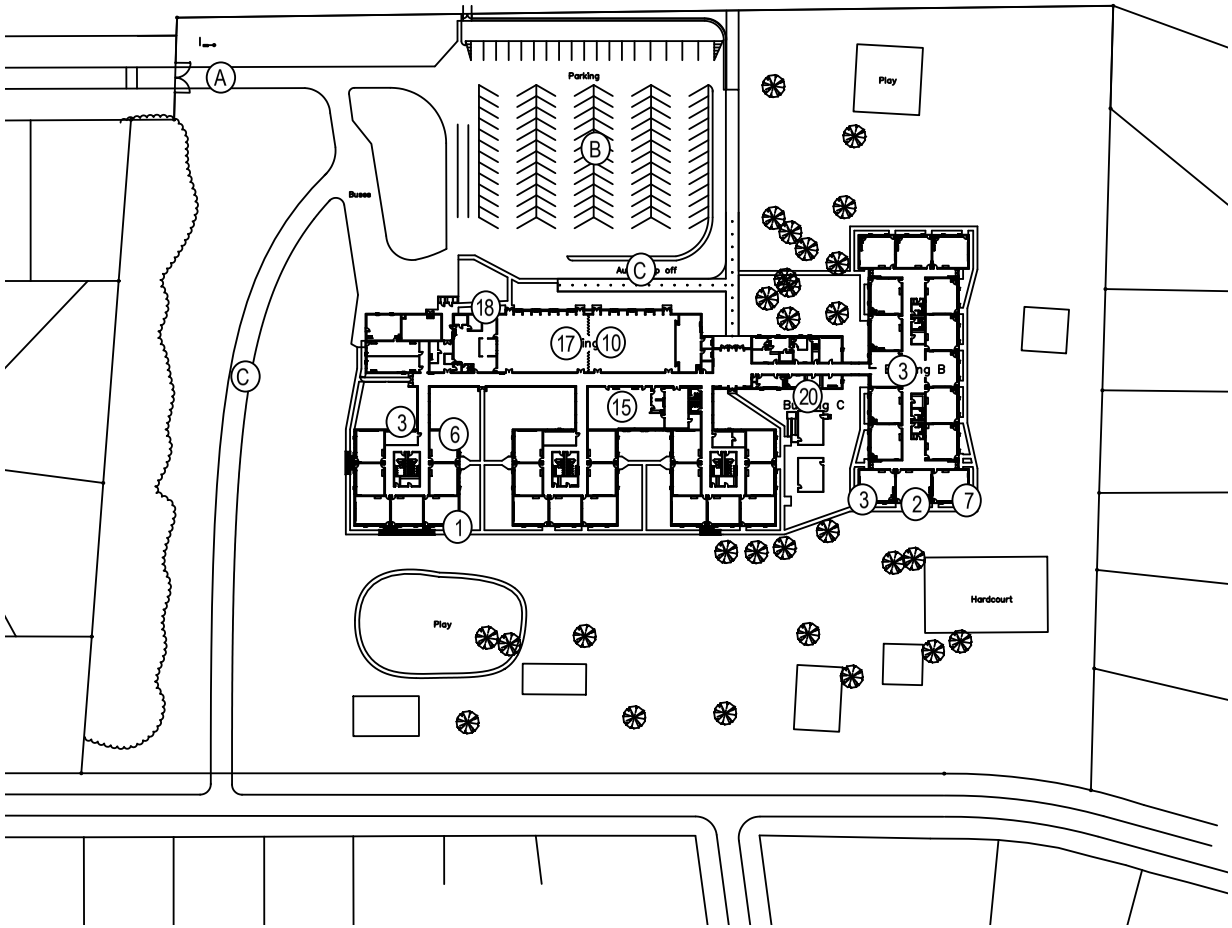
Additions / Renovations	Proposed Student Capacity	626
	Proposed Core Capacity	628

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	0	0	0.00	$0
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	0	0	0.00	$0
Misc. Spaces ()			180.00	$0
Renovations	1	6,596	60.00	$395,760
Core Capacity				
Media Center		822	313.23	$257,472
Food Service		0	0.00	$0
Auditorium		0	0.00	$0
Administration		299	277.50	$82,973
Storage		1,324	277.50	$367,410
Staff Support		123	277.50	$34,133
Renovations		4,192	160.15	$671,340
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		2,568	$288.94	$741,987
Circulation/ Mechanical/Toilets/Walls	38.00%	976	$288.94	$281,955
Subtotal Renovated		10,788	$98.92	$1,067,100
Athletics				$0
Site Improvements				$60,000
Other (Hall at Kitchen to Delivery)		250	$288.94	$72,234
Sub Total				$2,223,275
Inflation (3% for 3 years)	9.00%			$200,095
Contingency (%)	10.00%			$242,337
Sub Total				$2,665,707
A-E Fees (%)	10.00%			$266,571
Financing Charges	1.00%			$30,938
Other Fees and Services				$130,560
Site	0			$0
Owners Contingency (furn., equipment)				$220,000
Total				**$3,093,776**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

A.W. Edwards Elementary School | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

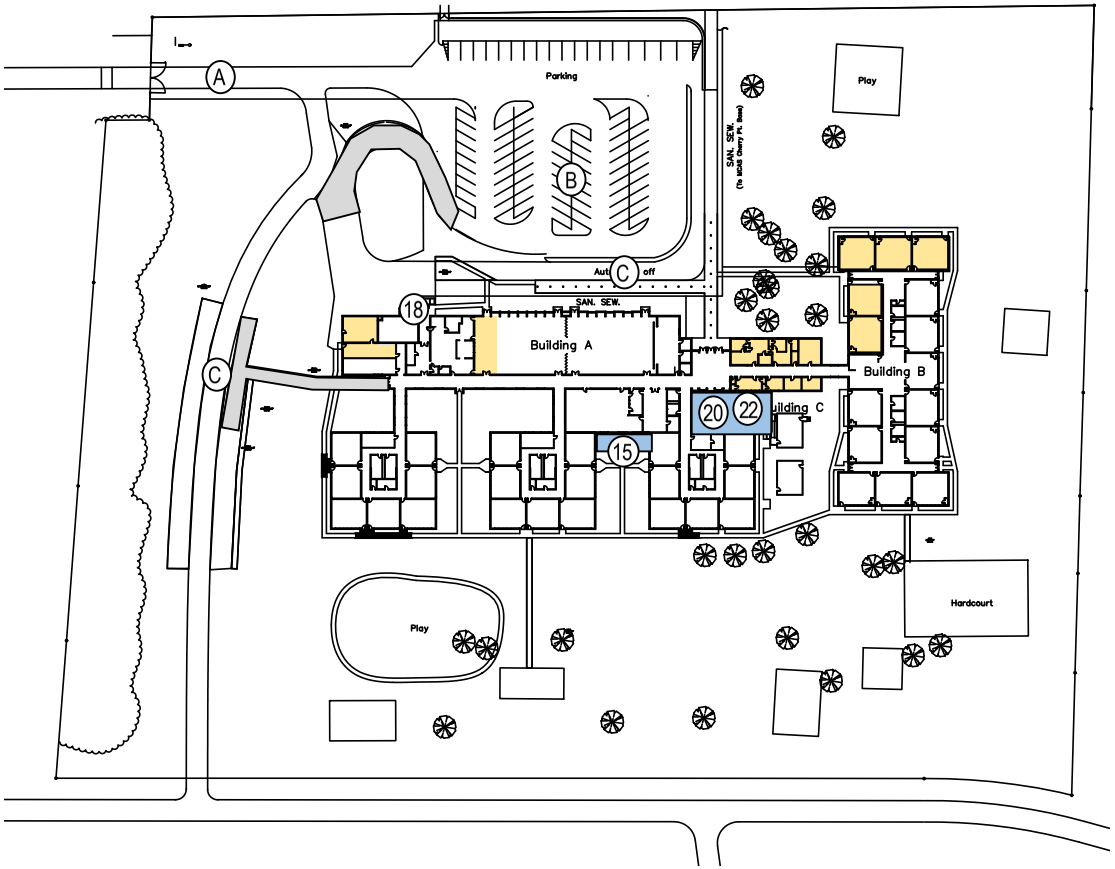
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

A.W. Edwards Elementary School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

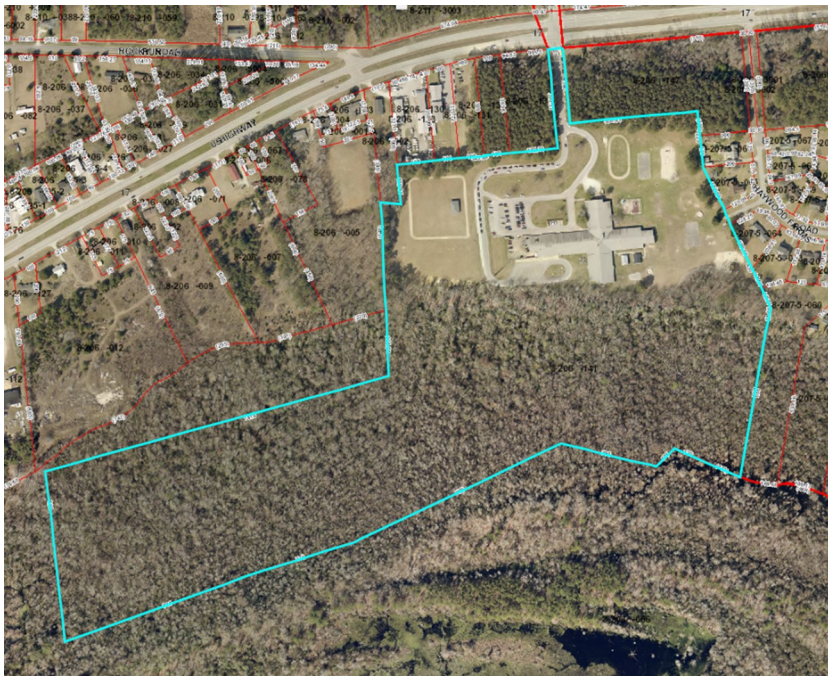
CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Ben D. Quinn Elementary School

The existing parcel is extensive and the cleared area is appropriate for the size of the school. Much of the area to the south is not usable for construction and is only a few feet above sea level. As one of the newest buildings for Craven County Schools, this building is relatively youthful and should provide for many more years of service. The overall organization of the facilities is conducive to a modern elementary school layout and provides group work areas for small group work.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-206 -141	Ben D. Quinn Elementary	NB-C BOE	63.1	$2,697,100	$2,697,100

Insurance Data

QUINN ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25030601	MAIN BUILDING	NC2	1/1/1991	28	59,885	$8,985,679
	Totals / Average $/sf				59,885	$8,985,679
	Average Construction Date		1991			
	Average Age			28		

Insurance / GIS Data

At 60,000 square feet this one story building takes up only a small portion of the overall site, but is reasonable for the terrain and the cleared area. Since this building is less than thirty years old, it has maintained much of its original value.

Flood Mapping

Based on the finished floor being nearly 30 feet above sea level there is little chance of a flood event effecting the building directly. It should be noted that most of the site will be under water and access to the school may be limited.

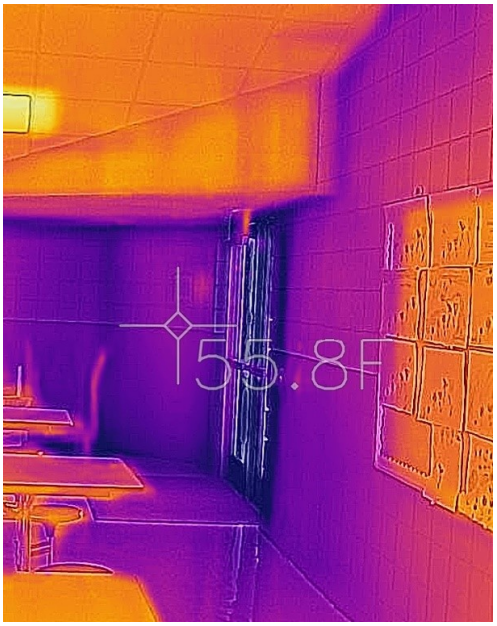




Life Cycle Analysis

With forty or so years of life left in the building it is in overall good condition and was built with relatively high quality materials. There are some components that should realistically be reviewed such as full ADA compliance, thermal glazing replacement and ensuring the queue is adequate to handle the population.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
QUINN ES						
MAIN BUILDING - 1991	42	70	60	80	1991	28



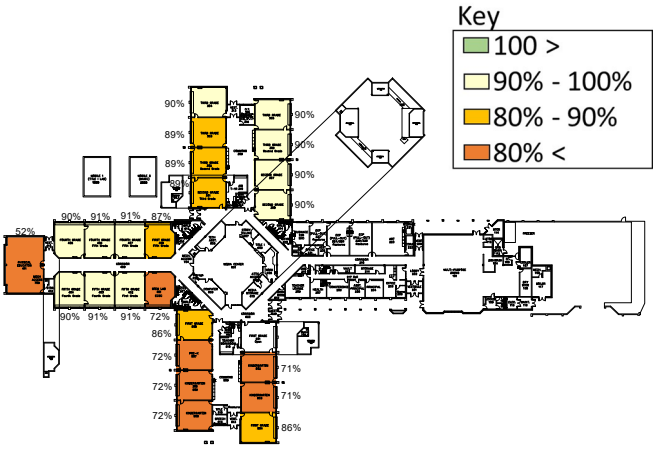


Utility Providers

Electrical	City of New Bern
Sewer	City of New Bern
Water	City of New Bern
Natural Gas	Piedmont Natural Gas

Square Footage Per Program (Based on Use)

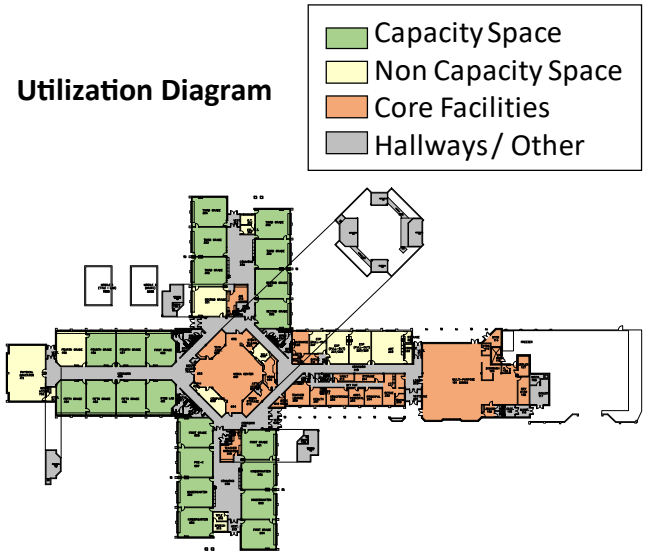
Even though it was built in 1991, this school has a number of small rooms that are in keeping with much older buildings. The most significant shortfall in square footage comes with the Physical Education program. This space is around 40% of the appropriate size making it difficult for both instructors and students. Other spaces at just over 70% of their correct size create an inequitable situation with other schools, even those of similar design.



Capacity / Use Diagram (Optimized for 2021)

With a relatively modern layout and centralized core spaces, this facility is well organized. As with other schools of similar design the resource type areas are to some degree included within the circulation areas, providing a dual function that aligns well with todays educational delivery methods.

Utilization Diagram



Facility Details

Several of the rooms are smaller than the three other schools and is likely related to budgeting at the time of construction. The overall organization of spaces is limited by the lack of dedicated resource rooms, but the oversized central space between two wings works toward eliminating those issues. The building is prominently located off of Trent Creek Road where upon arrival visitors are facing the main entry. The steeply sloping area to the south hems this facility in to some extent, but expansion is possible.

Building Images

Below are several images of the facility depicting some potential improvements. Not every thing depicted is an issue. For example, natural lighting has been found to improve student performance.

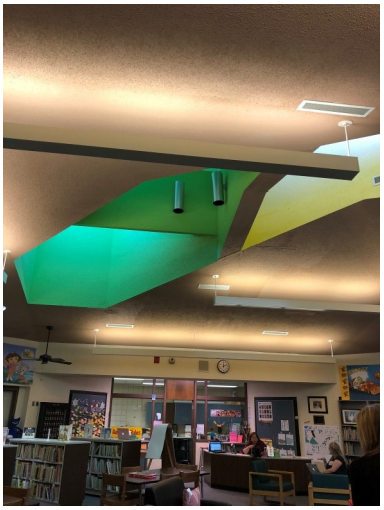
The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



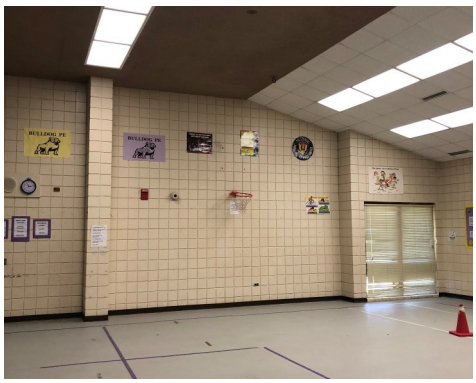
Bus Entry



Mechanical Issues



Natural Light



Small Multipurpose



Thermal Loss

Potential Improvements

This facility is considered a small school by NDCPI since it is under the 420 capacity level. Even as such there is insufficient queue and parking on site and improvements can be made to both with a modest investment. Other outdoor improvements to drainage and the addition of a canopy will greatly improve the operations at this site.

Once inside the building improvements to the mechanical system and other infrastructural renovations will allow this building to dehumidify and keep it relatively youthful over the course of the next 40 or so years. Upgrades such as polishing the existing concrete floors are reasonable considering its youthful status vs the cost of stripping and re-waxing the existing floors on an annual basis. Although this building is for the most part ADA compliant, there are still items that should be addressed.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Ben D Quinn

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$0	$0	$0	$0	$0
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$352,628	$35,263	$31,736	$52,894	$472,521
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$105,000	$10,500	$9,450	$15,750	$140,700
7	Canopy (cov. Walks)	$52,437	$5,244	$4,719	$7,866	$70,266
8	Other Site	$68,058	$6,806	$6,125	$10,209	$91,198
9	Roofing	$30,100	$3,010	$2,709	$4,515	$40,334
10	Structural	$0	$0	$0	$0	$0
11	Windows	$151,096	$15,110	$13,599	$22,664	$202,469
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$4,800	$480	$432	$720	$6,432
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$5,014	$501	$451	$752	$6,718
16	Flooring	$549,784	$54,978	$49,481	$82,468	$736,710
17	Painting	$113,796	$11,380	$10,242	$17,069	$152,487
18	Other Building Interior	$98,000	$9,800	$8,820	$14,700	$131,320
19	Mechanical	$560,000	$56,000	$50,400	$84,000	$750,400
20	Electrical	$500,000	$50,000	$45,000	$75,000	$670,000
21	Lighting	$110,000	$11,000	$9,900	$16,500	$147,400
22	Technology	$53,836	$5,384	$4,845	$8,075	$72,141
23	Plumbing	$29,600	$2,960	$2,664	$4,440	$39,664
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$10,500	$1,050	$945	$1,575	$14,070
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$365,270	$36,527	$32,874	$54,791	$489,462
28	Fire Alarm	$0	$0	$0	$0	$0
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$40,800	$4,080	$3,672	$6,120	$54,672
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$200,000	$20,000	$18,000	$30,000	$268,000
37	Kitchen Equipment	$213,000	$21,300	$19,170	$31,950	$285,420
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$4,842,383**

Renovations

This school has rooms that are smaller than those recommended by NCDPI's Minimum Standards. By removing the walls from three classrooms, two new classrooms can be renovated to make two that are the appropriate size. Renovations to what is now being used for PE into a Self-Contained classroom with a changing room and bathroom facilities would also be appropriate.

Additions

The proposed additions address the losses in classroom space based on the renovations where the overall number of classrooms will be reduced. The new classrooms will be larger than the remaining and if implemented will allow the Principal to put younger students in a classroom that is appropriate in size. A new full size Multipurpose Room and associated restrooms should be considered. This will result in a two classroom gain.

Site

The school has figured out how to make the parent drop off work by dropping their students off at the front of the school in the morning and picking them up at the back in the afternoon. Widening the queue and expanding parking on the north side of the school will alleviate the need for this type of juggling.
LED fixtures.

Mechanical System

The air handlers (AHU) are supplied with direct exchange DX cooling and hot water reheating. The AHUs are original and have aged out requiring replacement. No outdoor air is available with this system and should be corrected. The Boiler has reached the end of its life cycle and should also be replaced. The current system does not have the ability to dehumidify, but if humidity sensors were added and the mechanical controls upgraded, the system could pull unwanted moisture out of the air. The Maintenance Department added a return duct at the Mechanical Rooms due to high return air temperature, all in an effort to reduce overall energy consumption.

Fire Alarm

This is an original fire alarm and just like in most older schools is difficult to maintain. A new addressable system would be appropriate.

Electric

The existing main electrical gear is in good overall condition and should last for many years to come.

Lighting

There are still many older T8 fixtures that should be replaced with more efficient LED fixtures.

Potential Additions and Renovations

Ben D. Quinn

Craven County Schools

Space Inventory / Worksheet 2019

12/7/2019

Current Student Capacity (NCDPI)	402	Current Core Capacity (NCDPI)	728
Proposed Student Capacity	402	**Proposed Core Capacity**	728
	Number of Spaces	18	Square Footage

Total Cost	$6,610,392
Cost / Student	$16,444
Athletic / PE /Facilities	
	Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms	1	1		1
Kindergartens	4	4	3	1
Grades 1-3 Clsrms	12	12	1	
Grades 4-5 Clsrms	4	4		
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1	1	1	
Instructional Kitchen				
Resource	3	7		
Computer				
STEM	1	1		
Sub-Total	26	30	5	2
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts				
Art Project	1	1		
Art Sto. Kiln				
General Music				
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	1	1	0	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		1
Stage	1			1
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1			1
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	1	0	3
Misc. Spaces				
ROTC				
Mobile Units				
Total	**30**	**32**	**5**	**5**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,181	2911		
Support	1,500	1822	-322	
Computer				
Sub-Total	4,681	4,733	0	0
Food Service	# of seatings			3
Dining	2,912	3966	-538	
Kitchen	1,938	1816	122	
Serving	620	204	416	
Sub-Total	5,470	5,986	538	0
Auditorium	# of seats			0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	2,740	2505		235
Sub-Total	2,740	2,505	0	235
Storage				
Book Storage	860			860
General Storage	960	356		604
Sub-Total	1,820	356	0	1,464
Staff Support				
Staff Support	1,600	1140	322	138
Sub-Total	1,600	1,140	0	138
Total Renovated Spaces			538	
Demolition Totaling				
Total	**16,311**	**14,720**	**538**	**1,837**

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3			3
Sub-Total	3	0	0	3
Total	**0**	**0**	**0**	**9**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing space, if there is no cost associated with the re-allocation.

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Ben D. Quinn in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

Ben D. Quinn

Additions / Renovations	Proposed Student Capacity	420
	Proposed Core Capacity	728

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	2	2,400	241.67	$580,008
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	3	5,162	324.03	$1,672,668
Misc. Spaces (Restrooms)		900	320.00	$288,000
Renovations	4	7,264	60.00	$435,840
Core Capacity				
Media Center		0	0.00	$0
Food Service		0	0.00	$0
Auditorium		0	0.00	$0
Administration		235	254.38	$59,778
Storage		1,464	254.37	$372,405
Staff Support		138	254.38	$35,104
Renovations		538	245.35	$132,000
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		9,399	$320.03	$3,007,963
Circulation/ Mechanical/Toilets/Walls	38.00%	3,572	$320.03	$1,143,026
Subtotal Renovated		7,802	$72.78	$567,840
Athletics				$0
Site Improvements - Bus Drop				$149,364
Other ()				
Sub Total				$4,868,193
Inflation (3% for 3 years)	9.00%			$438,137
Contingency (%)	10.00%			$530,633
Sub Total				$5,836,964
A-E Fees (%)	10.00%			$583,696
Financing Charges	1.00%			$66,104
Other Fees and Services				$123,628
Site	0			$0
Owners Contingency (furn., equipment)				$345,000
Total				**$6,610,392**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Ben D. Quinn Elementary School — **2019**

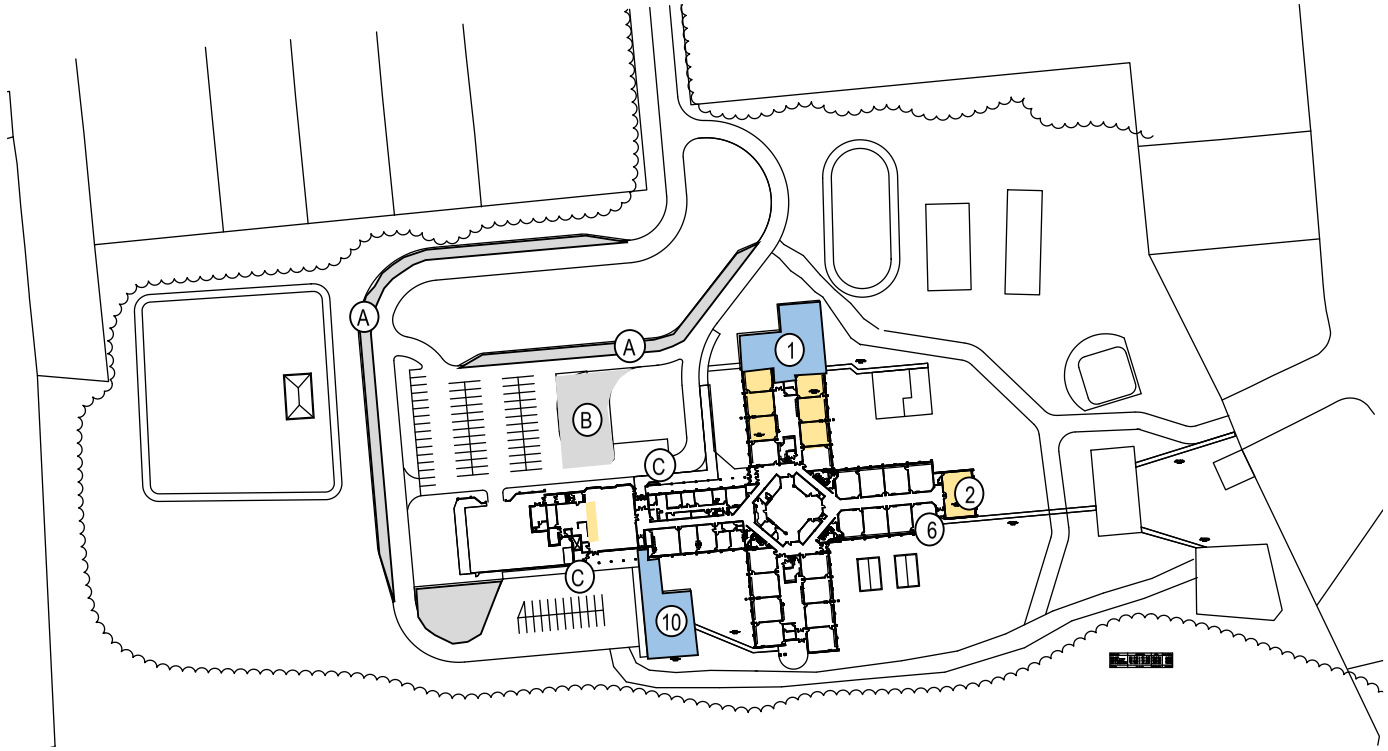
Existing

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Ben D. Quinn Elementary School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Bridgeton Elementary School

As one of the newest buildings in the system there have been no additions or significant repairs at this facility. It is in good overall condition with many years of useful life remaining. The site itself was improved by raising most of the site and the building out of the 100 year flood zone.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
2-039 -4000	Bridgeton Elementary	BOE	24.6	$295,680	$295,680

Insurance Data

BRIDGETON ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25030801	MAIN BUILDING	NC2	1/1/2003	16	81,547	$12,236,038
	Totals / Average $/sf				81,547	$12,236,038
	Average Construction Date		2003			
	Average Age			16		

Insurance / GIS Data

At 81,500 square feet this one story building takes up a reasonable portion of the site leaving room for vehicular traffic, play areas, and bioretention space.

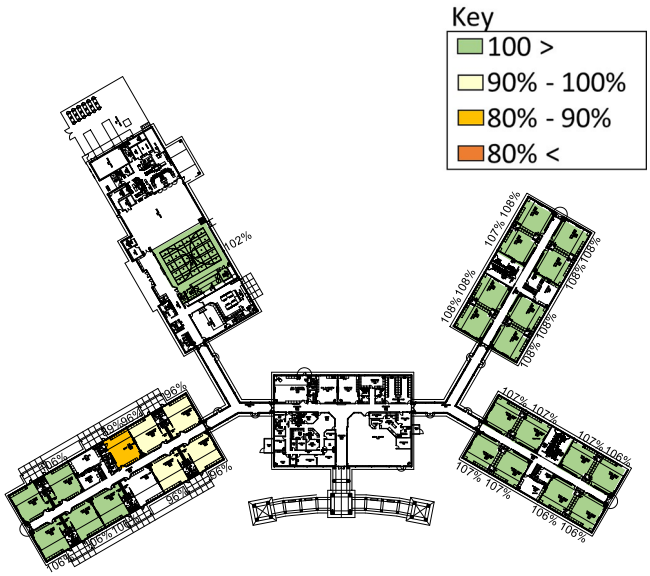
Life Cycle Analysis

At 16 years of age this building should continue to serve the system for another 70 years or so due in part to the good construction methods and materials used. However, portions of the building will need to be replaced as time goes on, such as thermally broken windows and chillers, but items like the metal roof, which will last the life of the school, will bring overall Deferred Maintenance cost down over its lifetime.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
BRIDGETON ES						
MAIN BUILDING - 2003	64	80	70	90	2003	16

Utility Providers

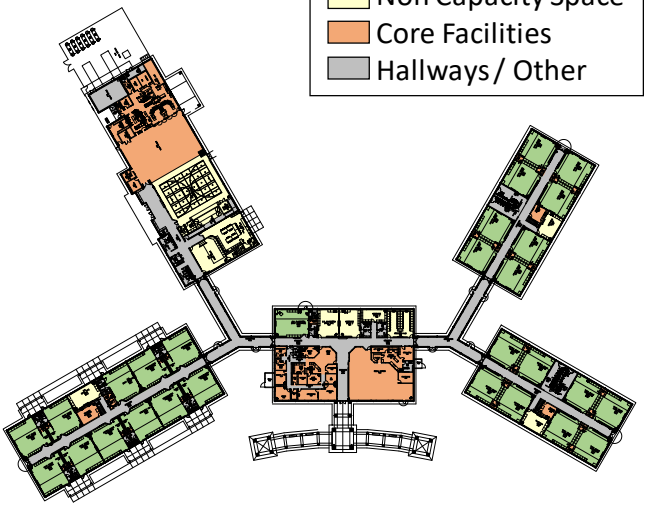
Electrical	City of New Bern
Sewer	First Craven
Water	Town of Bridgeton
Propane	Cherry Energy



Square Footage Per Program (Based on Use)

With nearly all of the spaces meeting or slightly exceeding the minimum standards, this building does well in supporting a modern education program.

Utilization Diagram



Capacity / Use Diagram (Optimized for 2021)

With a good distribution of core facilities and support spaces throughout the building this layout allows students and staff to get to resources quickly. The separation of the nosiest spaces, Cafeteria and Multipurpose Room, the building allows for quieter individual classrooms.

Facility Details

Bridgeton and Creekside are the two newest schools in the system and establish the benchmark for the combined Craven County Schools and NCDPI Minimum Facility Standards. There are improvements that should be considered but they are not related to educational deficiencies nor improvements related to a good life cycle cost. Suggested improvements relate to continued proper maintenance of the facility, along with upgrades that should be considered. These include but are not limited to; adding a generator to allow this campus to function as a shelter, continue to operate the mechanical system during power outages, or energy conscious decisions including LED lighting and window glazing replacement.

Building Images

Below are several images of the facility showing the overall state of the building.

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



Window Glazing



Multipurpose Room



Natural Light



Serving Lines

Potential Improvements

Considering the fact this facility is a newer school and meets nearly all of the minimum standards, there are expectantly few potential improvement that need to be made. Items found in the Deferred Maintenance section relate to materials that are worn such as replacement of carpet which should occur every ten year or so along with improvements to technology and other improvements that were not available at the time the building was constructed due to budget concerns or innovation since that time.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Bridgeton Elementary

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$16,000	$1,600	$1,440	$2,400	$21,440
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$120,228	$12,023	$10,821	$18,034	$161,106
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$30,000	$3,000	$2,700	$4,500	$40,200
7	Canopy (cov. Walks)	$0	$0	$0	$0	$0
8	Other Site	$5,400	$540	$486	$810	$7,236
9	Roofing	$0	$0	$0	$0	$0
10	Structural	$0	$0	$0	$0	$0
11	Windows	$75,918	$7,592	$6,833	$11,388	$101,730
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$0	$0	$0	$0	$0
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$0	$0	$0	$0	$0
16	Flooring	$139,759	$13,976	$12,578	$20,964	$187,277
17	Painting	$161,956	$16,196	$14,576	$24,293	$217,021
18	Other Building Interior	$0	$0	$0	$0	$0
19	Mechanical	$310,000	$31,000	$27,900	$46,500	$415,400
20	Electrical	$300,000	$30,000	$27,000	$45,000	$402,000
21	Lighting	$155,000	$15,500	$13,950	$23,250	$207,700
22	Technology	$58,588	$5,859	$5,273	$8,788	$78,508
23	Plumbing	$25,900	$2,590	$2,331	$3,885	$34,706
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$14,000	$1,400	$1,260	$2,100	$18,760
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$0	$0	$0	$0	$0
28	Fire Alarm	$0	$0	$0	$0	$0
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$67,100	$6,710	$6,039	$10,065	$89,914
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$30,000	$3,000	$2,700	$4,500	$40,200
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$112,000	$11,200	$10,080	$16,800	$150,080
37	Kitchen Equipment	$25,000	$2,500	$2,250	$3,750	$33,500
38	Media Center Furniture	$45,000	$4,500	$4,050	$6,750	$60,300
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$2,267,079**

Renovations
No renovations are suggested for this facility. It meets the minimum standards and is in good overall condition.

Additions
A moderate addition can be made to this building. The proposed renovation would add one classroom per grade level. Increases beyond that will begin to align the Student and Core Capacity to such an extent that overdriving the capacity will mean extending lunch period beyond what is ideal.

Site
There is good separation of bus and parent traffic. There are some improvements suggested, but they relate to maintenance, fixing pot holes and expected improvements to drainage swales.

Mechanical System
This is a 4 pipe Variable Air Volume (VAV) system with blower coils on platforms resulting in its ability to dehumidify the building. In the Administrative area, split system heat pumps are used, allowing summertime operation without cooling the entire school down to room temperature. Based on the ability of the system it would be appropriate to retro-commission or redo the test and balance, thus ensuring continued optimal operation. The RTAA chillers are reaching the end of their anticipated life and will likely need to be replaced in the next five to eight years.

Fire Alarm
The system does not need to be replaced at this time and is in good working order, however based on the age of the system, a new system will likely be needed in ten or so years.

Electric
The equipment is in good condition and should not need upgrades for many years. Adding a generator to this school should be considered to protect the asset from power outages and potentially use the facility in the event of an emergency.

Lighting
Mostly T8 fixtures. Replacement of these with LED lights will provide a payback within about 3 -5 years depending on the hours of operation, including reduced heating and cooling during that time.

Potential Additions and Renovations

Bridgeton

Craven County Schools

Space Inventory / Worksheet 2019

Bridgeton

12/2/2019

Current Student Capacity (NCDPI)	516	Current Core Capacity (NCDPI)	695
Proposed Student Capacity	**636**	**Proposed Core Capacity**	**695**
	Number of Spaces	0	Square Footage

Total Cost	**$2,642,735**
Cost / Student	**$4,155**
Athletic / PE /Facilities	Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	6	5		1
Grades 1-3 Clsrms	18	15		3
Grades 4-5 Clsrms	8	6		2
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1	2		
Instructional Kitchen				
Resource	5	6		
Computer	1			
STEM	1	1		
Sub-Total	40	35	0	6
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project				
Art Sto. Kiln	1	1		
General Music	1	1		
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	3	3	0	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage	1	1		
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1	1		
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	3	0	0
Misc. Spaces				
ROTC				
Mobile Units				
Total	**46**	**41**	**0**	**6**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,124	2800		
Support	1,200	1166		
Computer				
Sub-Total	4,324	3,966	0	0
Food Service		# of seatings		3
Dining	2,780	4073		
Kitchen	1,938	2853		
Serving	620	552		
Sub-Total	5,338	7,478	0	0
Auditorium		# of seats		0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	2,690	3240	-550	
Sub-Total	2,690	3,240	0	0
Storage				
Book Storage	850		626	
General Storage	950	1442		
Sub-Total	1,800	1,442	0	0
Staff Support				
Staff Support	1,300	884	416	
Sub-Total	1,300	884	0	0
Total Renovated Spaces			0	
Demolition Totaling				
Total	**15,452**	**17,010**	**0**	**0**

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3	3		
Sub-Total	3	3	0	0
Total	**0**	**0**	**0**	**9**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Bridgeton in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

Bridgeton

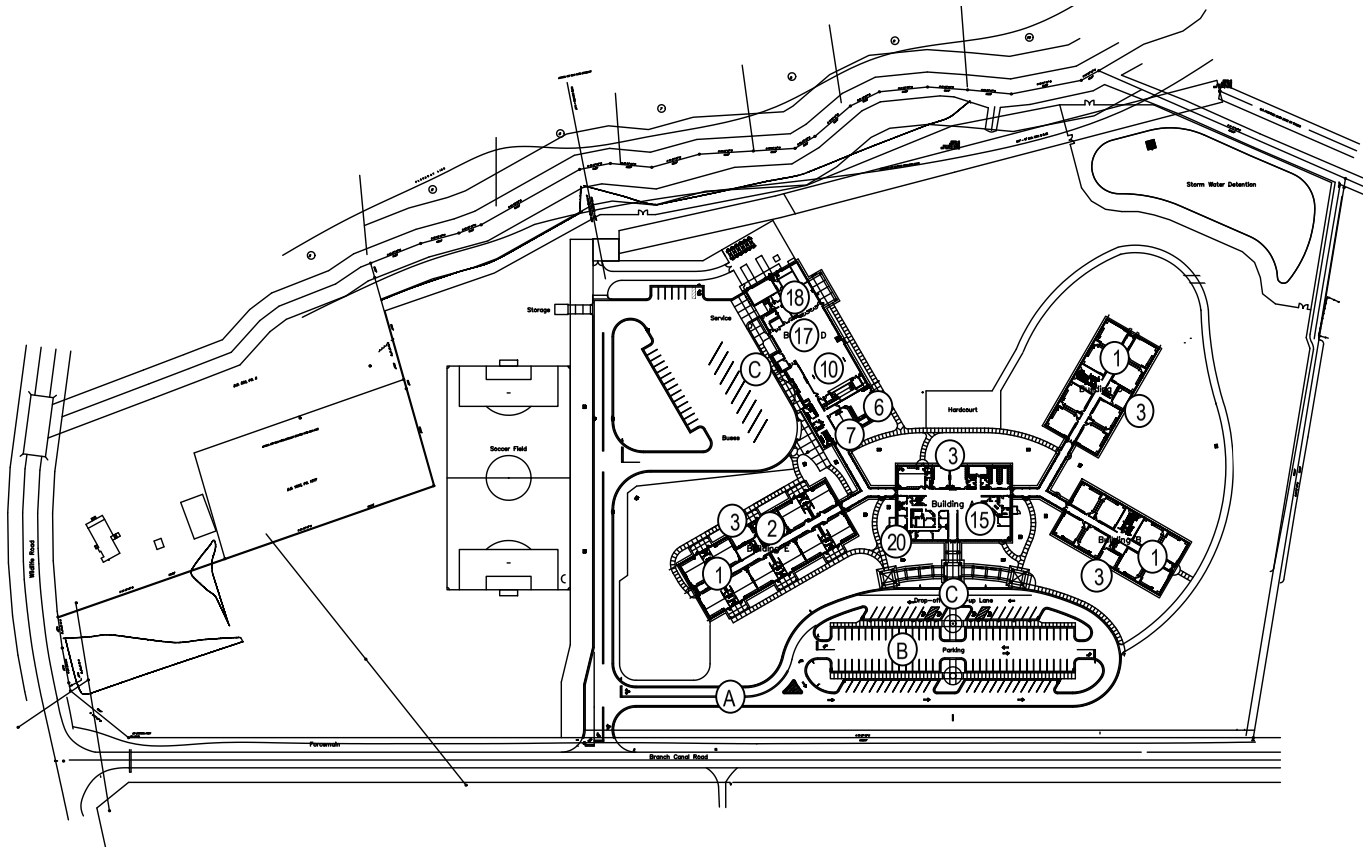
Additions / Renovations	Proposed Student Capacity	636
	Proposed Core Capacity	695

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	6	6,100	235.65	$1,437,467
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	0	0	0.00	$0
Misc. Spaces ()			180.00	$0
Renovations	0	0	60.00	$0
Core Capacity				
Media Center		0	0.00	$0
Food Service		0	0.00	$0
Auditorium		0	0.00	$0
Administration		0	259.00	$0
Storage		0	0.00	$0
Staff Support		0	259.00	$0
Renovations		0	0.00	$0
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		6,100	$235.65	$1,437,467
Circulation/ Mechanical/Toilets/Walls	38.00%	2,318	$235.65	$546,237
Subtotal Renovated		0	#DIV/0!	$0
Athletics				$0
Site Improvements				$0
Other ()				
Sub Total				$1,983,704
Inflation (3% for 3 years)	9.00%			$178,533
Contingency (%)	10.00%			$216,224
Sub Total				$2,378,461
A-E Fees (%)	10.00%			$237,846
Financing Charges	1.00%			$26,427
Other Fees and Services				$0
Site	0			$0
Owners Contingency (furn., equipment)				$0
Total				**$2,642,735**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Bridgeton Elementary School | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

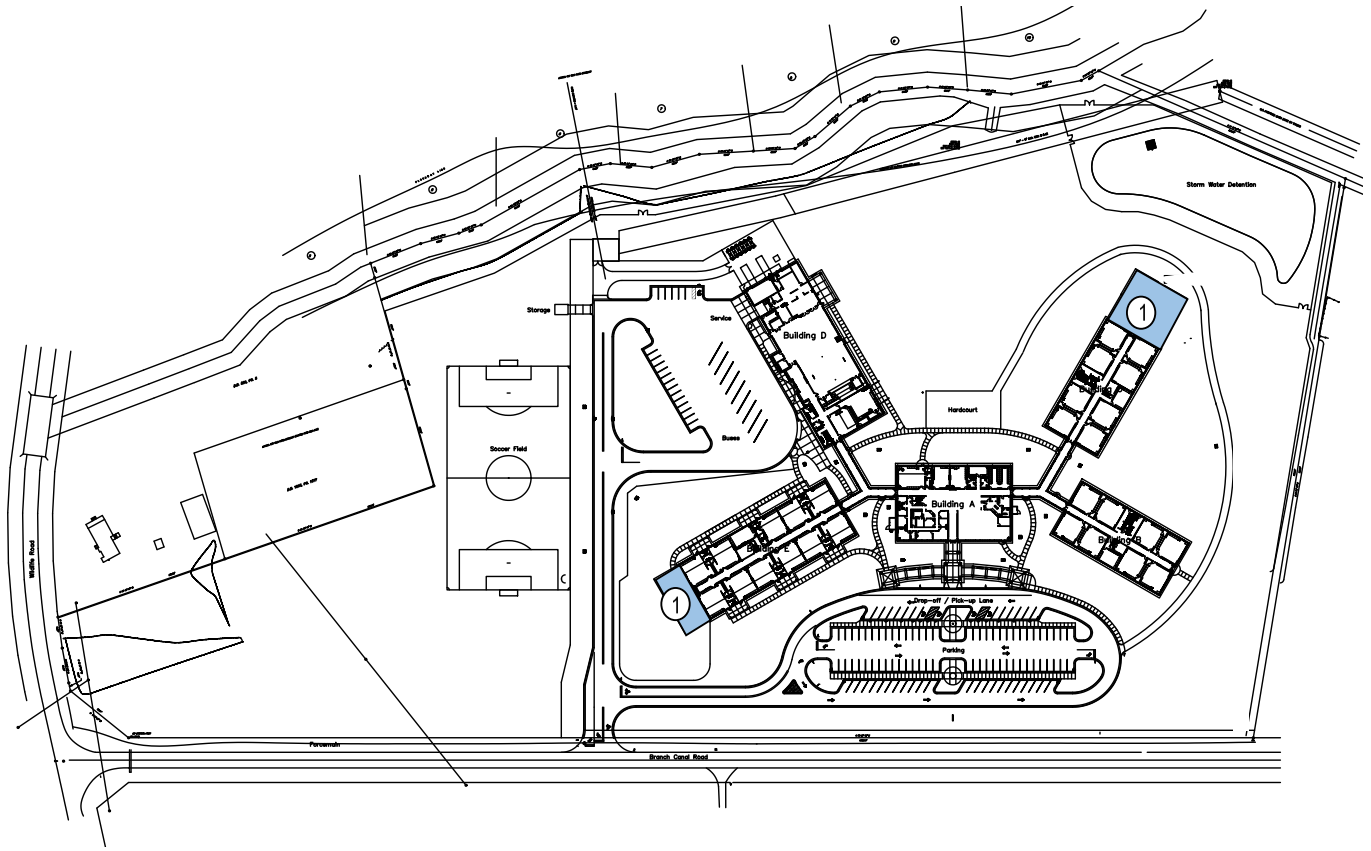
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Bridgeton Elementary School | **2019**

Proposed



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Brinson Memorial Elementary School

There have been numerous expansions to this facility since it was first constructed. The oldest remaining portion still was built in 1955 with a large expansion occurring in 1996. The overall site size is adequate, though there are concerns about vehicular transitions, being locked into a neighborhood and confined by the brackish Neuss River and the water elevation is zero feet ASL. The transition from the river to the top of the top of the bank is around 15 to 20 feet and from the water level it presents as a cliff.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
7-017 -027	Brinson Memorial Elementary	NB-C BOE	34.2	$1,769,240	$1,769,240

Insurance / GIS Data

At 108,000 square feet this one story building is very expansive. It occupies a reasonable portion of the overall site but a safety buffer zone around the cliff reduces the effective acreage. The newest portions of the building have been well maintained, but the older portion was constructed of inexpensive materials and is virtually impossible to maintain. One of the buildings on this campus is dedicated to system use. As a result, information about the Technology Center, which is dedicated to staff work and training is included in the data for this campus. Due to the large number of additions to this campus the Insurance information is listed on the following page.

Insurance Data

BRINSON ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25031201	MAIN BUILDING	NC2	1/1/1979	40	17,450	$10,545,139
	Cafeteria and Admin	NC2	1/1/1996	23	49,098	
	Toilet Rooms	NC2	9/1/2001	18	3,730	
25031206	BLOCK 3 BLDG	NC2	9/6/1965	54	3,098	$464,851
25031207	NEW BOILER BUILDING	NC1	1/1/1993	26	1,146	$171,953
25031208	BARTLING BLDG #2	NC2	9/6/1959	60	3,762	$564,481
25031209	EAST TMD BLDG #2	NC2	1/1/1955	64	2,244	$336,708
25031210	WEST BARTLING BLD #1	NC2	1/1/1953	66	4,932	$740,042
25031211	WEST TMD BLDG #1	NC2	1/1/1955	64	4,932	$740,042
25031212	GYMNASIUM BLDG	NC1	1/1/1961	58	10,509	1,576,865
25031213	TECHNOLOGY CENTER	NC2	1/1/1963	56	5,350	$1,104,360
		NC2	1/1/1998	21	2,010	
	Totals / Average $/sf				108,261	$16,244,441
	Average Construction Date		1973			
	Average Age		2018	46		

Life Cycle Analysis

There are numerous sections of this school that are nearing the end of their useful life. They were constructed with material such as cinder blocks that do not have long life cycles and as a result have lower than desirable life expectancy. The more youthful sections were built with better materials and the 2001 portion has the potential to provide service for many years. Most of the remaining sections will become more expensive to maintain as time goes on.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
BRINSON ES						
MAIN BUILDING - 1979	20	60	50	70	1979	40
MAIN BUILDING - 1996	47	70	60	80	1996	23
MAIN BUILDING - 2001	62	80	70	90	2001	18
BLOCK 3 BLDG - 1965	6	60	50	70	1965	54
NEW BOILER BUILDING - 1993	34	60	50	70	1993	26
BARTLING BLDG #2 - 1959	0	60	50	70	1959	60
EAST TMD BLDG #2 - 1955	-4	60	50	70	1955	64
WEST BARTLING BLD #1 - 1953	-6	60	50	70	1953	66
WEST TMD BLDG #1 - 1955	-4	60	50	70	1955	64
GYMNASIUM BLDG - 1961	2	60	50	70	1961	58
TECHNOLOGY CENTER -1963	4	60	50	70	1963	56
TECHNOLOGY CENTER -1998	49	70	60	80	1998	21

Utility Providers

Electrical	City of New Bern
Sewer	Craven County Water and Sewer
Water	City of New Bern
Natural Gas	Piedmont Natural Gas

Square Footage Per Program (Based on Use)

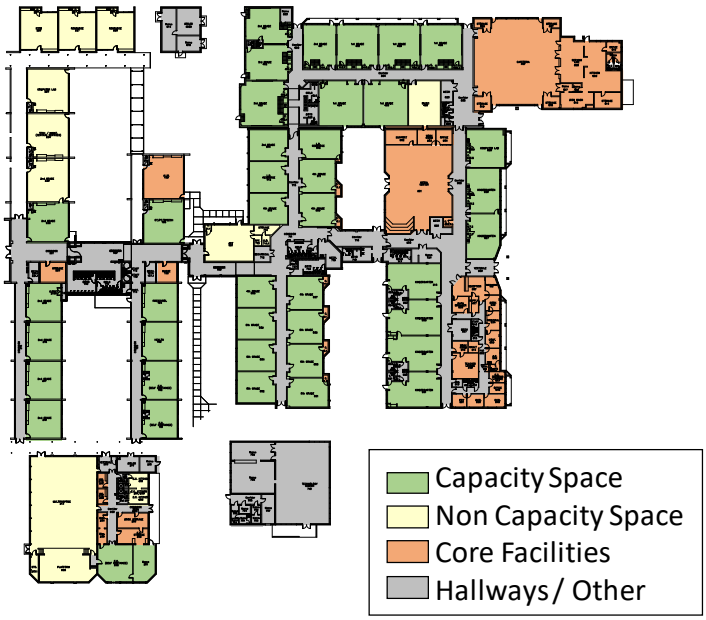
Many of the older spaces in this school are undersized. That forces the newer portions of the facility to be used ineffectively producing more undersized spaces than would be expected. Many of the rooms are left white since they are primarily used as resource rooms and not traditional classrooms due to elementary students needing to exit the building to access these spaces. This type of building is known as a "Florida School" and reduces the effective security on the campus.



Utilization Diagram

Capacity / Use Diagram (Optimized for 2021)

The optimal configuration attempts to minimize the need for students to go outside of the main building envelope. Resource rooms in yellow are not dispersed around the campus, but are concentrated on the Florida Style spaces. Administrative and Core facilities are reasonably distributed in an effort to provide the greatest amount of supervision as the plan will allow.



Facility Details

As one of the few elementary schools where students must leave the safety of the school building itself, this facility presents a safety concern for all. Additionally, much of the construction and square footage is below what is expected and about half of the entire school falls below the standards. The other half which is now twenty years old is better, but not ideal in itself. Add in the difficulties of transitioning on and off site and the overall facilities have much to be desired.

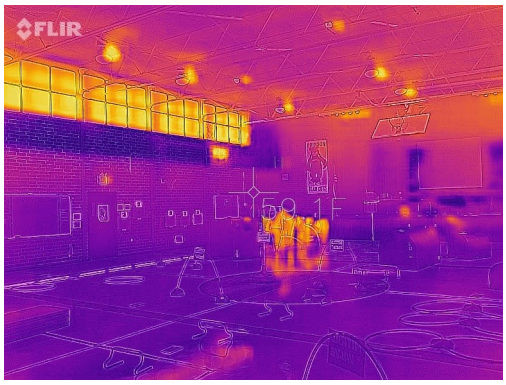
Building Images

Below are several images of the facility depicting some potential improvements. There are many deficiencies not shown here, only some of the more costly are provided.

The pages following this describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



Vapor Barrier Failure



Thermal Window Failure



Thermal Window Failure



Cinder Block, Wood, Windows

Potential Improvements

As an older building there are numerous opportunities for improvement. Starting before you enter the property with improved warning signals and flashing lights to notify motorists they are approaching a school. Site improvements include the creation of a new queue, improved drainage, repairs to the existing asphalt and other exterior upgrades. Once inside the building it is apparent there were at least two different times construction occurred on this site. This included the Florida Style portion where students exit the main building in order to get to their classroom.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Brinson Elementary

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$33,100	$3,310	$2,979	$4,965	$44,354
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$617,567	$61,757	$55,581	$92,635	$827,540
4	Sewer System	$32,000	$3,200	$2,880	$4,800	$42,880
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$45,000	$4,500	$4,050	$6,750	$60,300
7	Canopy (cov. Walks)	$43,500	$4,350	$3,915	$6,525	$58,290
8	Other Site	$106,200	$10,620	$9,558	$15,930	$142,308
9	Roofing	$1,130,123	$113,012	$101,711	$169,518	$1,514,365
10	Structural	$0	$0	$0	$0	$0
11	Windows	$683,253	$68,325	$61,493	$102,488	$915,559
12	Walls	$67,500	$6,750	$6,075	$10,125	$90,450
13	Other Building Exterior	$25,000	$2,500	$2,250	$3,750	$33,500
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$395,149	$39,515	$35,563	$59,272	$529,500
16	Flooring	$839,227	$83,923	$75,530	$125,884	$1,124,564
17	Painting	$141,717	$14,172	$12,755	$21,258	$189,901
18	Other Building Interior	$332,750	$33,275	$29,948	$49,913	$445,885
19	Mechanical	$850,000	$85,000	$76,500	$127,500	$1,139,000
20	Electrical	$614,000	$61,400	$55,260	$92,100	$822,760
21	Lighting	$188,000	$18,800	$16,920	$28,200	$251,920
22	Technology	$52,838	$5,284	$4,755	$7,926	$70,803
23	Plumbing	$79,450	$7,945	$7,150	$11,917	$106,462
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$19,250	$1,925	$1,733	$2,888	$25,795
26	ADA Ramps	$18,000	$1,800	$1,620	$2,700	$24,120
27	ADA Toilets	$68,880	$6,888	$6,199	$10,332	$92,299
28	Fire Alarm	$210,000	$21,000	$18,900	$31,500	$281,400
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$1,416,140	$141,614	$127,453	$212,421	$1,897,628
31	Abatement	$57,670	$5,767	$5,190	$8,650	$77,277
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$60,000	$6,000	$5,400	$9,000	$80,400
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$416,000	$41,600	$37,440	$62,400	$557,440
37	Kitchen Equipment	$58,000	$5,800	$5,220	$8,700	$77,720
38	Media Center Furniture	$90,000	$9,000	$8,100	$13,500	$120,600
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$11,645,020**

Renovations

Renovations are possible here, but the cost to do so would be unreasonable and at the conclusion of that endeavor would be a nearly 70 year old structure that was not built with quality materials to begin with. There is no long term responsible approach to renovating the older portion of this campus.

Additions

The additions proposed here only replace the older buildings. Newer classrooms and core facilities would be retained under this scenario.

Site

One of the largest issues with Brinson relate to parent access to pick up and drop off. The current procedure requires students to cross the queue in order to be on the correct side of the vehicle for safe entry. Other issues relate to canopy and providing proper drainage.

Mechanical System

As expected there is a great diversity of mechanical systems employed at this campus. A brief list include BARD units, split system heat pumps along with a boiler in support of those systems. Most are at the end of their life with the exception of the boiler which has issues and will need to be completely replaced in the next 5 to 15 years due to excessive leaking. With the exception of the Technology Building all mechanical controls are outdated and need to be replaced. The result is there is now way for the system to pull moisture out of the building which is an issue for any coastal building.

Plumbing

The older sections of the building have plumbing lines that have aged out and will need to be replaced along with replacement of the existing floor slab to access the piping.

Fire Alarm

The Fire alarm system is old and should be replaced including the newest portion with a modern addressable system.

Electric

The original electrical equipment has exceeded its reasonable life and should be replaced. Some improvements will also be needed in the newer section.

Lighting

As with other schools the T12 and T8 lights should be replaced with new LED fixtures.

Craven County Schools

Space Inventory / Worksheet 2019

Brinson

12/2/2019

Current Student Capacity (NCDPI)	722	Current Core Capacity (NCDPI)	813
Proposed Student Capacity	772	**Proposed Core Capacity**	813
	Number of Spaces	0	Square Footage

Total Cost	$18,327,392
Cost / Student	$23,740
Athletic / PE /Facilities	
	Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	7	7		
Grades 1-3 Clsrms	22	22	-22	22
Grades 4-5 Clsrms	10	10	-3	3
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	2	2	-2	2
Instructional Kitchen				
Resource	6	7	-5	5
Computer				
STEM	1	1	-1	1
Sub-Total	48	49	-33	33
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1	-1	1
Art Project				
Art Sto. Kiln	1	1	-1	1
General Music	1	1	-1	1
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	3	3	-3	3
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1	-1	1
Stage	1	1	-1	1
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1	1	-1	1
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	3	-3	3
Misc. Spaces				
ROTC				
Mobile Units				
Total	**54**	**55**	**-39**	**39**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,289	3252.3		
Support	1,500	658	865	
Computer				
Sub-Total	4,789	3,910	865	0
Food Service	# of seatings			3
Dining	3,252	4072.8	-195	
Kitchen	1,938	1743	195	
Serving	620	620		
Sub-Total	5,810	6,436	195	0
Auditorium	# of seats			0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	3,270	2604		666
Sub-Total	3,270	2,604	0	666
Storage				
Book Storage	910	280	630	
General Storage	1,010	1667	-630	
Sub-Total	1,920	1,947	0	0
Staff Support				
Staff Support	1,700	648		1,052
Sub-Total	1,700	648	0	1,052
Total Renovated Spaces			1,060	
Demolition Totaling				
Total	**17,489**	**15,545**	**1,060**	**1,718**

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3	3		
Sub-Total	3	3	0	0
Total	**0**	**0**	**0**	**9**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Brinson in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

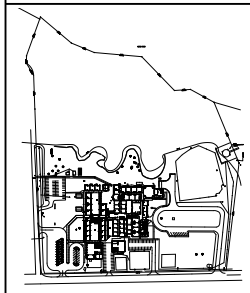
Brinson

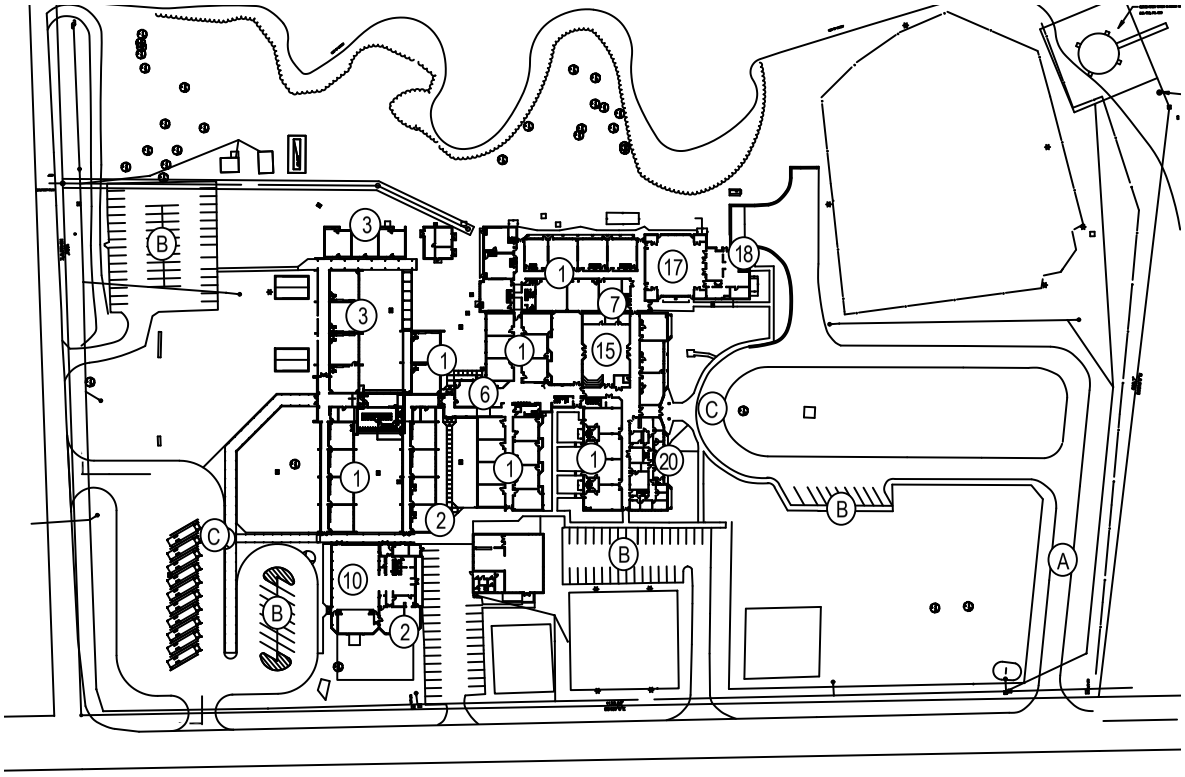
Additions / Renovations	Proposed Student Capacity			772
	Proposed Core Capacity			813
Student Capacity				
Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Academic Spaces	33	29,950	213.05	$6,380,794
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	3	2,350	231.25	$543,438
Vocational	0	0	0.00	$0
Physical Education Etc.	3	5,902	293.57	$1,732,664
Misc. Spaces ()			180.00	$0
Renovations (Demolition)	-39	30,493	18.00	$548,874
Core Capacity				
Media Center		0	0.00	$0
Food Service		0	0.00	$0
Auditorium		0	0.00	$0
Administration		666	231.25	$154,013
Storage		0	0.00	$0
Staff Support		1,052	231.25	$243,275
Renovations		1,060	80.00	$84,800
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		39,920	$226.81	$9,054,183
Circulation/ Mechanical/Toilets/Walls	38.00%	15,170	$226.81	$3,440,589
Subtotal Renovated		31,553	$20.08	$633,674
Athletics				$0
Site Improvements				$470,000
Other ()				
Sub Total				$13,598,446
Inflation (3% for 3 years)	9.00%			$1,223,860
Contingency (%)	10.00%			$1,482,231
Sub Total				$16,304,537
A-E Fees (%)	10.00%			$1,630,454
Financing Charges	1.00%			$183,274
Other Fees and Services				$209,127
Site	0			$0
Owners Contingency (furn., equipment)				$768,000
Total				**$18,327,392**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Brinson Elementary School | **2019**

Existing





1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

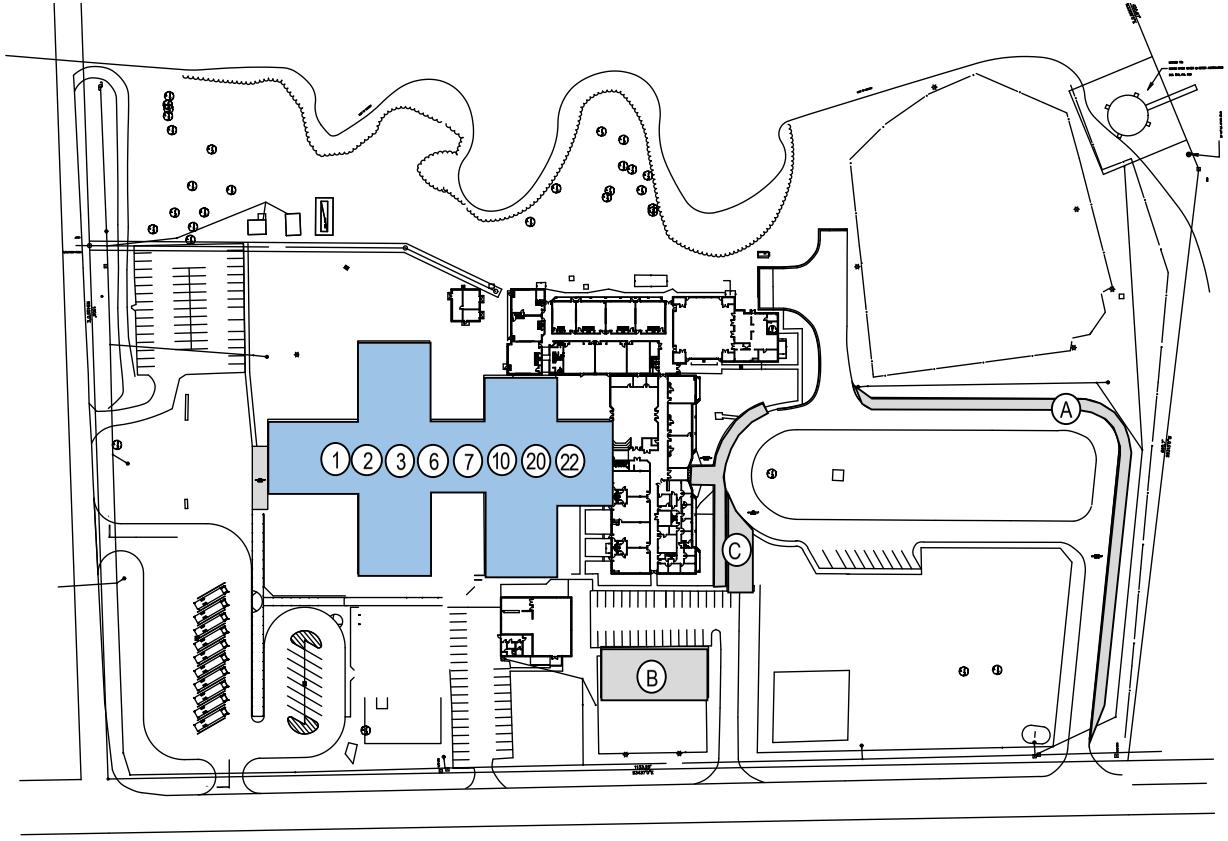
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Brinson Elementary School | **2019**

Proposed



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
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17. Dining
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19. Auditorium
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A Drive
B Parking
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CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

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Creekside Elementary School

This is the most recent addition to the school system. Completed in 2007, this twelve year old building is a twin to Bridgeton which was built just a few years earlier. It has the same potential to serve Craven County Schools for many years.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
7-104 -11001	Creekside Elementary	CRAVEN COUNTY	29.4	$570,000	$570,000

Insurance Data

CREEKSIDE ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25031601	MAIN BUILDING	NC1	8/1/2007	12	85,084	$12,767,167
	Totals / Average $/sf				85,084	$12,767,167
	Average Construction Date		2007			
	Average Age			12		

Insurance / GIS Data

Listed at 85,000 square feet this one story building sits on the nearly 30 acre site to still allow for queue, parking, play fields, and stormwater runoff.

Life Cycle Analysis

At only 12 year old Creekside should provide for another 70 or so years. Just as in Bridgeton the material selection and construction methods will require fewer times when items wear out. The metal roof along with quality flooring, windows, and mechanical system will all need fewer repairs over the life of the building than many other buildings in the school system.

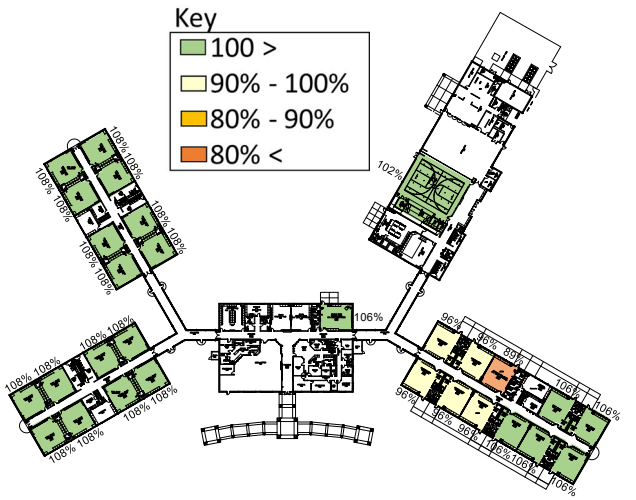
Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
CREEKSIDE ES						
MAIN BUILDING - 2007	68	80	70	90	2007	12

Utility Providers

Electrical	City of New Bern
Sewer	City of New Bern
Water	City of New Bern
Natural Gas	Piedmont Natural Gas

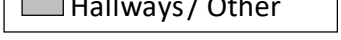
Square Footage Per Program (Based on Use)

Most of the classrooms meet or exceed the minimum standards and only in a few locations are they slightly below the ideal. Relocating programs such as the Self Contained classrooms may be appropriate, but will not have a dramatic impact.

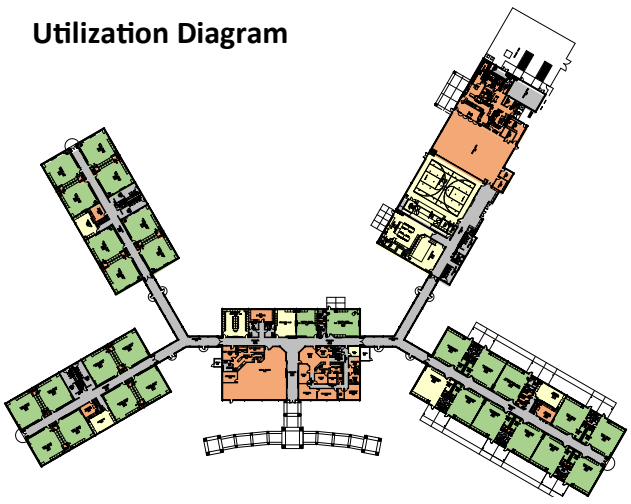


Capacity / Use Diagram (Optimized for 2021)

The distribution of support spaces and the centralization of core facilities follows best practices for the layout of an elementary school. Placing the noisiest portions of the building in their own wing reduces noise problems within the classrooms themselves.



Utilization Diagram



Facility Details

Bridgeton and Creekside are the two newest schools in the system and establish the bench-mark for the combined Craven County Schools and NCDPI Minimum Facility Standards. There are improvements that should be considered but they are not related to educational deficiencies nor improvements related to a good life cycle cost. Improvements suggested relate to continued proper maintenance of the facility along with upgrades that should be considered such as adding a generator to this campus so it can be used as a shelter or continue to operate the mechanical system in the event of a power outage, or energy conscious decisions like LED lighting and replacement of window glazing that has exceeded its anticipated life.

Building Images

Below are several images of the facility showing the overall state of the building.

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



Walkway Canopy



Mechanical and Maintenance



Entry Hall



Glazing

Potential Improvements

This building is nearly identical in all ways to Bridgeton Elementary and both are in very similar condition. Comments and issues noted here are for that reason similar to Bridgeton. Considering the fact this facility is a newer school and meets nearly all of the minimum standards, there are expectantly few potential improvement that need to be made. Items found in the Deferred Maintenance section relate to materials that are worn such as replacement of carpet which should occur every ten year or so along with improvements to technology and other improvements that were not available at the time the building was constructed due to budget concerns or innovation since that time.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Creekside Elementary

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$24,000	$2,400	$2,160	$3,600	$32,160
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$124,209	$12,421	$11,179	$18,631	$166,440
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$45,000	$4,500	$4,050	$6,750	$60,300
7	Canopy (cov. Walks)	$0	$0	$0	$0	$0
8	Other Site	$105,700	$10,570	$9,513	$15,855	$141,638
9	Roofing	$0	$0	$0	$0	$0
10	Structural	$0	$0	$0	$0	$0
11	Windows	$75,918	$7,592	$6,833	$11,388	$101,730
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$0	$0	$0	$0	$0
14	Partition/Wall Const	$9,600	$960	$864	$1,440	$12,864
15	Ceilings	$9,337	$934	$840	$1,400	$12,511
16	Flooring	$139,759	$13,976	$12,578	$20,964	$187,277
17	Painting	$161,938	$16,194	$14,574	$24,291	$216,997
18	Other Building Interior	$0	$0	$0	$0	$0
19	Mechanical	$60,000	$6,000	$5,400	$9,000	$80,400
20	Electrical	$500,000	$50,000	$45,000	$75,000	$670,000
21	Lighting	$155,000	$15,500	$13,950	$23,250	$207,700
22	Technology	$59,863	$5,986	$5,388	$8,979	$80,217
23	Plumbing	$25,900	$2,590	$2,331	$3,885	$34,706
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$15,750	$1,575	$1,418	$2,363	$21,105
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$0	$0	$0	$0	$0
28	Fire Alarm	$0	$0	$0	$0	$0
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$67,100	$6,710	$6,039	$10,065	$89,914
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$80,000	$8,000	$7,200	$12,000	$107,200
37	Kitchen Equipment	$48,000	$4,800	$4,320	$7,200	$64,320
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$2,287,478**

Renovations
No renovations are suggested for this facility. It meets the minimum standards and is in good overall condition.

Additions
A moderate addition can be made to this building. The proposed renovation would add one classroom per grade level. Increases beyond that will begin to align the Student and Core Capacity to such an extent that overdriving the capacity will mean extending lunch period beyond what is ideal.

Site
There is good separation of bus and parent traffic. There are some improvements suggested but they relate to maintenance and fixing pot holes and improvements to drainage swales which are to be expected.

Mechanical System
This is a 4 pipe VAV system with blower coils on platforms which results in its ability to dehumidify the building. In the Administrative area split system heat pumps are used allowing summertime operation without cooling the entire school down to room temperature. Based on the ability of the system it would be appropriate to retro-commission or redo the test and balance, thus ensuring continued optimal operation. There is a potential improvement in the Boiler Room where the sprinkler line may have the potential to freeze in very cold weather.

Fire Alarm
The system does not need to be replaced at this time and is in good working order, however much of it will need to be replaced due to availability of parts in the five to ten years.

Electric
The equipment is in good condition and should not need upgrades for many years. Adding a generator to this school should be considered to protect the asset from power outages and potentially use the facility in the event of an emergency.

Lighting
Mostly T8 fixtures. Replacement of these with LED lights will provide a payback within about 3 -5 years depending on the hours of operation and includes reduced heating and cooling during that time.

Craven County Schools

Space Inventory / Worksheet 2019

Creekside

12/2/2019

Current Student Capacity (NCDPI)	516	Current Core Capacity (NCDPI)	695
Proposed Student Capacity	636	**Proposed Core Capacity**	695
	Number of Spaces	0	Square Footage

Total Cost	$2,737,118
Cost / Student	$4,304
Athletic / PE /Facilities	
	Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	6	5		1
Grades 1-3 Clsrms	18	15		3
Grades 4-5 Clsrms	8	6		2
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1	2		
Instructional Kitchen				
Resource	5	6		
Computer	1			
STEM	1	1		
Sub-Total	40	35	0	6
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project				
Art Sto. Kiln	1	1		
General Music	1	1		
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	3	3	0	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage	1	1		
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1	1		
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	3	0	0
Misc. Spaces				
ROTC				
Mobile Units				
Total	**46**	**41**	**0**	**6**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,124	2800		
Support	1,200	1166		
Computer				
Sub-Total	4,324	3,966	0	0
Food Service		# of seatings		3
Dining	2,780	4073		
Kitchen	1,938	2853		
Serving	620	552		
Sub-Total	5,338	7,478	0	0
Auditorium		# of seats		0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	2,690	3240	-550	
Sub-Total	2,690	3,240	0	0
Storage				
Book Storage	850		626	
General Storage	950	1442		
Sub-Total	1,800	1,442	0	0
Staff Support				
Staff Support	1,300	884	416	
Sub-Total	1,300	884	0	0
Total Renovated Spaces			0	
Demolition Totaling				
Total	**15,452**	**17,010**	**0**	**0**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3	3		
Sub-Total	3	3	0	0
Total	**0**	**0**	**0**	**9**

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Creekside in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

Creekside

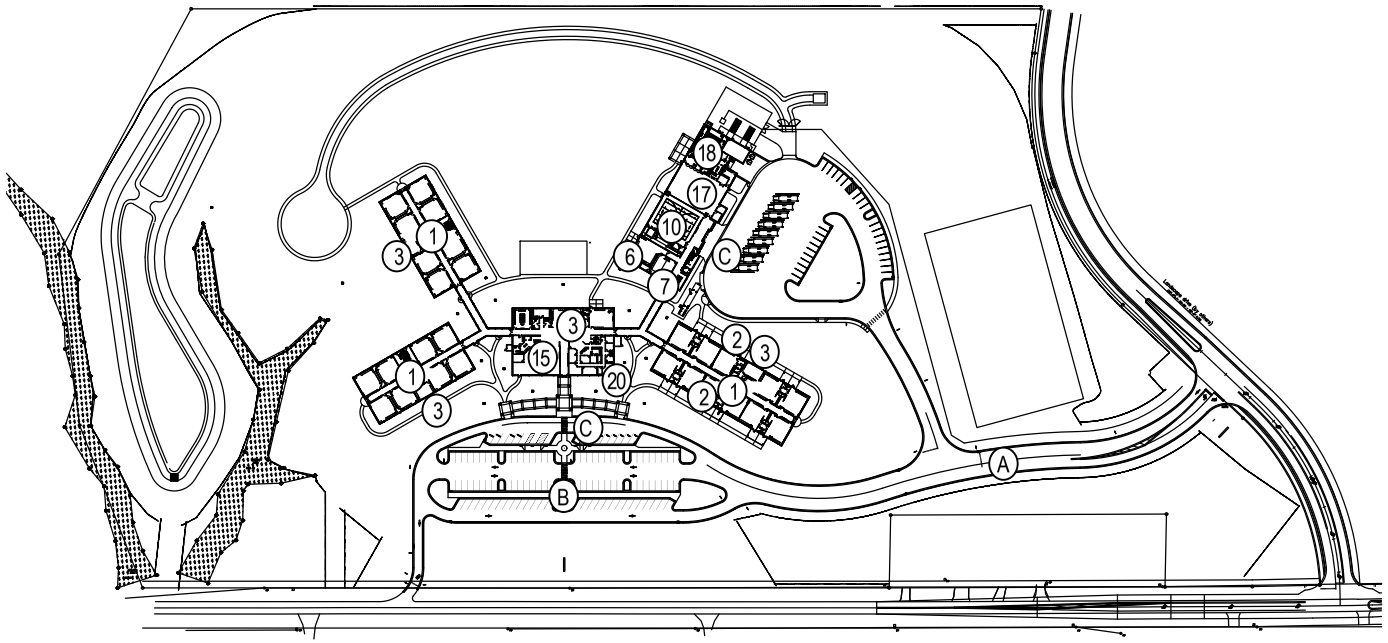
Additions / Renovations	Proposed Student Capacity	636
	Proposed Core Capacity	695

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	6	6,100	244.07	$1,488,805
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	0	0	0.00	$0
Misc. Spaces ()			180.00	$0
Renovations	0	0	60.00	$0
Core Capacity				
Media Center		0	0.00	$0
Food Service		0	0.00	$0
Auditorium		0	0.00	$0
Administration		0	268.25	$0
Storage		0	0.00	$0
Staff Support		0	268.25	$0
Renovations		0	0.00	$0
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		6,100	$244.07	$1,488,805
Circulation/ Mechanical/Toilets/Walls	38.00%	2,318	$244.07	$565,746
Subtotal Renovated		0	#DIV/0!	$0
Athletics				$0
Site Improvements				$0
Other ()				
Sub Total				$2,054,551
Inflation (3% for 3 years)	9.00%			$184,910
Contingency (%)	10.00%			$223,946
Sub Total				$2,463,406
A-E Fees (%)	10.00%			$246,341
Financing Charges	1.00%			$27,371
Other Fees and Services				$0
Site	0			$0
Owners Contingency (furn., equipment)				$0
Total				**$2,737,118**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Creekside Elementary School | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Creekside

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Creekside Elementary School — **2019**

Potential

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Graham A. Barden Elementary School

There has been one expansion to this facility since it was first constructed in 1953. The Media Center was constructed in 2001 and is centrally located. The site is deceptive with a good portion of the what appears to be the school site actually being a parcel owned by the Federal Government. This building is very close to Slocum Creek but sits well above it at 23 ft. ASL and slopes quickly down to sea level.





Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
6-049 -3000	Graham A. Barden Elementary	BOE	9.4	$151,600	$151,600

Insurance Data

Graham Barden ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25032801	MAIN BUILDING	NC2	1/1/1953	66	47709	$8,561,639
	Media Center	NC2	9/1/2001	18	9350	
	Totals / Average $/sf				57059	$8,561,639
	Average Construction Date		1977			
	Average Age			42		

Insurance / GIS Data

At 57,000 square feet this relatively small one story building occupies a good portion of the parcel. This is the smallest site in the school system with one of the oldest structures still standing.

Graham A. Barden

Flood Mapping

At nearly 23' ASL the building and site should not experience any significant flooding, however it will become an island as both the Southwest and East Prongs of Slocum Creek will cut off access to the site.



Effective



Preliminary

Life Cycle Analysis

This facility has a shorter life expectancy than others simply because of how it was built and the materials that were used. Over 80% of the building has a 60% average life expectancy and at 66 years of age, is moving towards its upper limit of around 70 years.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
BARDEN ES						
MAIN BUILDING - 1953	-6	60	50	70	1953	66
MAIN BUILDING - 2001	52	70	60	80	2001	18

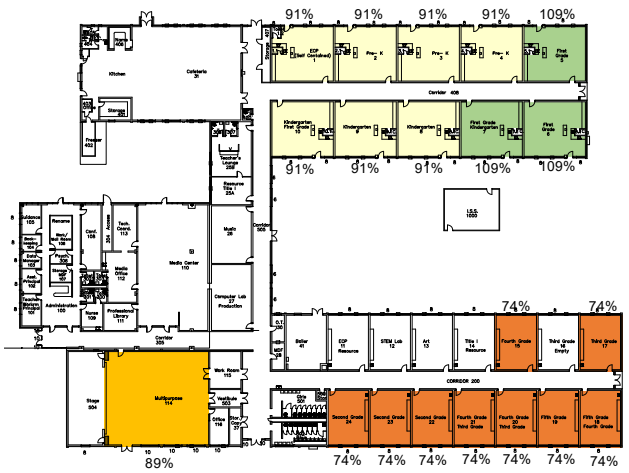
Utility Providers

Electrical	Duke /Progress Energy
Sewer	City of Havelock
Water	City of Havelock
Natural Gas	Piedmont Natural Gas

Graham A. Barden

Square Footage Per Program (Based on Use)

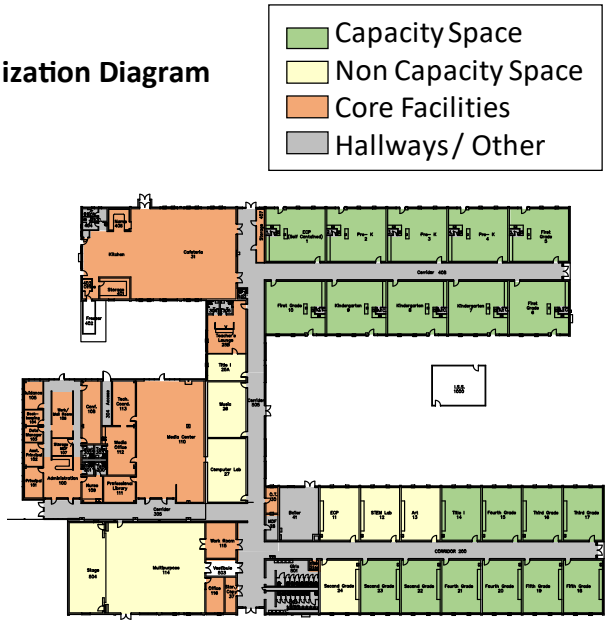
There are a few classrooms here of the appropriate size, but nearly half are less than 80% of the minimum recommended size. The classrooms in white are functioning as resource room at this time. If fully utilized it would be more that 50% of the classrooms were significantly undersized.



Capacity / Use Diagram (Optimized for 2021)

The school is organized with core and staff areas concentrated near the front of the building. The wings have classrooms of consistent square footage for the individual wing making it difficult to get resource or administrative spaces in them in any efficient manner. The organization still provides reasonable security since the north side of the school is protected by a steep bank down to Slocum Creek.

Utilization Diagram



Graham A. Barden

Facility Details

This is an older school and has many issues related to small classrooms, spaces, and even the very small site. This is all nestled between a residential neighborhood and a cliff down to Slocum Creek which is about 23 feet below the finished floor of the school. The site is small and without the addition of the parcel to the east, congestion will continue as you approach the school.

Building Images

Below are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance.

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



Non Thermal Windows



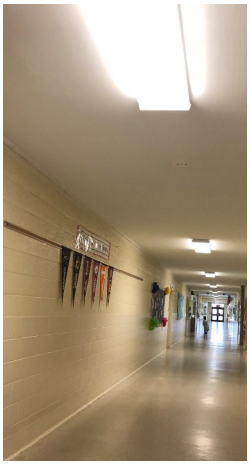
Failing Concrete



Cinder Block Structure



Vapor Barrier in Failure



Ceilings / Lights



Mechanical in Failure

Potential Improvements

The site itself limits most improvement to the interior. Creating a queue and separation of public and bus traffic is not possible on the school parcel. Exterior improvements are limited to repairing potholes, installation of walkway canopy, working on drainage, and providing ADA access to the existing play areas.

Once inside the building the various floor and wall finishes will make it difficult to have a coherent look. Replacement of ceilings, and flooring will be significant when consideration is given to how the infrastructure will be replaced. The largest investments will be in the infrastructure and that will not change the appearance of the school and the structure will still be of cinder block and other inexpensive materials.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

GA Barden Elementary

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$21,000	$2,100	$1,890	$3,150	$28,140
2	Site Utilities	$12,000	$1,200	$1,080	$1,800	$16,080
3	Parking / Drives	$125,242	$12,524	$11,272	$18,786	$167,824
4	Sewer System	$16,000	$1,600	$1,440	$2,400	$21,440
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$30,000	$3,000	$2,700	$4,500	$40,200
7	Canopy (cov. Walks)	$48,100	$4,810	$4,329	$7,215	$64,454
8	Other Site	$85,650	$8,565	$7,709	$12,848	$114,771
9	Roofing	$24,000	$2,400	$2,160	$3,600	$32,160
10	Structural	$0	$0	$0	$0	$0
11	Windows	$502,136	$50,214	$45,192	$75,320	$672,862
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$0	$0	$0	$0	$0
14	Partition/Wall Const	$15,500	$1,550	$1,395	$2,325	$20,770
15	Ceilings	$249,120	$24,912	$22,421	$37,368	$333,821
16	Flooring	$743,698	$74,370	$66,933	$111,555	$996,555
17	Painting	$107,635	$10,763	$9,687	$16,145	$144,231
18	Other Building Interior	$27,563	$2,756	$2,481	$4,134	$36,934
19	Mechanical	$750,000	$75,000	$67,500	$112,500	$1,005,000
20	Electrical	$470,000	$47,000	$42,300	$70,500	$629,800
21	Lighting	$96,000	$9,600	$8,640	$14,400	$128,640
22	Technology	$56,073	$5,607	$5,047	$8,411	$75,138
23	Plumbing	$68,171	$6,817	$6,135	$10,226	$91,349
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$10,500	$1,050	$945	$1,575	$14,070
26	ADA Ramps	$43,000	$4,300	$3,870	$6,450	$57,620
27	ADA Toilets	$55,440	$5,544	$4,990	$8,316	$74,290
28	Fire Alarm	$113,000	$11,300	$10,170	$16,950	$151,420
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$74,700	$7,470	$6,723	$11,205	$100,098
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$30,000	$3,000	$2,700	$4,500	$40,200
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$173,600	$17,360	$15,624	$26,040	$232,624
37	Kitchen Equipment	$78,000	$7,800	$7,020	$11,700	$104,520
38	Media Center Furniture	$18,000	$1,800	$1,620	$2,700	$24,120
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$5,419,131**

Renovations

Due to the small size of the site it is impractical to place an addition on this campus which results in a limited option for renovating the small classrooms into larger spaces. The concept of using three small classrooms and creating two, reduced the capacity of the school. The only way to make a real change at this school would be a major renovation which will require significant increase in overall square footage. The site cannot support that addition. For that reason renovations are limited to the core and administrative areas.

Additions

There are some services that can be expanded in an effort to improve overall service. The Kitchen, Administrative, Storage, and Staff Support areas are small and not well organized. By creating additional space for these services the students will be better served and the staff will be able to expand services similar to other schools in the system.

Site

As noted before the site is small and acquiring the adjacent parcel to the east should be investigated if this campus is to continue service. Until that time, improvements to the queue and other exterior spaces is limited.

Mechanical System

In 1998 BARD units were added with steam heat for the majority of the school. That steam boiler system is not working well due to the age and looses water somewhere in the loop, which means water is continually added to the system. During this year the boiler has deteriorated quickly and is currently limping along with plans to replace it as soon as the weather turnes warm in the spring. The system cannot dehumidify, and has only manual controls. The Air Handlers and other HVAC units have exceeded their life expectancy and the classrooms have exposed steam piping. The entire school needs a new mechanical system.

Plumbing

This pipes in this building are beginning to fail. Replacement of them along with the floor slab will have to be carefully coordinated in order to maintain the systems. Sanitary lines are in the same overall condition.

Fire Alarm

The fire alarm is old and should be replaced due to difficulty in finding parts.

Electric

This building still has the original electrical system in place which is now nearing seventy (70) years of age. The equipment is well beyond its expected life and should be replace in its entirety including all sub panels, branch circuits, outlets and switches.

Lighting

All T12 and T8 lights should be replaced with new LED fixtures.

Potential Additions and Renovations

Graham A. Barden

Craven County Schools

Space Inventory / Worksheet 2019

Graham A Barden

12/2/2019

Current Student Capacity (NCDPI)	366	Current Core Capacity (NCDPI)	720
Proposed Student Capacity	366	**Proposed Core Capacity**	720
	Number of Spaces	18	Square Footage

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms	1	3		
Kindergartens	3	3		
Grades 1-3 Clsrms	11	9		
Grades 4-5 Clsrms	4	4		
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1			
Instructional Kitchen				
Resource	3			
Computer				
STEM	1	1		
Sub-Total	24	20	0	0
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts				
Art Project	1	1		
Art Sto. Kiln				
General Music	1	1		
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	2	2	0	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage	1	1		
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1			
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	2	0	0
Misc. Spaces				
ROTC				
Mobile Units				
Total	**29**	**24**	**0**	**0**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,168	2880		
Support	1,200	1174		
Computer				
Sub-Total	4,368	4,054	0	0
Food Service	# of seatings			3
Dining	2,880	3330	-374	
Kitchen	1,938	1312	1312	626
Serving	620	246	374	
Sub-Total	5,438	4,888	1,686	626
Auditorium	# of seats			0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	2,690	3165	2327	
Sub-Total	2,690	3,165	2,327	0
Storage				
Book Storage	860			860
General Storage	960	485	155	320
Sub-Total	1,820	485	155	1,180
Staff Support				
Staff Support	1,300	980	320	728
Sub-Total	1,300	980	320	728
Total Renovated Spaces			4,488	
Demolition Totaling				
Total	**15,616**	**13,572**	**4,488**	**2,534**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Total Cost	**$2,629,645**
Cost / Student	**$7,185**
Athletic / PE /Facilities	
	Number of Spaces

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3	3		
Sub-Total	3	3	0	0
Total	**0**	**0**	**0**	**9**

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Graham A. Barden in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

Graham A Barden

Additions / Renovations	Proposed Student Capacity	366
	Proposed Core Capacity	720

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	0	0	0.00	$0
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	0	0	0.00	$0
Misc. Spaces ()			180.00	$0
Renovations - Rest Room	0	728	320.00	$232,960
Core Capacity				
Media Center		0	0.00	$0
Food Service		626	416.25	$260,573
Auditorium		0	0.00	$0
Administration		0	277.50	$0
Storage		1,180	277.50	$327,450
Staff Support		728	277.50	$202,020
Renovations		4,488	126.13	$566,090
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		2,534	$311.78	$790,043
Circulation/ Mechanical/Toilets/Walls	38.00%	963	$311.78	$300,216
Subtotal Renovated		5,216	$153.19	$799,050
Athletics				$0
Site Improvements				$25,000
Other ()				
Sub Total				$1,914,309
Inflation (3% for 3 years)	9.00%			$172,288
Contingency (%)	10.00%			$208,660
Sub Total				$2,295,256
A-E Fees (%)	10.00%			$229,526
Financing Charges	1.00%			$26,296
Other Fees and Services				$78,567
Site	0			$0
Owners Contingency (furn., equipment)				$175,000
Total				**$2,629,645**

Graham A. Barden

Space Profile for Renovation Projects Based on NC School Planning Recommendations

2019

Graham A. Barden Elementary School

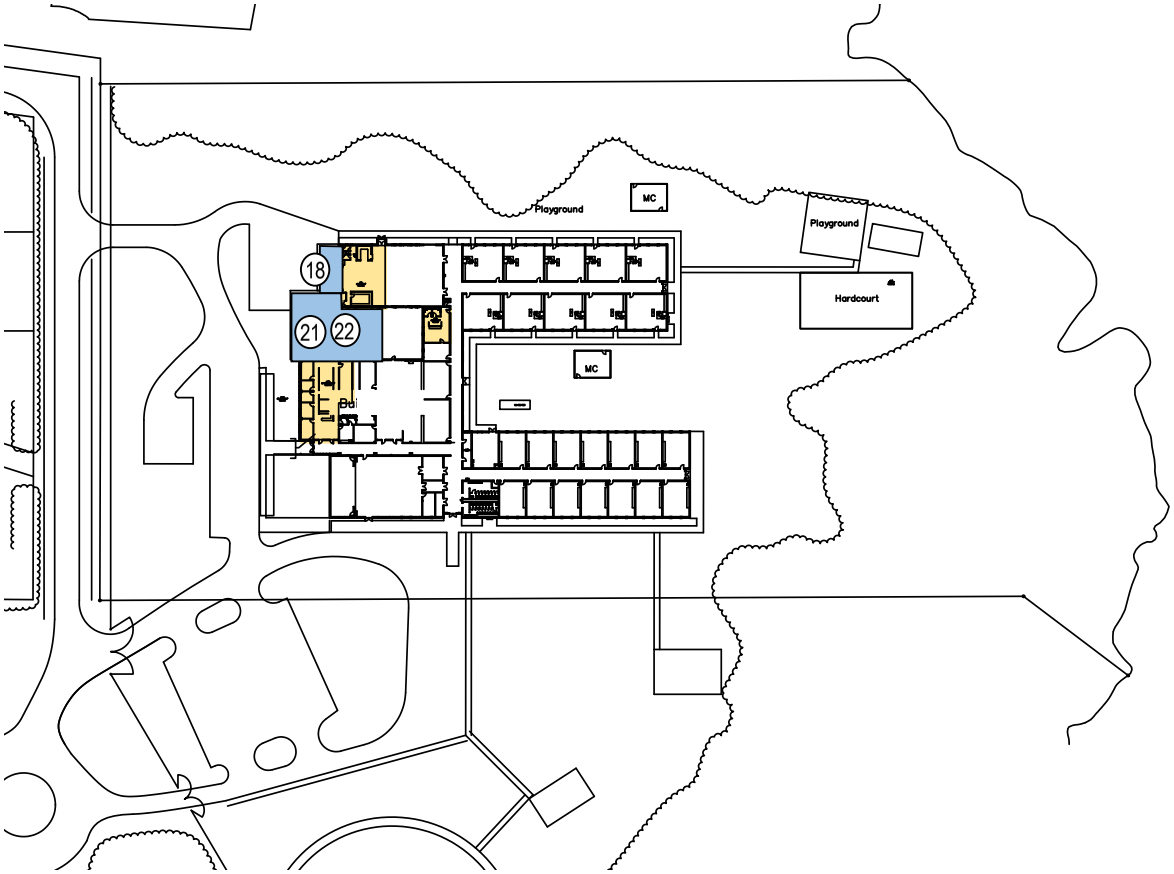
Existing

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Graham A. Barden Elementary School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

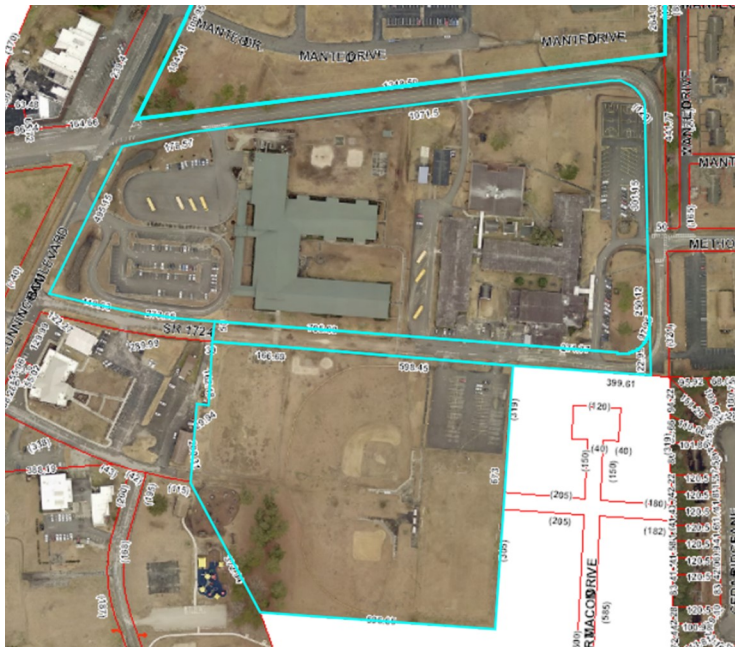
CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Havelock Elementary School

This is one of the newest schools in the system. It was built in 2003, is currently around 16 years old and has the potential to serve the community for many years to come. The site is confined by governmental agencies and Havelock Middle school. The area of the parcel used for HES is tight but does provide good queueing and play areas.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
6-066 -005	Havelock E. and Havelock M. Fields	BOE	11.5	$306,850	$287,250
6-066 -9000	Havelock E. and Havelock M. Drive	BOE	1.3	$33,500	$33,500
6-066 -002	Havelock E. and Havelock M.	BOE	18.3	$458,250	$458,250
		Total	31.2	$798,600	$779,000

Insurance Data

HAVELOCK ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25033601	MAIN BUILDING	NC2	1/1/2003	16	71245	$10,690,234
	Totals / Average $/sf				71245	$10,690,234
	Average Construction Date		2003			
	Average Age		16	16		

Insurance / GIS Data

At 70,000 square feet this one story building takes up a large portion of area dedicated to the school. The parcel is shared with HMS and it is difficult to provide an exact figure for how many acres are dedicated to the school, however it measures to be about 10 Acres dedicated to the school.

Life Cycle Analysis

This is a youthful school and at only 16 years of age should continue to provide many years of service to the community.

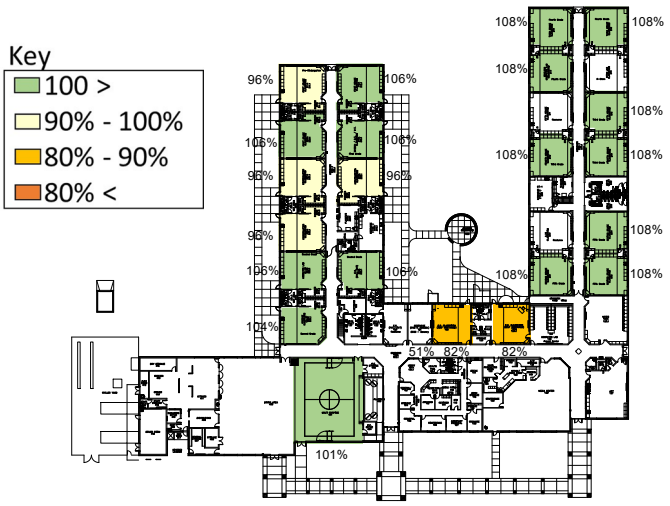
Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
HAVELOCK ES						
MAIN BUILDING - 2003	64	80	70	90	2003	16

Utility Providers

Electrical	Carteret Craven
Sewer	City of Havelock
Water	City of Havelock
Natural Gas	Piedmont Natural Gas

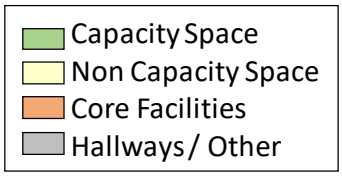
Square Footage Per Program (Based on Use)

As one of the facilites that establishes the standard minimum square footage, this facility has classrooms that are well proportioned and of sufficient size.

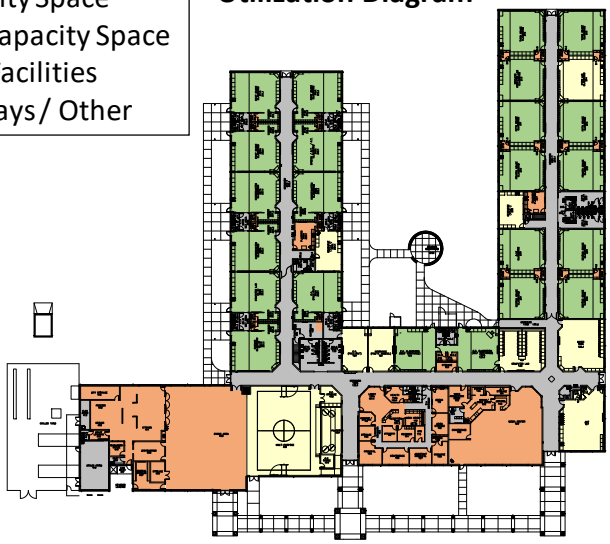


Capacity / Use Diagram (Optimized for 2021)

Havelock Elementary has a good distribution of staff and support spaces among the classroom wings. Core Facilities are concentrated near the front of the building allowing good visibility and security.



Utilization Diagram



Facility Details

This is another smaller school, but unlike some of the other schools in the system it can be expanded. The site is small does however have good core facilities with a capacity of around 700 students. With regard to both buildings and grounds, both meet the minimum standards and only typical maintenance issues are needed. The cost of most of those are reduced with items like a metal roof and a good mechanical unit, this facility is well positioned to provide many years of economical service.

Building Images

Below are several images of the facility showing general conditions.

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



Walkway Canopy



Entry Corridor



Mechanical



ADA Compliance

Potential Improvements

The amount and type of improvements noted here relate directly to deferred maintenance costs and the proper upkeep of the buildings and grounds. Site items relate to fixing pot holes and cleaning of swales. Interior and infrastructural are typical with the exception of the potential to add a generator to the site that can power up the mechanical system in the event of an emergency.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Havelock Elementary

			10.00%	9.00%	15.00%	
#	Item	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$16,000	$1,600	$1,440	$2,400	$21,440
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$105,239	$10,524	$9,472	$15,786	$141,020
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$60,000	$6,000	$5,400	$9,000	$80,400
7	Canopy (cov. Walks)	$0	$0	$0	$0	$0
8	Other Site	$9,567	$957	$861	$1,435	$12,820
9	Roofing	$0	$0	$0	$0	$0
10	Structural	$0	$0	$0	$0	$0
11	Windows	$0	$0	$0	$0	$0
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$0	$0	$0	$0	$0
14	Partition/Wall Const	$8,000	$800	$720	$1,200	$10,720
15	Ceilings	$13,458	$1,346	$1,211	$2,019	$18,034
16	Flooring	$127,044	$12,704	$11,434	$19,057	$170,238
17	Painting	$140,524	$14,052	$12,647	$21,079	$188,302
18	Other Building Interior	$0	$0	$0	$0	$0
19	Mechanical	$60,000	$6,000	$5,400	$9,000	$80,400
20	Electrical	$320,000	$32,000	$28,800	$48,000	$428,800
21	Lighting	$135,000	$13,500	$12,150	$20,250	$180,900
22	Technology	$50,698	$5,070	$4,563	$7,605	$67,936
23	Plumbing	$25,900	$2,590	$2,331	$3,885	$34,706
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$12,250	$1,225	$1,103	$1,838	$16,415
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$0	$0	$0	$0	$0
28	Fire Alarm	$0	$0	$0	$0	$0
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$28,000	$2,800	$2,520	$4,200	$37,520
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$16,000	$1,600	$1,440	$2,400	$21,440
37	Kitchen Equipment	$64,000	$6,400	$5,760	$9,600	$85,760
38	Media Center Furniture	$45,000	$4,500	$4,050	$6,750	$60,300
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$1,657,151**

Renovations
The existing spaces do not need renovated. Some improvements are appropriate but related to deferred maintenance items that are to be expected.

Additions
There is potential to expand this school. There are two options with one dependent on decisions related to Havelock Middle School, and the other option to the south. The proposed solution would bring the capacity up to around 600 students and be under the 700 student core. This is standard practice, but depending on the DMS decision, the school could be developed to meet its core, but any temporary facility will cause the lunch period to start earlier and run later than desired.

Site
This parcel is combined with DMS and although there are some improvements proposed to the building grounds related to deferred maintenance, no significant improvements to the queue or bus lot is anticipated.

Mechanical System
This is a 4 pipe Variable Air Volume (VAV) system with blower coils on platforms which results in its ability to dehumidify the building. In the Administrative area split system heat pumps are used allowing summertime operation without cooling the entire school down to room temperature. Based on the ability of the system it would be appropriate to retro-commission or redo the test and balance, thus ensuring continued optimal operation.

Fire Alarm
The system does not need to be replaced at this time and is in good working order, however much of it will need to be replaced due to availability of parts in the five to ten years. A generator is proposed in an effort to continue to dry the building in the event of a power loss.

Electric
The equipment is in good condition and should not need upgrades for many years. Adding a generator to this school should be considered to protect the asset from power outages and potentially use the facility in the event of an emergency.

Lighting
Mostly T8 fixtures. Replacement of these with LED lights will provide a payback within about 3 -5 years depending on the hours of operation and includes reduced heating and cooling during that time.

Potential Additions and Renovations

Havelock Elementary

Craven County Schools

Space Inventory / Worksheet 2019

Havelock Elementary

12/3/2019

Current Student Capacity (NCDPI)	422	Current Core Capacity (NCDPI)	699
Proposed Student Capacity	**600**	**Proposed Core Capacity**	**699**
	Number of Spaces	0	Square Footage

Total Cost				**$4,484,160**
Cost / Student				**$7,474**
Athletic / PE /Facilities				
				Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	6	4		2
Grades 1-3 Clsrms	18	12		6
Grades 4-5 Clsrms	8	5		3
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1	2		
Instructional Kitchen				
Resource	5	5		
Computer				
STEM	1	1		
Sub-Total	39	29	0	11
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project				
Art Sto. Kiln	1	1		
General Music	1	1		
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	3	3	0	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage	1	1		
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1	1		
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	3	0	0
Misc. Spaces				
ROTC				
Mobile Units				
Total	**45**	**35**	**0**	**11**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,131	2796		
Support	1,200	1034		
Computer				
Sub-Total	4,331	3,830	0	0
Food Service		# of seatings		3
Dining	2,796	4710	-222	
Kitchen	1,938	2962		
Serving	620	398	222	
Sub-Total	5,354	8,070	222	0
Auditorium		# of seats		0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	2,690	2564	151	
Sub-Total	2,690	2,564	151	0
Storage				
Book Storage	850	194	656	
General Storage	950	1757	-807	
Sub-Total	1,800	1,951	656	0
Staff Support				
Staff Support	1,300	801		
Sub-Total	1,300	801	0	0
Total Renovated Spaces			1,029	
Demolition Totaling				
Total	**15,475**	**17,216**	**1,029**	**0**

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3	3		
Sub-Total	3	3	0	0
Total	**0**	**0**	**0**	**9**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Havelock Elementary in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

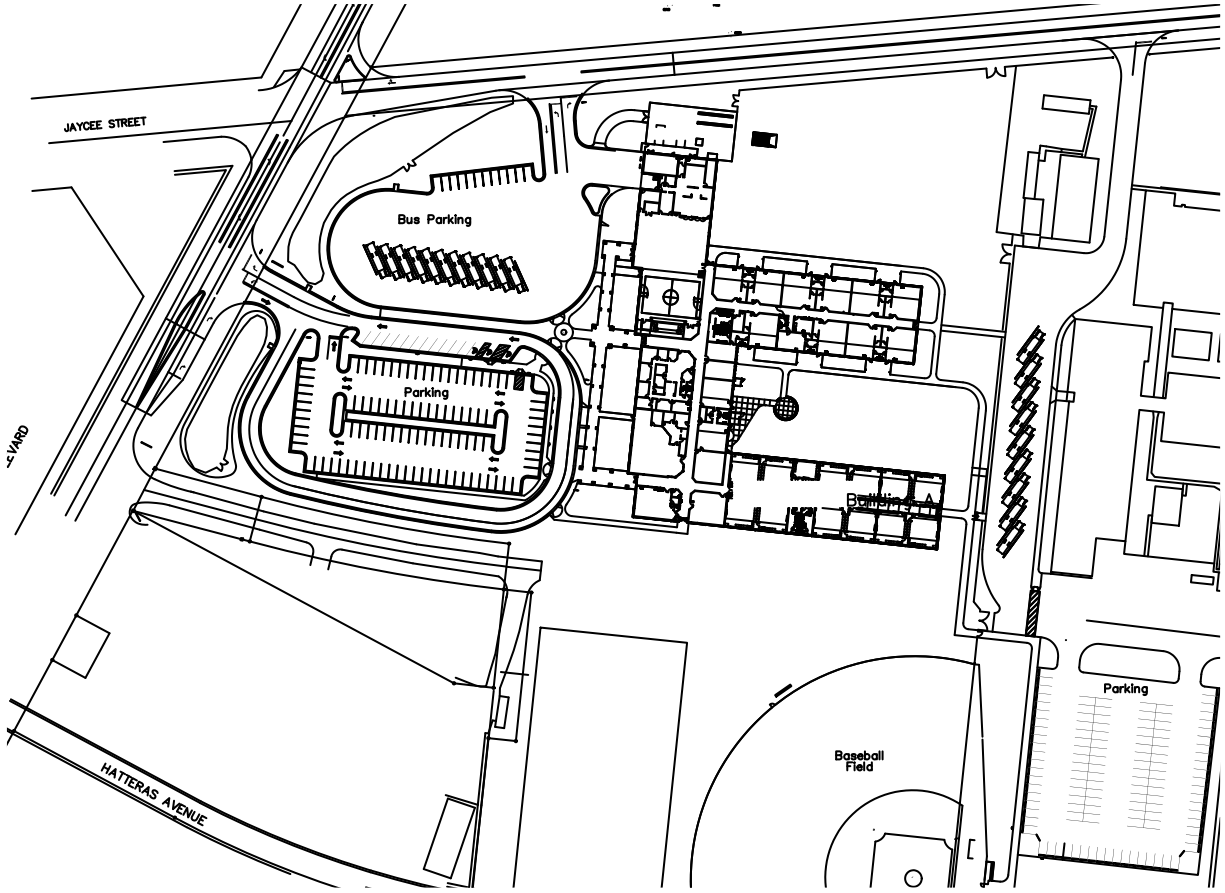
Havelock Elementary

Additions / Renovations	Proposed Student Capacity			600
	Proposed Core Capacity			699
Student Capacity				
Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Academic Spaces	11	11,250	185.32	$2,084,884
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	0	0	0.00	$0
Misc. Spaces ()			180.00	$0
Renovations	0	0	60.00	$0
Core Capacity				
Media Center		0	0.00	$0
Food Service		0	0.00	$0
Auditorium		0	0.00	$0
Administration		0	203.50	$0
Storage		0	0.00	$0
Staff Support		0	203.50	$0
Renovations		1,029	70.59	$72,640
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		11,250	$185.32	$2,084,884
Circulation/ Mechanical/Toilets/Walls	38.00%	4,275	$185.32	$792,256
Subtotal Renovated		1,029	$70.59	$72,640
Athletics				$0
Site Improvements				$120,000
Other ()				
Sub Total				$3,069,780
Inflation (3% for 3 years)	9.00%			$276,280
Contingency (%)	10.00%			$334,606
Sub Total				$3,680,666
A-E Fees (%)	10.00%			$368,067
Financing Charges	6.00%			$269,050
Other Fees and Services				$166,378
Site	0			$0
Owners Contingency (furn., equipment)				$126,000
Total				**$4,484,160**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Havelock Elementary School | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

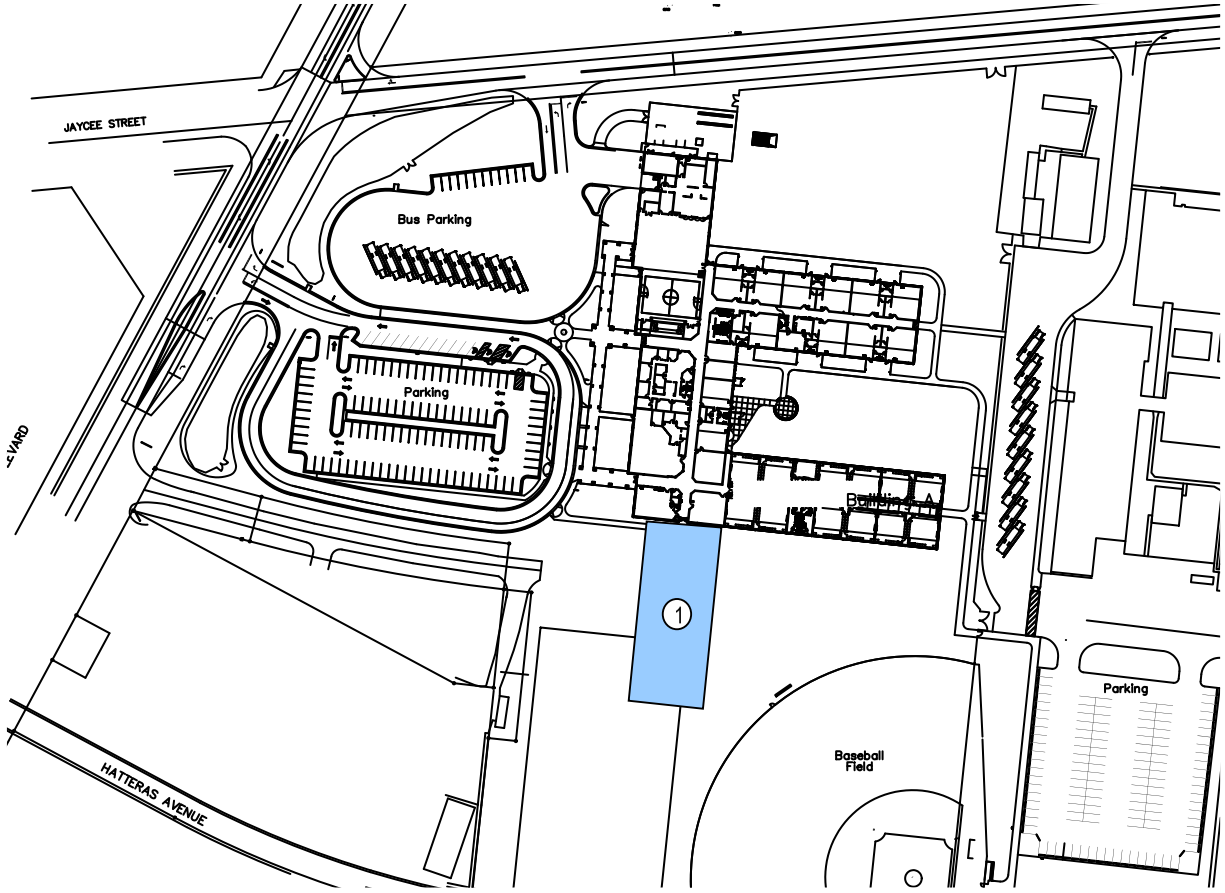
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Havelock Elementary School | **2019**

Proposed



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

J.T. Barber Elementary School

There have been several expansions to this facility since it was first constructed in 1951. The old portion still makes up 85% of the entire building. The parcel data is shared with the Bus Garage and the Child Nutrition Warehouse with several other adjacent residential size properties. It is nestled within a neighborhood community creating traffic congestion and the entirety of the building is within the 100 year flood zone.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-020 -005	J.T. Barber E.	BOE	11.0	$251,750	$251,750
8-020 -006	J.T. Barber E. West Parcel off Cobb St	BOE	0.1	$6,000	$6,000
8-020 -008	J.T. Barber E. Center Parcel off Cobb St	BOE	0.1	$6,000	$6,000
8-020 -012	J.T. Barber E. East Parcel off Cobb St	BOE	0.1	$6,000	$6,000
8-021 -072	J.T. Barber Partial and Bus Garage	BOE	5.5	$138,750	$138,750
		Total	16.7	$408,500	$408,500

Insurance Data

J.T. BARBER ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25034801	MAIN BUILDING	NC2	1/1/1951	68	75516	$13,369,349
1.02	Media / Admin	NC1	9/1/2008	11	8730	
1.03	Cafeteria / Kitchen		1/1/1952	67		
1.04	Double Loaded west corr		1/1/1954	65		
1.05	Auditorium / Gym		1/1/1954	65		
1.06	2 CR Pod		1/1/1954	65		
25034803	MAINT DEPT BLDG	NC1	1/1/1966	53	4260	$528,042
	Totals / Average $/sf				88506	$13,897,391
	Average Construction Date		1962			
	Average Age			56		

Insurance / GIS Data

At 884,000 square feet this one story building occupies about 50% of the overall campus. The new Media Center of around 9,000 sf is a recent addition and was constructed in 2008.

Flood Data

With a building floor elevation of 7 ft ASL it is lower than the 8 ft. ASL which is the 100 year flood zone (effective) for this parcel. The floor of the auditorium is nearly three feet lower and will become flooded again as heavy rains and flooding occur.





Life Cycle Analysis

With most of the building at 68 years of age, this building is at the end of its planned life cycle. It was built quickly with inexpensive materials and is beginning to show signs of decay. It should be understood this is a historic building, therefore careful consideration into its future must be considered.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
BARBER ES						
MAIN BUILDING - 1951	-8	60	50	70	1951	68
Media Admin - 2008	69	80	70	90	2008	11
Cafeteria / Kitchen - 1952	-7	60	50	70	1952	67
Double Loaded West Corriror - 1954	-5	60	50	70	1954	65
Auditorium / Gym - 1954	-5	60	50	70	1954	65
2 Classroom Pod - 1954	-5	60	50	70	1954	65
MAINT DEPT BLDG - 1966	-3	50	40	60	1966	53

Utility Providers

Electrical	City of New Bern
Sewer	City of New Bern
Water	City of New Bern
Natural Gas	Piedmont Natural Gas

Square Footage Per Program (Based on Use)

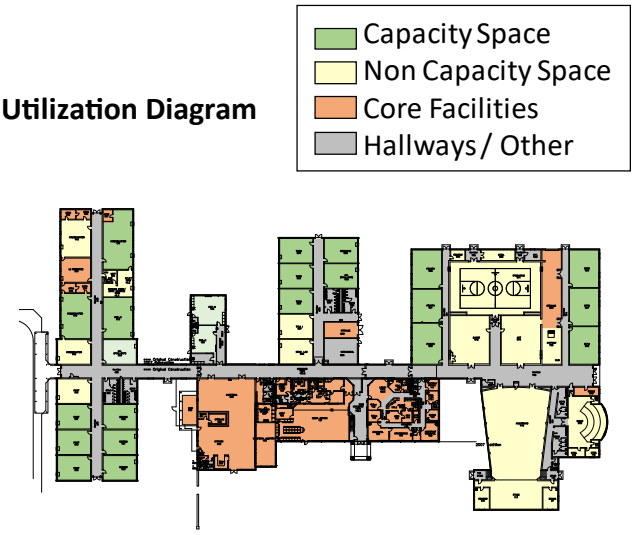
Nearly half of the rooms are below 80% of the recommended standards with the worst ratio being 50% of what it should be. When the square footage of classrooms is reduced to this level it is difficult for both teachers and students to focus on learning.



Capacity / Use Diagram (Optimized for 2021)

The school has a variety of different sized spaces which allows for a good distribution of support spaces and administrative areas around campus. There is a concentration of core and administrative facilities at the front.

Utilization Diagram



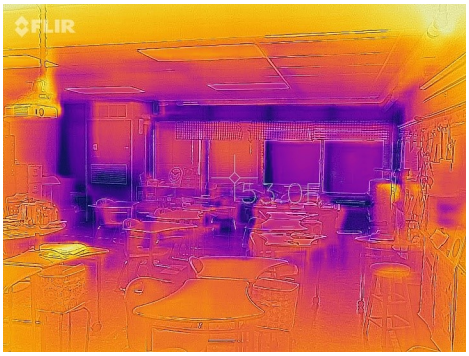
Facility Details

As you walk through the school it is apparent that numerous repairs have occurred over the years. Brick, concrete block, and cinder block are infilled suggesting changes to the overall building layout. The floors were never correctly finished and it takes great effort on the part of the custodians to get a good coat of wax on the floors.

When Hurricane Florence hit, the Auditorium filled up with three to four feet of water damaging many chairs and popping the asbestos tiles. The floors were polished and the seats are in progress of replacement. There are also numerous areas that are not fully ADA compliant and if this facility is to continue to serve the school system rectifying this situation should be considered .

Building Images

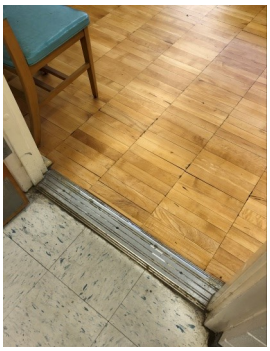
Below are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance. These are only a few examples that have a large impact to the deferred maintenance program.



Non Thermal Windows



Differential Settlement



Unique Flooring System



ADA Compliance



Aged Plumbing Lines



Freezers outside

Potential Improvements

J.T. Barber is a registered Historic Building and any improvements will need to be respectful of the history of the building including its construction material, type, and overall appearance. With an Operational Capacity of only 312 students, this is a small school on a site with various limitations, including its location in a flood zone and its cramped placement on the parcel.

Due to its location in a neighborhood and its street frontage, placing a NCDOT queue is not practical. One option is to rearrange the drop / pickup so parents can stage on the Bus Garage site. This will require careful orchestration from all parties on these combined parcels.

At only seven 7 ft. ASL, water infiltration will continue to be an issue. The water table is high and the soils remain wet year round. During heavy rains, water will leak into the auditorium floor which is only 4 ft ASL. Options including a type of French Drain attached to a pump and generator are one of the solutions proposed in an effort to get water away from the building. Water issues at the Auditorium are likely contributing to the settlement along the East wall.

The building was built of lower quality materials including cinder block walls and floor tiles. The original floor slabs were not poured flat and have many high and low spots. The custodial staff does a great job of stripping and polishing and have learned how to deal with the floor and all of its inconsistencies. The infrastructure is outside of its anticipated useful life. Several water breaks have been repaired and the entire mechanical system should be considered to be on its last legs.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

JT Barber Elementary

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$0	$0	$0	$0	$0
2	Site Utilities	$94,800	$9,480	$8,532	$14,220	$127,032
3	Parking / Drives	$245,243	$24,524	$22,072	$36,786	$328,625
4	Sewer System	$14,000	$1,400	$1,260	$2,100	$18,760
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$66,500	$6,650	$5,985	$9,975	$89,110
7	Canopy (cov. Walks)	$94,290	$9,429	$8,486	$14,144	$126,349
8	Other Site	$114,923	$11,492	$10,343	$17,238	$153,996
9	Roofing	$180,229	$18,023	$16,221	$27,034	$241,507
10	Structural	$155,400	$15,540	$13,986	$23,310	$208,236
11	Windows	$777,564	$77,756	$69,981	$116,635	$1,041,936
12	Walls	$76,250	$7,625	$6,863	$11,438	$102,175
13	Other Building Exterior	$25,000	$2,500	$2,250	$3,750	$33,500
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$257,452	$25,745	$23,171	$38,618	$344,986
16	Flooring	$1,163,699	$116,370	$104,733	$174,555	$1,559,356
17	Painting	$193,459	$19,346	$17,411	$29,019	$259,234
18	Other Building Interior	$100,100	$10,010	$9,009	$15,015	$134,134
19	Mechanical	$1,600,000	$160,000	$144,000	$240,000	$2,144,000
20	Electrical	$575,000	$57,500	$51,750	$86,250	$770,500
21	Lighting	$160,000	$16,000	$14,400	$24,000	$214,400
22	Technology	$53,449	$5,345	$4,810	$8,017	$71,622
23	Plumbing	$305,040	$30,504	$27,454	$45,756	$408,754
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$15,750	$1,575	$1,418	$2,363	$21,105
26	ADA Ramps	$20,500	$2,050	$1,845	$3,075	$27,470
27	ADA Toilets	$539,550	$53,955	$48,560	$80,933	$722,997
28	Fire Alarm	$175,000	$17,500	$15,750	$26,250	$234,500
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$85,500	$8,550	$7,695	$12,825	$114,570
31	Abatement	$41,113	$4,111	$3,700	$6,167	$55,092
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$16,000	$1,600	$1,440	$2,400	$21,440
37	Kitchen Equipment	$1,800	$180	$162	$270	$2,412
38	Media Center Furniture	$90,000	$9,000	$8,100	$13,500	$120,600
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$9,698,398**

Renovations

The proposed renovations address issues related to core facilities only. The Kitchen is relatively small and has numerous cracking and infrastructural issues that are related directly to the age of the building.

Additions

No classroom additions are proposed. The increased square footage is dedicated to rectifying the kitchen shortfall and adding restroom facilities near the Auditorium and Gymnasium.

Site

In the afternoon and occasionally in the morning, the queue stretches back into the community and impacts a number of residents. The configuration at the parent drop off does not have enough length to get the cars off the street. By using some of the Bus Garage and Child Nutrition site, a course can be laid out to increase the queue length to just under the NCDOT minimum.

Mechanical System

This school has a mix of BARD units with steam heat, gas packs and split system Dx units with steam heat. There is no steam condensate returning to the boilers requiring makeup water and only one of the boilers is operational. The various systems have a mixture of old control systems that are difficult to find replacement parts for today and will continue to become more scarce. The system has exposed steam piping in the classrooms. The most reasonable way to correct this system and provide a system that can dehumidify the building would be a total replacement of the entire system.

Plumbing

As in the other older buildings, the water lines and sanitary lines are beginning to fail. The lines will need to be replaced in the near future, along with the floor slabs that cover them.

Fire Alarm

The system is old and replacement parts are scarce if they can be found at all. It should be replaced in its entirety with a new addressable system.

Electric

Much of the existing electrical system is original. New switchgear, breaker boxes and branch circuits along with outlets and switches should be installed.

Lighting

The existing building has mainly T8 fixtures that should be replaced with LED lights.

Potential Additions and Renovations

J.T. Barber

Craven County Schools

Space Inventory / Worksheet 2019

12/2/2019

Current Student Capacity (NCDPI)	424	Current Core Capacity (NCDPI)	727
Proposed Student Capacity	424	**Proposed Core Capacity**	727
	Number of Spaces	72	Square Footage

Total Cost	$1,414,187
Cost / Student	$3,335
Athletic / PE /Facilities	
	Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms	1	3		
Kindergartens	4	4		
Grades 1-3 Clsrms	12	12		
Grades 4-5 Clsrms	4	4		
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1			
Instructional Kitchen				
Resource	3			
Computer				
STEM	1	1		
Sub-Total	26	24	0	0
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project				
Art Sto. Kiln	1	1		
General Music	1	1		
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama		1		
Sub-Total	3	4	0	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage	1			
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1	1		
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	2	0	0
Misc. Spaces				
ROTC				
Mobile Units				
Total	**32**	**30**	**0**	**0**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,179	2913		
Support	1,500	1114		
Computer				
Sub-Total	4,679	4,027	0	0
Food Service		# of seatings		3
Dining	2,908	3392		
Kitchen	1,938	1494	1494	444
Serving	620	443	620	
Sub-Total	5,466	5,329	2,114	444
Auditorium		# of seats		0
Auditorium		4776		
Stage / Dress / Sto.		2086		
Lobby		1747		
Sub-Total	0	8,609	0	0
Administration				
Administration	2,740	3046		
Sub-Total	2,740	3,046	0	0
Storage				
Book Storage	860		654	
General Storage	960	2684		
Sub-Total	1,820	2,684	0	0
Staff Support				
Staff Support	1,600	530	1070	
Sub-Total	1,600	530	1,070	0
Total Renovated Spaces			3,184	
Demolition Totaling				
Total	**16,305**	**24,225**	**3,184**	**444**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3	3		
Sub-Total	3	3	0	0
Total	**0**	**0**	**0**	**9**

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at J.T. Barber in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

J.T. Barber

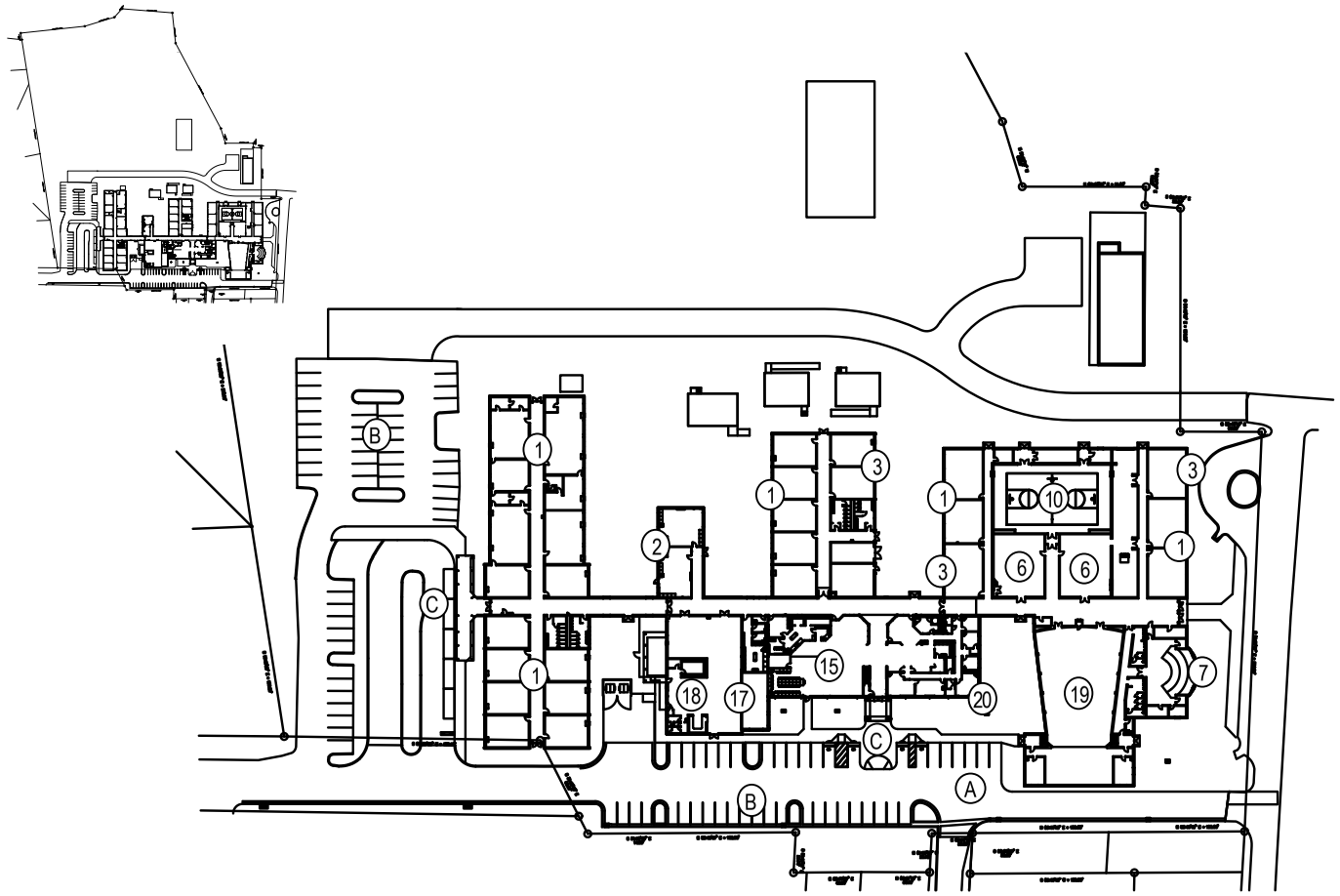
Additions / Renovations	Proposed Student Capacity	424
	Proposed Core Capacity	727

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	0	0	0.00	$0
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	0	0	0.00	$0
Misc. Spaces ()			180.00	$0
Renovations	0	0	60.00	$0
Core Capacity				
Media Center		0	0.00	$0
Food Service		444	471.75	$209,457
Auditorium		0	0.00	$0
Administration		0	314.50	$0
Storage		0	0.00	$0
Staff Support		0	314.50	$0
Renovations		3,184	213.38	$679,408
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		444	$471.75	$209,457
Circulation/ Mechanical/Toilets/Walls	38.00%	169	$471.75	$79,594
Subtotal Renovated		3,184	$213.38	$679,408
Athletics				$0
Site Improvements				$37,000
Other ()				
Sub Total				$1,005,459
Inflation (3% for 3 years)	9.00%			$90,491
Contingency (%)	10.00%			$109,595
Sub Total				$1,205,545
A-E Fees (%)	10.00%			$120,555
Financing Charges	1.00%			$14,142
Other Fees and Services				$73,946
Site	0			$0
Owners Contingency (furn., equipment)				$175,000
Total				**$1,414,187**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

J.T. Barber Elementary School | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

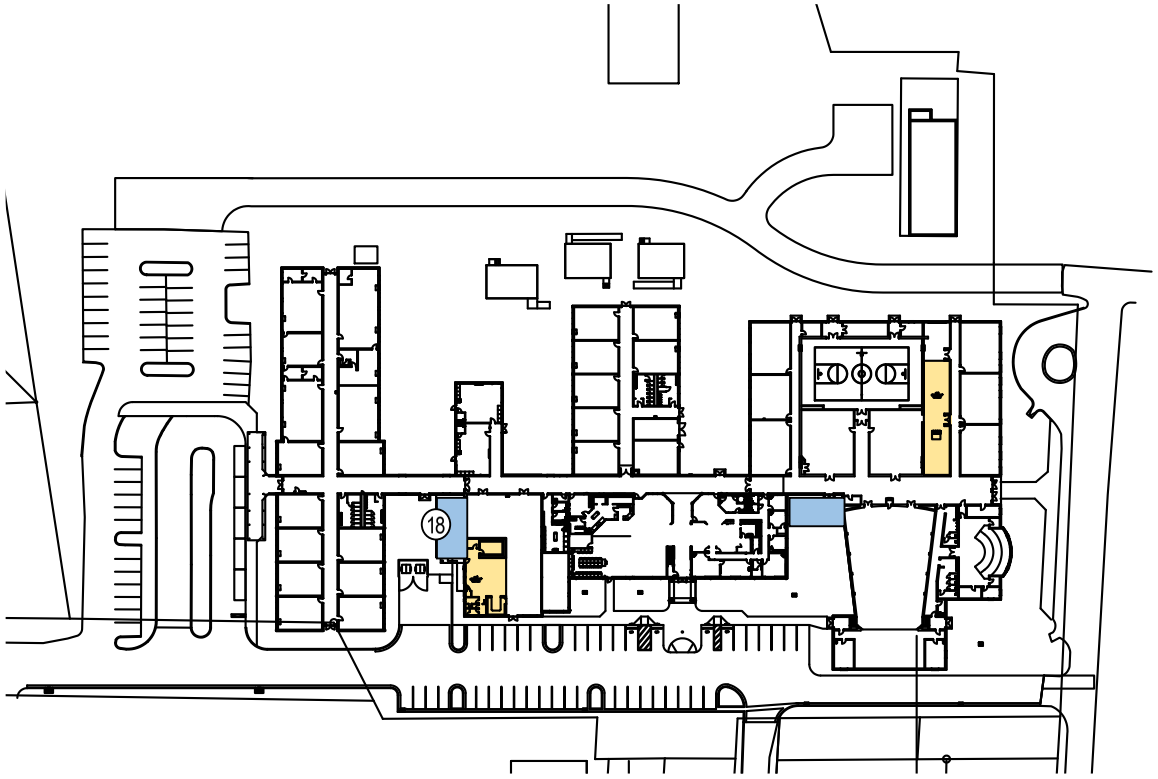
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

J.T. Barber Elementary School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

James W. Smith Elementary School

There has been one expansion to this facility since it was first constructed in 1988. The site is of adequate size and has good roadway frontage. The school system also owns a parcel on the East side of Wells Road. There appears to be wetlands to the north and likely on the eastern parcel, but much is in good overall condition and drains relatively well. The building is still youthful, but at 30 years of age will begin to see more and more building components reach the end of their life cycle and have more needs as time goes on.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
3-023 -072	James W. Smith Elementary	BOE	40.6	$122,100	$122,100
3-023 -071	James W. Smith Elementary Across	BOE	7.1	$42,840	$42,840
		Total	47.7	164,940.0	164,940.0

Insurance Data

SMITH ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25035001	MAIN BUILDING	NC2	1/1/1988	31	68762	$11,821,453
	Main - 6 Cr Addition	NC2	1/1/1998	21	10022	
	Totals / Average $/sf				78784	$11,821,453
	Average Construction Date		1992			
	Average Age			26		

Insurance / GIS Data

At nearly 80,000 square feet this one story building takes up a relatively small portion of the nearly fifty acre site. Overall the young age of the building and the size and organization of the site should provide service to the community for many years to come.

Flood Mapping

Although the building is well above the flood zone at 37 ft. ASL, it has and will become isolated during rain and flooding events. Nestled between Flat Branch and Core Creek which flood, there are only very rural roads that can potentially be used to reach the school. These can easily become flooded completely isolating the campus.



Effective



Preliminary

Life Cycle Analysis

At 31 years of age, this building was constructed of higher quality materials and will provide service for many years. The 1998 addition is slightly more youthful and at 21 years of age is even more soundly constructed.

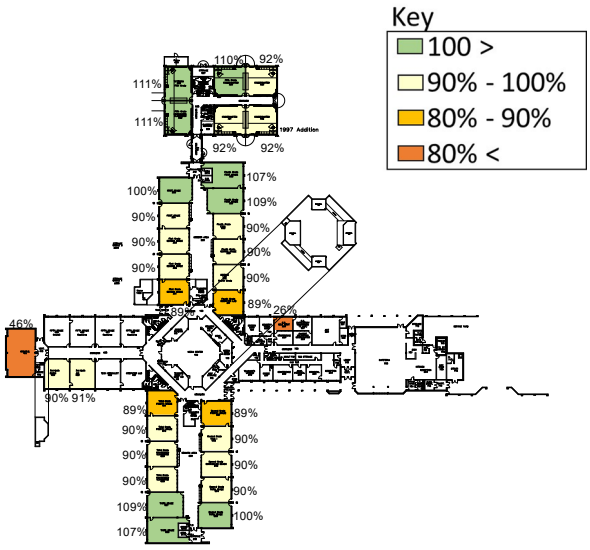
Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
SMITH ES						
MAIN BUILDING - 1988	39	70	60	80	1988	31
MAIN BUILDING - 1998	59	80	70	90	1998	21

Utility Providers

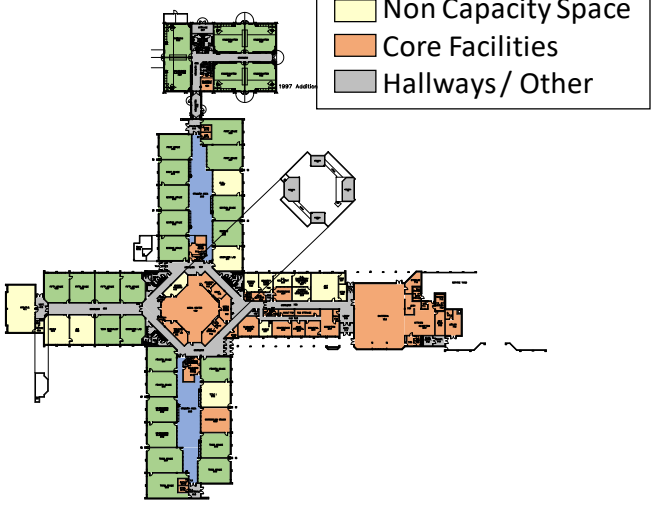
Electrical	Duke /Progress Energy
Sewer	Craven County Water and Sewer
Water	Craven County Water and Sewer
Fuel Oil	Varies

Square Footage Per Program (Based on Use)

As with the other buildings of similar design, there is a mix of rooms that are appropriately sized and some that fall below the minimum standard. The most notable shortfall in square footage is in the Physical Education program. Here the Multipurpose Room is only 46% of the recommended size and limits the activities that can occur and creates inequity with other schools that have a reasonably sized space for PE.



Utilization Diagram



Capacity / Use Diagram (Optimized for 2021)

With many of the rooms designed for classroom instruction, creating small support and resource rooms will be difficult. Using entire rooms for Resource and Administrative or Teacher Work Rooms is less than optimal.

The overall organization of Core Facilities and students, as well as Administrative space, aligns with the site and security concepts in place today.

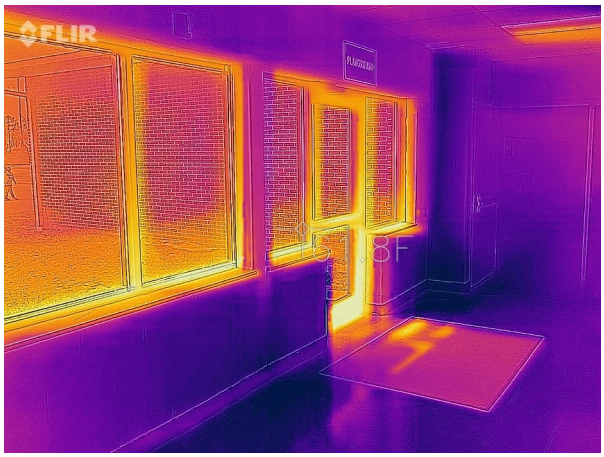
Facility Details

J.W. Smith and the other schools of similar design are in good overall condition with a layout that aligns well with current educational delivery methods. The site is adequate, but has a limited queue length and insufficient parking. The Family Literacy Center is also located on this site with the school Kitchen staff preparing meals and walking them over to the trailers.

Building Images

Below are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance. These are only a few examples that have a large impact on the deferred maintenance program.

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



Thermal Windows



Small PE Space



Aged Hardware



Natural Light



Cafeteria

Potential Improvements

This facility is an appropriately sized school and still provides the opportunity for expansion. Before an expansion is considered, there is insufficient queue and parking on site and with a modest investment improvements can be made to both. Other outdoor improvements to sidewalks and the addition of a canopy will greatly improve this site's operations.

Once inside the building, improvements to the mechanical system and other infrastructure renovations will rejuvenate the building and keep it relatively youthful over the course of the next 40 or so years. Upgrades such as polishing the existing concrete floors are reasonable considering its youthful status vs the cost of stripping and re-waxing the existing floors on an annual basis. Although this building is for the most part ADA compliant, there are still items that should be addressed.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as "Soft Costs" include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

JW Smith Elementary

			10.00%	9.00%	15.00%	
#	Item	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$1,100	$110	$99	$165	$1,474
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$358,671	$35,867	$32,280	$53,801	$480,619
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$0	$0	$0	$0	$0
7	Canopy (cov. Walks)	$56,970	$5,697	$5,127	$8,546	$76,340
8	Other Site	$66,775	$6,678	$6,010	$10,016	$89,479
9	Roofing	$0	$0	$0	$0	$0
10	Structural	$0	$0	$0	$0	$0
11	Windows	$185,154	$18,515	$16,664	$27,773	$248,106
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$4,800	$480	$432	$720	$6,432
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$310,245	$31,025	$27,922	$46,537	$415,729
16	Flooring	$323,639	$32,364	$29,127	$48,546	$433,676
17	Painting	$149,507	$14,951	$13,456	$22,426	$200,339
18	Other Building Interior	$202,283	$20,228	$18,205	$30,342	$271,059
19	Mechanical	$710,000	$71,000	$63,900	$106,500	$951,400
20	Electrical	$300,000	$30,000	$27,000	$45,000	$402,000
21	Lighting	$45,000	$4,500	$4,050	$6,750	$60,300
22	Technology	$52,146	$5,215	$4,693	$7,822	$69,876
23	Plumbing	$29,600	$2,960	$2,664	$4,440	$39,664
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$14,000	$1,400	$1,260	$2,100	$18,760
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$190,210	$19,021	$17,119	$28,532	$254,881
28	Fire Alarm	$160,000	$16,000	$14,400	$24,000	$214,400
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$77,680	$7,768	$6,991	$11,652	$104,091
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$30,000	$3,000	$2,700	$4,500	$40,200
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$216,000	$21,600	$19,440	$32,400	$289,440
37	Kitchen Equipment	$0	$0	$0	$0	$0
38	Media Center Furniture	$45,000	$4,500	$4,050	$6,750	$60,300
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$4,728,564**

Renovations

This school has rooms that are smaller than those recommended by NCDPI's Minimum Standards. By removing the walls from three classrooms, two new classrooms can be renovated to make two that are an appropriate size. Renovations to a room currently used for PE turning it into a Self- Contained classroom with a changing room and bathroom facilities would also be appropriate.

Additions

Based on the size of the site and the Core Capacity, additions beyond replacement of the ones lost in the renovation portion can increase the overall student capacity at this school. This will bring the ADM Capacity to within about fifty students of the Core Capacity which will still allow for some temporary facilities prior to extending the lunch period. A new, full sized, Multipurpose Room with associated toilet facilities should also be considered.

Site

There are several opportunities to improve traffic flow and ADA access to play fields. A revision to the queue by double loading it and adding parking to the east as well as in the circle will extend the stacking space to meet NCDOT requirements. Additional drive and parking should also be considered at the Family Literacy Center to provide staff parking. Walkway Canopy and sidewalks will also improve flow and safety around campus. Building B has a Variable Volume and Temperature (VVT) system that is not working properly and should be replaced.

Mechanical System

The air handlers (AHU) are supplied with direct exchange DX cooling and hot water reheating. The AHUs are original and have aged out requiring the need to replace them. No outdoor air is available with this system and should be corrected. The oil fired boiler has reached the end of its life cycle and should be replaced. The current system does not have the ability to dehumidify, but if humidity sensors were added and the mechanical controls upgraded, the system could pull unwanted moisture out of the air.

Fire Alarm

This is an original fire alarm and as in most older schools is difficult to maintain. A new addressable system would be appropriate.

Electric

The existing main electrical gear is in good overall condition and should last for many years to come. This building is at the end of the electric line and occasionally loses power, as there is no redundancy in the Duke Energy system. It would be appropriate to petition Duke / Progress in an effort to ensure a back line is available. Until that is complete it would be reasonable to add phase monitoring to the school as one leg of the three phase line will occasionally drop power. This can cause larger mechanical units to short out permanently.

Lighting

There are still many older T8 fixtures that should be replaced with more efficient LED fixtures.

Potential Additions and Renovations

J.W. Smith

Craven County Schools

Space Inventory / Worksheet 2019

James W. Smith

12/2/2019

Current Student Capacity (NCDPI)	609	Current Core Capacity (NCDPI)	728
Proposed Student Capacity	676	**Proposed Core Capacity**	728
	Number of Spaces	0	Square Footage

Total Cost	$7,951,173
Cost / Student	$11,762
Athletic / PE /Facilities	
	Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	6	6		
Grades 1-3 Clsrms	21	17	6	6
Grades 4-5 Clsrms	8	8		
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	2	1	1	1
Instructional Kitchen				
Resource	5	6		
Computer	1			1
STEM	1	1		
Sub-Total	44	39	7	8
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project				
Art Sto. Kiln	1	1		
General Music	1	1		
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	3	3	0	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1	-1	1
Stage	1			1
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1			1
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	1	0	3
Misc. Spaces				
ROTC				
Mobile Units				
Total	**50**	**43**	**7**	**11**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,181	2911		
Support	1,500	1646	-146	
Computer				
Sub-Total	4,681	4,557	0	0
Food Service	# of seatings			3
Dining	2,912	3965	-538	
Kitchen	1,938	1816	122	
Serving	620	204	416	
Sub-Total	5,470	5,985	538	0
Auditorium	# of seats			0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	2,740	2623		117
Sub-Total	2,740	2,623	0	117
Storage				
Book Storage	860			860
General Storage	960	884		76
Sub-Total	1,820	884	0	936
Staff Support				
Staff Support	1,600	1395	146	
Sub-Total	1,600	1,395	146	0
Total Renovated Spaces			684	
Demolition Totaling				
Total	**16,311**	**15,444**	**684**	**1,053**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3	3		
Sub-Total	3	3	0	0
Total	**0**	**0**	**0**	**9**

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at J.W. Smith in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

James W. Smith

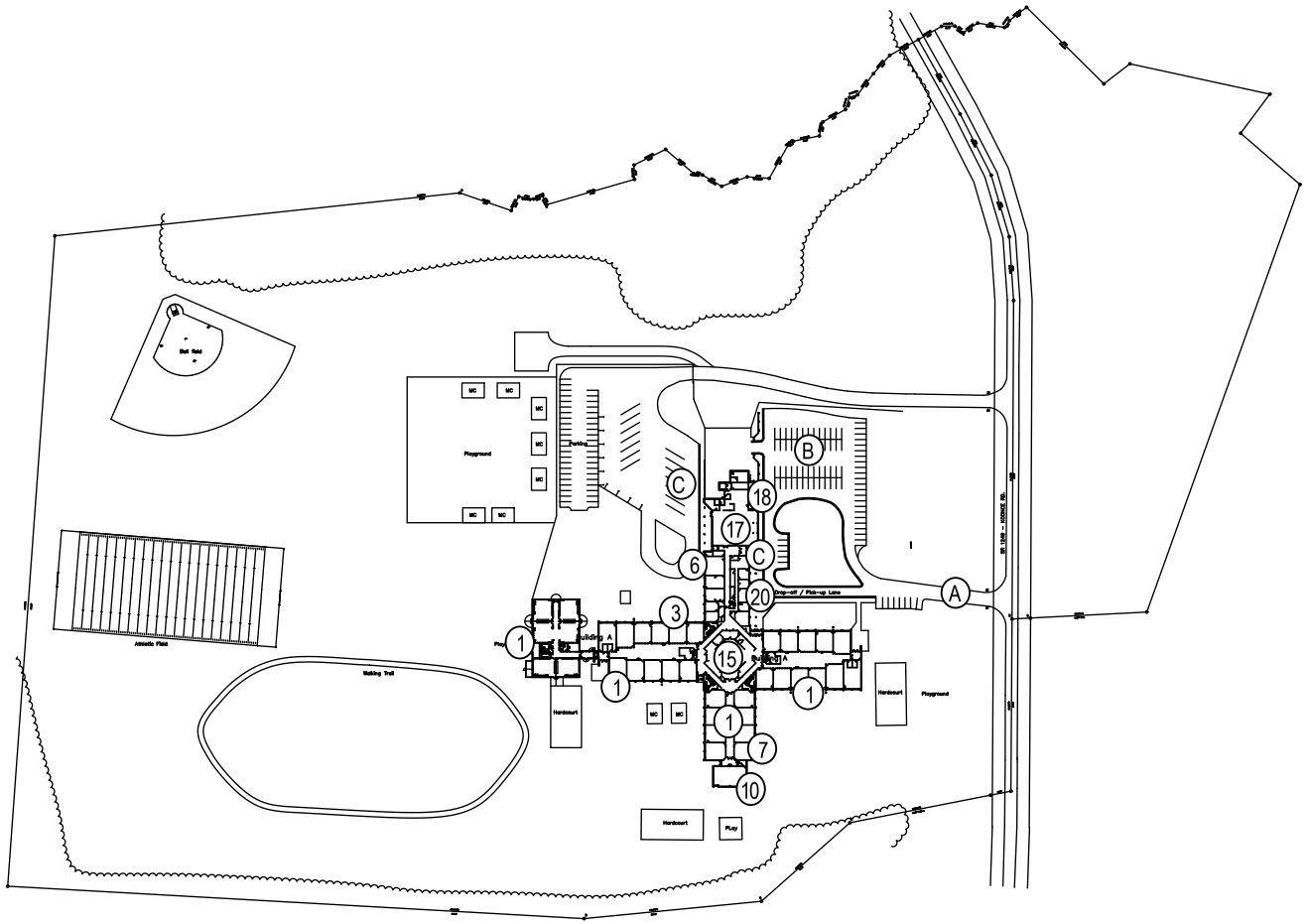
Additions / Renovations	Proposed Student Capacity	676
	Proposed Core Capacity	728

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	8	8,050	229.97	$1,851,238
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	3	5,162	306.36	$1,581,432
Misc. Spaces ()			180.00	$0
Renovations	7	7,265	67.40	$489,630
Core Capacity				
Media Center		0	0.00	$0
Food Service		0	0.00	$0
Auditorium		0	0.00	$0
Administration		117	240.50	$28,139
Storage		936	240.50	$225,108
Staff Support		0	240.50	$0
Renovations		684	165.85	$113,440
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	1			$45,000
Subtotal New		14,265	$258.39	$3,685,916
Circulation/ Mechanical/Toilets/Walls	38.00%	5,421	$258.39	$1,400,648
Subtotal Renovated		7,949	$75.87	$603,070
Athletics				$45,000
Site Improvements				$144,364
Other ()				
Sub Total				$5,878,998
Inflation (3% for 3 years)	9.00%			$529,110
Contingency (%)	10.00%			$640,811
Sub Total				$7,048,919
A-E Fees (%)	10.00%			$704,892
Financing Charges	1.00%			$79,512
Other Fees and Services				$117,851
Site	0			$0
Owners Contingency (furn., equipment)				$260,000
Total				**$7,951,173**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

James W. Smith Elementary School | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

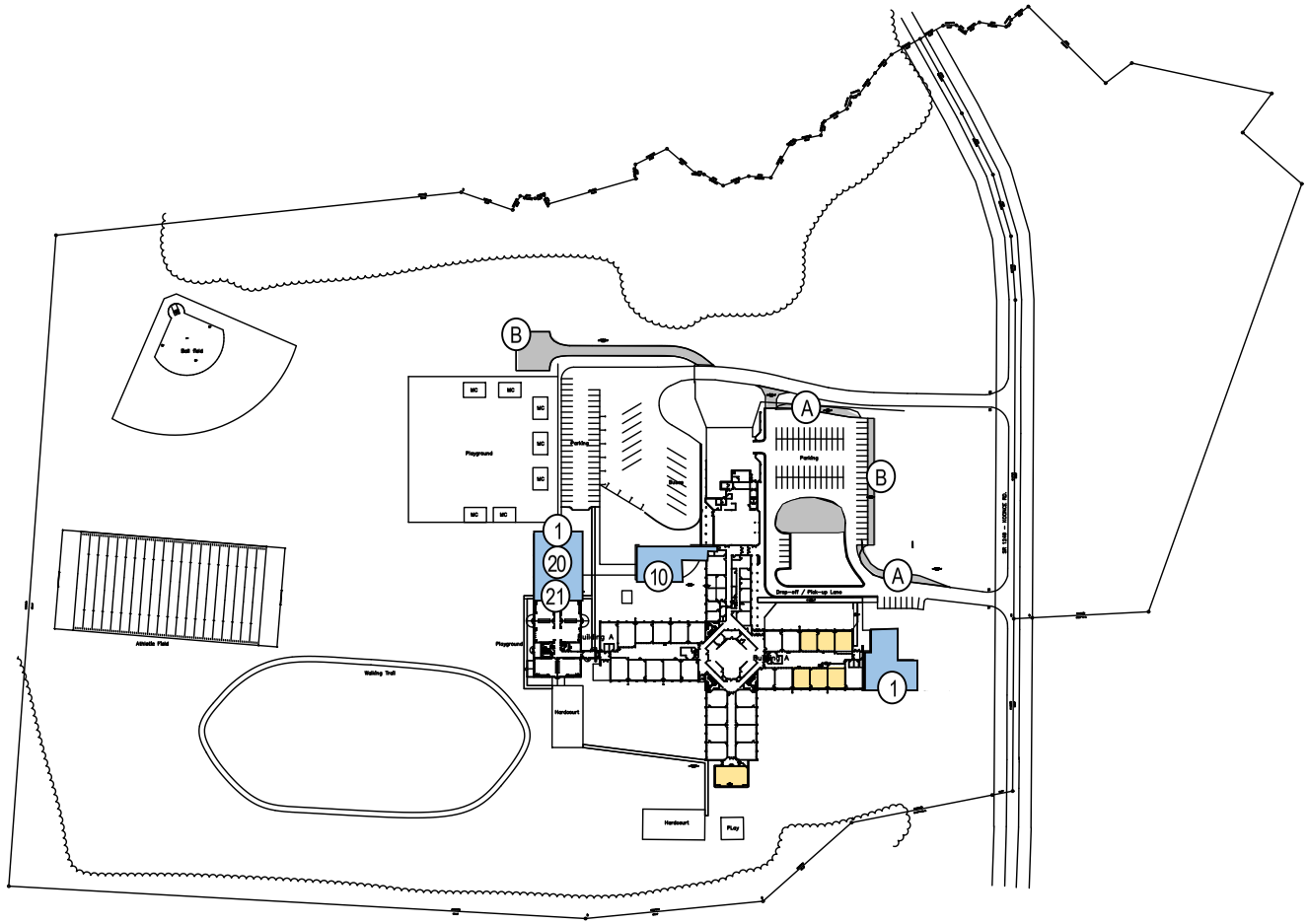
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

James W. Smith Elementary School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

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Oaks Road Academy

There have been several expansions to this facility since it was first constructed in 1958, with most of the square footage being more than 40 years of age. The parcel size is adequate, but once you reach the wood line the soils become very wet and no construction should be considered there. The queue length is short for a school of more than 500 students, parking is limited and the parent and bus traffic mix indicates additional vehicular space is warranted. Play areas are limited due to the wet area around the school.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-240 -013	Oaks Road	BOE	15.6	$390,000	$390,000
8-240 -8000	Oaks Road Field out Front	BOE	2.5	$98,800	$98,800
		Total	18.1	$488,800	$488,800

Insurance Data

OAKS RD ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25036001	MAIN BUILDING	NC2	1/1/1958	61	19550	$6,182,015
	4 CR Addition	NC2	1/1/1967	52	4150	
	North and South CR Wings	NC2	1/1/1976	43	17500	
25036011	MULTIPURPOSE MEDIA	NC2	9/1/2001	18	9750	$1,462,977
	Toilet Addition		9/1/2001	18		
	Totals / Average $/sf				50950	$7,644,992
	Average Construction Date		1975			
	Average Age			38		

Insurance / GIS Data

At 51,000 square feet this one story building takes up a relatively large portion of the useful 18 acres. The building has been well maintained, but based on the construction materials of the older sections are nearing the end of their predicted life cycle.

Flood Mapping

When looking at either the effective or preliminary maps, the school building itself is in the 100 year flood zone. The building floor is at 8' ASL with the accepted flood zone being equal and the preliminary flood zone showing it one foot below flood stage.



Effective



Preliminary

Life Cycle Analysis

The age of the building, along with the type of construction, contribute to the overall expected life of a building. With only twenty or so years of life remaining on most of the square footage this building is nearing the end of its anticipated life and will begin to cost more to maintain than in past years.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
OAKS RD ES						
MAIN BUILDING - 1958	-1	60	50	70	1958	61
Main - 4 CR Addition - 1967	18	70	60	80	1967	52
Main - North and South CR Wing - 1976	27	70	60	80	1976	43
MULTIPURPOSE MEDIA - 2001	62	80	70	90	2001	18
Toilet Addition - 2001	62	80	70	90	2001	18

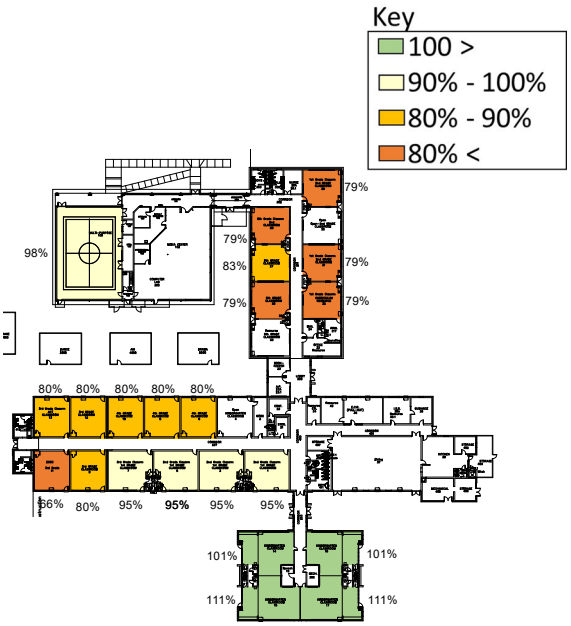
Utility Providers

Electrical	City of New Bern
Sewer	City of New Bern
Water	City of New Bern
Gas	NA

Oaks Road

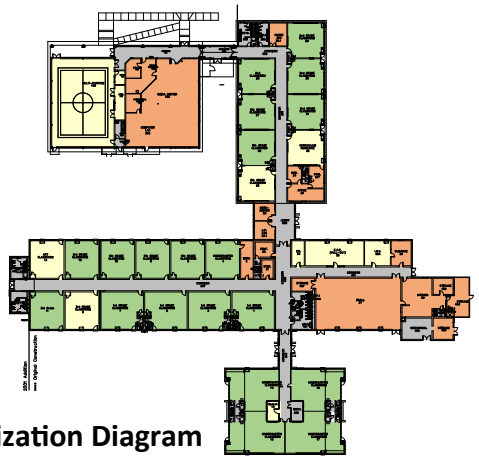
Square Footage Per Program (Based on Use)

As is the case with most older schools the classrooms are smaller than the current recommended minimums. The exceptions to this are the newest sections, the PK area and the Multipurpose Room.

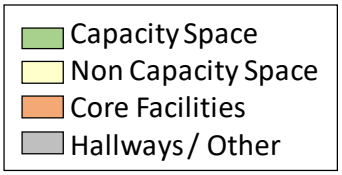


Capacity / Use Diagram (Optimized for 2021)

The core and support facilities are concentrated near the main entry with some distribution throughout the remainder of the building. Within the classroom wings there is great consistency in the size of the spaces and resource rooms are not as efficiently distributed as they are in other buildings.



Utilization Diagram



Facility Details

As might be expected, this older school is beginning to have significant infrastructure issues related to water lines and electrical systems. The fact that it sits within a flood zone explains why much of the site is wet and will be difficult to drain properly.

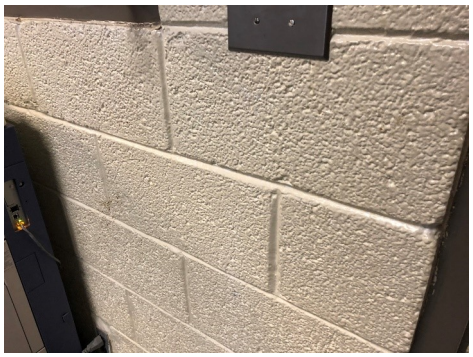
Building Images

Below are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance. These are only a few issues that have a large impact to the deferred maintenance cost.

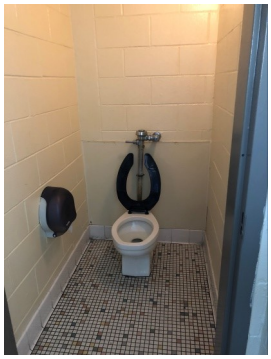
The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



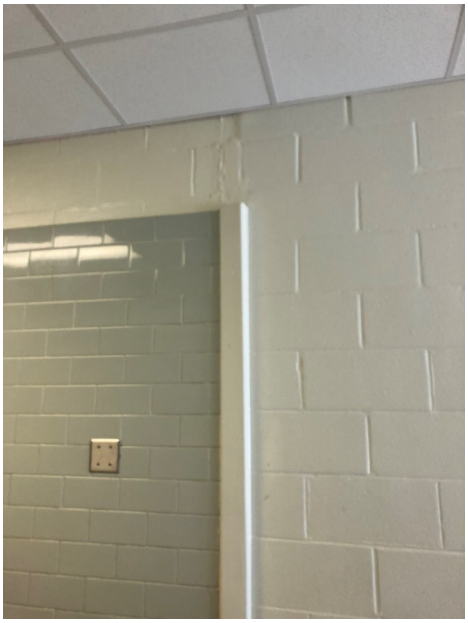
Thermal Windows



Cinder Blocks



ADA Compliance



Material Changes



Small Spaces



Door Hardware

Potential Improvements

This is considered a small school in building size, classroom size and effective parcel size. The site is very limited and the southern and western portions are very wet as they are in the 100 year flood zone. With an operating capacity of around 300 students it will be more expensive to continue to operate this school on a cost per student basis when compared to a typical school of 600 to 800 students.

Starting at the street edge there is insufficient queue space to get cars off the street. By adding a double loaded queue at the front along with additional parking, vehicular traffic related issues will be reduced.

On the interior there are numerous items that have reached the end of their expected life. These include windows that have no thermal resistance, a mechanical system that cannot dehumidify and an original electrical system.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Oaks Road Elementary

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$1,100	$110	$99	$165	$1,474
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$286,273	$28,627	$25,765	$42,941	$383,606
4	Sewer System	$44,000	$4,400	$3,960	$6,600	$58,960
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$53,000	$5,300	$4,770	$7,950	$71,020
7	Canopy (cov. Walks)	$86,785	$8,679	$7,811	$13,018	$116,292
8	Other Site	$46,440	$4,644	$4,180	$6,966	$62,230
9	Roofing	$740,029	$74,003	$66,603	$111,004	$991,638
10	Structural	$0	$0	$0	$0	$0
11	Windows	$301,764	$30,176	$27,159	$45,265	$404,364
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$0	$0	$0	$0	$0
14	Partition/Wall Const	$8,000	$800	$720	$1,200	$10,720
15	Ceilings	$252,026	$25,203	$22,682	$37,804	$337,714
16	Flooring	$434,088	$43,409	$39,068	$65,113	$581,678
17	Painting	$100,532	$10,053	$9,048	$15,080	$134,712
18	Other Building Interior	$111,800	$11,180	$10,062	$16,770	$149,812
19	Mechanical	$550,000	$55,000	$49,500	$82,500	$737,000
20	Electrical	$460,000	$46,000	$41,400	$69,000	$616,400
21	Lighting	$96,000	$9,600	$8,640	$14,400	$128,640
22	Technology	$56,318	$5,632	$5,069	$8,448	$75,466
23	Plumbing	$42,695	$4,269	$3,843	$6,404	$57,211
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$8,750	$875	$788	$1,313	$11,725
26	ADA Ramps	$46,250	$4,625	$4,163	$6,938	$61,975
27	ADA Toilets	$633,500	$63,350	$57,015	$95,025	$848,890
28	Fire Alarm	$106,000	$10,600	$9,540	$15,900	$142,040
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$104,700	$10,470	$9,423	$15,705	$140,298
31	Abatement	$34,391	$3,439	$3,095	$5,159	$46,083
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$30,000	$3,000	$2,700	$4,500	$40,200
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$16,000	$1,600	$1,440	$2,400	$21,440
37	Kitchen Equipment	$20,800	$2,080	$1,872	$3,120	$27,872
38	Media Center Furniture	$45,000	$4,500	$4,050	$6,750	$60,300
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$6,319,761**

Renovations

Renovations here are relegated to addressing Administrative and Core facilities. The classrooms do not lend themselves to being reconfigured into appropriate spaces without making a significant investment into a building that is sixty years old.

Additions

The main Administrative Offices are extremely small with other offices located around the school. An addition and renovation combination would be appropriate to create a suite of rooms that allow the administration and staff to work closely together in a way similar to other schools.

Site

Several improvements to the site should be considered, including improvements to the southern driveway entrance as a parent entrance. This would allow for an elongated queue and separate the bus and other vehicular traffic. Additional parking and canopies should also be considered in an effort to creating equity amongst the other schools.

Mechanical System

Oaks Road has a mix of split system heat pumps and BARD units dating from 1998. These have exceeded their expected life and should be replaced.

Fire Alarm

The system is sufficiently old that finding replacement parts is difficult to impossible. Replacement with a new addressable system will be needed.

Electric

The original equipment has reached the end of its life and should be replaced. This includes sub panels and branch circuits. The equipment in the 2000 addition still has some life in it and can wait to be replaced.

Lighting

The existing T8 lights should be replaced with LED lights to save energy.

Potential Additions and Renovations

Oaks Road

Craven County Schools

Space Inventory / Worksheet 2019

12/2/2019

Current Student Capacity (NCDPI)	368	Current Core Capacity (NCDPI)	536
Proposed Student Capacity	368	**Proposed Core Capacity**	536
	Number of Spaces	0	Square Footage

Total Cost	$2,126,324
Cost / Student	$5,778

Athletic / PE /Facilities — Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	3	3		
Grades 1-3 Clsrms	12	12		
Grades 4-5 Clsrms	4	4		
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1	1		
Instructional Kitchen				
Resource	3	5	2	
Computer				
STEM	1	1		
Sub-Total	24	26	2	0
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts				
Art Project	1	1		
Art Sto. Kiln				
General Music				
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	1	1	0	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage	1			1
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1	1		
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	2	0	1
Misc. Spaces				
ROTC				
Mobile Units				
Total	**28**	**29**	**2**	**1**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	2,734	3278	-441	
Support	1,200	759	441	
Computer				
Sub-Total	3,934	4,037	0	0
Food Service	# of seatings			3
Dining	2,144	2500	-113	
Kitchen	1,518	1593	1593	
Serving	400	287	113	
Sub-Total	4,062	4,380	1,706	0
Auditorium	# of seats			0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	2,630	2497	1156	1,146
Sub-Total	2,630	2,497	1,156	1,146
Storage				
Book Storage	770		770	
General Storage	870	769	101	
Sub-Total	1,640	769	871	0
Staff Support				
Staff Support	1,200		1200	
Sub-Total	1,200	0	0	0
Total Renovated Spaces			3,733	
Demolition Totaling				
Total	**13,466**	**11,683**	**3,733**	**1,146**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3	3		
Sub-Total	3	3	0	0
Total	**0**	**0**	**0**	**9**

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Oaks Road in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

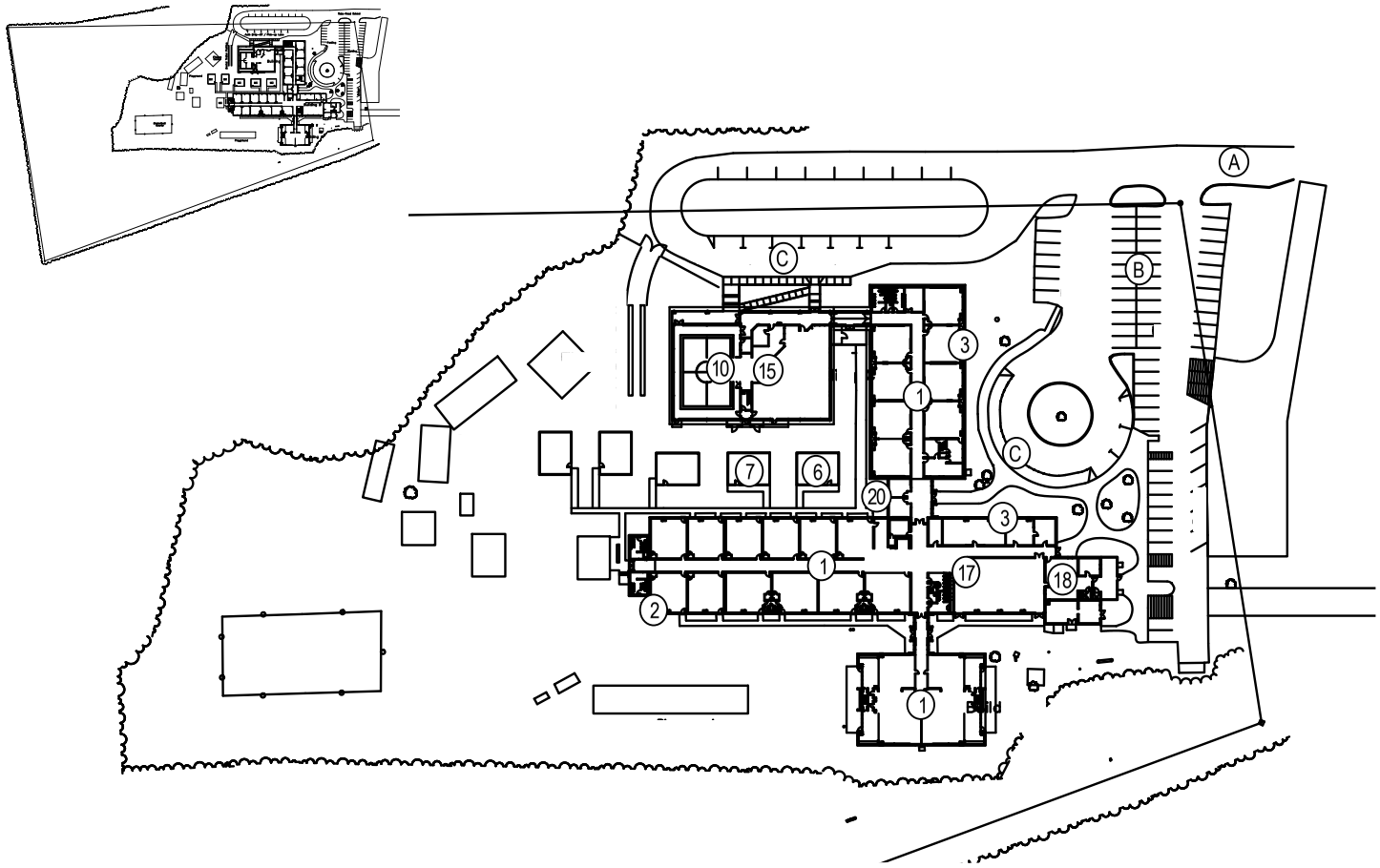
Oaks Road

Additions / Renovations	Proposed Student Capacity			368
	Proposed Core Capacity			536
Student Capacity				
Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Academic Spaces	0	0	0.00	$0
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	1	600	396.82	$238,095
Misc. Spaces ()			180.00	$0
Renovations-Resource	2	809	30.00	$24,270
Core Capacity				
Media Center		0	0.00	$0
Food Service		0	0.00	$0
Auditorium		0	0.00	$0
Administration		1,146	305.25	$349,817
Storage		0	0.00	$0
Staff Support		0	305.25	$0
Renovations		3,733	169.40	$632,378
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		1,746	$336.72	$587,912
Circulation/ Mechanical/Toilets/Walls	38.00%	663	$336.72	$223,406
Subtotal Renovated		4,542	$144.57	$656,648
Athletics				$0
Site Improvements				$37,000
Other ()				
Sub Total				$1,504,966
Inflation (3% for 3 years)	9.00%			$135,447
Contingency (%)	10.00%			$164,041
Sub Total				$1,804,454
A-E Fees (%)	10.00%			$180,445
Financing Charges	1.00%			$21,263
Other Fees and Services				$120,162
Site	0			$0
Owners Contingency (furn., equipment)				$421,000
Total				**$2,126,324**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Oaks Road Elementary School | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

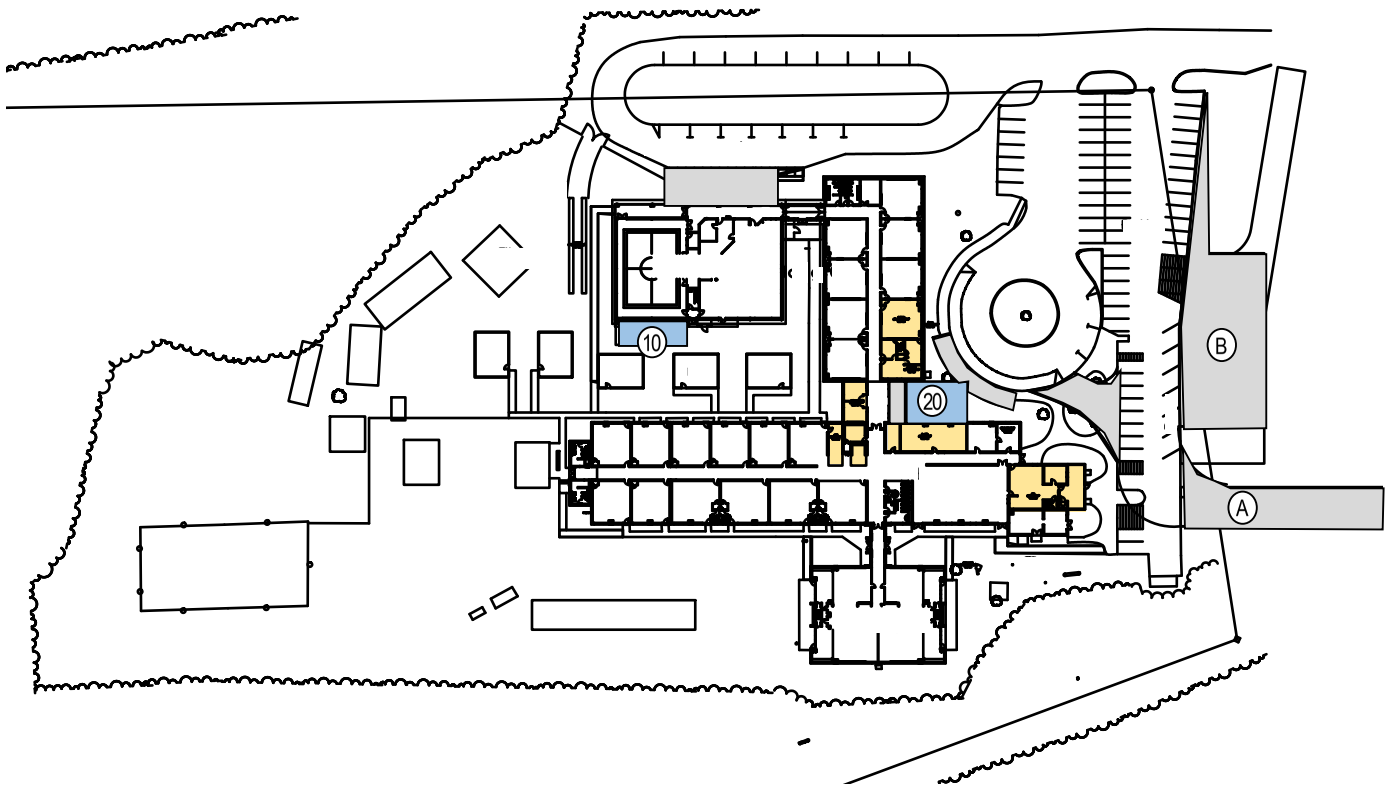
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Oaks Road Elementary School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
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A Drive
B Parking
C Bus Parking / Drop

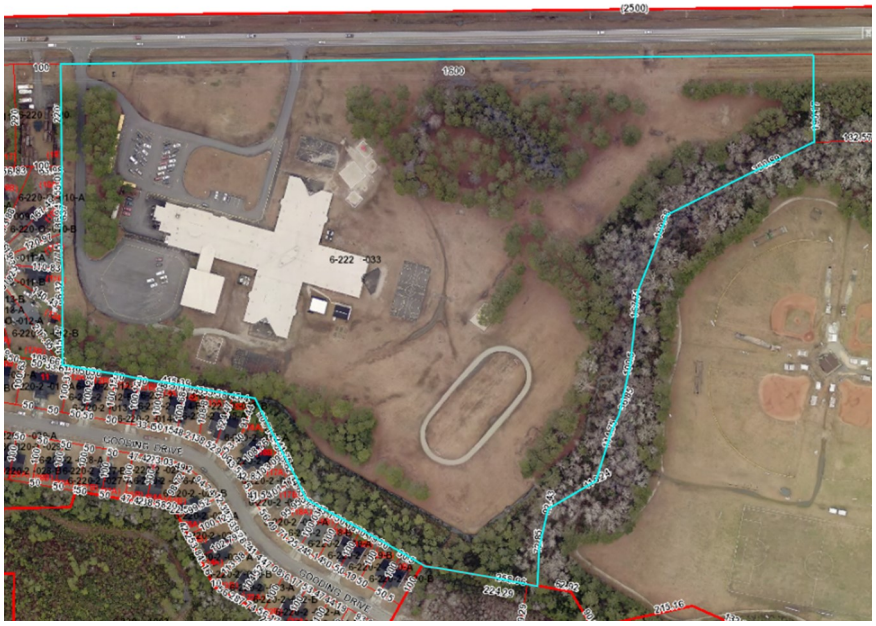
CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

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Roger Bell New Tech Elementary School

There has been one expansion to this facility since it was first constructed in 1986. This is the third building based on the same prototype and the first of the group to be built. It is still relatively youthful and in good overall condition. The site has a high water table and often has standing water long after a minor rainfall. The building does support a modern education delivery program and is the only one of this prototype to have a gymnasium that is near the minimum facility standards.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
6-222 -033	Roger Bell Elementary	BOE	27.1	$676,250	$676,250

Insurance Data

ROGER BELL ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25036201	MAIN BUILDING	NC2	1/1/1986	33	56354	$9,369,654
	Main - Gym Addition	NC2	1/1/2001	18	6090	
	Totals / Average $/sf				62444	$9,369,654
	Average Construction Date		1993			
	Average Age			26		

Insurance / GIS Data

At 62,000 square feet this one story building is proportionate to the site of 27 acres. The building has been well maintained, but is reaching the age where several infrastructure systems will begin to fail.

Life Cycle Analysis

At 33 years of age, this building has not yet achieved middle age. It is appropriate at this time to consider replacement of several components of the school in order to rejuvenate the facilities and add extra life to the building. These replacements focus on the Electrical and Mechanical systems.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
BELL ES						
MAIN BUILDING - 1986	47	80	70	90	1986	33
MAIN BUILDING - 2001	62	80	70	90	2001	18

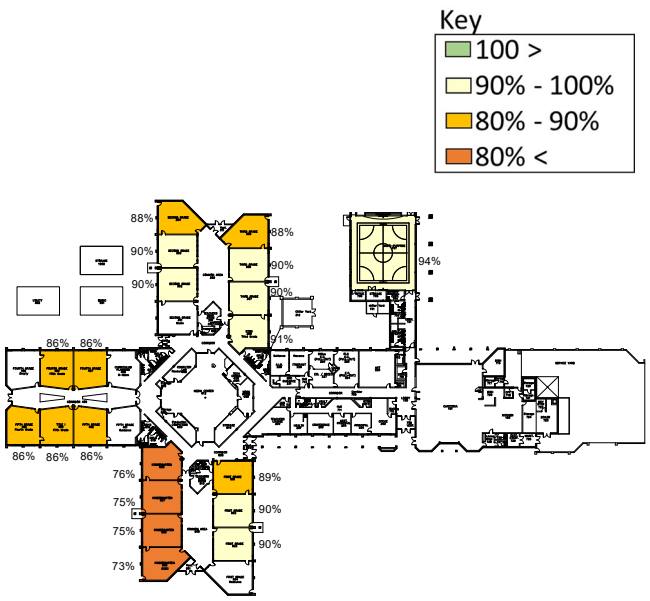
Utility Providers

Electrical	Carteret Craven
Sewer	City of Havelock
Water	City of Havelock
Natural Gas	Piedmont Natural Gas

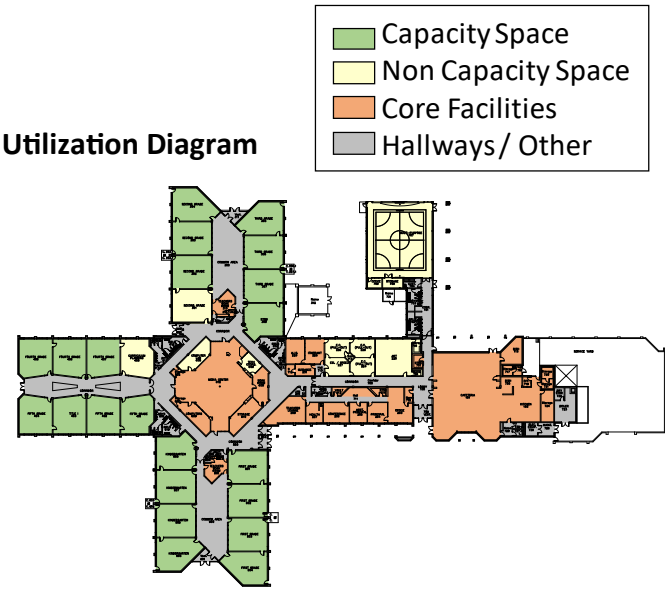
Square Footage Per Program (Based on Use)

As with the other schools of the same prototype this facility has a high proportion of spaces that are undersized, with approximately half being less than 90% of the minimums, it will be difficult to reconfigure grade levels to improve the situation.

The Multipurpose Room is the exception to the other buildings and is 98% of the minimum standards.



Utilization Diagram



Capacity / Use Diagram (Optimized for 2021)

The Core Facilities are centrally located near the front of the school. This supports security and places the noisier spaces away from classrooms. The classroom wings do not have spaces designed as Resource Rooms. The center section does function as a group work space.

Facility Details

Roger Bell and the other schools of similar design are in good overall condition with a layout that aligns well with current education delivery methods. The site is somewhat limited due to water, residential neighborhoods and Fontana Drive. There is potential to renovate and increase the overall capacity of this school. Renovations can increase the size of several rooms by moving walls and the core facilities will support an increased overall capacity up to around 550 students.

Building Images

Below are several images of the facility depicting building conditions. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance. These are only a few issues that have a large impact to the deferred maintenance program.

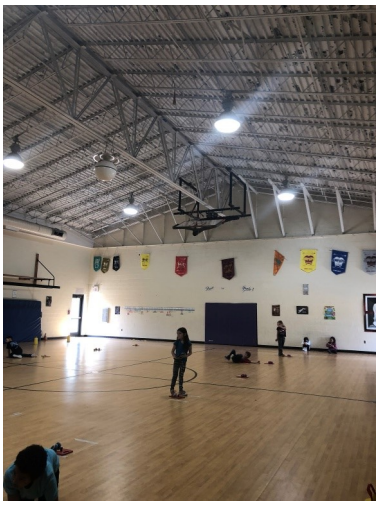
The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



Groundwater



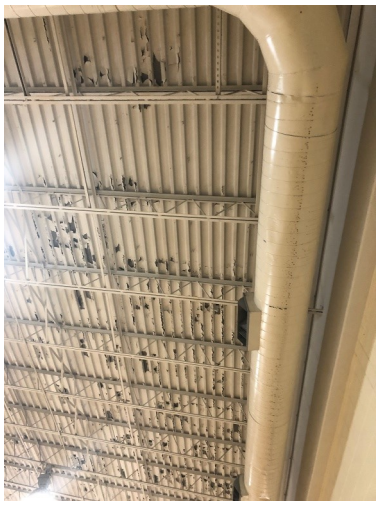
Cafeteria



Multipurpose



Media Center



Paint

Potential Improvements

This facility is a moderately sized school and has the opportunity for expansion. Before expansion is considered there is currently an insufficient queue and parking. Additions can be made to parking and re-routing the queue will meet the NCDOT stacking space. Other outdoor improvements to sidewalks and the addition of a canopy will greatly improve this site's operations.

Once inside the building improvements to the mechanical system and other infrastructure renovations will allow this building to dehumidify and keep it relatively youthful over the course of the next 40 or so years. Upgrades such as polishing the existing concrete floors are reasonable considering its youthful status vs the cost of stripping and re-waxing the existing floors on an annual basis. Although this building is for the most part ADA compliant, there remain items that should be addressed.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as "Soft Costs" include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Roger Bell Elementary

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$420,000	$42,000	$37,800	$63,000	$562,800
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$147,498	$14,750	$13,275	$22,125	$197,648
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$106,000	$10,600	$9,540	$15,900	$142,040
7	Canopy (cov. Walks)	$60,000	$6,000	$5,400	$9,000	$80,400
8	Other Site	$136,567	$13,657	$12,291	$20,485	$182,999
9	Roofing	$0	$0	$0	$0	$0
10	Structural	$0	$0	$0	$0	$0
11	Windows	$139,140	$13,914	$12,523	$20,871	$186,448
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$6,000	$600	$540	$900	$8,040
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$45,976	$4,598	$4,138	$6,896	$61,609
16	Flooring	$239,826	$23,983	$21,584	$35,974	$321,366
17	Painting	$129,673	$12,967	$11,671	$19,451	$173,762
18	Other Building Interior	$77,525	$7,753	$6,977	$11,629	$103,884
19	Mechanical	$780,000	$78,000	$70,200	$117,000	$1,045,200
20	Electrical	$490,000	$49,000	$44,100	$73,500	$656,600
21	Lighting	$115,000	$11,500	$10,350	$17,250	$154,100
22	Technology	$57,878	$5,788	$5,209	$8,682	$77,557
23	Plumbing	$22,200	$2,220	$1,998	$3,330	$29,748
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$10,500	$1,050	$945	$1,575	$14,070
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$379,050	$37,905	$34,115	$56,858	$507,927
28	Fire Alarm	$125,000	$12,500	$11,250	$18,750	$167,500
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$77,680	$7,768	$6,991	$11,652	$104,091
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$30,000	$3,000	$2,700	$4,500	$40,200
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$0	$0	$0	$0	$0
37	Kitchen Equipment	$72,000	$7,200	$6,480	$10,800	$96,480
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$4,914,468**

Renovations
Several spaces at Roger Bell should be considered for renovation. These include some administrative areas as well as the classroom wings.

Additions
The proposed additions address losses in classroom space based on where the overall number of classrooms will be reduced during renovations. Additionally several new appropriately sized spaces can be created and increase the overall capacity of the school. The addition of a stage on the Multipurpose Room should also be considered.

Site
Traffic on Fontana Blvd moves quickly and although there are posted speed limits around the school, traffic does not always slow down. The installation of a right and left center turn lane on this busy road will improve ease and safety when exiting and entering the site. Additional parking and drainage should also be reviewed.

Mechanical System
The school is based on DX cooling with hot water heat from a gas boiler. At present, the system does not have the ability to dehumidify. If a Direct Digital Controls (DDC) system was installed as an upgrade to the existing system, the school could pull the moisture out of the air. Additionally, several split systems have been replaced. The Multipurpose Room has high humidity which is likely related to the ceiling paint peeling off. A DDC upgrade will allow for dehumidification.

Fire Alarm
As with other Fire Alarm Systems, finding parts is a problem and this system is no longer manufactured. It should be replaced with a new addressable system.

Electric
The building is now at the age that replacing the main switchgear will ensure continued uninterrupted service.

Lighting
The building has mostly T8 fixtures that should be replaced with LED lights.

Potential Additions and Renovations

Roger Bell

Craven County Schools

Space Inventory / Worksheet 2019

12/2/2019

Current Student Capacity (NCDPI)	412	Current Core Capacity (NCDPI)	728
Proposed Student Capacity	532	**Proposed Core Capacity**	728
	Number of Spaces	0	Square Footage

Total Cost	$6,562,684
Cost / Student	$12,336
Athletic / PE /Facilities	
	Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	5	4	3	2
Grades 1-3 Clsrms	15	12		3
Grades 4-5 Clsrms	7	5		2
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1	1	1	
Instructional Kitchen				
Resource	4	6		1
Computer				
STEM	1	1		
Sub-Total	33	29	4	8
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project				
Art Sto. Kiln	1	1		
General Music	1	1		
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	3	3	0	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage	1			1
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1			1
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	1	0	2
Misc. Spaces				
ROTC				
Mobile Units				
Total	**39**	**33**	**4**	**10**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,181	2911		
Support	1,500	1140	360	
Computer				
Sub-Total	4,681	4,051	360	0
Food Service	# of seatings			3
Dining	2,912	3965	-515	
Kitchen	1,938	1816	122	
Serving	620	204	416	
Sub-Total	5,470	5,985	538	0
Auditorium	# of seats			0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	2,740	3309	-569	
Sub-Total	2,740	3,309	0	0
Storage				
Book Storage	860			860
General Storage	960	407	123	430
Sub-Total	1,820	407	123	1,290
Staff Support				
Staff Support	1,600	1154	446	
Sub-Total	1,600	1,154	446	0
Total Renovated Spaces			1,467	
Demolition Totaling				
Total	**16,311**	**14,906**	**1,467**	**1,290**

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3	3		
Sub-Total	3	3	0	0
Total	**0**	**0**	**0**	**9**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Roger Bell in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

Roger Bell

Additions / Renovations	Proposed Student Capacity	532
	Proposed Core Capacity	728

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	8	7,750	280.34	$2,172,664
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	2	1,050	357.58	$375,458
Misc. Spaces ()			180.00	$0
Renovations	4	4,916	90.00	$442,440
Core Capacity				
Media Center		0	0.00	$0
Food Service		0	0.00	$0
Auditorium		0	0.00	$0
Administration		0	305.25	$0
Storage		1,290	305.25	$393,773
Staff Support		0	305.25	$0
Renovations		1,467	151.35	$222,030
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	1			$90,000
Subtotal New		10,090	$291.57	$2,941,894
Circulation/ Mechanical/Toilets/Walls	38.00%	3,834	$291.57	$1,117,920
Subtotal Renovated		6,383	$104.10	$664,470
Athletics				$90,000
Site Improvements				$40,000
Other ()				
Sub Total				$4,854,284
Inflation (3% for 3 years)	9.00%			$436,886
Contingency (%)	10.00%			$529,117
Sub Total				$5,820,286
A-E Fees (%)	10.00%			$582,029
Financing Charges	1.00%			$65,627
Other Fees and Services				$94,743
Site	0			$0
Owners Contingency (furn., equipment)				$84,000
Total				**$6,562,684**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Roger Bell New Tech Elementary School — **2019**

Existing



1. Classrooms
2. Exceptional (SC)
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CONNOTES RENOVATION

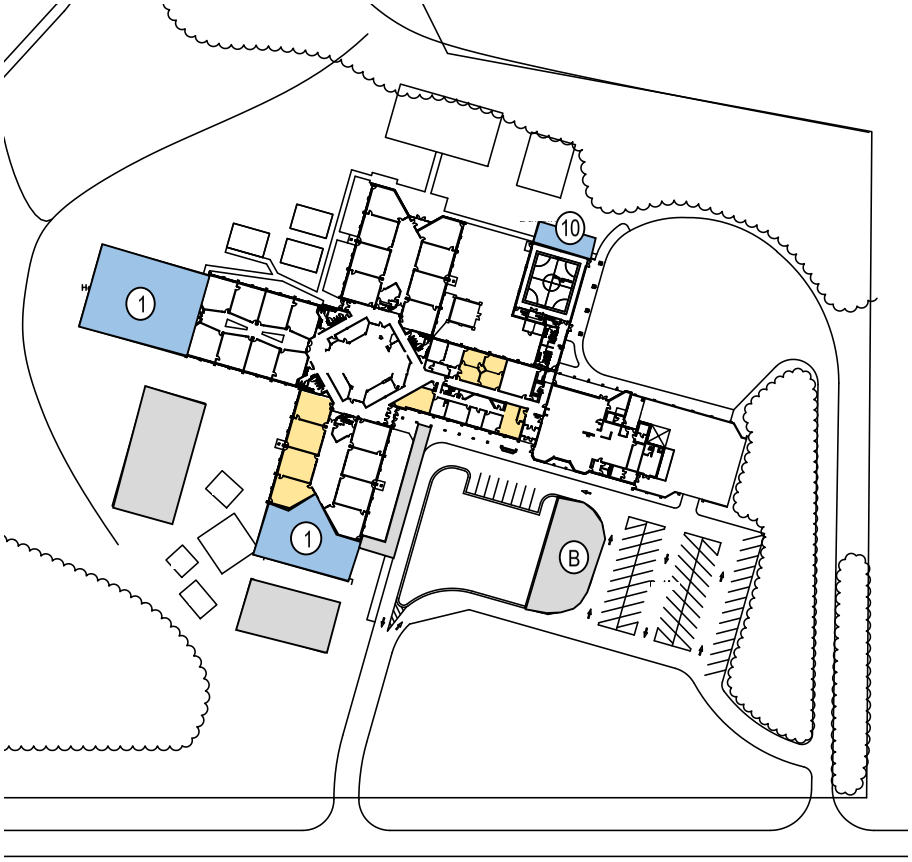
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
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T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Roger Bell New Tech Elementary School | **2019**

Potential



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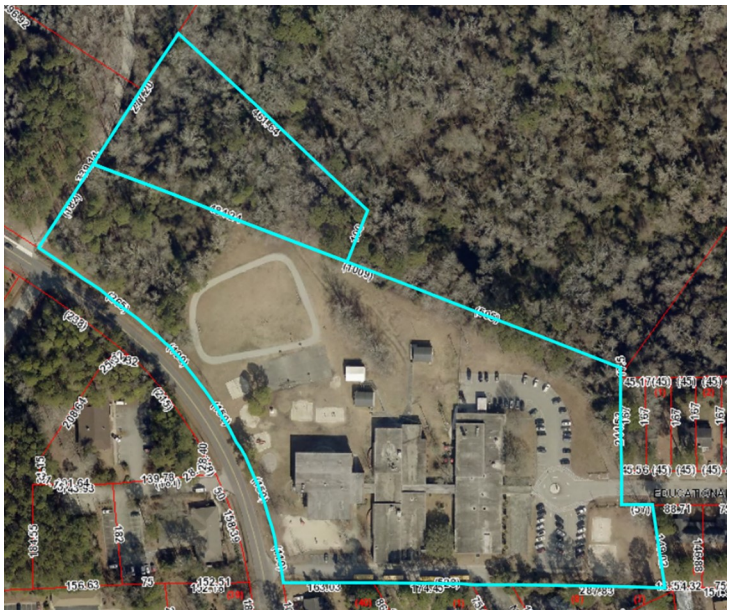
CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Trent Park Elementary School

There have been many expansions to this facility since it was first constructed in 1954. Each addition was constructed with slightly different materials and methods which have their own individual life cycle. The Multipurpose building is the newest portion of the school. It is less than 20 years old and in good overall condition. With just over a 300 student capacity, this is a small school on a small site.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-035 -013	Trent Park Elementary	NB-C BOE	10.0	$279,500	$279,500
8-035 -019	Trent Park Elementary-North Lot	NB-C BOE	2.0	$53,750	$53,750
		Total	12.0	$333,250	$333,250

Insurance Data

TRENT PARK ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25036401	MAIN BUILDING	NC2	1/1/1954	65	20750	$6,182,015
	Main - 8 CR at front	NC2	1/1/1963	56	10700	
	Main - Cafeteria	NC2	1/1/1971	48	9750	
	Addition		1/1/1960	59		
	Addition		1/1/1967	52		
	Addition		1/1/1977	42		
25036411	MULTIPURPOSE MEDIA	NC2	9/1/2001	18	10564	$1,462,977
	Totals / Average $/sf				51764	$7,644,992
	Average Construction Date		1970			
	Average Age			49		

Insurance / GIS Data

At 51,000 square feet this one story building takes up a large portion of the twelve acre site. With much of the building nearing sixty years of age, this small campus is nearing the end of its anticipated life cycle.

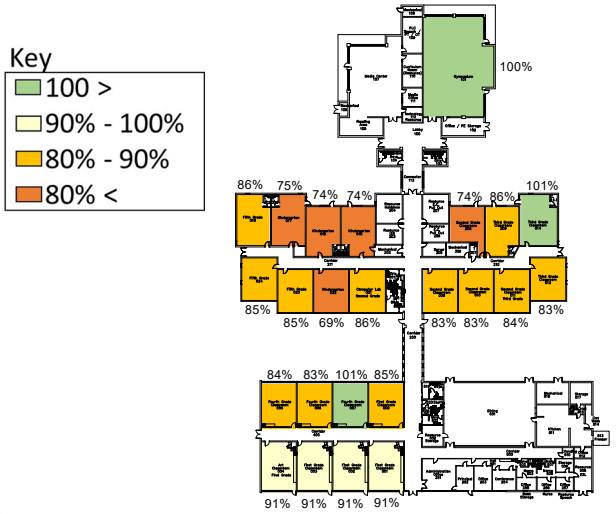
Life Cycle Analysis

A significant number of square footage was constructed during the baby boom using inexpensive materials. The result is an anticipated reduction in the overall longevity of the building. Several of the additions will come to the end of the noted life cycle within the next ten years. A complete restoration can add life into this building, but the overall structure, layout, and size of the building must be taken into consideration before making that investment.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
TRENT PARK ES						
MAIN BUILDING - 1954	-5	60	50	70	1954	65
MAIN BUILDING - 1963	4	60	50	70	1963	56
MAIN BUILDING - 1971	22	70	60	80	1971	48
1960 Addition	1	60	50	70	1960	59
1967 Addition	8	60	50	70	1967	52
1977 Addition	28	70	60	80	1977	42
MULTIPURPOSE MEDIA - 2001	62	80	70	90	2001	18

Utility Providers

Electrical	City of New Bern
Sewer	City of New Bern
Water	City of New Bern
Gas	NA



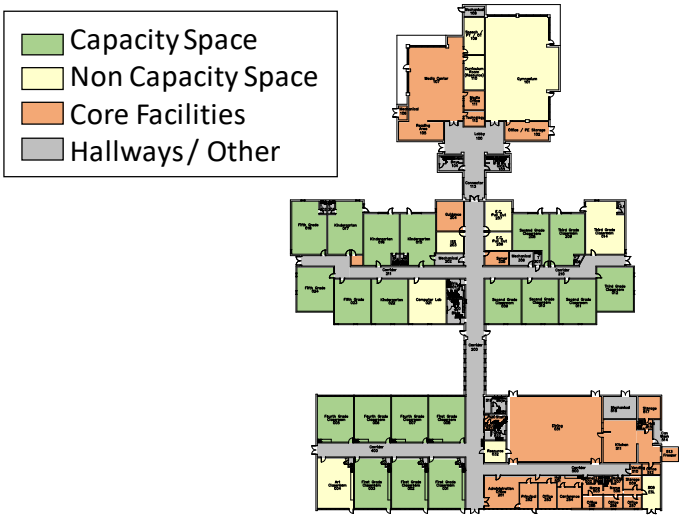
Square Footage Per Program (Based on Use)

Trent Park has many rooms that are well below the desired square footage. The staggered hallways make reconfiguration difficult.

Capacity / Use Diagram (Optimized for 2021)

To achieve the maximum capacity several full size classrooms will be needed as resource rooms. These can be scattered around the school effectively. Many of the core facilities are concentrated near the entrance. The Multipurpose Room and the Media Center aren't typically adjacent to each other due to concerns over noise. There are rooms separating them, but the construction and adjacent doors may allow sound to transfer to a space that is traditionally quiet.

Utilization Diagram



Facility Details

With a capacity of 300 students, and less than 90% of needed site acreage, this small school is showing its age. The various additions and renovations have left the interior and exterior with eclectic finishes. Materials are in unlikely locations including brick on the interior, ceramic tile in the Work Room, and glazed tiles on the exterior. Several of the building systems are currently in failure. The plumbing lines under the Kitchen floor have already been replaced in several areas, the floors in several areas are settling, and the windows no longer have insulative properties.

Building Images

Below are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance. These are only a few issues that have a large impact to the deferred maintenance program.

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



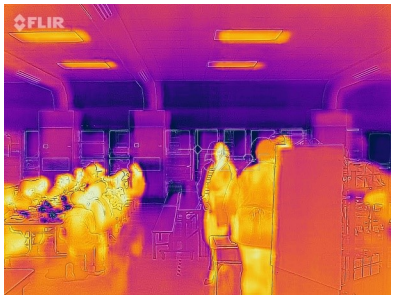
Canopy



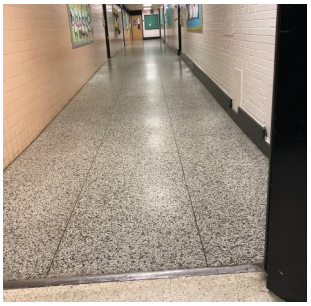
Water Line Repairs



Infrastructure / Moisture



Windows in Failure



Numerous Finishes



Glazed Tile Exterior

Potential Improvements

With six noted additions and a large variety of floor, wall, and exterior finishes there are numerous opportunities for improvement, starting with the site. The queue at this school is virtually non-existent. Parent line up along Educational Drive and try not to block the driveways of the residents. The queue will back up onto Simmons Street at times. The buses are separated and use North Grace Avenue which is gated to reduce unwanted traffic from cutting through the site. The playgrounds are very close together, there is often standing water on site and parking is at a premium.

The building exterior is in various stages of life. The variety of materials again speaks to the multiple additions and includes Brick, Ceramic Tile, Metal, Stucco, and Transite, each with a different life cycle. Once inside the building the variety of material exponentially increases. Starting with the floors you will find Terrazzo, Ceramic Tile, Vinyl Tile, Carpet, and a large amount of asbestos tile. Much of this will need to be replaced when the water lines are replaced. The walls are no different with a mix of brick, concrete block, cinder block, ceramic tile and other materials.

Most of the buildings infrastructure is currently in failure or will have issues in the next ten years. The repairs to the water lines in the Kitchen are indicative of what is to come in other sections of the school. Other systems like the electrical system are beyond their expected life and will require significant investment in order to continue operations.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Trent Park Elementary

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$1,100	$110	$99	$165	$1,474
2	Site Utilities	$21,000	$2,100	$1,890	$3,150	$28,140
3	Parking / Drives	$255,722	$25,572	$23,015	$38,358	$342,668
4	Sewer System	$14,000	$1,400	$1,260	$2,100	$18,760
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$15,000	$1,500	$1,350	$2,250	$20,100
7	Canopy (cov. Walks)	$100,470	$10,047	$9,042	$15,071	$134,630
8	Other Site	$136,814	$13,681	$12,313	$20,522	$183,331
9	Roofing	$713,172	$71,317	$64,185	$106,976	$955,650
10	Structural	$0	$0	$0	$0	$0
11	Windows	$233,538	$23,354	$21,018	$35,031	$312,941
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$31,000	$3,100	$2,790	$4,650	$41,540
14	Partition/Wall Const	$57,000	$5,700	$5,130	$8,550	$76,380
15	Ceilings	$64,581	$6,458	$5,812	$9,687	$86,539
16	Flooring	$784,286	$78,429	$70,586	$117,643	$1,050,943
17	Painting	$98,475	$9,847	$8,863	$14,771	$131,956
18	Other Building Interior	$115,912	$11,591	$10,432	$17,387	$155,322
19	Mechanical	$625,000	$62,500	$56,250	$93,750	$837,500
20	Electrical	$616,000	$61,600	$55,440	$92,400	$825,440
21	Lighting	$94,000	$9,400	$8,460	$14,100	$125,960
22	Technology	$44,793	$4,479	$4,031	$6,719	$60,023
23	Plumbing	$96,987	$9,699	$8,729	$14,548	$129,963
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$8,750	$875	$788	$1,313	$11,725
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$530,200	$53,020	$47,718	$79,530	$710,468
28	Fire Alarm	$104,000	$10,400	$9,360	$15,600	$139,360
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$36,700	$3,670	$3,303	$5,505	$49,178
31	Abatement	$80,006	$8,001	$7,201	$12,001	$107,207
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$30,000	$3,000	$2,700	$4,500	$40,200
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$240,000	$24,000	$21,600	$36,000	$321,600
37	Kitchen Equipment	$59,000	$5,900	$5,310	$8,850	$79,060
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$6,978,058**

Renovations
The way in which this building was constructed makes many renovations unrealistic. Moving block walls to create larger spaces is possible, but expensive. Corrections to improve security by aligning hallways to improve visibility and surveillance are impractical here.

Additions
Increasing the number of students on this campus is impractical and based on the acreage a reduction would be reasonable. The NCDPI suggestion is ten acres plus one acre for every 100 students which would leave this as a 200 student school. With no cost effective way to renovate the remaining option would be to demolish a large portion of the building and replace it with new construction. There is potential to keep the Media Center and Multipurpose Room in this scenario. However, the end result would be a small school on a small lot.

Site
Currently the site does not have adequate queueing or parking spaces. It also lacks good emergency vehicular access. The replacement noted above would require the creation of an appropriate queue and reworking the bus route and creating emergency vehicle access.

Mechanical System
There is a mix of split system direct exchange units and BARD units that were installed in 1999. They have reached the end of their life and should be removed. The Multipurpose Room / Media Center addition uses an energy wheel to pull moisture out of the air. That unit has never worked properly. The result is the entire building has humidity issues.

Fire Alarm
The ability to find parts for the existing system is difficult at best. The system is old and should be replaced with a new addressable system.

Electric
The original equipment that has reached the end of its life expectancy and all switchgear, subpanels, and branch circuits need to be replaced. The exception is the Multipurpose / Media Center addition, which is in overall good condition.

Plumbing
The water supply lines are currently in failure with numerous repairs already made. The entire system along with the sanitary sewer system needs to be replaced and will require the replacement of a good portion of the floor slabs.

Lighting
There are still many T8 lights in use that should be replaced with LED.

Potential Additions and Renovations

Craven County Schools

Space Inventory / Worksheet 2019

Trent Park

12/2/2019

Current Student Capacity (NCDPI)	376	Current Core Capacity (NCDPI)	604
Proposed Student Capacity	376	**Proposed Core Capacity**	604
	Number of Spaces	0	Square Footage

Total Cost	$20,694,931
Cost / Student	$55,040
Athletic / PE /Facilities	
	Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	4	4	2	2
Grades 1-3 Clsrms	12	12	-12	12
Grades 4-5 Clsrms	4	4	-4	4
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1			
Instructional Kitchen				
Resource	3	7	-7	7
Computer				
STEM	1	1	-1	1
Sub-Total	25	28	-22	26
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1			1
Art Project		1	-1	
Art Sto. Kiln	1			1
General Music	1	1	-1	1
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	3	2	-2	3
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage	1			1
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1	1		
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	2	0	1
Misc. Spaces				
ROTC				
Mobile Units				
Total	**31**	**32**	**-24**	**30**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,181	2561	-2561	3,181
Support	1,500	362	-362	1,500
Computer				
Sub-Total	4,681	2,923	0	4,681
Food Service		# of seatings		3
Dining	2,912	2816	-2816	2,912
Kitchen	1,938	1478	-1478	1,938
Serving	620	402	-402	620
Sub-Total	5,470	4,696	0	5,470
Auditorium		# of seats		0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	2,740	2536	-2536	2,740
Sub-Total	2,740	2,536	0	2,740
Storage				
Book Storage	860			860
General Storage	960	322	-322	960
Sub-Total	1,820	322	0	1,820
Staff Support				
Staff Support	1,600			1,600
Sub-Total	1,600	0	0	1,600
Total Renovated Spaces			0	
Demolition Totaling				
Total	**16,311**	**10,477**	**0**	**16,311**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3			3
Sub-Total	3	0	0	3
Total	**0**	**0**	**0**	**9**

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Trent Park in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

Trent Park

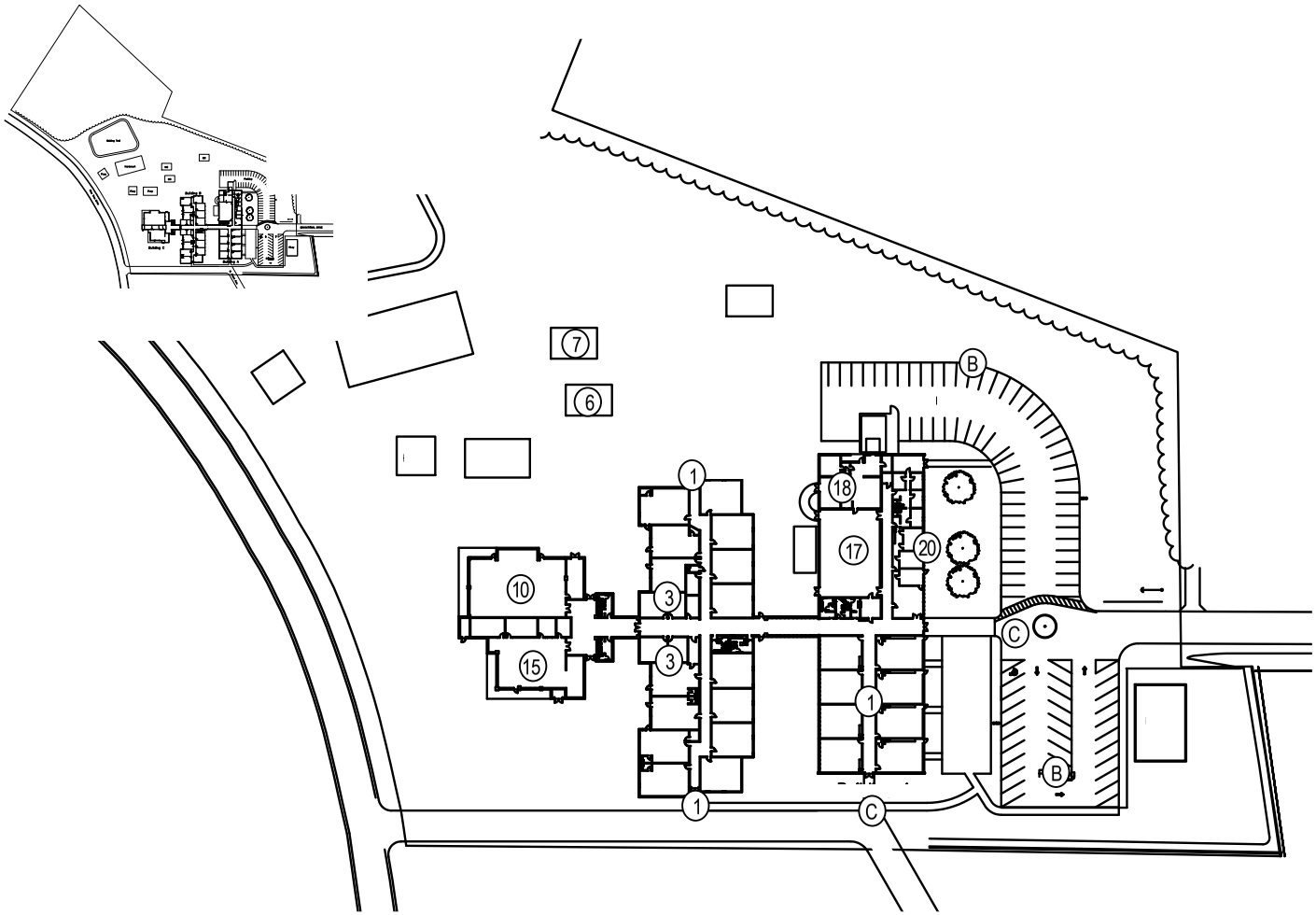
Additions / Renovations	Proposed Student Capacity	376
	Proposed Core Capacity	604

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	26	21,800	220.01	$4,796,243
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	3	2,550	240.50	$613,275
Vocational	0	0	0.00	$0
Physical Education Etc.	1	600	312.65	$187,590
Misc. Spaces ()			180.00	$0
Renovations	-24	0	60.00	$0
Core Capacity				
Media Center		4,681	272.73	$1,276,651
Food Service		5,470	352.57	$1,928,570
Auditorium		0	0.00	$0
Administration		2,740	240.50	$658,970
Storage		1,820	240.50	$437,710
Staff Support		1,600	240.50	$384,800
Renovations		0	66.53	$0
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	3			$150,000
Subtotal New		41,261	$249.24	$10,283,809
Circulation/ Mechanical/Toilets/Walls	38.00%	15,679	$249.24	$3,907,848
Subtotal Renovated		0	#DIV/0!	$0
Athletics				$150,000
Site Improvements				$1,029,286
Other (Demolition)				$0
Sub Total				$15,370,943
Inflation (3% for 3 years)	9.00%			$1,383,385
Contingency (%)	10.00%			$1,675,433
Sub Total				$18,429,760
A-E Fees (%)	10.00%			$1,842,976
Financing Charges				$26,652
Other Fees and Services				$395,543
Site	0			$0
Owners Contingency (furn., equipment)				$912,000
Total				**$20,694,931**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Trent Park Elementary School | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

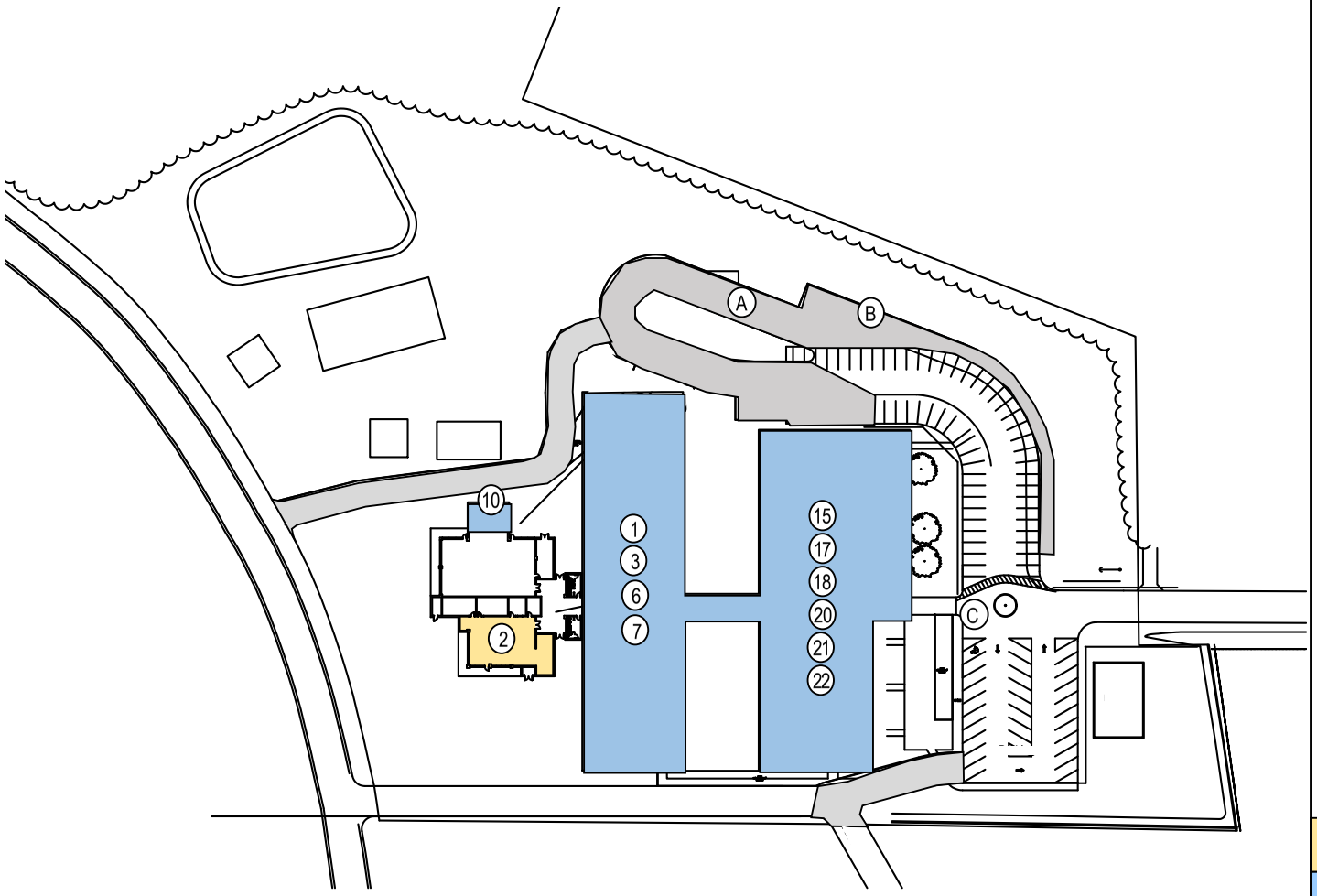
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Trent Park Elementary School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

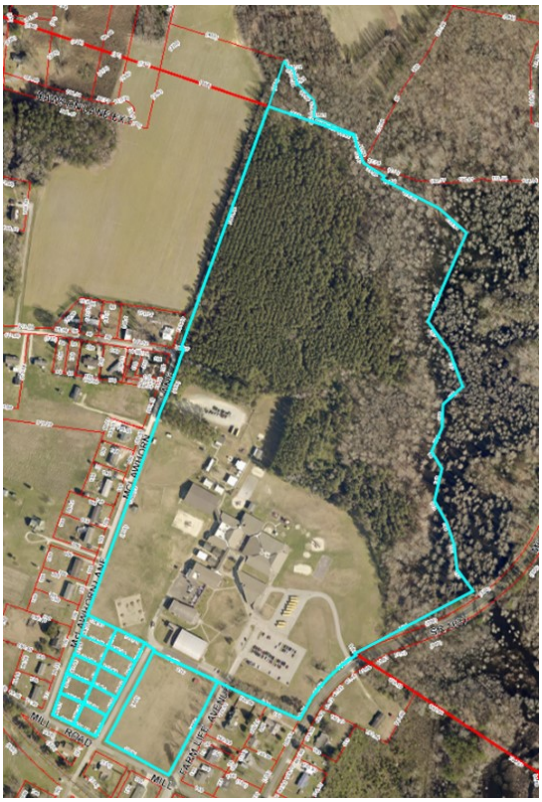
CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Vanceboro Farm Life Elementary School

There have been many changes to this campus since the first construction occurred. The oldest remaining portions are the Gymnasium and Auditorium which were completed in 1953. The Administration and Classroom sections were built in 1983 and are nearing middle age. At almost 470 students the school capacity is just above what NCDPI considers a small school. With the Gymnasium, Auditorium, and Administration Building being free-standing structures, this elementary functions like a campus with students exiting the main building when accessing any of the other services.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
1-V-07 -001	Vanceboro Elementary-Main	BOE	59.9	$476,960	$476,960
1-045 -1008	Vanceboro Elementary-North	BOE	0.6	$30,000	$30,000
1-V-07 -005	Vanceboro Elementary-Large South	BOE	3.0	$46,030	$46,030
1-V-07 -12001	Vanceboro Elementary-Center 5	BOE	0.2	$3,000	$3,000
1-V-07 -12002	Vanceboro Elementary-Center 4	BOE	0.2	$3,000	$3,000
1-V-07 -12003	Vanceboro Elementary-Center 3	BOE	0.2	$3,000	$3,000
1-V-07 -12004	Vanceboro Elementary-Center 2	BOE	0.3	$3,000	$3,000
1-V-07 -12005	Vanceboro Elementary-Center 1	BOE	0.3	$3,000	$3,000
1-V-07 -12006	Vanceboro Elementary-West 5	BOE	0.2	$3,000	$3,000
1-V-07 -12007	Vanceboro Elementary-West 4	BOE	0.2	$3,000	$3,000
1-V-07 -12008	Vanceboro Elementary-West 3	BOE	0.2	$3,000	$3,000
1-V-07 -12009	Vanceboro Elementary-West 2	BOE	0.3	$3,000	$3,000
1-V-07 -12010	Vanceboro Elementary-West 1	BOE	0.3	$3,000	$3,000
		Total	66.0	$582,990	$582,990

Insurance / GIS Data

At 80,000 square feet this one story building is dwarfed by the sixty acre site, much of which is woodlands and potential wetlands. Although it has two of the oldest buildings in the school system, the classroom portion still has many years of service remaining.

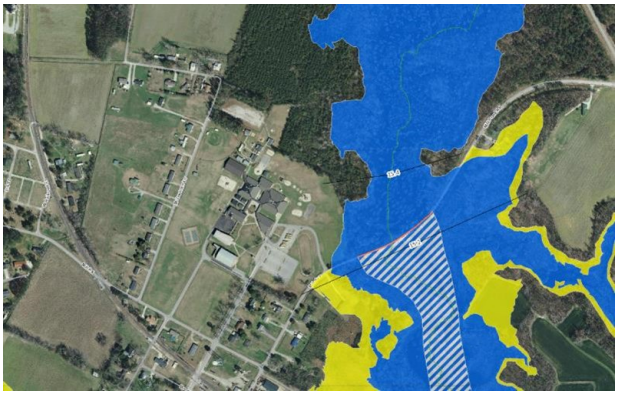
Insurance Data

Vanceboro Farm Life

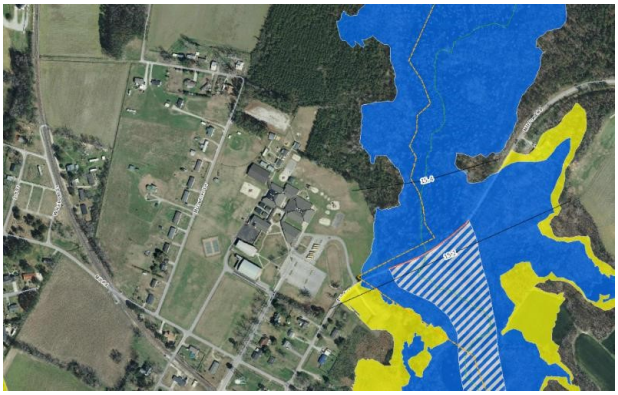
VANCEBORO-FARM LIFE ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25032001	MAIN BUILDING - Cafeteria	NC1	1/1/1983	36	7630	$8,772,610
	Main - Cafeteria	NC2	1/1/1983	36	40356	
	8 CR Wing	NC2	1/1/1999	20	10479	
25032002	GYMNASIUM BUILDING	JM1	1/1/1953	66	6021	$903,444
25032003	AUDITORIUM	JM1	1/1/1953	66	7687	$1,153,425
25032005	ENCLOSED CANOPY	JM1	1/1/1983	36		$175,065
25032015	ADMINISTRATION BLDG	NC2	1/1/1983	36	8173	$1,226,349
	Totals / Average $/sf				80346	$12,230,893
	Average Construction Date		1976			
	Average Age			42		

Flood Mapping

With the building floor elevation at 28 ft. ASL and the flood zone in the area around 9ft. There is little fear of floodwaters getting inside the building. The campus will be difficult if not impossible to access in the event of a flood due to flooding of school access roads.



Effective



Preliminary

Life Cycle Analysis

With a variety of different construction dates and building methods, the buildings are at different stages of life. The two freestanding buildings will need improvement soon if they are to continue service.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
VANCEBORO-FARM LIFE ES						
MAIN BUILDING -1983	34	70	60	80	1983	36
MAIN BUILDING -1983	34	70	60	80	1983	36
MAIN BUILDING -1999	60	80	70	90	1999	20
GYMNASIUM BUILDING - 1953	-6	60	50	70	1953	66
AUDITORIUM - 1953	-6	60	50	70	1953	66
ENCLOSED CANOPY - 1983	34	70	60	80	1983	36
ADMINISTRATION BLDG - 1983	34	70	60	80	1983	36

Utility Providers

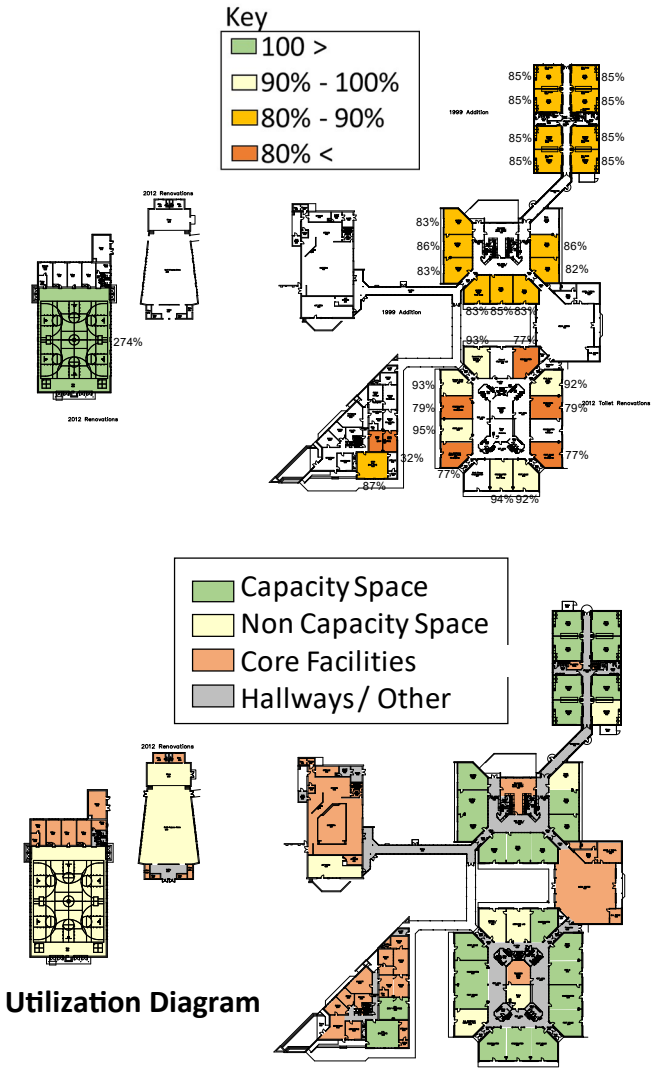
Electrical	Duke /Progress Energy
Sewer	Town of Vanceboro
Water	Town of Vanceboro
Gas	NA

Square Footage Per Program (Based on Use)

Like many of the older buildings the square footage of the classrooms is below the minimum required. The programs in the younger grade levels require more square footage per classroom than do the upper grade levels. Nearly all of the classrooms in this school are the same size creating a space issue for the Kindergarten through first grade students.

Capacity / Use Diagram (Optimized for 2021)

The core facilities are well dispersed around campus and classrooms are not exposed to excessively loud areas. The disjunction between the Administration Building and the classrooms creates a potential security issue as does using the Gymnasium or Auditorium.



Utilization Diagram

Facility Details

The site is in overall good condition with good drainage and adequate vehicular access and queue length. The main building has the smaller spaces but added to the size issue is the less than desirable room shape for about half of the rooms. The two older classroom buildings have a central core with circulation around it making it difficult for a visitor to orient themselves and many rooms with operable partitions between them. The detached Administration Building is even more cut up with angles that create spaces of limited use.

Building Images

Below are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the buildings, ranging from limited parking to ADA compliance. These are only a few issues that have a large impact to the deferred maintenance program.

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



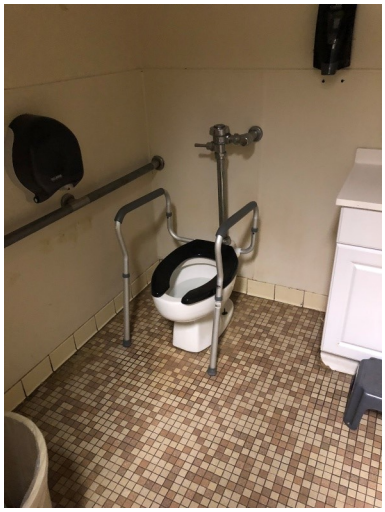
Non Insulative Windows



Exterior Refrigeration



Unique Spaces



ADA



Natural Light



Gymnasium



ADA Gym Access



ADA Stage Access

Potential Improvements

One of the first things a visitor will notice about the site are the road conditions. As with other sites, there are potholes, patches, repairs, and cracks in both the parking areas and driveways. Potential improvements here include a long term approach to asphalt replacement. By re-coating a portion and replacing another portion every five or so years, a continual rejuvenation of the parking lots can be accomplished.

A decision will need to be made on how to proceed with the Auditorium and Gymnasium. Some investment into these buildings will be needed soon in order to keep them functioning as part of the campus. The window seals are broken on the newest portions and have no thermal value. Replacement of these will result in lower energy bills throughout the year. Flooring is another potential issues including replacement of the existing gym floor in the next ten years.

There are significant infrastructure improvements warranted. In the gym for instance, the custodial and maintenance staff must manually control the amount of hot water allowed into the units. Electrical and plumbing issues are present in the older portions of the school with newer construction in good overall condition.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Vancebor Farm Life

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$6,600	$660	$594	$990	$8,844
2	Site Utilities	$30,000	$3,000	$2,700	$4,500	$40,200
3	Parking / Drives	$201,622	$20,162	$18,146	$30,243	$270,174
4	Sewer System	$20,000	$2,000	$1,800	$3,000	$26,800
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$45,000	$4,500	$4,050	$6,750	$60,300
7	Canopy (cov. Walks)	$41,469	$4,147	$3,732	$6,220	$55,568
8	Other Site	$101,540	$10,154	$9,139	$15,231	$136,064
9	Roofing	$303,425	$30,342	$27,308	$45,514	$406,589
10	Structural	$0	$0	$0	$0	$0
11	Windows	$430,992	$43,099	$38,789	$64,649	$577,529
12	Walls	$145,707	$14,571	$13,114	$21,856	$195,248
13	Other Building Exterior	$31,000	$3,100	$2,790	$4,650	$41,540
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$104,093	$10,409	$9,368	$15,614	$139,485
16	Flooring	$702,822	$70,282	$63,254	$105,423	$941,782
17	Painting	$213,087	$21,309	$19,178	$31,963	$285,537
18	Other Building Interior	$332,600	$33,260	$29,934	$49,890	$445,684
19	Mechanical	$890,000	$89,000	$80,100	$133,500	$1,192,600
20	Electrical	$495,000	$49,500	$44,550	$74,250	$663,300
21	Lighting	$160,000	$16,000	$14,400	$24,000	$214,400
22	Technology	$65,693	$6,569	$5,912	$9,854	$88,029
23	Plumbing	$47,680	$4,768	$4,291	$7,152	$63,891
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$14,000	$1,400	$1,260	$2,100	$18,760
26	ADA Ramps	$68,000	$6,800	$6,120	$10,200	$91,120
27	ADA Toilets	$398,300	$39,830	$35,847	$59,745	$533,722
28	Fire Alarm	$178,000	$17,800	$16,020	$26,700	$238,520
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$42,500	$4,250	$3,825	$6,375	$56,950
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$30,000	$3,000	$2,700	$4,500	$40,200
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$298,600	$29,860	$26,874	$44,790	$400,124
37	Kitchen Equipment	$247,000	$24,700	$22,230	$37,050	$330,980
38	Media Center Furniture	$45,000	$4,500	$4,050	$6,750	$60,300
39	Off Site	$0	$0	$0	$0	$0
40	Other	$1,598,040	$159,804	$143,824	$239,706	$2,141,374
	Total					**$9,765,614**

Renovations

Classrooms are smaller than the minimum standards. By removing the walls from three classrooms, two new classrooms can be renovated to make two spaces that are of the appropriate size. Renovations are also suggested for the entire Administration Building.

Additions

The proposed additions address the losses in classroom space based on the renovations where the overall number of classrooms will be reduced. This will result in the school having the same student capacity as before construction occurred. Additional ADA compliant Restrooms for the Gymnasium and Auditorium are included, along with connecting corridors.

Site

The school has figured out how to make the parent drop off work well for them. For most of the parents, it is appropriate to walk their young learner to the front door. This requires sufficient parking for parents. However, once the student and parents are comfortable, they typically transition to the kiss and drop method of pickup and drop off. There is sufficient space to increase both parking and drop off areas on this campus, improving the overall flow and safety of the site.
should be replaced with energy efficient LED lights.

Mechanical System

Vanceboro Farm Life has a mix of BARD units, Rooftop Units (RTU) and Split System with a Variable Volume and Temperature (VVT) system that is not working. Makeup or outdoor air intake is minimal and the building cannot be dehumidified with the existing system. About half of the RTU's have recently been replaced and the same needs should occur for the remainder of the units. As noted before, the Gymnasium Air Handling Units (AHU's) do not have hot water control which allows for overheated units and space.

Plumbing

The old buildings have limited water, but all piping for water and sanitary will need to be replaced if continued use of them is anticipated.

Fire Alarm

The fire alarm system is old and replacement parts are difficult to find. It should be replaced with a new audible system.

Electric

The old electric system on the older buildings has aged out and needs to be replaced. The new sections are still in good condition.

Lighting

A mix of T12 and T8 lights still exist and should be replaced with energy efficient LED lights.

Potential Additions and Renovations

Craven County Schools

Space Inventory / Worksheet 2019

Vanceboro Farm Life

12/2/2019

Current Student Capacity (NCDPI)	516	Current Core Capacity (NCDPI)	699
Proposed Student Capacity	516	**Proposed Core Capacity**	699
	Number of Spaces	0	Square Footage

Total Cost	$3,140,820
Cost / Student	$6,087
Athletic / PE /Facilities	
	Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	5	5	3	2
Grades 1-3 Clsrms	15	15		
Grades 4-5 Clsrms	6	6		
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1	2	2	
Instructional Kitchen				
Resource	4	4		
Computer				
STEM	1	1		
Sub-Total	32	33	5	2
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project				
Art Sto. Kiln	1	1		
General Music	1	1		
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	3	3	0	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage	1	1		
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1	1		
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	3	0	0
Misc. Spaces				
ROTC				
Mobile Units				
Total	**38**	**39**	**5**	**2**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,131	3038	93	
Support	1,200	1318	-93	
Computer				
Sub-Total	4,331	4,356	0	0
Food Service	# of seatings			3
Dining	2,796	3262	-397	
Kitchen	1,938	1891		
Serving	620	223	397	
Sub-Total	5,354	5,376	397	0
Auditorium	# of seats			0
Auditorium		4728		
Stage / Dress / Sto.		1475		
Lobby		492		
Sub-Total	0	6,695	0	0
Administration				
Administration	2,690	3660		
Sub-Total	2,690	3,660	0	0
Storage				
Book Storage	850		539	
General Storage	950		950	
Sub-Total	1,800	0	1,489	0
Staff Support				
Staff Support	1,300	1819	-519	
Sub-Total	1,300	1,819	0	0
Total Renovated Spaces			1,886	
Demolition Totaling				
Total	**15,475**	**21,906**	**1,886**	**0**

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3	3		
Sub-Total	3	3	0	0
Total	**0**	**0**	**0**	**9**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Vanceboro in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

Vanceboro Farm Life

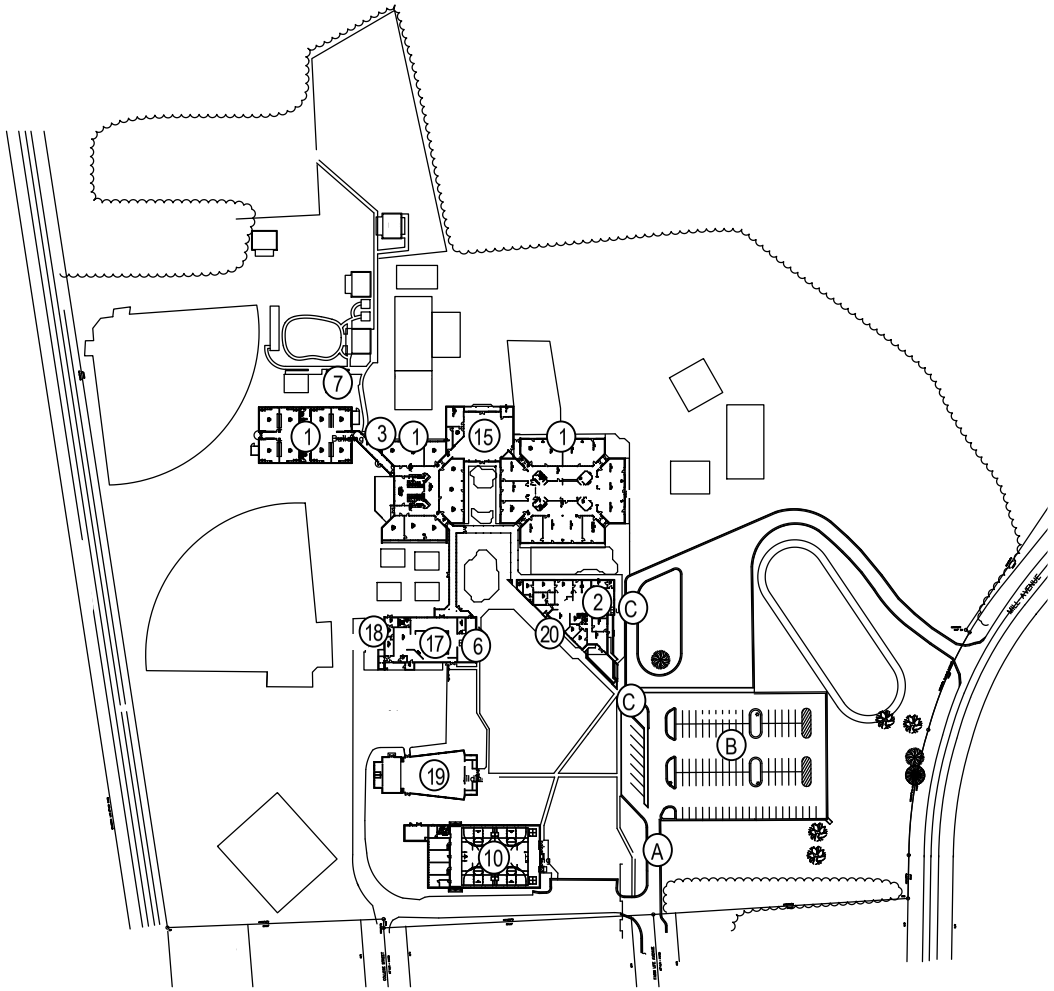
Additions / Renovations	Proposed Student Capacity	516
	Proposed Core Capacity	699

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	2	2,400	281.22	$674,918
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	0	0	0.00	$0
Misc. Spaces (Additional Toilets Gym)		926	400.00	$370,400
Renovations	5	6,737	115.20	$776,080
Core Capacity				
Media Center		0	0.00	$0
Food Service		0	0.00	$0
Auditorium		0	0.00	$0
Administration		0	296.00	$0
Storage		0	0.00	$0
Staff Support		0	296.00	$0
Renovations		1,886	73.68	$138,960
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		2,400	$435.55	$1,045,318
Circulation/ Mechanical/Toilets/Walls	38.00%	912	$435.55	$397,221
Subtotal Renovated		8,623	$106.12	$915,040
Athletics				$0
Site Improvements				$0
Other ()				
Sub Total				$2,357,579
Inflation (3% for 3 years)	9.00%			$212,182
Contingency (%)	10.00%			$256,976
Sub Total				$2,826,738
A-E Fees (%)	10.00%			$282,674
Financing Charges	1.00%			$31,408
Other Fees and Services				$0
Site	0			$0
Owners Contingency (furn., equipment)				$0
Total				**$3,140,820**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Vanceboro Farm Life Elementary School — **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

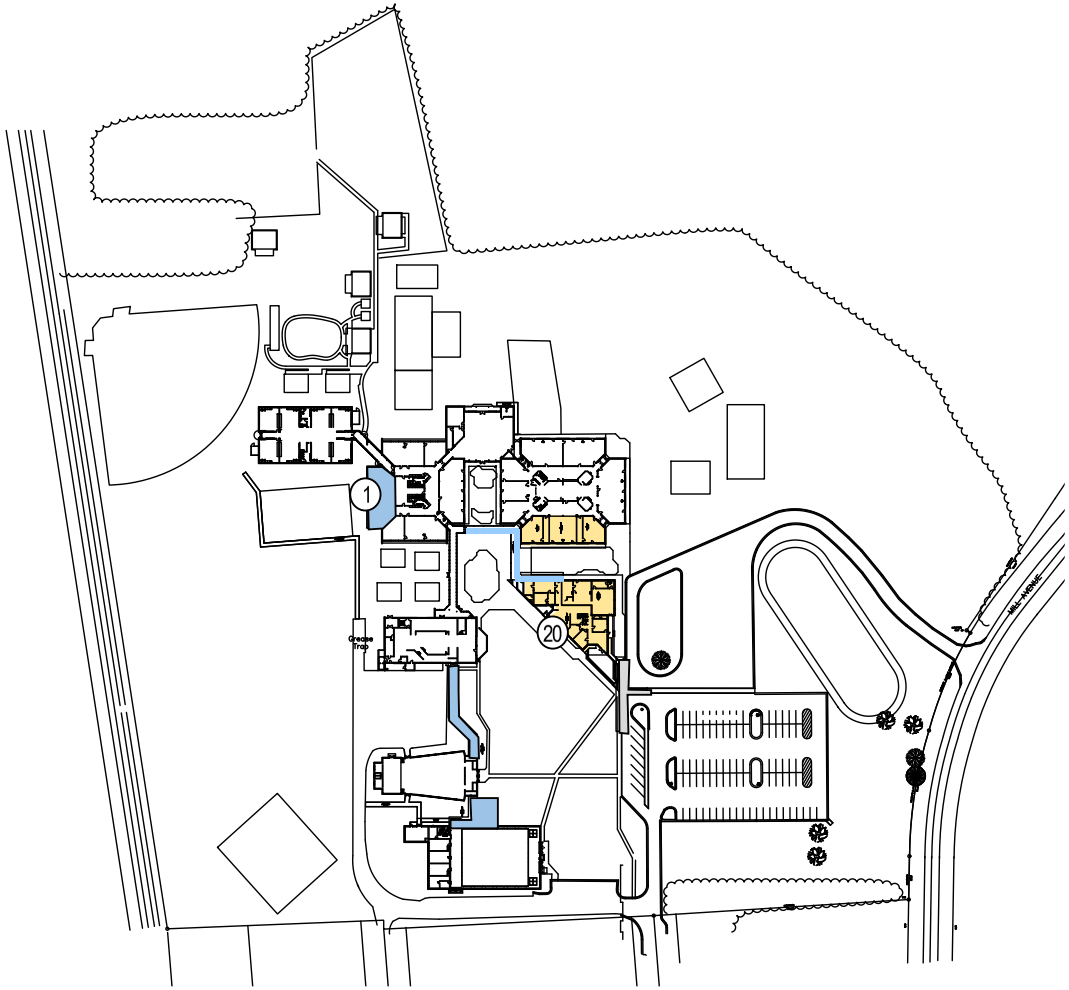
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Vanceboro Farm Life Elementary School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
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A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

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W.J. Gurganus Elementary School

There has been no expansion to this facility since it was first constructed in 1991. The design is one of four similar buildings in the system. The site is of adequate size and is near a major roadway, Hwy 70. Before entering or exiting the site, one must cross the railroad tracks which parallel Hwy 70. Unlike other locations in the system, there is no viable second means of accessing the site which can potentially pose both a safety and security issue. The building still has many years of service left to provide.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
6-216 -10001	W.J. Gurganus Elementary-Both	CRAVEN COUNTY	32.6	$463,820	$463,820

Insurance Data

GURGANUS ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25037801	MAIN BUILDING	NC2	1/1/1991	28	59885	$8,985,679
	Totals / Average $/sf				59885	$8,985,679
	Average Construction Date		1991			
	Average Age			28		

Insurance / GIS Data

At 60,000 square feet this one story building fits well within the 32 acre site. Since construction it has been well maintained with few significant components replace.

Life Cycle Analysis

At only 28 years of age, this building should continue to provide many years of service. At between 20 and 30 years of age, exterior air conditioning units begin to deteriorate. The roof is another component that is aged out and replacement with a metal roof would mean that no additional re-roofing would need to occur throughout the remaining life of the building.

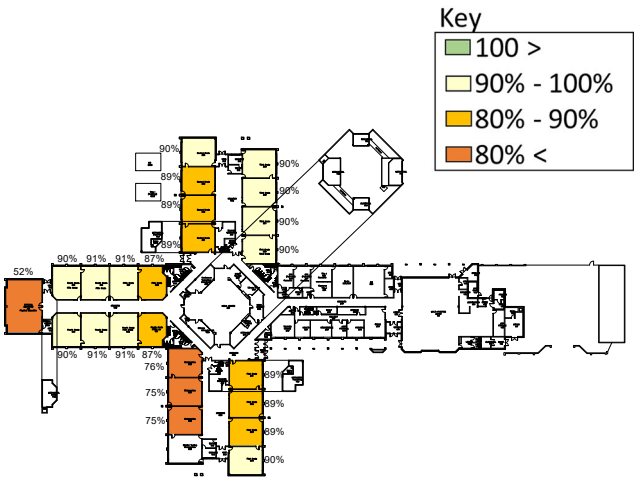
Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
GURGANUS ES						
MAIN BUILDING - 1991	42	70	60	80	1991	28

Utility Providers

Electrical	Duke /Progress Energy
Sewer	City of Havelock
Water	City of Havelock
Natural Gas	Piedmont Natural Gas

Square Footage Per Program (Based on Use)

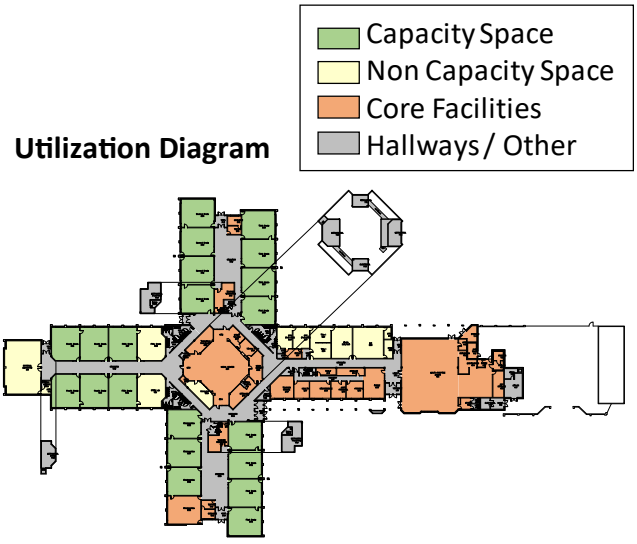
There are no academic spaces in this building that are of appropriate size. The ones in yellow are only 90% of the correct size. The most egregious is the Physical Education space which is only 52% of what it should be.



Capacity / Use Diagram (Optimized for 2021)

As with other school of the same design the Core Facilities are concentrated at the front and centrally with classrooms spinning off into their own wings. Resource spaces can be distributed throughout the building, but due to the similar size of the spaces, several full sized classrooms will need to be used as resource spaces.

Utilization Diagram



Facility Details

All of the rooms are smaller than the minimum standards. The overall organization of spaces is reasonable, with resource type spaces located in two of the three hallways. The building is close to Hwy 70 and the railroad crossing is less than desirable. The site is wet and surrounded by what is assumed to be wetlands.

Building Images

Below are several images of the facility depicting some potential improvements. Not everything depicted is an issue. For example, natural lighting has been found to improve student performance.

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



Thermal Windows



Fuel Oil Tank



Physical Education



Roofing

Potential Improvements

This facility is a small school with a student capacity of around 300 students. Additional parking would be appropriate, as would reworking the swales around the school to help improve drainage away from the building.

As such, there is insufficient queueing and parking on site though improvements can be made to both with a modest investment. Other outdoor improvements include ADA compliance, egress, and the addition of a canopy will greatly improve the operations at this site.

Once inside the building, improvements to the mechanical system and other infrastructure renovations will allow this building to dehumidify and keep it relatively youthful over the course of the next 40 or so years. Upgrades, such as polishing the existing concrete floors, are reasonable considering its youthful status vs the cost of stripping and re-waxing the existing floors on an annual basis. Although this building is for the most part ADA compliant, there are still items that should be addressed.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

WJ Gurganus Middle

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$1,100	$110	$99	$165	$1,474
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$95,932	$9,593	$8,634	$14,390	$128,549
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$60,000	$6,000	$5,400	$9,000	$80,400
7	Canopy (cov. Walks)	$50,817	$5,082	$4,574	$7,623	$68,095
8	Other Site	$75,543	$7,554	$6,799	$11,331	$101,228
9	Roofing	$1,105,430	$110,543	$99,489	$165,815	$1,481,276
10	Structural	$0	$0	$0	$0	$0
11	Windows	$0	$0	$0	$0	$0
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$9,600	$960	$864	$1,440	$12,864
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$57,969	$5,797	$5,217	$8,695	$77,679
16	Flooring	$221,959	$22,196	$19,976	$33,294	$297,424
17	Painting	$113,910	$11,391	$10,252	$17,086	$152,639
18	Other Building Interior	$0	$0	$0	$0	$0
19	Mechanical	$560,000	$56,000	$50,400	$84,000	$750,400
20	Electrical	$300,000	$30,000	$27,000	$45,000	$402,000
21	Lighting	$110,000	$11,000	$9,900	$16,500	$147,400
22	Technology	$51,876	$5,188	$4,669	$7,781	$69,514
23	Plumbing	$25,900	$2,590	$2,331	$3,885	$34,706
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$10,500	$1,050	$945	$1,575	$14,070
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$365,270	$36,527	$32,874	$54,791	$489,462
28	Fire Alarm	$120,000	$12,000	$10,800	$18,000	$160,800
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$77,680	$7,768	$6,991	$11,652	$104,091
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$37,500	$3,750	$3,375	$5,625	$50,250
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$196,000	$19,600	$17,640	$29,400	$262,640
37	Kitchen Equipment	$45,000	$4,500	$4,050	$6,750	$60,300
38	Media Center Furniture	$36,000	$3,600	$3,240	$5,400	$48,240
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$4,995,502**

Renovations
Several spaces at W.J. Gurganus should be considered for renovation. These would include moving walls in the small classrooms in order to make larger spaces. This will reduce the capacity of the school unless an addition is constructed to make up for the lost classrooms.

Additions
The proposed additions address the losses in classroom space based on the renovations noted above. Additionally, several new spaces can be created in the appropriate size and increase the overall capacity of the school. The addition of a full size Multipurpose Room should also be considered.

Site
Additional parking would be appropriate especially if the addition is constructed. Some reworking of the bus lot will also need to occur if the multipurpose space is placed as shown. Additional sidewalks should also be provided to improve ADA compliance to the play areas as well as to improve overall emergency egress to the public way.

Mechanical System
The school is based on DX cooling with hot water heat from a natural gas boiler. At present the system does not have the ability to dehumidify nor pull in new outside air. If a Direct Digital Controls (DDC) system was installed as an upgrade to the existing system, the school could pull the moisture out of the air.

Fire Alarm
As with other Fire Alarm Systems, getting parts is a problem and this system is no longer manufactured. It should be replaced with a new addressable system.

Electric
The building is now at the age that replacing the main switchgear will ensure continued uninterrupted service. The system is currently in good condition and does not need to be replaced.

Lighting
The building has mostly T8 fixtures that should be replaced with LED lights.

Potential Additions and Renovations

Craven County Schools

Space Inventory / Worksheet 2019

W.J. Gurganus

12/2/2019

Current Student Capacity (NCDPI)	402	Current Core Capacity (NCDPI)	728
Proposed Student Capacity	616	**Proposed Core Capacity**	728
	Number of Spaces	0	Square Footage

Total Cost	$9,348,833
Cost / Student	$15,177
Athletic / PE /Facilities	
	Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens	6	4	4	2
Grades 1-3 Clsrms	18	12		6
Grades 4-5 Clsrms	8	5		3
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1		1	
Instructional Kitchen				
Resource	5	5		
Computer				
STEM	1	1		
Sub-Total	39	27	5	11
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project				
Art Sto. Kiln	1	1		
General Music	1	1		
Instrumental Music (Band)				
Vocal Music (Chorus) + Sto.				
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	3	3	0	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	0	0	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		1
Stage	1			1
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office	1	1		1
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms				
Sub-Total	3	2	0	3
Misc. Spaces				
ROTC				
Mobile Units				
Total	**45**	**32**	**5**	**14**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,181	2911		
Support	1,500	1822	-322	
Computer				
Sub-Total	4,681	4,733	0	0
Food Service	# of seatings			3
Dining	2,912	3965	-538	
Kitchen	1,938	1816	122	
Serving	620	204	416	
Sub-Total	5,470	5,985	538	0
Auditorium	# of seats			0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	2,740	2781		
Sub-Total	2,740	2,781	0	0
Storage				
Book Storage	860			860
General Storage	960	373		587
Sub-Total	1,820	373	0	1,447
Staff Support				
Staff Support	1,600	1139	322	
Sub-Total	1,600	1,139	322	0
Total Renovated Spaces			860	
Demolition Totaling				
Total	**16,311**	**15,011**	**860**	**1,447**

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field	3			3
Sub-Total	3	0	0	3
Total	**0**	**0**	**0**	**9**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at W.J. Gurganus an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

W.J. Gurganus

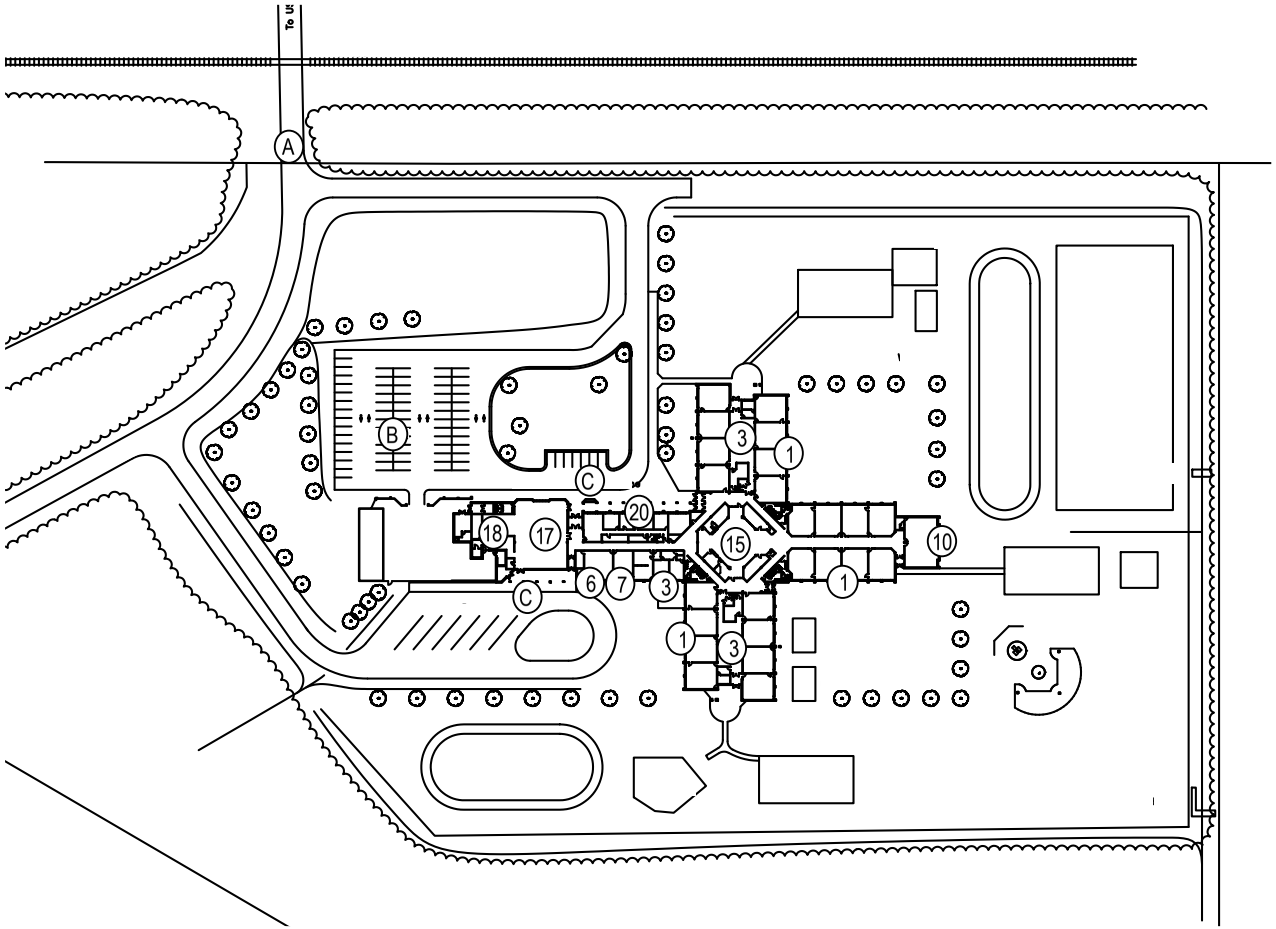
Additions / Renovations	Proposed Student Capacity	616
	Proposed Core Capacity	728

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	11	11,250	219.02	$2,463,954
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	3	5,162	306.36	$1,581,432
Misc. Spaces ()			180.00	$0
Renovations	5	5,567	73.39	$408,550
Core Capacity				
Media Center		0	0.00	$0
Food Service		0	0.00	$0
Auditorium		0	0.00	$0
Administration		0	240.50	$0
Storage		1,447	240.50	$348,004
Staff Support		0	240.50	$0
Renovations		860	156.09	$134,240
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	1			$45,000
Subtotal New		17,859	$246.00	$4,393,389
Circulation/ Mechanical/Toilets/Walls	38.00%	6,786	$246.00	$1,669,488
Subtotal Renovated		6,427	$84.45	$542,790
Athletics				$45,000
Site Improvements				$240,657
Other ()				
Sub Total				$6,891,324
Inflation (3% for 3 years)	9.00%			$620,219
Contingency (%)	10.00%			$751,154
Sub Total				$8,262,697
A-E Fees (%)	10.00%			$826,270
Financing Charges	1.00%			$93,488
Other Fees and Services				$166,378
Site	0			$0
Owners Contingency (furn., equipment)				$498,000
Total				**$9,348,833**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

W. J Gurganus Elementary School — **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

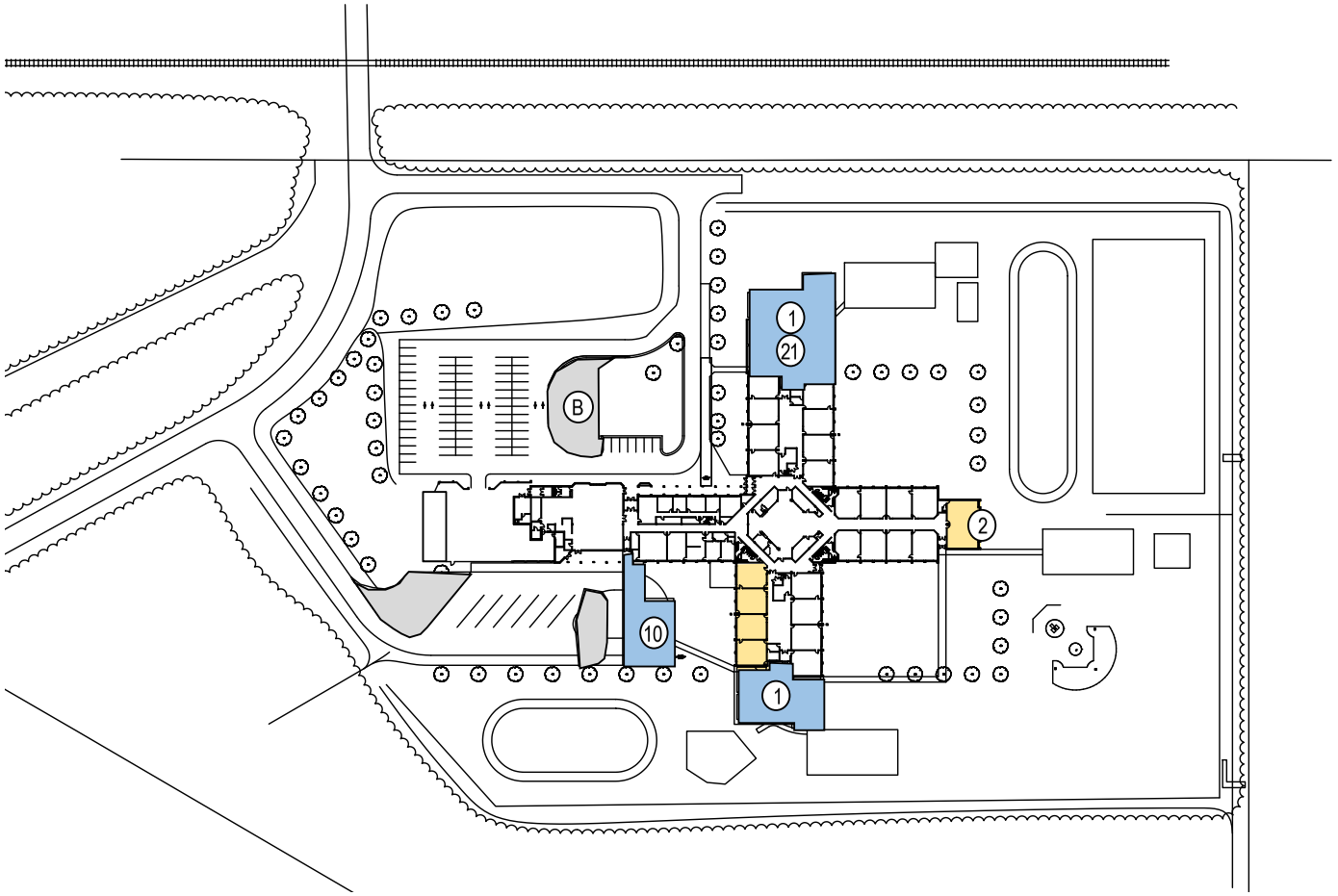
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

W. J Gurganus Elementary School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

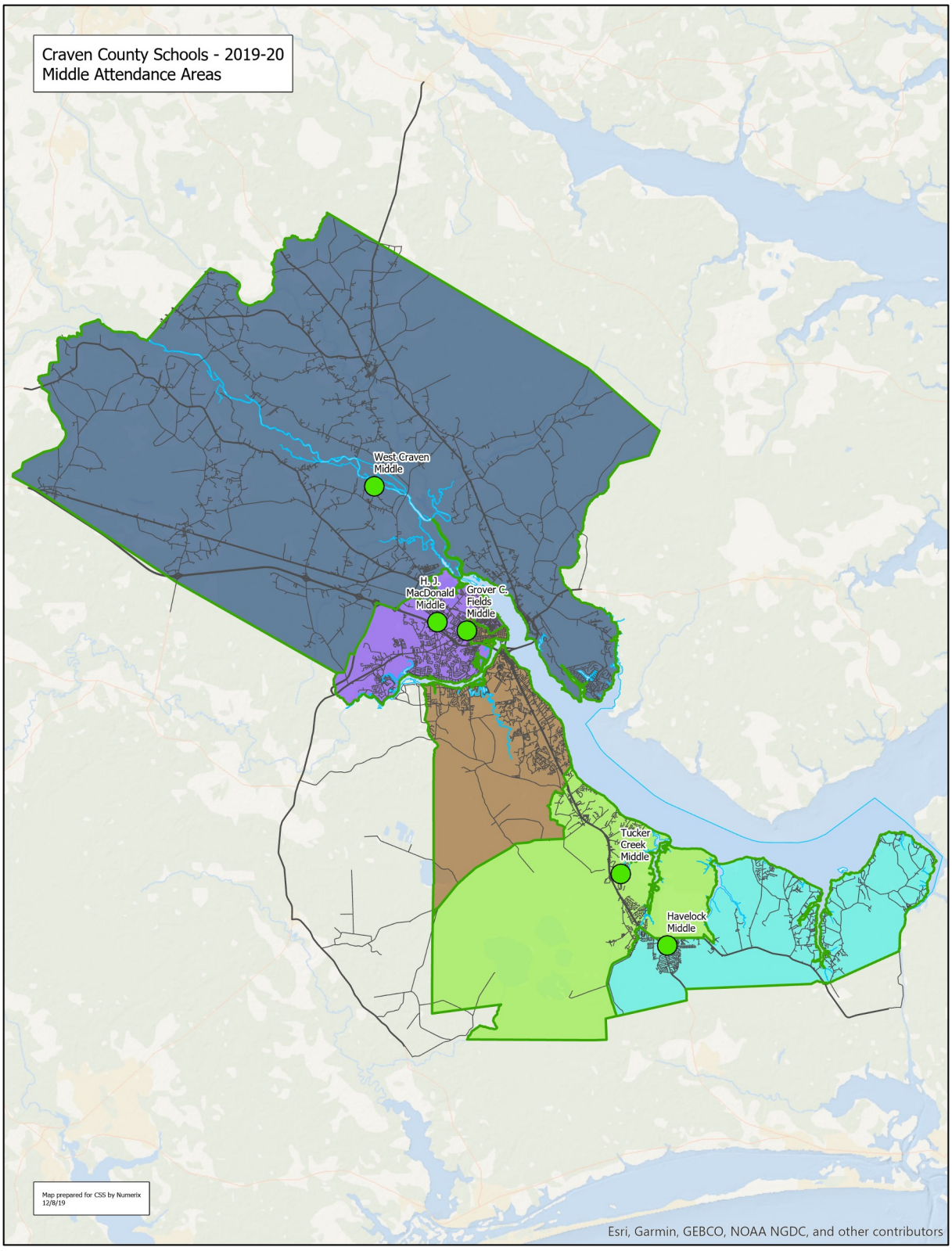
A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

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Middle Schools



Grover C. Fields Middle School

There have been many additions to this campus since it was first constructed in 1955. The two story structure is reasonable and reduces the overall footprint of the building, thus requiring less acreage than a one story building. There are five distinct buildings creating a campus atmosphere where students must exit and re-enter buildings. Due to its proximity to the Bus Garage, the east parking lot is used for bus parking over the summer . The Aspire program is also on this campus which is the white rectangle on the north side of the building.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-027 -105	Grover C. Fields Middle	BOE	23.7	$2,369,980	$2,369,980

Insurance / GIS Data

Insurance data can be found on the following page where the additions are shown. The campus square footage, exclusive of the modular building near the bus lot, is substantial at 124,000 square feet. Most of that space was constructed in 1955. At almost 24 acres the site is at the square footage level recommended by NCDPI for a one story building. As a two story building, the site should be adequate.

Insurance Data

GC FIELDS MS		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25032401	300 BLDG/CLASSROOM	NC2	1/1/1955	64	31400	$4,711,535
25032402	100 BLDG/ADMIN-AUD	NC2	1/1/1955	64	22646	$3,398,008
25032403	600 BLDG/GYMNASIUM	NC1	1/1/1955	64	21691	$3,254,709
25032404	400 BLDG/CLASSROOM	NC2	1/1/1964	55	17900	$2,685,876
25032405	500 BLDG/ART	NC2	1/1/1967	52	6094	$914,398
25032406	200 BLDG/CAFE-MEDIA	NC2	1/1/1955	64	8648	$2,675,371
	Media addition	NC1	7/1/2008	11	9182	
25032410	FIELD HOUSE	JM1	1/1/1980	39	4705	$705,981
25032412	BLEACHERS	F1	1/1/2004	15		$297,523
25032415	FIELD MAINT. BLDG	F1	1/1/2000	19	2030	$119,190
25032416	F'BALL FIELD LIGHTS	F1	1/1/1998	21		$215,875
	Band / Chorus		1/1/2003	16		
	Main Entrance		1/1/2003	16		
	Totals / Average $/sf				124296	$18,978,466
	Average Construction Date		1980			
	Average Age			45		

Life Cycle Analysis

With a good portion of the building at 64 years of age, much of this building is nearing the end of its life cycle. With the exception of the Media Center addition which occurred in 2008, the remainder of the buildings are not far behind. Without a significant investment into the finishes, infrastructure, and building envelope, repair costs will begin to increase exponentially.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
GC FIELDS MS						
300 BLDG/CLASSROOM - 1955	-4	60	50	70	1955	64
100 BLDG/ADMIN-AUD - 1955	-4	60	50	70	1955	64
600 BLDG/GYMNASIUM - 1955	-4	60	50	70	1955	64
400 BLDG/CLASSROOM - 1964	5	60	50	70	1964	55
500 BLDG/ART - 1967	8	60	50	70	1967	52
200 BLDG/CAFE-MEDIA - 1955	-4	60	50	70	1955	64
201 BLDG/CAFE-MEDIA - 2008	69	80	70	90	2008	11
FIELD HOUSE - 1980	1	40	30	50	1980	39
BLEACHERS - 2004	15	30	20	40	2004	15
FIELD MAINT. BLDG - 2000	11	30	20	40	2000	19
F'BALL FIELD LIGHTS - 1998	29	50	50	50	1998	21
Band Chrous - 2003	14	30	20	40	2003	16
Main Entrance 2003	14	30	20	40	2003	16

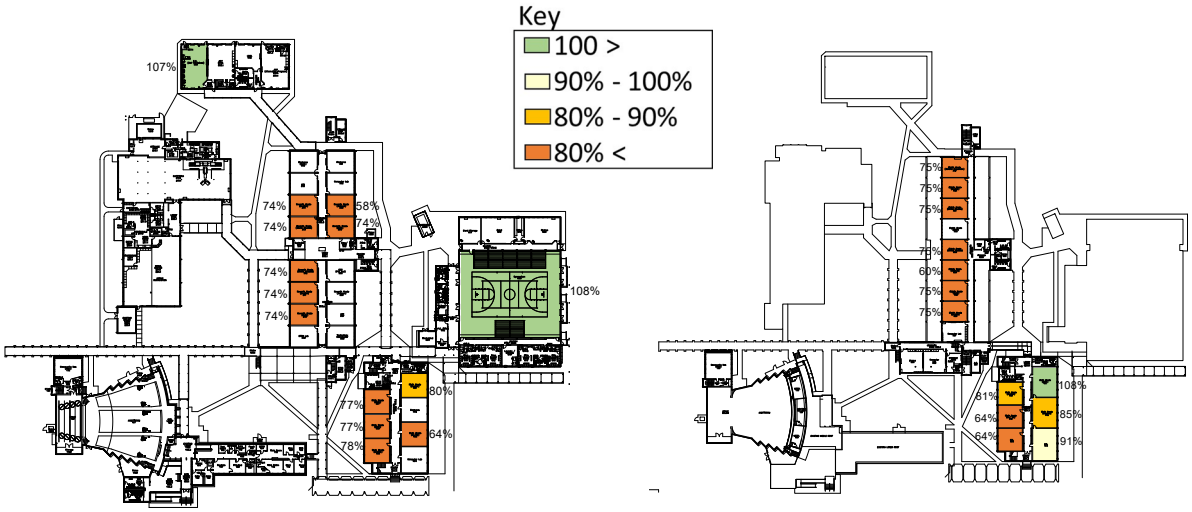
Grover C. Fields

Utility Providers

Electrical	City of New Bern
Sewer	City of New Bern
Water	City of New Bern
Gas	NA

Square Footage Per Program (Based on Use)

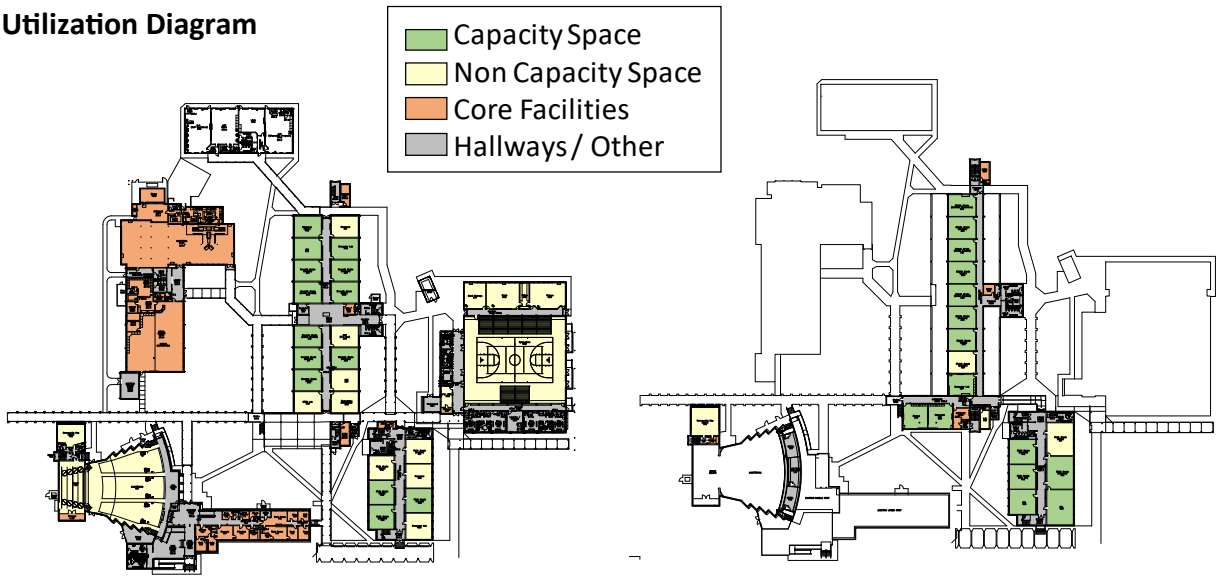
As an older building that has been repurposed to a middle school, there are few spaces that are the appropriate size, the smallest of which is at 60% of the minimum.



Capacity / Use Diagram (Optimized for 2021)

The distribution of spaces is reasonable with concentrations of Core Facilities near the front and noisier areas away from classrooms. The exception to this condition is the relationship between the Cafeteria and Media Center. Resource spaces can be distributed around the campus.

Utilization Diagram



Facility Details

This is an old building that was built with inexpensive materials like cinder blocks and other materials that do not have a long life cycle. The buildings do not provide the level of security afforded most schools today and has an inefficient design with respect to building envelope. The entire layout of the campus resembles the layout of a Junior High School where programs are centralized and students move more to get to their next class.

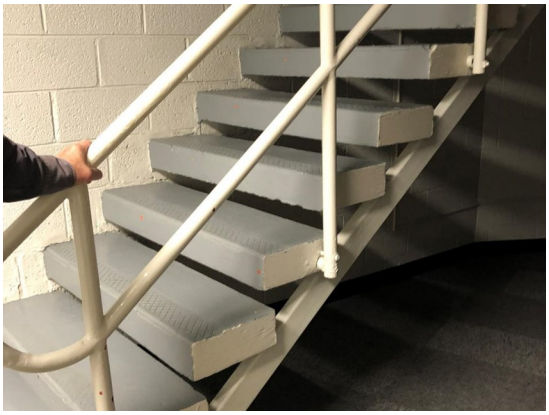
Access to the site is via Business 17 or through a residential neighborhood. The queue double stacks up to the Administration Building and backs up onto 17 in both directions. Sporting events are an issue with the northern side of the track being the property line for the adjacent property. Adding to the clutter on the site is the modular building that is not in good condition and demolition should be considered.

Building Images

Below and on the following page are several images of the facility depicting some potential needed improvements. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance. These are only a few items that have a large impact on deferred maintenance.



Cinder Block Walls



ADA Access



Stair Tread Wear



Single Pane Windows



No Thermal Windows



Old Seating



Aged Infrastructure



Concrete in Failure



Cracked Asphalt



Worn Mortar Joints

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.

Potential Improvements

This campus has numerous opportunities for improvement. They range from the cosmetic to security issues. Starting with the site there is an opportunity to rework the bus lot to the northeast and have it double as a queue during the school year and still provide bus parking during the summer. Other site improvements include asphalt repairs, adding parking for staff near the kitchen and adding soil around the walkways to reduce trip hazards and improve ADA compliance.

The building envelope is leaking. The primary culprit is the walls where masonry expansion joints have failed, as well as soft mortar joints which are allowing moisture into the building. Roofing is always a concern, as are the non-thermally broken windows.

Most of the finishes on the interior are showing their age. The cinder block walls collect the dirt and grease from students hands and the wood frames for doors are in constant need of repair. At 64 years old and with nearly 700 students in the building each year would mean that nearly 50,000 students have walked up and down the two stair towers. The result is that over the years the students have worn the stair treads down to such an extent that it is apparent where they have walked. This campus is ripe with opportunities for improvement should it be considered the correct decision.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Grover C Fields Middle

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$26,000	$2,600	$2,340	$3,900	$34,840
2	Site Utilities	$66,200	$6,620	$5,958	$9,930	$88,708
3	Parking / Drives	$771,551	$77,155	$69,440	$115,733	$1,033,878
4	Sewer System	$33,840	$3,384	$3,046	$5,076	$45,346
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$35,000	$3,500	$3,150	$5,250	$46,900
7	Canopy (cov. Walks)	$0	$0	$0	$0	$0
8	Other Site	$228,122	$22,812	$20,531	$34,218	$305,683
9	Roofing	$1,250,532	$125,053	$112,548	$187,580	$1,675,712
10	Structural	$30,000	$3,000	$2,700	$4,500	$40,200
11	Windows	$799,200	$79,920	$71,928	$119,880	$1,070,928
12	Walls	$94,600	$9,460	$8,514	$14,190	$126,764
13	Other Building Exterior	$75,564	$7,556	$6,801	$11,335	$101,256
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$77,787	$7,779	$7,001	$11,668	$104,234
16	Flooring	$851,831	$85,183	$76,665	$127,775	$1,141,453
17	Painting	$290,831	$29,083	$26,175	$43,625	$389,714
18	Other Building Interior	$338,113	$33,811	$30,430	$50,717	$453,071
19	Mechanical	$980,000	$98,000	$88,200	$147,000	$1,313,200
20	Electrical	$775,000	$77,500	$69,750	$116,250	$1,038,500
21	Lighting	$165,000	$16,500	$14,850	$24,750	$221,100
22	Technology	$77,306	$7,731	$6,958	$11,596	$103,590
23	Plumbing	$70,948	$7,095	$6,385	$10,642	$95,070
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$252,000	$25,200	$22,680	$37,800	$337,680
26	ADA Ramps	$8,000	$800	$720	$1,200	$10,720
27	ADA Toilets	$0	$0	$0	$0	$0
28	Fire Alarm	$180,000	$18,000	$16,200	$27,000	$241,200
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$52,000	$5,200	$4,680	$7,800	$69,680
31	Abatement	$49,914	$4,991	$4,492	$7,487	$66,885
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$692,400	$69,240	$62,316	$103,860	$927,816
37	Kitchen Equipment	$135,000	$13,500	$12,150	$20,250	$180,900
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$11,265,028**

Renovations

Originally designed as a High School, these buildings will need significant modifications to function as a modern middle school. Revisions to the location of the cinder block walls will require a substantial investment and will yield a building that is still primarily constructed of materials with a lower life expectancy. The place where these changes will make the most impact are to the sciences and vocational programs, with the biggest impact occurring in the administrative wing.

Additions

The proposed additions address the losses in classroom space based on the renovations where the overall number of classrooms will be reduced, as well as to spaces that provide added security. By creating connecting corridors within the additions, students will be able to enter the building and not have to transition to the exterior numerous times a day.

Site

Potential site improvements focus on filling potholes and protecting the existing asphalt. New asphalt options are included in the proposed solution, as is the opportunity to create a queue out of the bus parking lot.

Mechanical
Grover C. Fields has a mix of BARD units, split system heat pumps, and roof top units. This is an all electric school with no ability to dehumidify the buildings. The auditorium has high humidity levels due in part to oversized units and air infiltration through the walls and joints. A replacement of that system would be needed to correct the unit size and also provide dehumidification in the auditorium. The controls on these units are newer and in good condition.

Fire Alarm
The system is old and should be replaced with a new addressable system. Parts for the existing system are difficult to find.

Electrical
Much of the electrical system is original and has reached the end of its anticipated life. Main units, sub panels and branch circuits should be replaced. Due to the age and type of some of the equipment, several panels should be replaced as soon as practical.

Plumbing
The original lines are currently in failure. They are original and replacement is needed for both water and sanitary lines.

Lighting
The school has mostly T8 fixtures that should be replaced with LED lights.

Potential Additions and Renovations

Grover C. Fields

Craven County Schools

Space Inventory / Worksheet 2019

12/2/2019

Current Student Capacity (NCDPI)	722	Current Core Capacity (NCDPI)	1,021
Proposed Student Capacity	722	**Proposed Core Capacity**	1021
	Number of Spaces	0	Square Footage

Total Cost	**$10,931,883**
Cost / Student	**$15,141**
Athletic / PE /Facilities	
	Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens				
Grades 1-3 Clsrms				
Grades 4-5 Clsrms				
4-8 LA/SS/Math	21	21	19	2
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms	6	6	4	2
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	2	2	2	
Instructional Kitchen				
Resource	5	5		
Computer				
ISS	1			1
Sub-Total	35	34	25	5
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project				
Art Sto. Kiln				
General Music				
Instrumental Music (Band)	1	1		
Vocal Music (Chorus) + Sto.	1	1		
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	3	3	0	0
Vocational				
Keyboarding Labs	1	1		
Exploratory Labs	3	3		
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	4	4	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage				
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office				
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms	3	2		1
Sub-Total	4	3	0	1
Misc. Spaces				
ROTC				
Mobile Units				
Total	**46**	**44**	**25**	**6**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	4,185	4084		
Support	2,000	1566		434
Computer				
Sub-Total	6,185	5,650	0	434
Food Service		# of seatings		3
Dining	4,765	4946		
Kitchen	2,208	2176	2176	
Serving	620	859		
Sub-Total	7,593	7,981	2,176	0
Auditorium		# of seats		0
Auditorium	3,676	6296		
Stage / Dress / Sto.	2,500	2705		
Lobby	1,000	1070		
Sub-Total	7,176	10,071	0	0
Administration				
Administration	3,190	3688		
Sub-Total	3,190	3,688	0	0
Storage				
Book Storage	1,011			1,011
General Storage	1,111	1128		
Sub-Total	2,122	1,128	0	1,011
Staff Support				
Staff Support	1,950		498	1,452
Sub-Total	1,950	0	498	1,452
Total Renovated Spaces			2,674	
Demolition Totaling				
Total	**28,216**	**28,518**	**2,674**	**2,897**

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field				
Sub-Total	0	0	0	0
Total	**0**	**0**	**0**	**9**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Grover C. Fields in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

Grover C. Fields

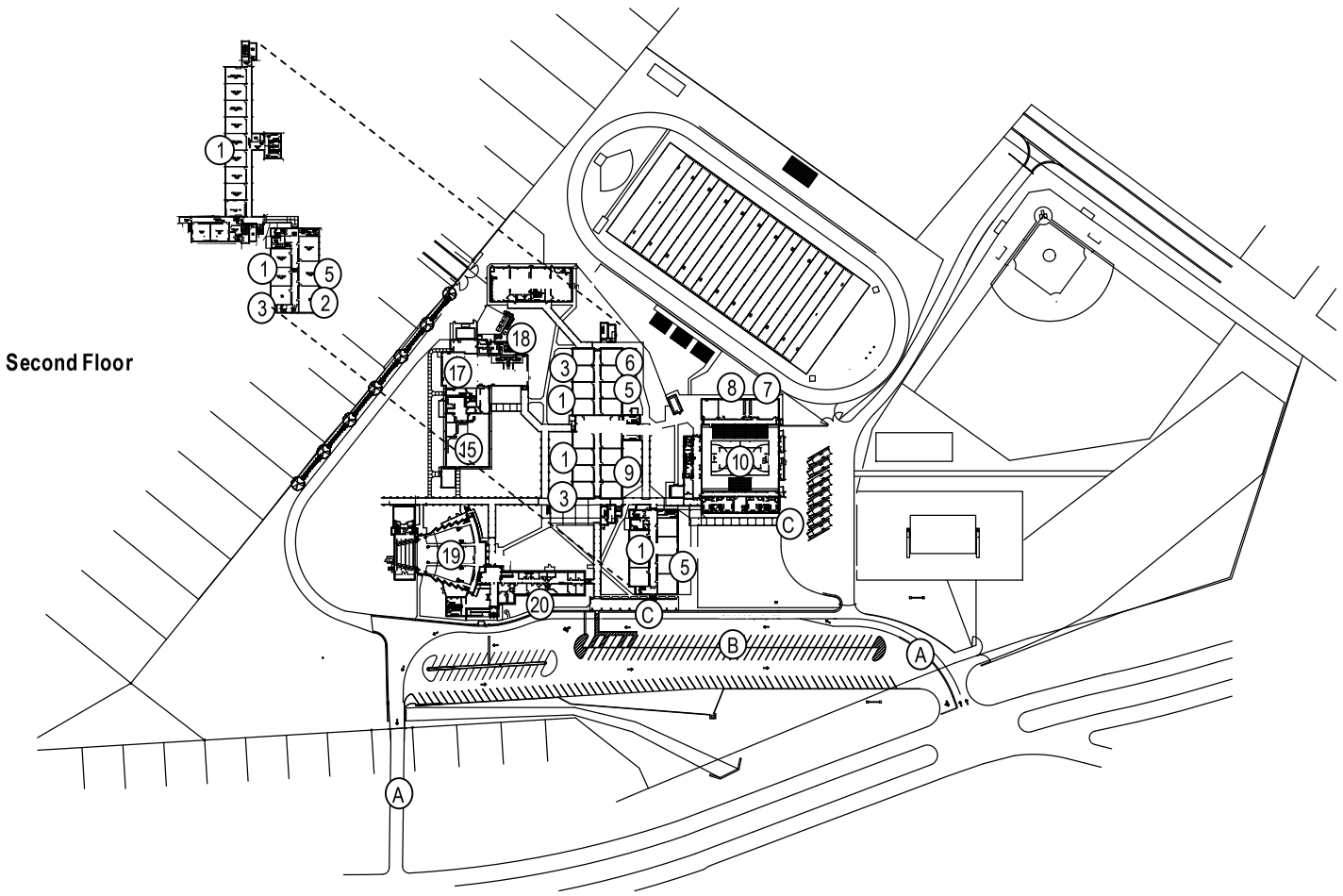
Additions / Renovations	Proposed Student Capacity	722
	Proposed Core Capacity	1,021

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	5	4,950	283.28	$1,402,248
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	1	750	272.43	$204,321
Misc. Spaces (Rest Room / Corridors)		4,910	285.67	$1,402,646
Renovations	25	25,776	78.25	$2,017,000
Core Capacity				
Media Center		434	315.42	$136,894
Food Service		0	0.00	$0
Auditorium		0	0.00	$0
Administration		0	286.75	$0
Storage		1,011	286.75	$289,904
Staff Support		1,452	286.75	$416,361
Renovations		2,674	210.20	$562,080
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		8,597	$448.11	$3,852,375
Circulation/ Mechanical/Toilets/Walls	38.00%	3,267	$448.11	$1,463,902
Subtotal Renovated		28,450	$90.65	$2,579,080
Athletics				$0
Site Improvements				$110,000
Other (Demolition Partial)		2908	18	$52,344
Sub Total				$8,057,701
Inflation (3% for 3 years)	9.00%			$725,193
Contingency (%)	10.00%			$878,289
Sub Total				$9,661,184
A-E Fees (%)	10.00%			$966,118
Financing Charges	1.00%			$109,319
Other Fees and Services				$195,263
Site	0			$0
Owners Contingency (furn., equipment)				$550,000
Total				**$10,931,883**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Grover C. Fields Middle School — **2019**

Existing – First Floor



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

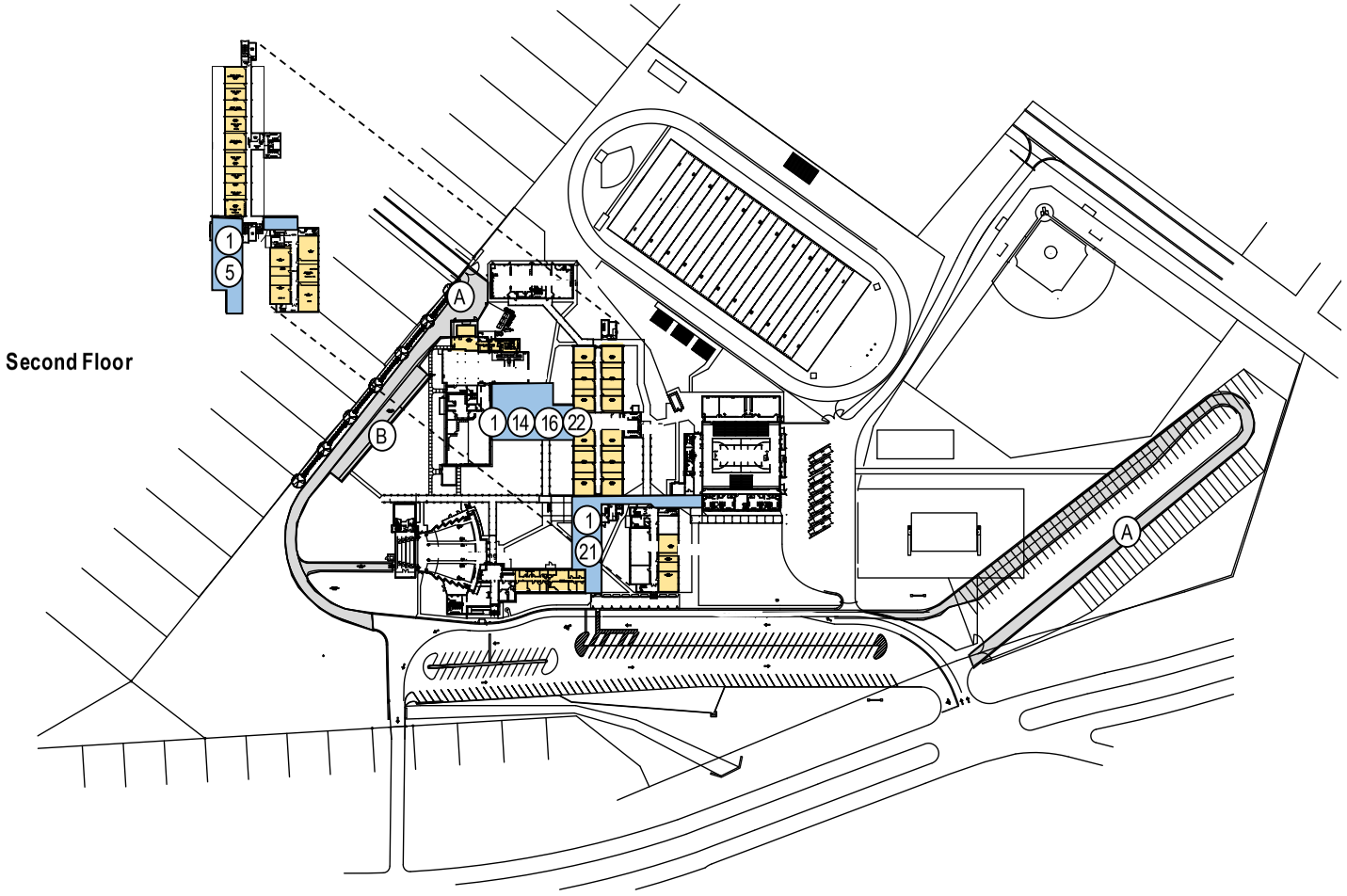
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Grover C. Fields Middle School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

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H.J. MacDonald Middle School

Since it was first constructed in 1970 there has been one addition, the gymnasium in 1980. The building consists of two story classroom towers that are connected via corridors and other spaces on the ground floor only, while the gymnasium is a freestanding structure. The main building has issues with organization, where in some cases students must walk through a classroom to get to their intended class. The site size and shape are good with bus and car traffic well separated..



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-212 -018	H.J. MacDonald Middle	BOE	42.7	$1,621,460	$1,621,460

Insurance Data

MACDONALD MS		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25033201	MAIN BUILDING	NC2	1/1/1970	49	133835	$20,081,797
25033202	GYMNASIUM BUILDING	NC2	1/1/1980	39	18070	$2,711,383
	Totals / Average $/sf				151905	$22,793,180
	Average Construction Date		1975			
	Average Age		49	44		

Insurance / GIS Data

At 152,000 square feet this 700 student school falls within the ideal size for a middle school. With nearly 43 acres of land and the two story configuration, there is sufficient space on campus to provide all needed programs and services.

Life Cycle Analysis

At 50 years of age, this building is starting to show its age. Finishes are worn sufficiently that replacement is warranted. The mechanical and electrical systems are beyond their intended life cycle and some floors have differential settlement. If this facility is to continue operation, a significant investment will be needed to improve the building structure, finishes, and infra-structure.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
MACDONALD MS						
MAIN BUILDING - 1970	21	70	60	80	1970	49
GYMNASIUM BUILDING - 1979	31	70	60	80	1980	39

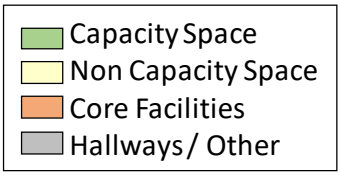
Utility Providers

Electrical	City of New Bern
Sewer	City of New Bern
Water	City of New Bern
Natural Gas	Piedmont Natural Gas

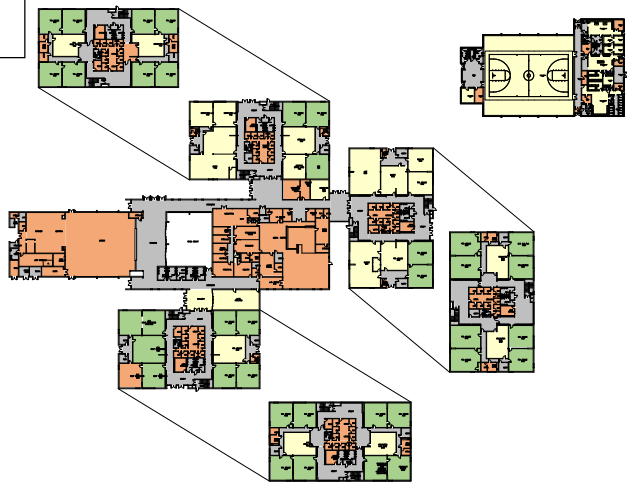


Square Footage Per Program (Based on Use)

With only a few exceptions, most of the classrooms in the school do not have the required minimum square footage. The program with the greatest shortfalls are the sciences. Some of these are below 70% of the minimums.



Utilization Diagram



Capacity / Use Diagram (Optimized for 2021)

The central section of the main building houses the Core Facilities providing good access to all building occupants. Class-room areas can work in pods and re-source rooms can be spread sufficiently to provide support to the main classrooms. The configuration of the spaces results in an inefficient use of space.

Facility Details

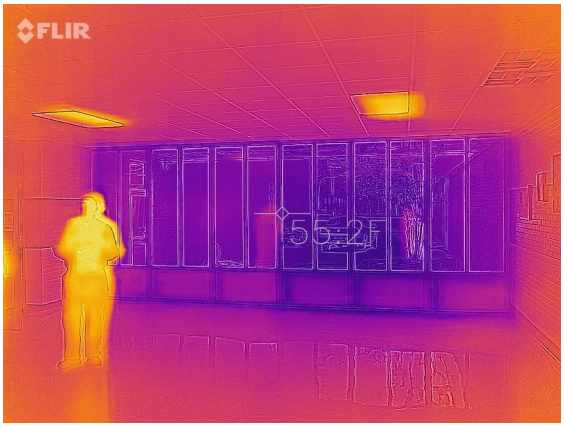
As an older building there are opportunities for improvement that will add life to the buildings. The main building itself has many interior rooms. The classroom towers have a central area that has been renovated in most places into a resource type space. That space is surrounded by a group of four classrooms. This is mirrored on the other side of the building with a series of primarily storage spaces between the two. There are no elevators at this school and since there are no connections between the three towers, a total of three elevators would be needed to fully comply with ADA requirements.

The site has a high water table and is often wet. Drainage swales are present and often filled with water, suggesting cleaning of swales here and downstream are needed.

Built before the Americans with Disabilities Act (ADA) was created, this building has many areas that are not in compliance. Significant investment will be needed to get the building and grounds into full compliance.

Building Images

Below and on the following page are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance. These are only a few that have a large impact to the deferred maintenance.



Windows in Failure



Standing Water



Reception



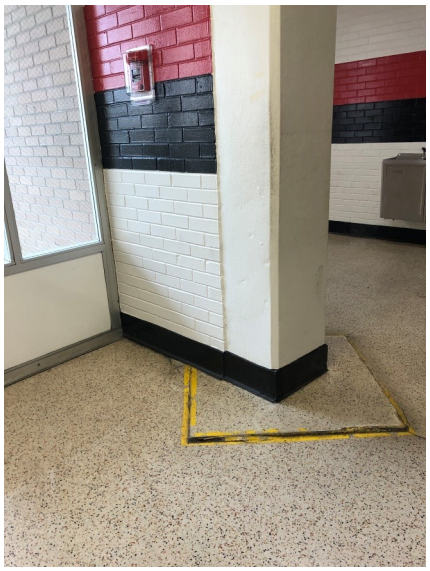
Seating



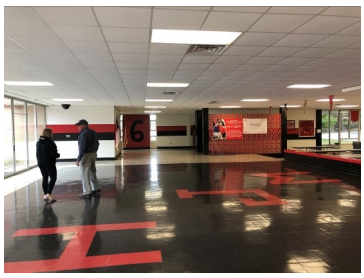
Art Room



Finish Failure

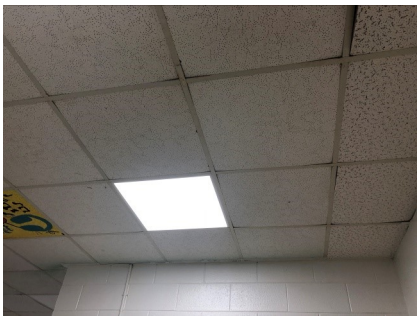


Floor Slab Settlement





Cafeteria



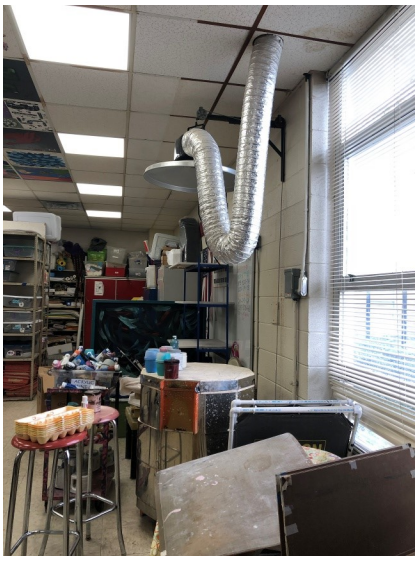
Humidity



Gymnasium



Wet Site



Kiln Exhaust



Mechanical



Supplemental AC

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.

Potential Improvements

Starting with the site there is sufficient acreage to create a queue on site but with the existence of the turn around at the end of Racetrack Road, there is no imminent need to add that component. Should the parcel owners in that area decide to develop the land, it would be practical to add a queue to the site.

The building has a number of flooring issues and some will need to be replaced if the plumbing lines are reworked. Ceilings and other interior finishes are in need to replacement or updating. The roof has now been patched enough times that it is appropriate to consider a full replacement.

Much of the existing infrastructure at the school has aged out. The mechanical system is of significant concern. The system is very inefficient at moving air which results in a buildup of carbon dioxide that can only be removed by opening the outside air intakes to their maximum. In the winter the system is constantly running to heat up that air with the reverse in the summer. Constant air monitoring is in place to ensure building occupants are safe. Considering the age of the original electrical equipment and plumbing lines, most of the components in the school are at the end of their life cycle.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

HJ MacDonald Middle

			10.00%	9.00%	15.00%	
#	Item	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$55,100	$5,510	$4,959	$8,265	$73,834
2	Site Utilities	$40,000	$4,000	$3,600	$6,000	$53,600
3	Parking / Drives	$242,284	$24,228	$21,806	$36,343	$324,661
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$52,500	$5,250	$4,725	$7,875	$70,350
7	Canopy (cov. Walks)	$204,072	$20,407	$18,366	$30,611	$273,456
8	Other Site	$148,388	$14,839	$13,355	$22,258	$198,840
9	Roofing	$1,399,323	$139,932	$125,939	$209,899	$1,875,093
10	Structural	$0	$0	$0	$0	$0
11	Windows	$608,664	$60,866	$54,780	$91,300	$815,610
12	Walls	$192,699	$19,270	$17,343	$28,905	$258,217
13	Other Building Exterior	$60,000	$6,000	$5,400	$9,000	$80,400
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$525,259	$52,526	$47,273	$78,789	$703,847
16	Flooring	$1,021,787	$102,179	$91,961	$153,268	$1,369,195
17	Painting	$336,236	$33,624	$30,261	$50,435	$450,556
18	Other Building Interior	$225,900	$22,590	$20,331	$33,885	$302,706
19	Mechanical	$4,100,000	$410,000	$369,000	$615,000	$5,494,000
20	Electrical	$915,000	$91,500	$82,350	$137,250	$1,226,100
21	Lighting	$240,000	$24,000	$21,600	$36,000	$321,600
22	Technology	$55,663	$5,566	$5,010	$8,349	$74,589
23	Plumbing	$44,400	$4,440	$3,996	$6,660	$59,496
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$440,250	$44,025	$39,623	$66,038	$589,935
26	ADA Ramps	$450,000	$45,000	$40,500	$67,500	$603,000
27	ADA Toilets	$960,000	$96,000	$86,400	$144,000	$1,286,400
28	Fire Alarm	$300,000	$30,000	$27,000	$45,000	$402,000
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$90,700	$9,070	$8,163	$13,605	$121,538
31	Abatement	$42,822	$4,282	$3,854	$6,423	$57,381
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$952,600	$95,260	$85,734	$142,890	$1,276,484
37	Kitchen Equipment	$108,000	$10,800	$9,720	$16,200	$144,720
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$1,925,280	$192,528	$173,275	$288,792	$2,579,875
	Total					**$21,087,484**

Renovations

The three classroom towers are not configured for a modern school. This relates to the organization of rooms, administrative offices and storage, and a lack of ADA compliance. These spaces can be completely cleared of all walls, ceilings and floor finishes and replaced with an improved organization and vertical circulation. Other areas that should be considered are the administrative suites, vocational and arts spaces and the Self Contained classrooms.

Additions

The school is of sufficient size that an Auditorium is warranted. This would need to include sufficient rest room facilities for the Auditorium itself, but if placed correctly could also supplement the limited facilities at the existing Gymnasium. To get students to the proposed Auditorium / Gymnasium Complex, a connecting corridor can be added which will provide dry and safe access between the buildings.

Site

Asphalt repair and maintenance make up a big portion of the costs on site improvement, while drainage and safety are other areas for consideration. It would also be appropriate to consider adding sidewalks for ADA compliance and security at the school.

Mechanical System

H.J. MacDonald has a mix of BARD units and air handlers with direct exchange (DX) cooling and has a boiler that provides hot water to the units. The system is poorly zoned and does not provide sufficient air change per hour unless the outdoor air dampers are set to the full open position. The Gymnasium units were in failure at the time of inspection.

Mechanical System

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Fire Alarm

As with other older buildings this system is sufficiently aged that replacement parts are difficult to find or completely unavailable. The system should be replaced with a new addressable system.

Electric

The original equipment is beyond the anticipated useful life and needs to be replaced from the main service to switches and outlets.

Lighting

There is a mix of old, inefficient T12 and T8 lights that should be replaced with new energy efficient LED lights.

Potential Additions and Renovations

H.J. MacDonald

Craven County Schools

Space Inventory / Worksheet 2019

12/2/2019

H.J. MacDonald

Current Student Capacity (NCDPI)	888	Current Core Capacity (NCDPI)	1,189
Proposed Student Capacity	888	**Proposed Core Capacity**	1189
	Number of Spaces	0	Square Footage

Total Cost $17,951,587
Cost / Student $20,216
Athletic / PE /Facilities — Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens				
Grades 1-3 Clsrms				
Grades 4-5 Clsrms				
4-8 LA/SS/Math	24	24	24	
Grades 6-8 Math/Sci Clsrms	3	3	3	
Grades 5-8 Science Clsrms	6	6	6	
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	2	3	3	
Instructional Kitchen				
Resource	7	8	8	
Computer				
ISS	1		1	
Sub-Total	43	44	45	0
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project				
Art Sto. Kiln				
General Music				
Instrumental Music (Band)	1	1		
Vocal Music (Chorus) + Sto.	1	1		
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama	1	1		
Sub-Total	4	4	0	0
Vocational				
Keyboarding Labs	1	1		
Exploratory Labs	3	3		
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	4	4	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage				
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office				
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms	3	3		
Sub-Total	4	4	0	0
Misc. Spaces				
ROTC				
Mobile Units				
Total	**55**	**56**	**45**	**0**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	4,756	4757		
Support	2,000	1199	801	
Computer				
Sub-Total	6,756	5,956	801	0
Food Service		# of seatings		3
Dining	5,549	6258		
Kitchen	2,566	2544		
Serving	620	667		
Sub-Total	8,735	9,469	0	0
Auditorium		# of seats		0
Auditorium	4,280			4,280
Stage / Dress / Sto.	4,000			4,000
Lobby	1,000			1,000
Sub-Total	9,280	0	0	9,280
Administration				
Administration	3,400	9449	3400	
Sub-Total	3,400	9,449	3,400	0
Storage				
Book Storage	1,095		1095	
General Storage	1,195	1446		
Sub-Total	2,290	1,446	1,095	0
Staff Support				
Staff Support	1,950	2328	1950	
Sub-Total	1,950	2,328	1,950	0
Total Renovated Spaces			7,246	
Demolition Totaling				
Total	**32,411**	**28,648**	**7,246**	**9,280**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field				
Sub-Total	0	0	0	0
Total	**0**	**0**	**0**	**9**

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at H.J. MacDonald in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

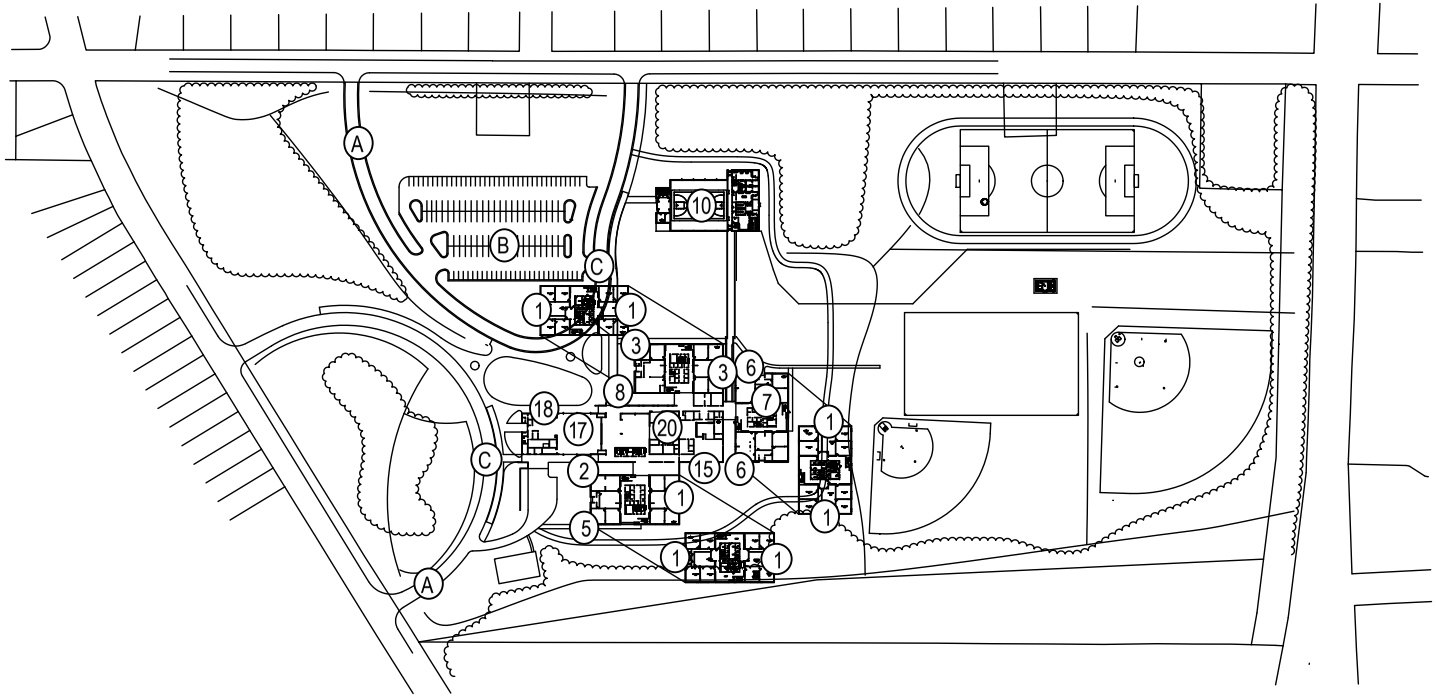
H.J. MacDonald

Additions / Renovations	Proposed Student Capacity			888
	Proposed Core Capacity			1,189
Student Capacity				
Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Academic Spaces	0	0	0.00	$0
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	0	0	0.00	$0
Physical Education Etc.	0	0	0.00	$0
Misc. Spaces (3 Elevators)	3		120,000	$360,000
Renovations	45	82,939	65.00	$7,785,855
Core Capacity				
Media Center		0	0.00	$0
Food Service		0	0.00	$0
Auditorium		9,280	341.50	$3,169,217
Administration		0	277.50	$0
Storage		0	0.00	$0
Staff Support		0	277.50	$0
Renovations		8,149	66.78	$544,200
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		9,280	$380.29	$3,529,217
Circulation/ Mechanical/Toilets/Walls	38.00%	3,527	$380.29	$1,341,102
Subtotal Renovated		91,088	$91.45	$8,330,055
Athletics				$0
Site Improvements				$130,000
Other (Additional Toilets Auditorium)				
Sub Total				$13,330,374
Inflation (3% for 3 years)	9.00%			$1,199,734
Contingency (%)	10.00%			$1,453,011
Sub Total				$15,983,118
A-E Fees (%)	10.00%			$1,598,312
Financing Charges	1.00%			$179,516
Other Fees and Services				$190,641
Site	0			$0
Owners Contingency (furn., equipment)				$960,000
Total				**$17,951,587**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

H.J. MacDonald Middle School | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

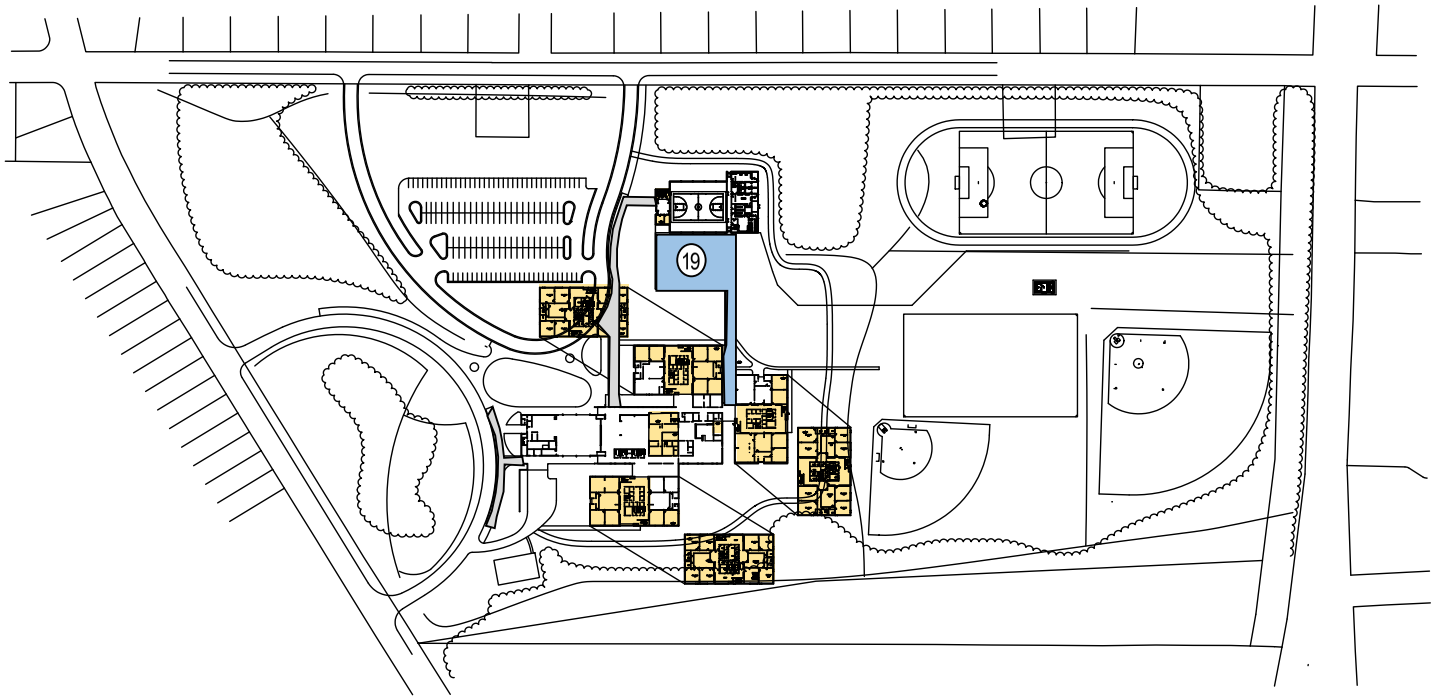
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

H.J. MacDonald Middle School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
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19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

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Craven County Schools

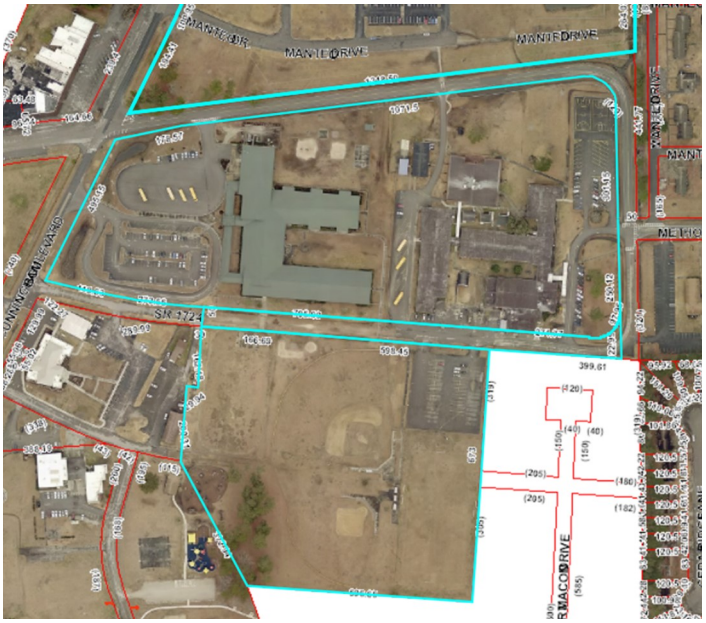
Middle Schools

H.J. MacDonald

Havelock Middle School

There have been four expansions to this campus since it was first constructed in 1956 and the buildings are beginning to show their age. The school shares parcel information with Havelock Elementary and Early College East making this a very busy campus. Adding to that congestion is the proximity to Havelock High, Craven Community College, Havelock City Hall, the Police Department, and the local Fire and Rescue Department, and base traffic.

Even though Early College East is a different program, the wing adjacent to the Media Center will also be reviewed with the middle school since it is a portion of the overall building.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
6-066 -005	Havelock E. and Havelock M. Fields	BOE	11.5	$306,850	$287,250
6-066 -9000	Havelock E. and Havelock M. Drive	BOE	1.3	$33,500	$33,500
6-066 -002	Havelock E. and Havelock M.	BOE	18.3	$458,250	$458,250
		Total	31.2	$798,600	$779,000

Insurance / GIS Data

At 91,000 square feet this one story building occupies a large proportion of the area dedicated to this school. Athletic fields are to the south with appropriate Softball and Baseball fields, but there is not enough acreage for a football field and proper seating. It would be appropriate to investigate adding the Federal property (in white) to improve the overall campus acreage.

Havelock Middle

Insurance Data

HAVELOCK MS		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25034401	MAIN BUILDING	NC2	1/1/1956	63	32350	$10,882,297
	Main - Media Center	NC2	1/1/1959	60	25175	
	Main North Classroom Building	NC2	1/1/1965	54	15000	
25034402	CLASSROOM BUILDING	NC2	1/1/1978	41	16155	$2,424,040
25034403	SHOP BUILDING	F1	1/1/1979	53	2500	$309,885
	Cafeteria 04		1/1/1961			
	4 Classroom Addition 05		1/1/1957			
	Shop Addition - Hite 06					
	Totals / Average $/sf				91180	$13,616,222
	Average Construction Date		1964			
	Average Age			54		

Life Cycle Analysis

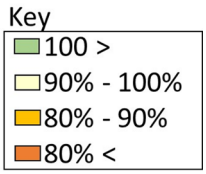
With the oldest portion at 63 yeas old, and most of the square footage being the same age, a large portion of the school is elderly. The initial construction dates back to the baby boom where building materials like cinder blocks and soft mortar were used, along with rapid construction methods creating buildings with shorter lives. The result is a building that can be rejuvenated and provide some extension of service, but will continue to be burdened with an old structure.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
HAVELOCK MS						
MAIN BUILDING - 1956	-3	60	50	70	1956	63
MAIN BUILDING - 1959	0	60	50	70	1959	60
MAIN BUILDING - 1965	6	60	50	70	1965	54
CLASSROOM BUILDING - 1978	19	60	50	70	1978	41
SHOP BUILDING - 1966	7	60	50	70	1966	53
Cafeteria 04 1961	2	60	50	70	1961	58
4 Classroom Addition 05 1957	-2	60	50	70	1957	62
Shop Addition	7	60	50	70	1966	53

Utility Providers

Electrical	Carteret Craven
Sewer	City of Havelock
Water	City of Havelock
Gas	NA

Havelock Middle

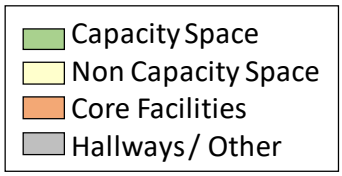


Square Footage Per Program (Based on Use)

Most of the spaces are below the minimum square footage. Those in the older building are larger than the newer 12 classroom building. The program with the most limited square footage is the science program with the lowest percentage, around 66% of the minimum.

Here and below, the grey section is used by Early College East





Utilization Diagram



Capacity / Use Diagram (Optimized for 2021)

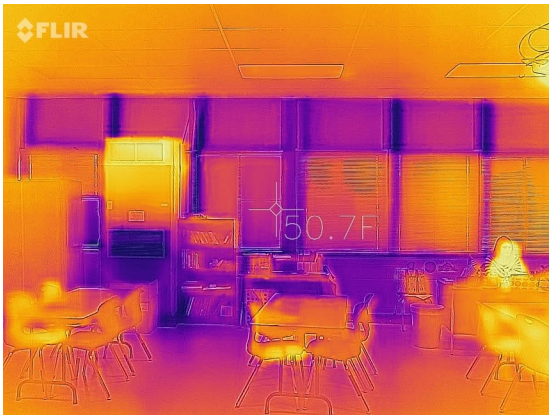
With most of the spaces on this campus being intended as traditional classrooms, there are few options for resource and support spaces. Those dedicated as resource are larger than a typical Resource Room. The core facilities are spread around campus with noisy programs located near each other and the quieter spaces closer to the classrooms.

Facility Details

At 63 years of age, this is one of the older buildings in the school system. At maximum capacity it would serve around 550 students and is slightly smaller than the desired 600 to 800 student ideal school size. It is showing its age on interior and exterior components. The site itself is complicated and shares the grounds with the Havelock Elementary and Early College East programs. Also in close proximity, is Havelock High further adding congestion to the area. The area does not drain well and cleaning of swales is needed, but will do little to improve drainage unless the city swales can also be improved.

Building Images

Below are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance. These are only a few that have a large impact to the deferred maintenance.



Thermal Windows and HVAC



Mortar / Infill



Cinder Block



Old Ceiling and Lighting



Aged Casework



Water Infiltration



Wood Door Frames



Humidity Issues



HVAC



Band + Wrestling + Electric



Drainage Issues



Gymnasium

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.

Potential Improvements

This begins offsite and requires the community's help in cleaning all swales in the area to get good drainage at the school. Once on site, the many potholes, cracks, and low spots in the drives are evident, along with concrete sidewalks that are beginning to deteriorate. A canopy for students should also be considered at the bus loading and drop off area.

The exterior of the building needs repairs to the soft mortar that was used when the building was constructed. The roof surface has aged out and is allowing water into the walls of the building causing paint to peel. As the water works its way into the block, the cinders in the block will swell and pop paint off or parts of the block itself. At more than 60 years old, the vapor barrier under the floor slab has failed and is allowing vapor to migrate to the joints between tiles and even causing some delamination of the tiles themselves. Old windows that have no thermal resistance could be replaced, thus reducing energy consumption and bills.

As with other older buildings, there is potential to make improvements to the plumbing, mechanical, and electrical systems since they are all beyond their anticipated life cycle. Restroom facilities also could be brought up to meet current ADA standards along with other code and safety considerations that would be necessary to keep the school in operation.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as "Soft Costs" include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Havelock Middle

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$23,000	$2,300	$2,070	$3,450	$30,820
2	Site Utilities	$85,560	$8,556	$7,700	$12,834	$114,650
3	Parking / Drives	$334,523	$33,452	$30,107	$50,178	$448,260
4	Sewer System	$48,000	$4,800	$4,320	$7,200	$64,320
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$123,625	$12,363	$11,126	$18,544	$165,658
7	Canopy (cov. Walks)	$30,654	$3,065	$2,759	$4,598	$41,076
8	Other Site	$73,860	$7,386	$6,647	$11,079	$98,972
9	Roofing	$1,030,054	$103,005	$92,705	$154,508	$1,380,273
10	Structural	$0	$0	$0	$0	$0
11	Windows	$750,948	$75,095	$67,585	$112,642	$1,006,270
12	Walls	$123,420	$12,342	$11,108	$18,513	$165,383
13	Other Building Exterior	$37,000	$3,700	$3,330	$5,550	$49,580
14	Partition/Wall Const	$122,450	$12,245	$11,021	$18,368	$164,083
15	Ceilings	$353,646	$35,365	$31,828	$53,047	$473,886
16	Flooring	$946,474	$94,647	$85,183	$141,971	$1,268,275
17	Painting	$197,035	$19,704	$17,733	$29,555	$264,027
18	Other Building Interior	$242,385	$24,239	$21,815	$36,358	$324,796
19	Mechanical	$890,000	$89,000	$80,100	$133,500	$1,192,600
20	Electrical	$558,000	$55,800	$50,220	$83,700	$747,720
21	Lighting	$155,000	$15,500	$13,950	$23,250	$207,700
22	Technology	$53,483	$5,348	$4,814	$8,023	$71,668
23	Plumbing	$29,600	$2,960	$2,664	$4,440	$39,664
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$15,750	$1,575	$1,418	$2,363	$21,105
26	ADA Ramps	$36,350	$3,635	$3,272	$5,453	$48,709
27	ADA Toilets	$690,470	$69,047	$62,142	$103,571	$925,230
28	Fire Alarm	$172,000	$17,200	$15,480	$25,800	$230,480
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$71,750	$7,175	$6,458	$10,763	$96,145
31	Abatement	$29,434	$2,943	$2,649	$4,415	$39,442
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$60,000	$6,000	$5,400	$9,000	$80,400
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$431,600	$43,160	$38,844	$64,740	$578,344
37	Kitchen Equipment	$80,800	$8,080	$7,272	$12,120	$108,272
38	Media Center Furniture	$90,000	$9,000	$8,100	$13,500	$120,600
39	Off Site	$0	$0	$0	$0	$0
40	Other	$73,000	$7,300	$6,570	$10,950	$97,820
	Total					**$10,666,228**

Renovations
With most of the classrooms in the building have block on all sides which makes moving them difficult and costly, but not impossible. It is impractical therefore to attempt to move walls but in the most critical spaces. The proposed renovations would only be for the Sciences, Self Contained, and Pre-vocational classrooms.

Additions
The proposed additions would include classrooms and a new Band Room and associated storage. The administration square footage is low and the organization of the spaces is less than ideal. Adding new administrative square footage at the front door and renovating the existing administration area will provide a better organized area with the appropriate square footage. Lastly, the Kitchen area is sufficiently small that an addition and renovation here is warranted. Spaces that are vacated such as the old Band Room will be used by other programs.

Site
It would be reasonable to create a queue so all cars will be off of the surface streets. As proposed, it would also provide a fire loop around the buildings should emergency responders need to get quick access to the school.

Mechanical Systems
Havelock Middle has a mix of BARD units, split system heat pumps, rooftop packaged heat pumps, and window units. The BARD units were installed in 1999 and have aged out, cannot control humidity and should be replaced. The window units are used in places where the BARD units have failed. At the time of inspection, the Kitchen had window units that were not currently working.

Fire Alarm
The system is old and should be replaced with a new addressable system.

Electric
The building still has the original electrical equipment in it. This has aged out and should be replaced.

Plumbing
As with all of the older buildings the water supply lines are beyond their realistic life cycle and need to be replaced, along with floor slabs in those areas.

Lighting
There is a mix of T12 and T8 lights still in use and should be replaced with new energy efficient LED lights.

Potential Additions and Renovations

Havelock Middle

Craven County Schools

Space Inventory / Worksheet 2019

Havelock Middle

12/2/2019

Current Student Capacity (NCDPI)	566	Current Core Capacity (NCDPI)	769
Proposed Student Capacity	566	**Proposed Core Capacity**	769
	Number of Spaces	0	Square Footage

Total Cost	$8,527,109			
Cost / Student	$15,066			
Athletic / PE /Facilities				
	Number of Spaces			

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens				
Grades 1-3 Clsrms				
Grades 4-5 Clsrms				
4-8 LA/SS/Math	15	15		2
Grades 6-8 Math/Sci Clsrms	3	3	2	
Grades 5-8 Science Clsrms	3	3		
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	1	2	1	
Instructional Kitchen	1		1	
Resource	4	4		
Computer				
ISS	1			1
Sub-Total	28	27	4	3
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project				
Art Sto. Kiln				
General Music				
Instrumental Music (Band)	1	1	1	
Vocal Music (Chorus) + Sto.	1	1		1
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama				
Sub-Total	3	3	1	1
Vocational				
Keyboarding Labs	1	1		
Exploratory Labs	2	2	2	
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	3	3	2	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage				
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office				
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms	2	2		1
Sub-Total	3	3	0	1
Misc. Spaces				
ROTC				
Mobile Units				
Total	**37**	**36**	**7**	**5**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,797	3607		
Support	1,800	1795		
Computer				
Sub-Total	5,597	5,402	0	0
Food Service	# of seatings			3
Dining	3,589	3590		
Kitchen	1,938	1004	725	1,213
Serving	620	298	620	
Sub-Total	6,147	4,892	1,345	1,213
Auditorium	# of seats			0
Auditorium				
Stage / Dress / Sto.				
Lobby				
Sub-Total	0	0	0	0
Administration				
Administration	3,000	1807	2419	1,193
Sub-Total	3,000	1,807	2,419	1,193
Storage				
Book Storage	885			885
General Storage	985	1653	-668	
Sub-Total	1,870	1,653	0	885
Staff Support				
Staff Support	1,950			1,950
Sub-Total	1,950	0	0	1,950
Total Renovated Spaces			3,764	
Demolition Totaling				
Total	**18,564**	**13,754**	**3,764**	**5,241**

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field				
Sub-Total	0	0	0	0
Total	**0**	**0**	**0**	**9**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Havelock Middle in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

Havelock Middle

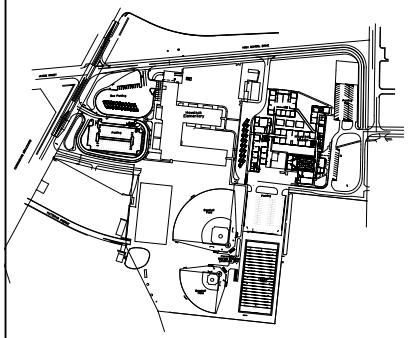
Additions / Renovations	Proposed Student Capacity	566
	Proposed Core Capacity	769

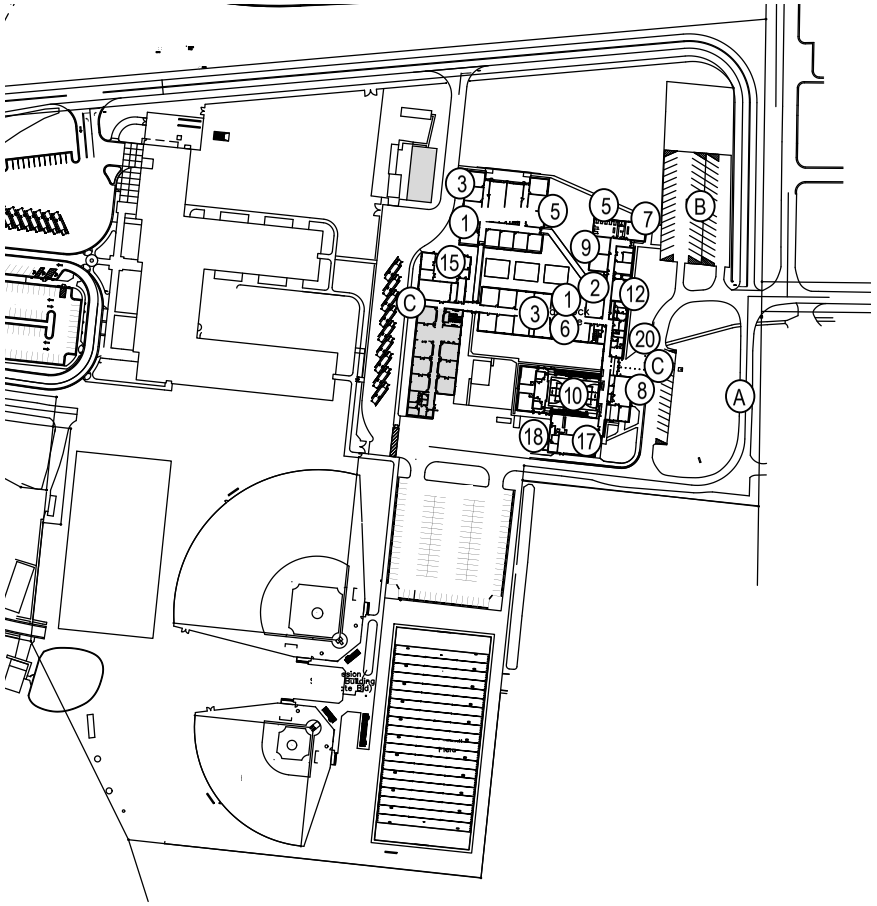
Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	3	2,350	255.06	$599,400
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	1	1,200	305.25	$366,300
Vocational	0	0	0.00	$0
Physical Education Etc.	1	750	263.64	$197,730
Misc. Spaces (Inc. Connecting Corridors		4,423	292.01	$1,291,581
Renovations	7	6,582	42.05	$276,785
Core Capacity				
Media Center		0	0.00	$0
Food Service		1,213	416.25	$504,911
Auditorium		0	0.00	$0
Administration		1,193	277.50	$331,058
Storage		885	277.50	$245,588
Staff Support		1,950	277.50	$541,125
Renovations		3,764	62.16	$233,970
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		9,541	$427.39	$4,077,692
Circulation/ Mechanical/Toilets/Walls	38.00%	3,626	$427.39	$1,549,523
Subtotal Renovated		10,346	$49.37	$510,755
Athletics				$0
Site Improvements				$165,000
Other ()				
Sub Total				$6,302,970
Inflation (3% for 3 years)	9.00%			$567,267
Contingency (%)	10.00%			$687,024
Sub Total				$7,557,261
A-E Fees (%)	10.00%			$755,726
Financing Charges	1.40%			$119,380
Other Fees and Services				$94,743
Site	0			$0
Owners Contingency (furn., equipment)				$465,000
Total				**$8,527,109**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Havelock Middle School | **2019**

Existing





1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Havelock Middle

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Havelock Middle School — **2019**

Potential

1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

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Tucker Creek Middle School

Tucker Creek is the newest middle school and it is already 22 years old. No expansions have been made to the building since its first construction. The parcel is located between residential neighborhoods, wetlands, with new development occurring on the southern border.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
6-215 -013	Tucker Creek Middle	BOE	52.7	$556,920	$556,920

Insurance Data

TUCKER CREEK MS		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25036801	MAIN BUILDING	NC2	1/1/1997	22	120437	$18,071,440
25036802	GYMNASIUM	NC2	1/1/1997	22	19259	$2,889,792
25036803	TRACTOR SHED	F1	1/1/2002	17	840	$49,321
	Totals / Average $/sf				140536	$21,010,553
	Average Construction Date		1998			
	Average Age			22		

Insurance / GIS Data

At 140,000 square feet this one story building is well suited to the nearly 53 acre site. During the past twenty years the building has been well maintained. The parcel is wet with many swales to move water away from the building, but the high humidity still remains.

Flood Mapping

Neither the building nor the site is within the flood plain, but the amount of moisture near the school is easily understood based on this image. During a major flood event this site , like most other school sites in the county, will become isolated along with a large number of residential neighborhoods.



Effective



Preliminary

Life Cycle Analysis

At 22 years of age, Tucker Creek should provide many more years of service. It is however coming up on the time when some building components will begin to fail. Items like chillers and windows are at or beyond their anticipated useful life and continuing to use them beyond those limits will result in increased maintenance and operation costs.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
TUCKER CREEK MS						
MAIN BUILDING - 1997	58	80	70	90	1997	22
GYMNASIUM - 1997	58	80	70	90	1997	22
TRACTOR SHED - 2002	23	40	30	50	2002	17

Utility Providers

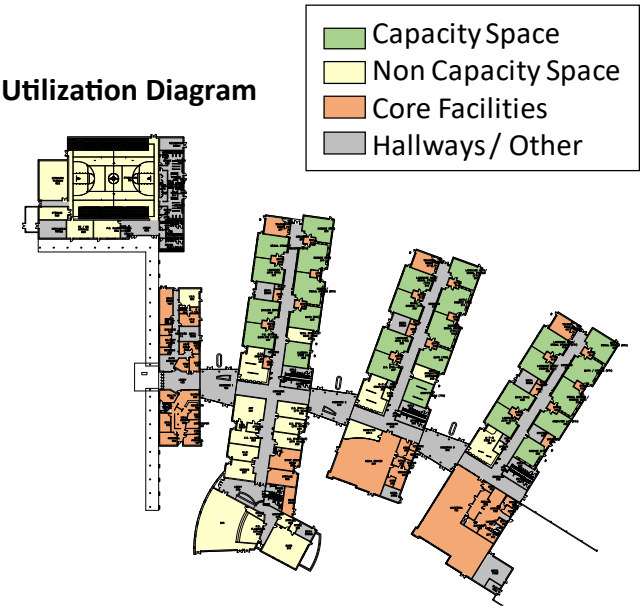
Electrical	Duke / Progress
Sewer	City of Havelock
Water	City of Havelock
Natural Gas	Piedmont Natural Gas

Square Footage Per Program (Based on Use)

As with other schools most of the classrooms are below the minimum recommended square footage. The most significant shortage is once again in the sciences.



Utilization Diagram



Capacity / Use Diagram (Optimized for 2021)

Core facilities are concentrated at the front door and still distributed throughout the building. Resource and support spaces are also a combination of concentrated on a single wing while still having some that are spread around the school.

The Gymnasium is a separate building providing good sound isolation, but requires students to go outside to get into and out of the Gym.

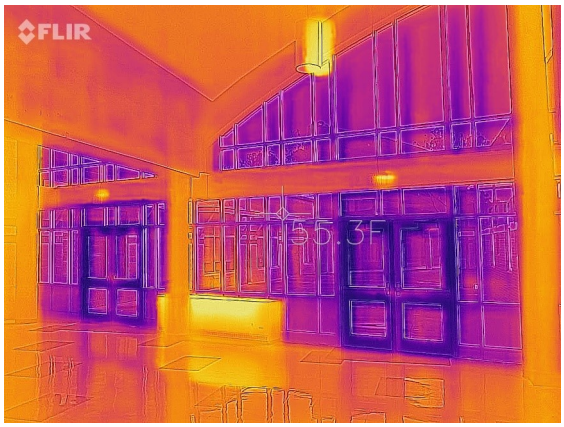
Facility Details

This relatively youthful school aligns well with a modern middle school layout and most of the spaces are above 90% of the recommended minimum square footage. It is located at the edge of a residential neighborhood and is adjacent to the base.

Building Images

Below are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance. These are only a few that have a large impact to the deferred maintenance.

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



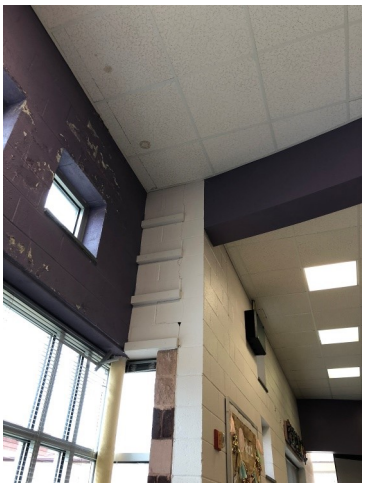
Thermal Glazing in Failure



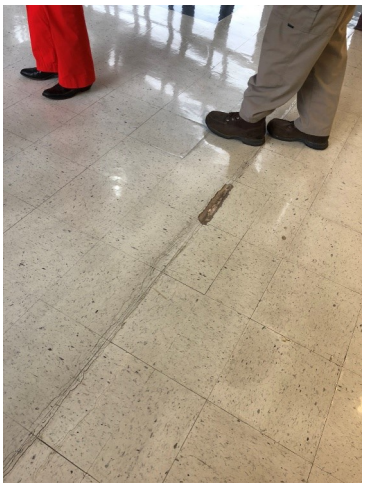
Efflorescence



Gym Water Damage



Water Infiltration



Tile Failure

Potential Improvements

The largest single improvement would likely be to change the mechanical system from a two pipe to a four pipe system. This would allow the system to dehumidify the building which cannot be done the way it is currently configured.

Outside reworking the swales and getting the water away from the building faster will reduce the overall water table and humidity. ADA parking can be added at the front door along with an appropriate curb cut and asphalt striping. Unlike many of the other middle schools a substantial addition can be added to create a capacity increase of a little over 200 students.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Tucker Creek Middle

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$24,000	$2,400	$2,160	$3,600	$32,160
2	Site Utilities	$25,000	$2,500	$2,250	$3,750	$33,500
3	Parking / Drives	$186,948	$18,695	$16,825	$28,042	$250,510
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$96,000	$9,600	$8,640	$14,400	$128,640
7	Canopy (cov. Walks)	$68,004	$6,800	$6,120	$10,201	$91,125
8	Other Site	$127,127	$12,713	$11,441	$19,069	$170,351
9	Roofing	$46,125	$4,613	$4,151	$6,919	$61,808
10	Structural	$0	$0	$0	$0	$0
11	Windows	$174,541	$17,454	$15,709	$26,181	$233,885
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$3,600	$360	$324	$540	$4,824
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$80,945	$8,094	$7,285	$12,142	$108,466
16	Flooring	$468,582	$46,858	$42,172	$70,287	$627,899
17	Painting	$229,250	$22,925	$20,632	$34,387	$307,195
18	Other Building Interior	$35,000	$3,500	$3,150	$5,250	$46,900
19	Mechanical	$1,600,000	$160,000	$144,000	$240,000	$2,144,000
20	Electrical	$500,000	$50,000	$45,000	$75,000	$670,000
21	Lighting	$250,000	$25,000	$22,500	$37,500	$335,000
22	Technology	$63,903	$6,390	$5,751	$9,585	$85,630
23	Plumbing	$33,300	$3,330	$2,997	$4,995	$44,622
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$24,500	$2,450	$2,205	$3,675	$32,830
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$0	$0	$0	$0	$0
28	Fire Alarm	$260,000	$26,000	$23,400	$39,000	$348,400
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$69,000	$6,900	$6,210	$10,350	$92,460
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$22,500	$2,250	$2,025	$3,375	$30,150
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$272,000	$27,200	$24,480	$40,800	$364,480
37	Kitchen Equipment	$0	$0	$0	$0	$0
38	Media Center Furniture	$45,000	$4,500	$4,050	$6,750	$60,300
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$6,305,134**

Renovations

No interior renovations are suggested.

Additions

Additions are limited to academic classrooms. A mix of typical classrooms and science rooms along with an additional arts program can be constructed at the end of each wing.

Site

The parking and queue can be revised to provide better ADA access and increase the length of the queue sufficiently to meet NCDOT minimums. Additional walkways can be built improving ADA compliance, emergency egress, and a path for students that walk to school from inside the neighborhood, thereby getting them off of the road sooner.

Mechanical System

The existing building has a two pipe system with two air cooled chillers and two gas fired boilers that can be modified into a four pipe system that can dehumidify the building. It has single zoned Air Handling Units (AHU) serving multiple spaces at the same time. The Gymnasium is a self contained system using Direct Exchange (DX) heat pumps that have aged out and need to be replaced.

Fire Alarm

This is the original system Installed in 1996. Parts will become difficult to find and should be replaced within the next 5 or so years.

Electric

The original equipment is in good overall condition and should be reliable for the next 20 years or more.

Lighting

Much of the building still has T8 lights. Changing these to LED light fixtures would help reduce overall energy consumption.

Potential Additions and Renovations

Craven County Schools

Space Inventory / Worksheet 2019

12/2/2019

Tucker Creek

Current Student Capacity (NCDPI)	686	Current Core Capacity (NCDPI)	937
Proposed Student Capacity	**930**	**Proposed Core Capacity**	**937**
	Number of Spaces	0	Square Footage

Total Cost	**$6,471,751**
Cost / Student	**$6,959**
Athletic / PE /Facilities	
	Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens				
Grades 1-3 Clsrms				
Grades 4-5 Clsrms				
4-8 LA/SS/Math	26	21		6
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms	9	6		3
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	2	1	1	1
Instructional Kitchen	1			1
Resource	7	7		2
Computer				
ISS	1	1		
Sub-Total	46	36	1	13
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project				
Art Sto. Kiln				
General Music				
Instrumental Music (Band)	1	1		
Vocal Music (Chorus) + Sto.	1	1		
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama	1			1
Sub-Total	4	3	0	1
Vocational				
Keyboarding Labs	1	1		
Exploratory Labs	2	2		
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	3	3	0	0
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage				
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office				
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms	2	2		
Sub-Total	3	3	0	0
Misc. Spaces				
ROTC				
Mobile Units				
Total	**56**	**45**	**1**	**14**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	4,102	3747	355	
Support	1,800	1539	261	
Computer				
Sub-Total	5,902	5,286	616	0
Food Service		# of seatings		3
Dining	4,373	5682	-614	
Kitchen	2,208	1797	411	
Serving	620	417	203	
Sub-Total	7,201	7,896	614	0
Auditorium		# of seats		0
Auditorium	3,373	3184		
Stage / Dress / Sto.	2,500	947		
Lobby	1,000	925		
Sub-Total	6,873	5,056	0	0
Administration				
Administration	3,060	4186		
Sub-Total	3,060	4,186	0	0
Storage				
Book Storage	969		969	
General Storage	1,069	279	790	
Sub-Total	2,038	279	1,759	0
Staff Support				
Staff Support	1,950	4089	-1759	
Sub-Total	1,950	4,089	0	0
Total Renovated Spaces			2,989	
Demolition Totaling				
Total	**27,024**	**26,792**	**2,989**	**0**

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field				
Sub-Total	0	0	0	0
Total	**0**	**0**	**0**	**9**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Tucker Creek in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

Tucker Creek

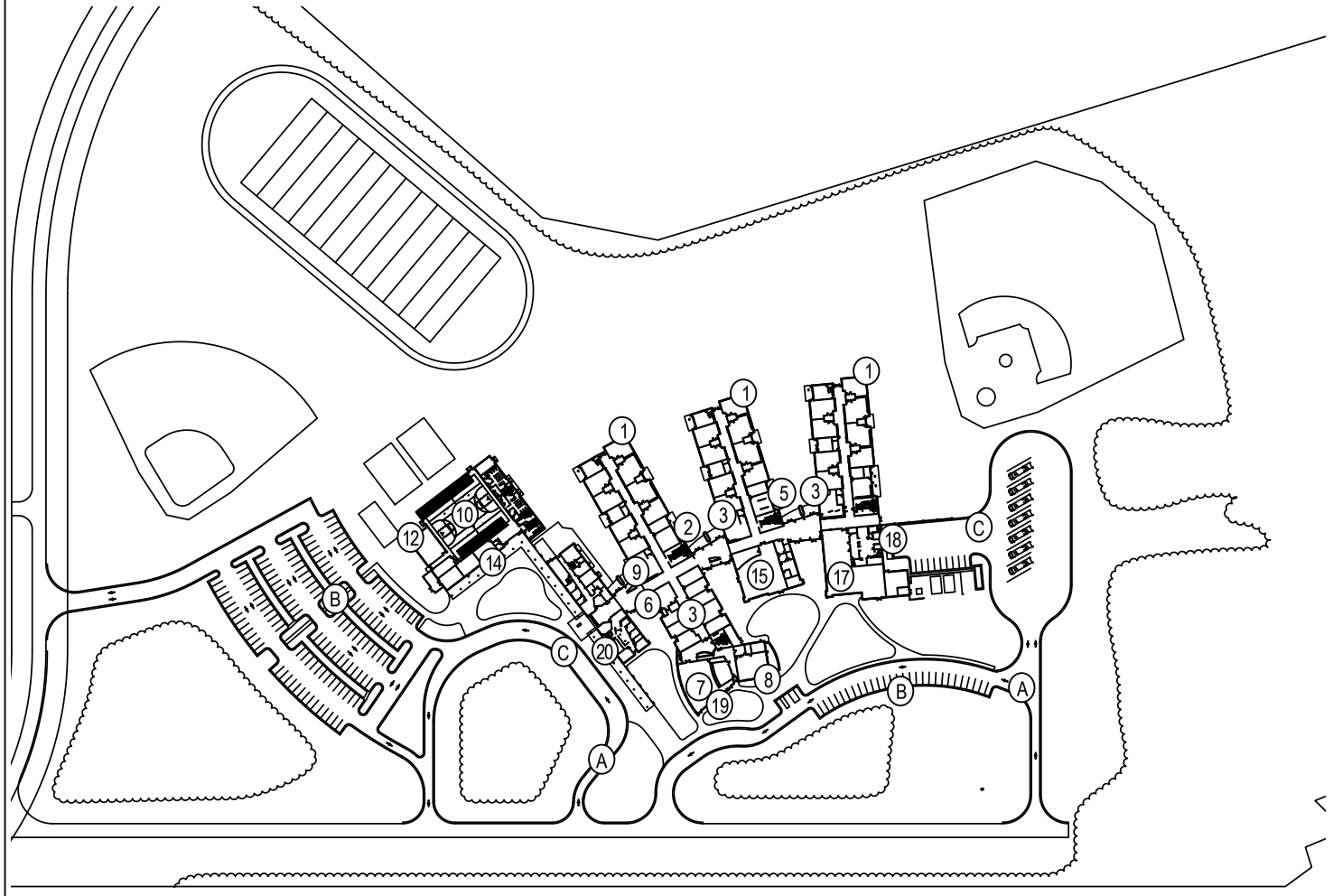
Additions / Renovations	Proposed Student Capacity	930
	Proposed Core Capacity	937

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	13	11,700	234.34	$2,741,762
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	1	1,800	264.55	$476,190
Vocational	0	0	0.00	$0
Physical Education Etc.	0	0	0.00	$0
Misc. Spaces ()			180.00	$0
Renovations	1	0	60.00	$0
Core Capacity				
Media Center		0	0.00	$0
Food Service		0	0.00	$0
Auditorium		0	0.00	$0
Administration		0	240.50	$0
Storage		0	0.00	$0
Staff Support		0	240.50	$0
Renovations		2,989	80.00	$239,120
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		13,500	$238.37	$3,217,952
Circulation/ Mechanical/Toilets/Walls	38.00%	5,130	$238.37	$1,222,822
Subtotal Renovated		2,989	$80.00	$239,120
Athletics				$0
Site Improvements				$100,000
Other ()				
Sub Total				$4,779,894
Inflation (3% for 3 years)	9.00%			$430,190
Contingency (%)	10.00%			$521,008
Sub Total				$5,731,093
A-E Fees (%)	10.00%			$573,109
Financing Charges	1.00%			$64,718
Other Fees and Services				$102,831
Site	0			$0
Owners Contingency (furn., equipment)				$478,000
Total				**$6,471,751**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Tucker Creek Middle School | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

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Space Profile for Renovation Projects Based on NC School Planning Recommendations

Tucker Creek Middle School — **2019**

Potential

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West Craven Middle Elementary School

There has been one expansion to this facility since it was first constructed in 1978. Several renovations have been undertaken, including air conditioning of the building and ceiling replacements. The property is tucked behind a neighborhood, an adjacent agricultural property, and backs up to the Neuse River.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
9-047 -030	West Craven Middle	BOE	41.9	$457,010	$457,010

Insurance Data

WEST CRAVEN MS		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25037601	MAIN BUILDING	NC2	1/1/1978	41	77680	$15,451,137
	Main - South Addition	NC2	1/1/1997	22	25294	
	Totals / Average $/sf				102974	$15,451,137
	Average Construction Date		1987			
	Average Age			32		

Insurance / GIS Data

At 103,000 square feet this one story building takes is well situated on the 42 acre site. This is a middle aged building and will begin to show signs of age especially with respect to mechanical and electrical equipment.

Flood Mapping

A portion of the parcel is within the 100 and 500 year flood zone, but the building is at 15 ft above seal level and the flood level in the area is down at 11.3 ft. ASL and 13.6 ft. ASL, respectively. This building will not see the isolation other schools will be faced with since most of the adjacent roads are not in a flood zone.



Effective



Preliminary

Life Cycle Analysis

At 41 years of age, this building should be considered middle aged. Over the course of the next several years several systems will need replacement. By doing these major replacements for mechanical, electrical, and other infrastructural equipment, the school system may be able to extend the overall life of the building.

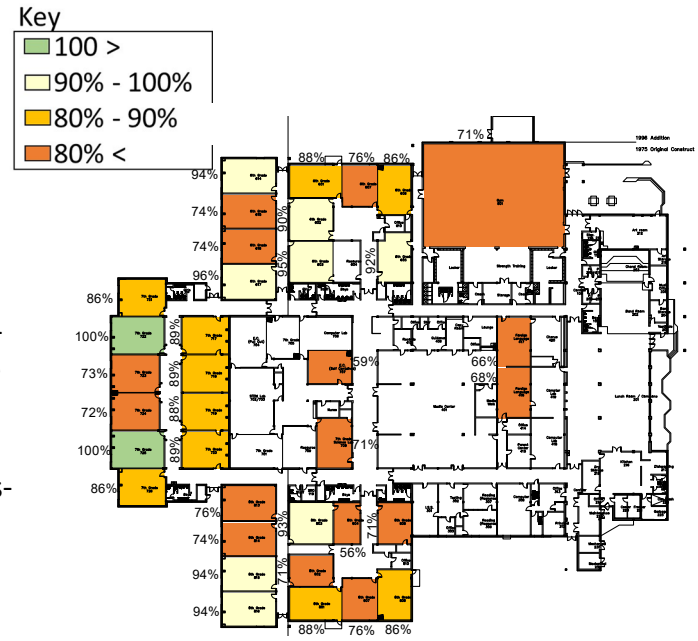
Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
WEST CRAVEN MS						
MAIN BUILDING - 1978	29	70	60	80	1978	41
MAIN BUILDING - 1997	48	70	60	80	1997	22

Utility Providers

Electrical	Duke /Progress Energy
Sewer	Craven County Water and Sewer
Water	Craven County Water and Sewer
Propane	Varies

Square Footage Per Program (Based on Use)

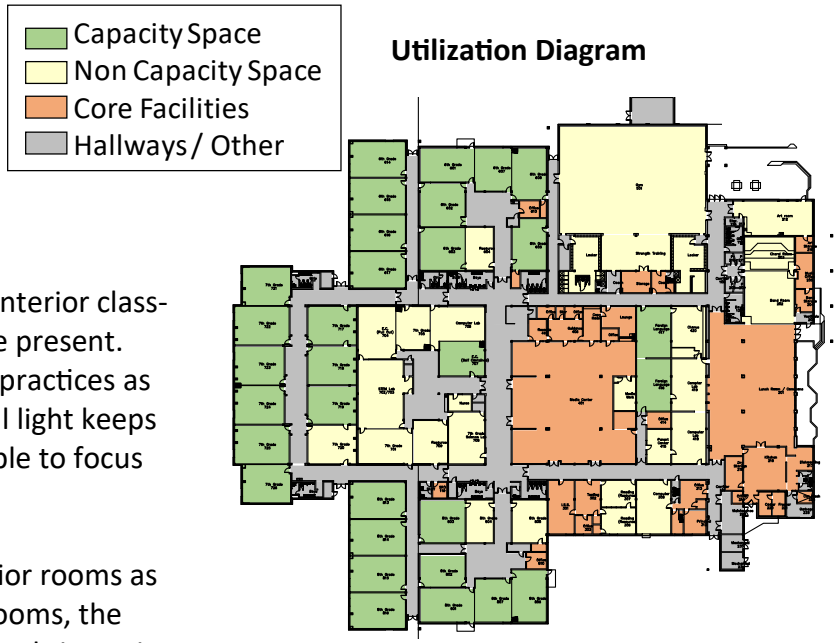
Many of the rooms in this school are below the minimum recommended square footage. The programs that have a low ratio of existing to the minimum square footage are once again the Science Classrooms, which are in the 70% range.



Capacity / Use Diagram (Optimized for 2021)

There are a large number of interior classrooms where no windows are present. This does not align with best practices as it has been found that natural light keeps students awake and better able to focus on the work at hand.

By using as many of the interior rooms as support spaces or resource rooms, the amount of time a student spends in a windowless room can be reduced. Most of the core facilities are concentrated at the front of the school with the noisiest sections toward the east side of the site.



Utilization Diagram

Facility Details

The attendance boundary for West Craven is extensive and covers the top half of the county. The building is close to the middle of the attendance boundary. It still has many years of service remaining but replacement of worn components and building finishes will help to potentially increase the overall life of the building and reduce operation costs. With a capacity at around 740 students, it fits well within the ideal size for a middle school.

Building Images

Below are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance. These are only a few items that have a large impact to the deferred maintenance.

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.



Asphalt in Failure



Media / Natural Light



Movable Walls



BARD Unit



Aged Mechanical

Potential Improvements

The largest improvement option for the site is related to the extension of the queue and building additional parking, repair and replacement of asphalt and some minor work in the bus lot.

Roofing is and will continue to be a portion of this building that will from time to time need to be replaced. The material has aged out and will begin to fail completely in the next several years. Some window replacement or glazing replacement would improve the overall thermal envelope and reduce energy costs. Additionally, by removing the existing floor tiles and polishing the concrete, maintenance costs will be reduced. Re-polishing of the existing terrazzo floors would be practical to do at the same time.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

West Craven Middle

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$21,000	$2,100	$1,890	$3,150	$28,140
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$461,832	$46,183	$41,565	$69,275	$618,855
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$60,000	$6,000	$5,400	$9,000	$80,400
7	Canopy (cov. Walks)	$0	$0	$0	$0	$0
8	Other Site	$30,900	$3,090	$2,781	$4,635	$41,406
9	Roofing	$1,204,669	$120,467	$108,420	$180,700	$1,614,257
10	Structural	$0	$0	$0	$0	$0
11	Windows	$94,667	$9,467	$8,520	$14,200	$126,854
12	Walls	$36,288	$3,629	$3,266	$5,443	$48,626
13	Other Building Exterior	$6,000	$600	$540	$900	$8,040
14	Partition/Wall Const	$12,000	$1,200	$1,080	$1,800	$16,080
15	Ceilings	$456,577	$45,658	$41,092	$68,487	$611,813
16	Flooring	$375,491	$37,549	$33,794	$56,324	$503,158
17	Painting	$219,433	$21,943	$19,749	$32,915	$294,040
18	Other Building Interior	$97,800	$9,780	$8,802	$14,670	$131,052
19	Mechanical	$1,300,000	$130,000	$117,000	$195,000	$1,742,000
20	Electrical	$801,000	$80,100	$72,090	$120,150	$1,073,340
21	Lighting	$181,000	$18,100	$16,290	$27,150	$242,540
22	Technology	$52,698	$5,270	$4,743	$7,905	$70,616
23	Plumbing	$32,600	$3,260	$2,934	$4,890	$43,684
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$17,500	$1,750	$1,575	$2,625	$23,450
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$884,700	$88,470	$79,623	$132,705	$1,185,498
28	Fire Alarm	$200,584	$20,058	$18,053	$30,088	$268,783
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$93,500	$9,350	$8,415	$14,025	$125,290
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$971,600	$97,160	$87,444	$145,740	$1,301,944
37	Kitchen Equipment	$129,000	$12,900	$11,610	$19,350	$172,860
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$10,372,723**

Renovations

There is potential to increase the size of several spaces by moving walls around to create larger rooms. The result will be a net loss to capacity that can be corrected with the construction of an addition to the school. These renovations would be focused on the sciences, kitchen, and reorganizing the administrative and support areas.

Additions

The largest portion of the proposed additions would be to add an Auditorium to the school. At nearly 800 students it is appropriate to add this program. Additional increases would include space for arts programs and the pre-vocational classrooms. The space that is too small is the kitchen. By combining a renovation and addition to the kitchen, the space can be reorganized and modernized.

Site

The queue blocks traffic on NW Craven Middle School Road. By increasing the queue down to the first gravel entrance and adding parking, parents will be able to get off the road and reduce the mixing of bus and automobile traffic.

Mechanical Systems

West Craven has a mix of different systems used for heating and cooling. The main building has air cooled chillers on the roof and three of the five need to be replaced at this time. The gym also has rooftop units along with other systems including BARD units and split systems in the Administration Offices to supplement the overall system. The original piping and duct-work on the building has aged out and needs to be replaced. Nearly half of the school is not controlled by Direct Digital Controls (DDS) which means the maintenance department must manually control the system. For much of the building a propane fired boiler provides hot water to the units.

Fire Alarm

The fire alarm system is outdated and should be replaced with a modern addressable system.

Electric

The main electrical panels are ageing out and replacement should be considered in the near future.

Lighting

The school still has a mix of T12 and T8 lights that should be replaced with energy efficient LED lights.

Potential Additions and Renovations

West Craven Middle

Craven County Schools

Space Inventory / Worksheet 2019

12/2/2019

Current Student Capacity (NCDPI)	758	Current Core Capacity (NCDPI)	860
Proposed Student Capacity	758	**Proposed Core Capacity**	860
	Number of Spaces	0	Square Footage

Total Cost $11,142,893

Cost / Student $14,700

Athletic / PE /Facilities — Number of Spaces

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens				
Grades 1-3 Clsrms				
Grades 4-5 Clsrms				
4-8 LA/SS/Math	21	21		
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms	6	7	6	
(9-12) Eng. / F-Lang. / SS / Math				
Exceptional (self contained)	2	3	3	
Instructional Kitchen			1	
Resource	6	7		
Computer				
ISS	1	1		
Sub-Total	36	39	10	0
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other				
Prep Rooms				
Math/Sci Computer Lab				
Sub-Total	0	0	0	0
Arts Education				
Visual Arts	1	1		
Art Project				
Art Sto. Kiln				
General Music				
Instrumental Music (Band)	1	1		
Vocal Music (Chorus) + Sto.	1	1		1
Ensemble / Practice				
Band Uniform Sto.				
Instrument Sto.				
Office / Library				
Dance/Drama		1		1
Sub-Total	3	4	0	2
Vocational				
Keyboarding Labs	1	1		1
Exploratory Labs	2	2		2
Computer Applications				
Business/Office Ed.				
Cons/Occ Home Economics				
Service/Marketing				
Health Occupations				
Agri/Trade & Industry (Heavy)				
Trade & Industry (Medium)				
Technology (Light)				
Communications/Misc				
Vocational Clsrms				
Sub-Total	3	3	0	3
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage				
Boys/Girls Locker				
Boys/Girls Showers				
Coaches off./ Showers				
Training				
Laundry				
Storage / Office				
Officials/showers				
Lobby/cons./commons				
Auxiliary Gym				
Weight Room				
Wrestling				
Health/P.E. Clsrms	2	2		
Sub-Total	3	3	0	0
Misc. Spaces				
ROTC				
Mobile Units				
Total	**45**	**49**	**10**	**5**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	3,986	6243	-2257	
Support	1,800	1933	-133	
Computer				
Sub-Total	5,786	8,176	0	0
Food Service	# of seatings			3
Dining	4,013	4011		
Kitchen	2,208	1937	1937	650
Serving	620	269	351	
Sub-Total	6,841	6,217	2,288	650
Auditorium	# of seats			0
Auditorium	3,096			3,096
Stage / Dress / Sto.	2,500			2,500
Lobby	1,000			1,000
Sub-Total	6,596	0	0	6,596
Administration				
Administration	3,030	2093	937	
Sub-Total	3,030	2,093	937	0
Storage				
Book Storage	930			930
General Storage	1,030	106	133	791
Sub-Total	1,960	106	133	1,721
Staff Support				
Staff Support	1,950	473	1320	157
Sub-Total	1,950	473	1,320	157
Total Renovated Spaces			4,678	
Demolition Totaling				
Total	**26,163**	**17,065**	**4,678**	**9,124**

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field				
Sub-Total	0	0	0	0
Total	**0**	**0**	**0**	**9**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at West Craven Middle an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

West Craven Middle

Additions / Renovations	Proposed Student Capacity	758
	Proposed Core Capacity	860

Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Student Capacity				
Academic Spaces	0	0	0.00	$0
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	2	1,200	284.90	$341,880
Vocational	3	3,800	288.30	$1,095,556
Physical Education Etc.	0	0	0.00	$0
Misc. Spaces ()			180.00	$0
Renovations	10	13,917	85.83	$1,194,460
Core Capacity				
Media Center		0	0.00	$0
Food Service		650	388.50	$252,525
Auditorium		6,596	319.78	$2,109,296
Administration		0	259.00	$0
Storage		1,721	259.00	$445,739
Staff Support		157	259.00	$40,663
Renovations		4,678	122.47	$572,920
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		14,124	$303.43	$4,285,659
Circulation/ Mechanical/Toilets/Walls	38.00%	5,367	$303.43	$1,628,550
Subtotal Renovated		18,595	$95.05	$1,767,380
Athletics				$0
Site Improvements				$564,286
Other ()				
Sub Total				$8,245,875
Inflation (3% for 3 years)	9.00%			$742,129
Contingency (%)	10.00%			$898,800
Sub Total				$9,886,804
A-E Fees (%)	10.00%			$988,680
Financing Charges	1.00%			$111,429
Other Fees and Services				$155,979
Site	0			$0
Owners Contingency (furn., equipment)				$682,500
Total				**$11,142,893**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

West Craven Middle School — **2019**

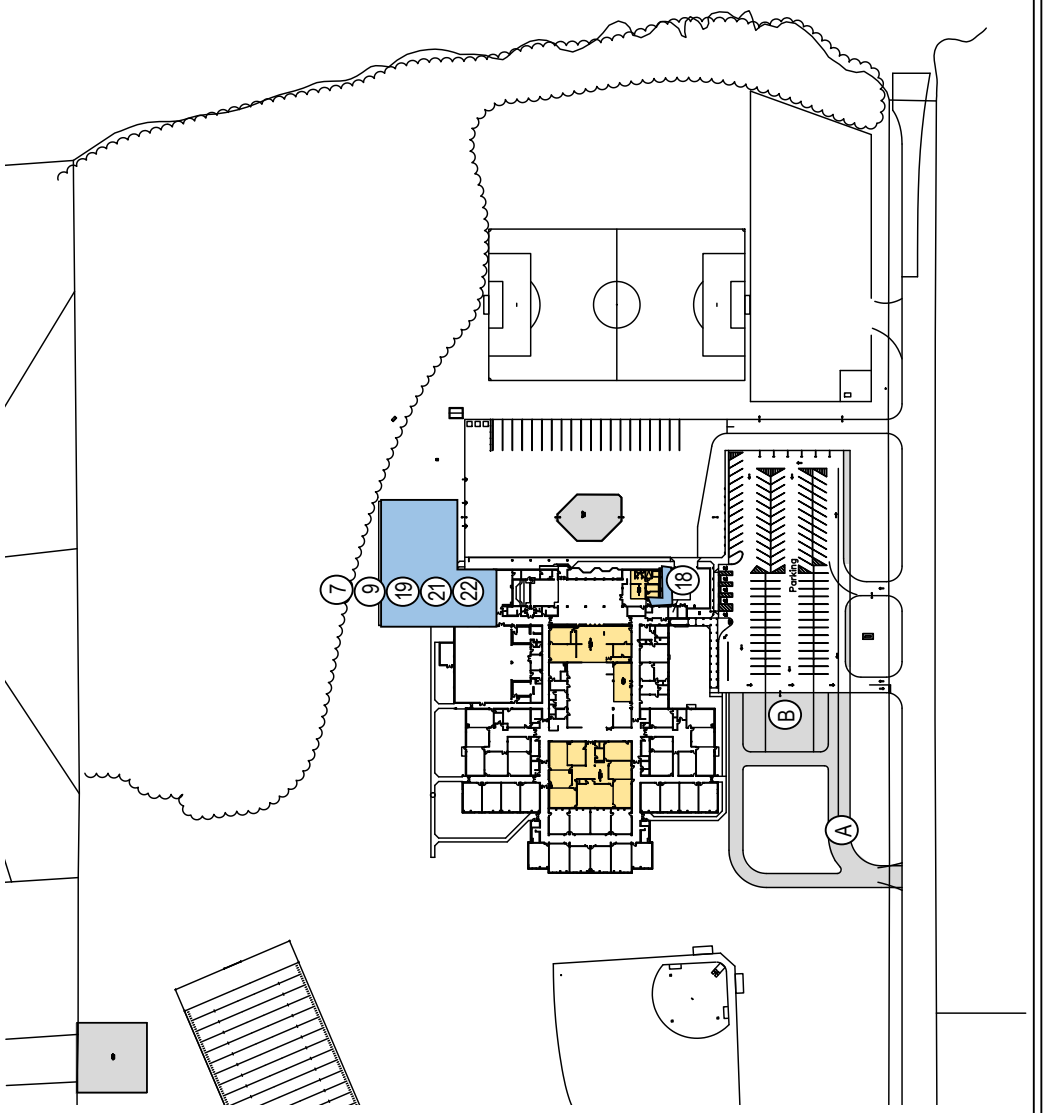
Existing

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Space Profile for Renovation Projects Based on NC School Planning Recommendations

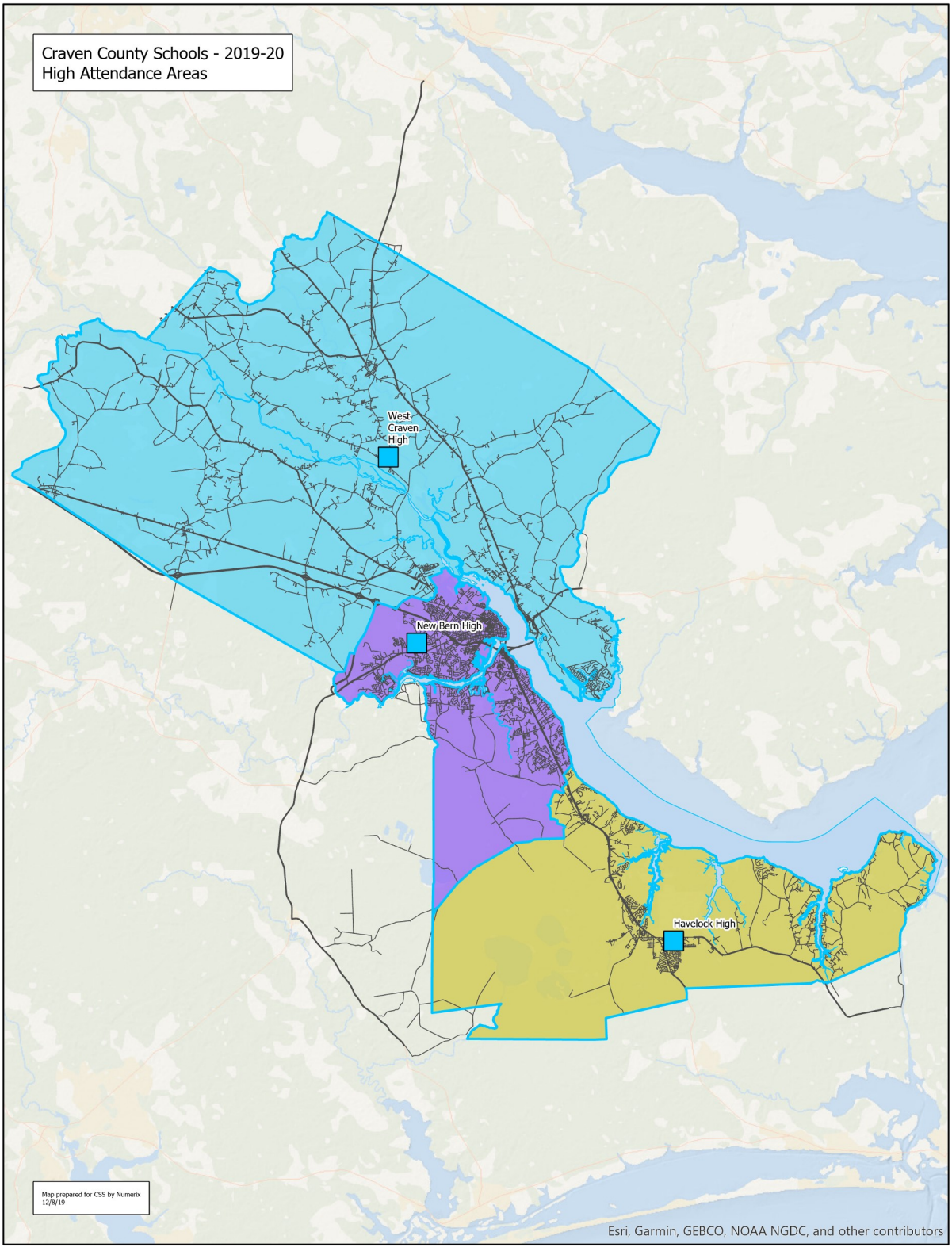
West Craven Middle School — **2019**

Potential



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4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
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High Schools



Havelock High School

There have been several expansions to this facility since it was first constructed in 1971. The most recent addition to the campus is the auditorium which was built in 2003 followed by several buildings related to the athletic program and field maintenance. Havelock and West Craven High were built at the same time and the initial construction was based on the same prototype. The additions at the two locations are different.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
6-220 -004	Havelock High and across Webb Bl	BOE	52.7	$1,318,750	$1,318,750
6-220 -005	Havelock High School inset	BOE	0.3	$17,000	$17,000
		Total	53.1	$1,335,750	$1,335,750

Insurance / GIS Data

At 200,000 square feet the building aligns with the site of 53 acres. Athletic fields occupy much of the site along with parking for teachers, staff, students, and busing. The campus sits in a residential area with the northern boundary being MCAS Cherry Point. The building itself is only 3,000 ft away from runway 5R where the sound pressure levels can reach 120 db or more. The school is not directly inline with the runway.

Insurance Data

HAVELOCK HS		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25034001	MAIN BUILDING	NC2	1/1/1971	48	103093	$23,911,945
	Main - East Addition	NC2	1/1/1990	29	45878	
	Main - West Addition	NC2	1/1/1998	21	10390	
25034002	ATHLETIC FIELD HOUSE	NC2	1/1/1990	29	7830	$1,174,883
25034003	PRESSBOX/BLEACHERS	JM1	1/1/1992	27	1	$348,154
25034007	ATHLETIC FIELD LIGHT	NC1	1/1/2004	15	1	$692,206
25034009	TRACTOR SHED	F1	1/1/2004	15	800	$46,972
25034010	FOOTBALL CONCESSION	F1	1/1/2004	15	1875	$232,412
25034011	BASEBALL CONCESSION	F1	1/1/2004	15	1875	$232,412
25034017	BAND/CHORUS BLDG	NC2	1/1/1990	29	6518	$978,019
25034018	CARPENTRY SHOP	NC1	1/1/1990	29	5663	$849,725
25034019	AUDITORIUM	NC2	1/1/2003	16	16030	$2,405,284
	Totals / Average $/sf				199954	$30,872,012
	Average Construction Date		1995			
	Average Age			29		

Life Cycle Analysis

At nearly 50 years of age, the main building is beginning to show its age, but is in good overall condition. The facility has been well maintained and should continue to provide service for the next twenty years before maintenance costs begin to increase beyond a reasonable measure.

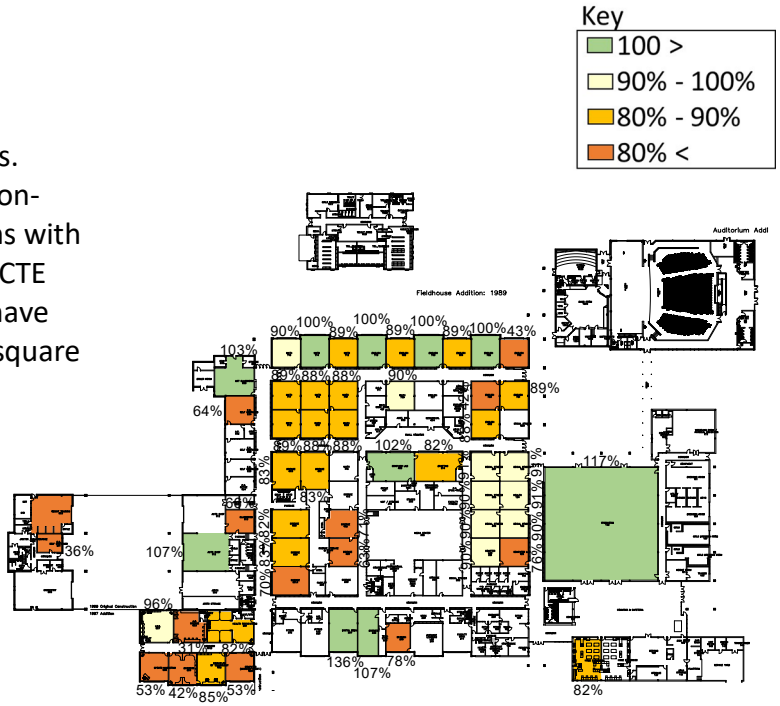
Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
HAVELOCK HS						
MAIN BUILDING - 1971	22	70	60	80	1971	48
MAIN BUILDING - 1990	41	70	60	80	1990	29
MAIN BUILDING - 1998	59	80	70	90	1998	21
ATHLETIC FIELD HOUSE - 1990	11	40	30	50	1990	29
PRESSBOX/BLEACHERS - 1992	3	30	20	40	1992	27
ATHLETIC FIELD LIGHT - 2004	15	30	20	40	2004	15
TRACTOR SHED - 2004	15	30	20	40	2004	15
FOOTBALL CONCESSION - 2004	25	40	30	50	2004	15
BASEBALL CONCESSION - 2004	25	40	30	50	2004	15
BAND/CHORUS BLDG - 1990	41	70	60	80	1990	29
CARPENTRY SHOP - 1990	41	70	60	80	1990	29
AUDITORIUM - 2003	64	80	70	90	2003	16

Utility Providers

Electrical	Carteret Craven
Sewer	City of Havelock
Water	City of Havelock
Natural Gas	Piedmont Natural Gas

Square Footage Per Program (Based on Use)

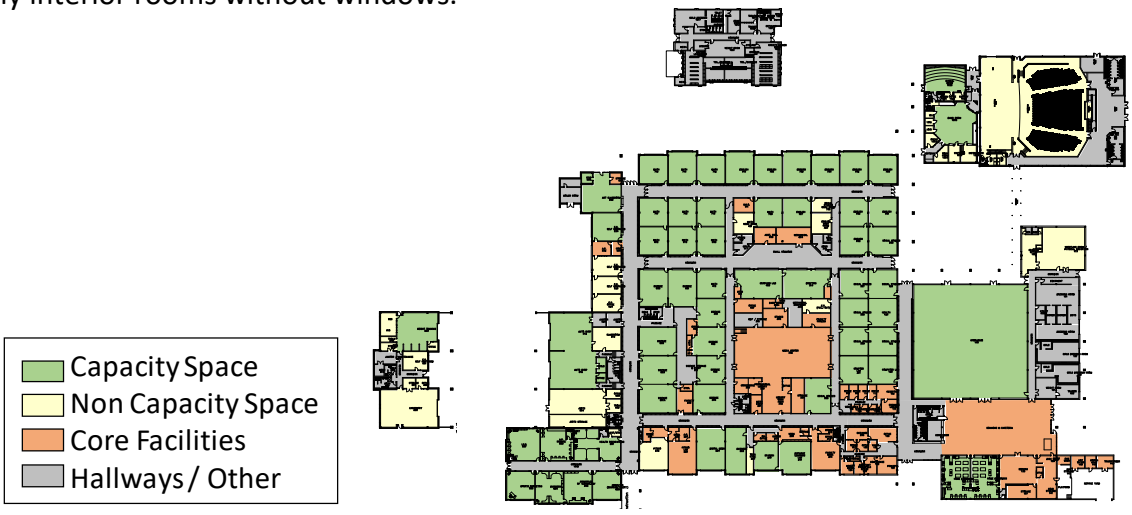
Most of the spaces in the school are smaller than the minimum standards. This includes the spaces that were constructed in the 1990's. The programs with the most issue are the sciences and CTE programs. Several CTE classrooms have less than half of the recommended square footage.



Capacity / Use Diagram (Optimized for 2021)

Core facilities are concentrated near the front of the building with office and other staff spaces scattered around the school. Classrooms line the perimeter and central areas of the building and are distal from the noise producing spaces. There are many interior rooms without windows.

Utilization Diagram



Facility Details

As older buildings go, Havelock High is holding up well. The site is compact with nearly every inch of space used for some program. The floor plan does not comply with current education philosophies in the way the building clusters interior rooms together. Natural light is known to keep students awake and focused on classwork.

Building Images

Below are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance. These are only a few issues that have a large impact on deferred maintenance needs.



ADA Compliance



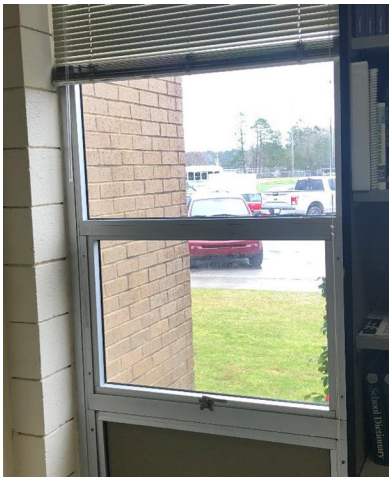
Wet Soils



Non-Thermal Windows



Aged Mechanical



Security



Non-Thermal Windows



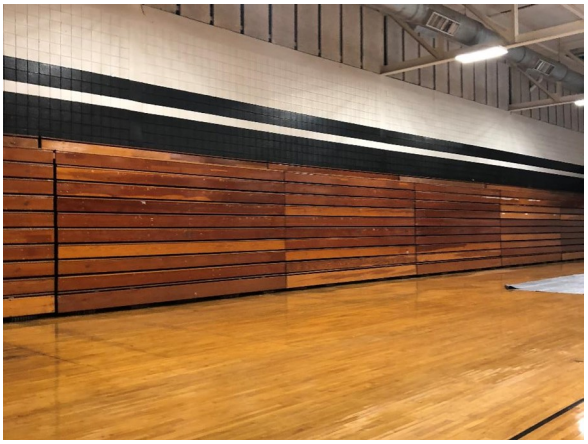
Lead P-Trap



Supplemental Heat



Ceilings, Grid, Lights



ADA Compliance



Aged Floors

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.

Potential Improvements

The school has been in use for many years now and components are getting to the end of their useful life. Starting with the site, the asphalt is aged out to various levels around campus and could be brought back to new and a long range plan established for rejuvenation. Canopies for students at both the front and back of the school keep students out of the rain as they transition from the school to a bus or privately owned vehicle. Other site improvements include ADA compliance to all fields and resurfacing or repairs to the track and tennis courts.

The building itself has an old roof membrane that needs to be replaced along with windows that were never thermally broken or have lost their seals and no longer provide a thermal barrier to the exterior.

Inside the building there are numerous opportunities for improvement, beginning with the removal of existing floor tiles and polishing the existing floor slab since the vapor barrier is in failure. Walls, ceilings, and lights can be painted or replaced. As with other buildings of this age the plumbing, electrical, and mechanical systems could all be improved. Several toilet renovations and improvements should be considered since the building was built prior to the adoption of the Americans with Disabilities Act.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Havelock High

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$41,100	$4,110	$3,699	$6,165	$55,074
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$761,057	$76,106	$68,495	$114,159	$1,019,817
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$90,000	$9,000	$8,100	$13,500	$120,600
7	Canopy (cov. Walks)	$267,837	$26,784	$24,105	$40,176	$358,902
8	Other Site	$465,036	$46,504	$41,853	$69,755	$623,148
9	Roofing	$1,997,171	$199,717	$179,745	$299,576	$2,676,209
10	Structural	$0	$0	$0	$0	$0
11	Windows	$403,204	$40,320	$36,288	$60,481	$540,294
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$9,600	$960	$864	$1,440	$12,864
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$408,138	$40,814	$36,732	$61,221	$546,905
16	Flooring	$1,097,468	$109,747	$98,772	$164,620	$1,470,607
17	Painting	$383,930	$38,393	$34,554	$57,589	$514,466
18	Other Building Interior	$1,177,768	$117,777	$105,999	$176,665	$1,578,209
19	Mechanical	$1,800,000	$180,000	$162,000	$270,000	$2,412,000
20	Electrical	$1,520,000	$152,000	$136,800	$228,000	$2,036,800
21	Lighting	$320,000	$32,000	$28,800	$48,000	$428,800
22	Technology	$75,273	$7,527	$6,775	$11,291	$100,865
23	Plumbing	$44,400	$4,440	$3,996	$6,660	$59,496
24	Other PME	$46,800	$4,680	$4,212	$7,020	$62,712
25	Code / Safety	$33,250	$3,325	$2,993	$4,988	$44,555
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$951,400	$95,140	$85,626	$142,710	$1,274,876
28	Fire Alarm	$350,000	$35,000	$31,500	$52,500	$469,000
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$170,288	$17,029	$15,326	$25,543	$228,186
31	Abatement	$133,731	$13,373	$12,036	$20,060	$179,199
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$37,500	$3,750	$3,375	$5,625	$50,250
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$1,522,055	$152,205	$136,985	$228,308	$2,039,553
37	Kitchen Equipment	$0	$0	$0	$0	$0
38	Media Center Furniture	$45,000	$4,500	$4,050	$6,750	$60,300
39	Off Site	$0	$0	$0	$0	$0
40	Other	$1,594,100	$159,410	$143,469	$239,115	$2,136,094
	Total					**$21,099,781**

Renovations

With the large number of small classrooms it would be unrealistic to increase the size in each one, but it is appropriate to look at the classrooms that have the greatest shortfall. As with other schools, the sciences and the CTE programs along with the Self Contained classrooms need the most help. A Kitchen expansion is planned and a renovation of the existing space would be appropriate to ensure the entire space functions properly.

Additions

With limited square footage in many of the CTE programs it is appropriate to create new large spaces for the programs that need large square footage and move other programs around to maximize space. The school is also large enough that an Auxiliary Gym should be considered. With the creation of the additional PE space additional square footage could be built to create a Band Room with greater volume to the space and backfilling the old Band Room with the Chorus program and a dedicated Drama space near the auditorium.

Site

At the present time, the queue is very short, but could be lengthened by using the north access point as the queue entrance.

MECHANICAL SYSTEM

The school uses four air cooled chillers for cold water that are all in good condition. The Air handlers and ducts are original and have aged out. The Gymnasium is running a split system which has no service platforms making maintenance difficult. The main building has a vented attic space and no ability for dehumidification. The entire school is on electric heat and a boiler could prove to be more economical. Finally the controls are a mix of two different manufactures ACL and JCI.

FIRE ALARM

The fire alarm is old and should be replaced.

ELECTRIC

The building still has its original electrical equipment and the main and sub panels should be replaced.

LIGHTING

The school has mostly T8 fixtures that should be replaced with LED lights.

Craven County Schools

Space Inventory / Worksheet 2019

Havelock High

12/2/2019

Current Student Capacity (NCDPI)	1,253	Current Core Capacity (NCDPI)	1,254
Proposed Student Capacity	1253	**Proposed Core Capacity**	1254
	Number of Spaces	0	Square Footage

Total Cost	$11,179,869		
Cost / Student	$8,922		
Athletic / PE /Facilities			
	Number of Spaces		

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens				
Grades 1-3 Clsrms				
Grades 4-5 Clsrms				
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math	26	26		
Exceptional (self contained)	2	2		
Instructional Kitchen	1		1	
Resource	5	8		1
Computer				
ISS	1	1		
Sub-Total	35	37	1	1
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other	9	8	3	
Prep Rooms	4	4		
Math/Sci Computer Lab				
Sub-Total	13	12	3	0
Arts Education				
Visual Arts	2	2		
Art Project				
Art Sto. Kiln	2	2		
General Music				
Instrumental Music (Band)	1	1		
Vocal Music (Chorus) + Sto.	1	1		
Ensemble / Practice	1	1		
Band Uniform Sto.	1	1		
Instrument Sto.	1	1		
Office / Library	1	1		
Dance/Drama	2	2		
Sub-Total	12	12	0	0
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications	1	1		
Business/Office Ed.	1	3		
Cons/Occ Home Economics	2	1		
Service/Marketing	1			
Health Occupations	1	4		
Agri/Trade & Industry (Heavy)	2	3		2
Trade & Industry (Medium)	2	3		
Technology (Light)	1			
Communications/Misc	2			
Vocational Clsrms	2	2		
Sub-Total	15	17	0	2
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage				
Boys/Girls Locker	4	4		
Boys/Girls Showers	2	2		
Coaches off./ Showers	2	2		
Training	1	1		
Laundry	1	1		
Storage / Office	1	1		
Officials/showers	1	1		
Lobby/cons./commons	1	1		
Auxiliary Gym	1			1
Weight Room	1	1		
Wrestling	1	1		
Health/P.E. Clsrms	3	3		
Sub-Total	20	19	0	1
Misc. Spaces				
ROTC	1	1		
Mobile Units				
Total	**95**	**97**	**4**	**4**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	5,382	5569		
Support	3,290	3511	-221	
Computer				
Sub-Total	8,672	9,080	0	0
Food Service	# of seatings			3
Dining	5,852	5839		
Kitchen	2,566	1811	1811	1,264
Serving	940	431	509	
Sub-Total	9,358	8,081	2,320	1,264
Auditorium	# of seats			0
Auditorium	4,514	5633		
Stage / Dress / Sto.	4,000	4067		
Lobby	1,200	2659		
Sub-Total	9,714	12,359	0	0
Administration				
Administration	5,460	5733	-273	
Sub-Total	5,460	5,733	0	0
Storage				
Book Storage	1,130			1,130
General Storage	1,230	1123		107
Sub-Total	2,360	1,123	0	1,237
Staff Support				
Staff Support	3,050	1467	494	1,089
Sub-Total	3,050	1,467	494	1,089
Total Renovated Spaces			2,814	
Demolition Totaling				
Total	**38,614**	**37,843**	**2,814**	**3,590**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field				
Sub-Total	0	0	0	0
Total	**0**	**0**	**0**	**9**

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at Havelock High in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

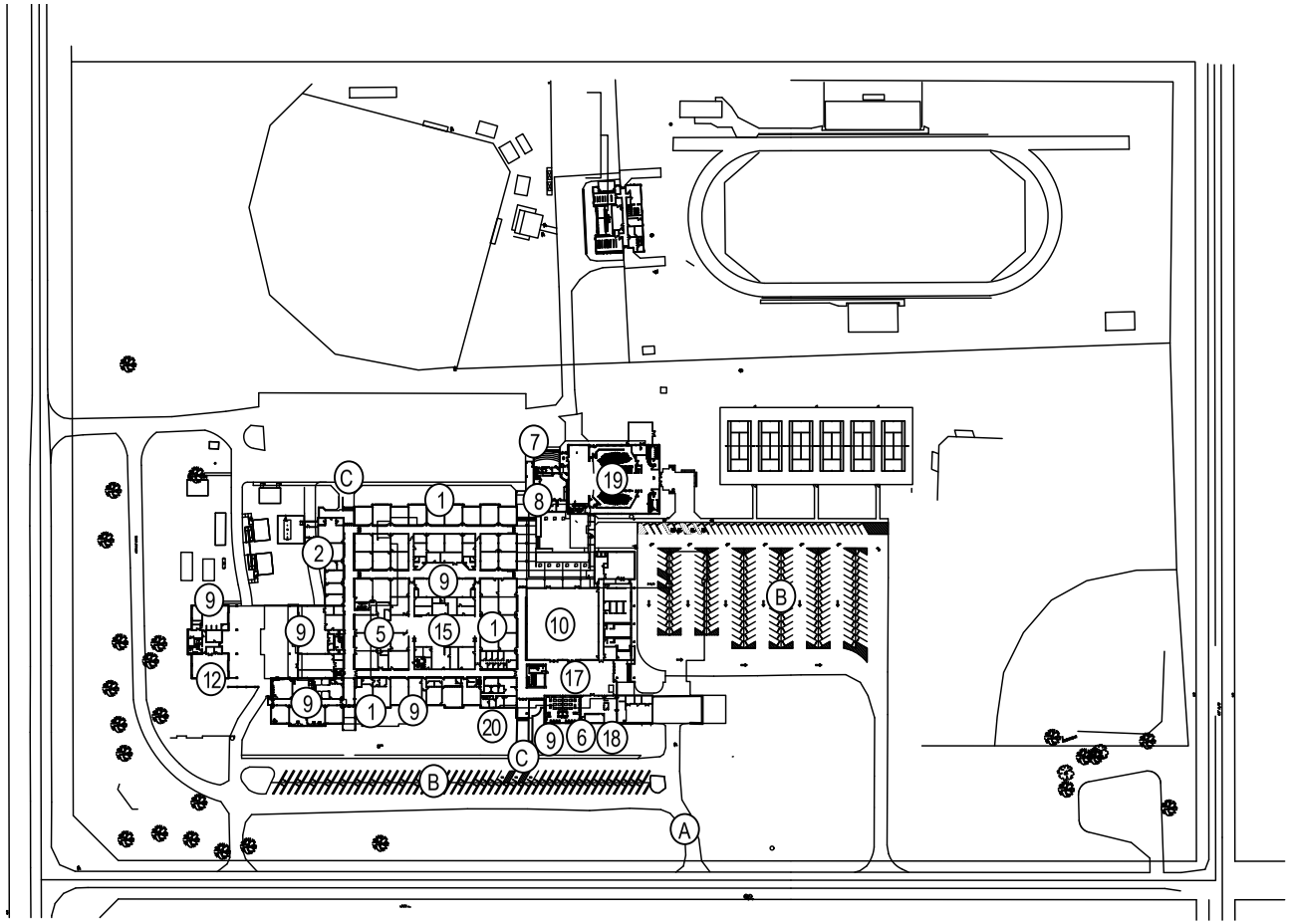
Havelock High

Additions / Renovations	Proposed Student Capacity			1,253
	Proposed Core Capacity			1,254
Student Capacity				
Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Academic Spaces	1	450	228.49	$102,820
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	0	0	0.00	$0
Vocational	2	6,000	276.56	$1,659,372
Physical Education Etc.	1	6,500	312.65	$2,032,225
Misc. Spaces ()			180.00	$0
Renovations	4	4,417	217.55	$960,920
Core Capacity				
Media Center		0	0.00	$0
Food Service		1,264	360.75	$455,988
Auditorium		0	0.00	$0
Administration		0	240.50	$0
Storage		1,237	240.50	$297,499
Staff Support		1,089	240.50	$261,905
Renovations		2,814	208.08	$585,540
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		16,540	$290.80	$4,809,808
Circulation/ Mechanical/Toilets/Walls	38.00%	6,285	$290.80	$1,827,727
Subtotal Renovated		7,231	$213.87	$1,546,460
Athletics				$0
Site Improvements				$80,000
Other ()				
Sub Total				$8,263,994
Inflation (3% for 3 years)	9.00%			$743,760
Contingency (%)	10.00%			$900,775
Sub Total				$9,908,529
A-E Fees (%)	10.00%			$990,853
Financing Charges	1.00%			$111,799
Other Fees and Services				$168,688
Site	0			$0
Owners Contingency (furn., equipment)				$717,000
Total				**$11,179,869**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Havelock High School | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

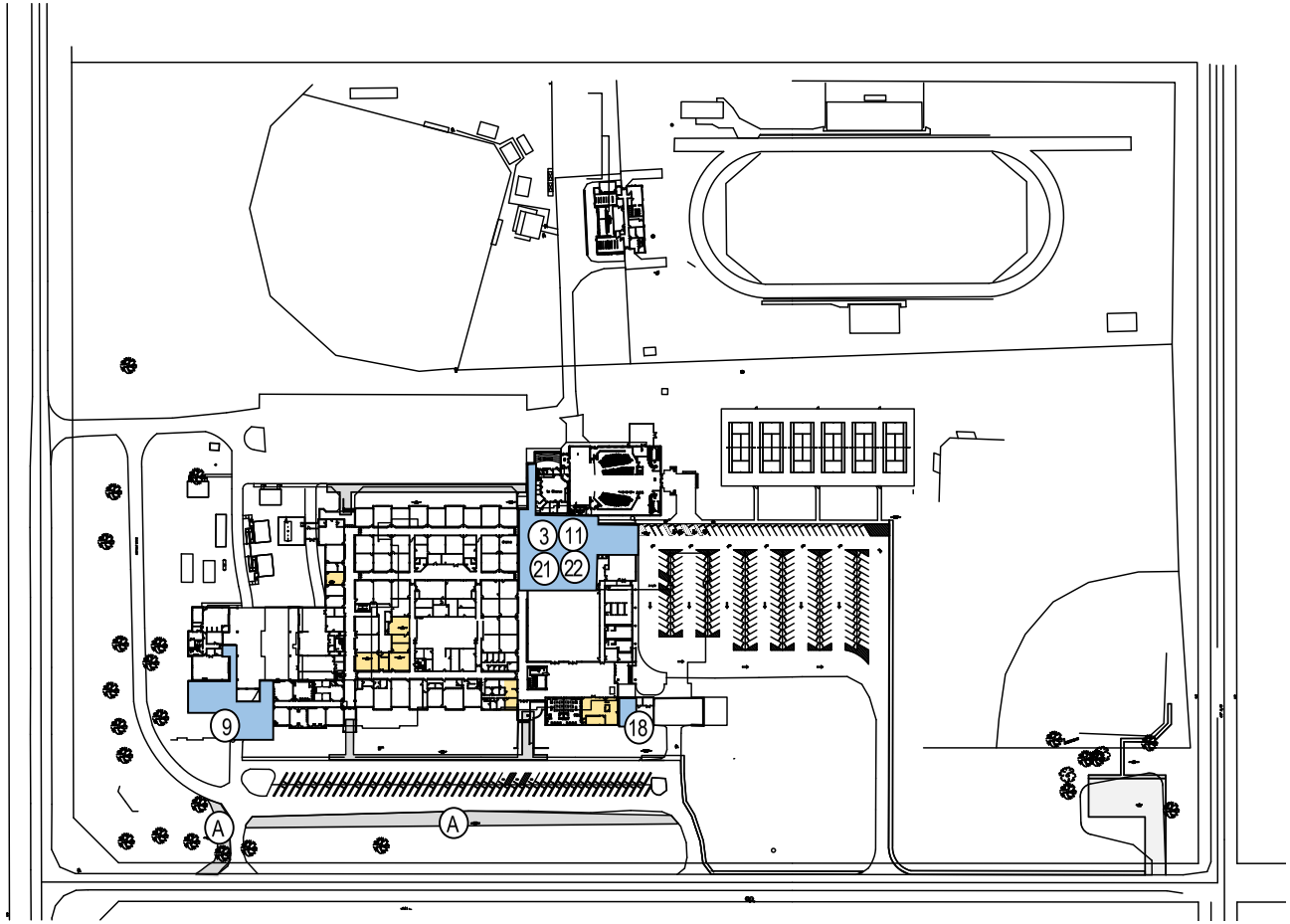
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Havelock High School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
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A Drive
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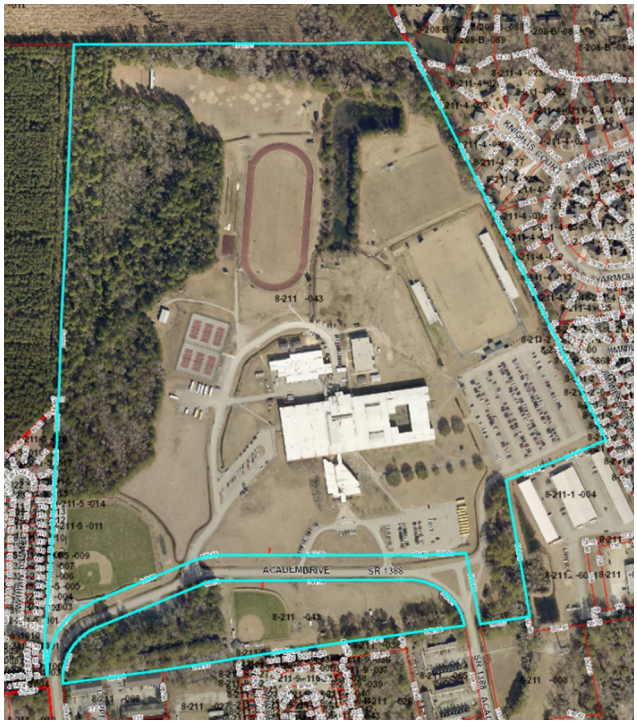
Craven County Schools

High Schools

Havelock High

New Bern High School

There have been two expansions to this campus since it was first constructed in 1991. This youthful building is the newest High School in Craven County. The parcel is surrounded by residential neighborhoods and timberlands. Access to the site is via Academic Drive which loops around to Dr. ML King Jr. Blvd. in two locations.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-211 -043	New Bern High	NB-C BOE	95.2	$963,200	$963,200

Insurance Data

NEW BERN HS		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25035601	MAIN BUILDING	NC2	1/1/1991	28	205205	$30,790,787
25035602	VOCATIONAL BUILDING	NC2	1/1/1991	28	17248	$2,588,042
25035603	FTBL CONCESSION STND	NC1	1/1/1992	27	2579	$386,976
25035604	PRESSBOX/BLEACHERS	NC1	1/1/2004	15		$453,780
25035605	ATHLETIC FIELD LGHTS	NC1	1/1/2004	15		$649,092
25035607	FIELD HOUSE	F1	1/1/1997	22	11700	$1,554,874
25035617	TRACTOR SHED	F1	1/1/2001	18	150	$36,714
	Totals / Average $/sf				236882	$36,460,265
	Average Construction Date		1997			
	Average Age			28		

Insurance / GIS Data

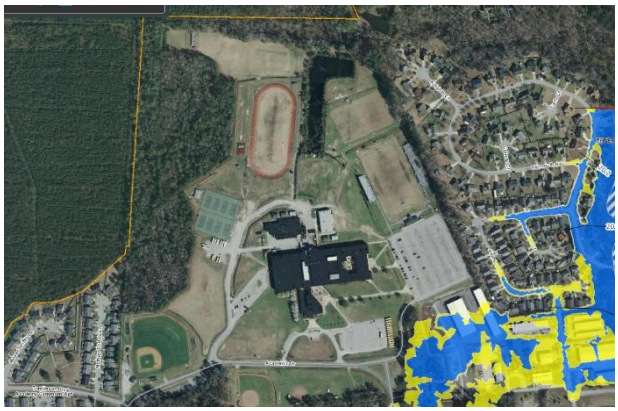
At 237,000 square feet this two story building takes is well situated on the 95 acre parcel. Most of the site is used for athletic fields or vehicular circulation and parking. A large section of wooded area exists to the northwest and is anticipated to be wetlands.

Flood Mapping

Neither the building nor the site are in a flood pain, however the adjacent properties are and will likely cause the existing swales to backup causing the site to retain water.



Effective



Preliminary

Life Cycle Analysis

At less than thirty years old, only a handful of building components have reached the end of their life cycle. The roof was one item that aged out and was replaced in 2015 and. Other costly items like the electrical and plumbing systems are all still in good condition.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
NEW BERN HS						
MAIN BUILDING - 1991	52	80	70	90	1991	28
VOCATIONAL BUILDING - 1991	42	70	60	80	1991	28
FTBL CONCESSION STND - 1992	13	40	30	50	1992	27
PRESSBOX/BLEACHERS - 2004	15	30	20	40	2004	15
ATHLETIC FIELD LGHTS - 2004	15	30	20	40	2004	15
FIELD HOUSE - 1997	18	40	30	50	1997	22
TRACTOR SHED - 2001	12	30	20	40	2001	18

Utility Providers

Electrical	Duke / Progress Energy
	City of New Bern
Sewer	City of New Bern
Water	City of New Bern
Natural Gas	Piedmont Natural Gas

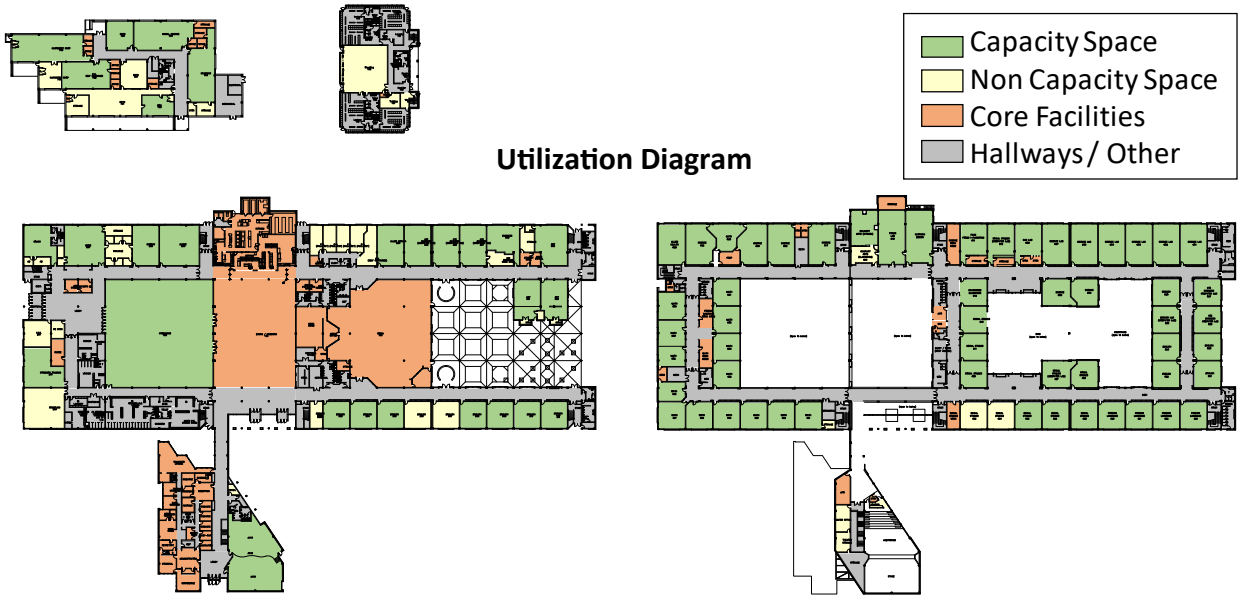
Square Footage Per Program (Based on Use)

Although only a few spaces meet or exceed the planned minimums, most are at 90% to 95% of that standard. Some of the science classrooms and CTE programs are in the 60th percentile.



Capacity / Use Diagram (Optimized for 2021)

The overall layout of the school places many of the Core Facilities in the front of the school or are connected via commons areas. Other staff spaces are scattered around the building appropriately to provide both security and functionality. Resource Rooms are also distributed around campus.



Utilization Diagram

Facility Details

As one of the newest schools in the system, this school will provide many more years of service if past maintenance efforts can be continued. The school was built with a lecture hall that was intended to suffice for an Auditorium. The space itself works for lectures, but is only about half the size of what it should be.

Building Images

Below are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance. These are only a few that have a large impact to the deferred maintenance.



Worn Asphalt



Sidewalk and Swale



Swale Clogging



Swale Clogging



High Water Table



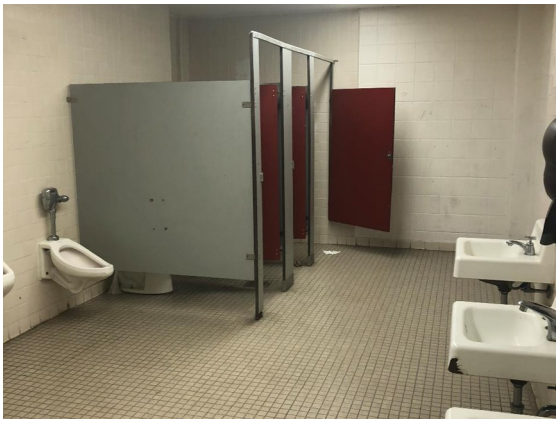
Efflorescence



Worn Finishes



Moisture



ADA Compliance



Worn Finishes



ADA Compliance



Small Band Room



Thermal Windows

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.

Potential Improvements

As one of the more youthful buildings in the system it is easy to dismiss the needs at this facility. By making early and continued investment into the building the overall building life can be extended.

Starting with the site the water table is high and cleaning of the swales is needed to ensure proper drainage is needed. The existing asphalt is cracking and potholes are forming. Through periodic recoating of the surfaces the underlying asphaltic layers are protected. Some additional drives and parking areas would be appropriate around the Athletic Fields for student support and emergency vehicle access. Reworking the front to provide an appropriate parent drop area may be appropriate depending on decisions regarding the addition of a true Auditorium.

The building itself has several areas to consider. Items like window glazing that no longer provides a thermal barrier should be replaced and will reduce energy consumption. The ceilings are older 2x4 type and are showing signs of age and the lighting in many places is older and uses more electricity than newer LED lights. There are also numerous opportunities to make improvements to the restrooms. Since 1991 the building code has changed several times and additional toilet facilities would be appropriate along with bringing the existing facilities up to ADA standards.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

New Bern High

			10.00%	9.00%	15.00%	
#	Item	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$7,200	$720	$648	$1,080	$9,648
2	Site Utilities	$57,000	$5,700	$5,130	$8,550	$76,380
3	Parking / Drives	$1,555,908	$155,591	$140,032	$233,386	$2,084,916
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$120,000	$12,000	$10,800	$18,000	$160,800
7	Canopy (cov. Walks)	$274,170	$27,417	$24,675	$41,126	$367,388
8	Other Site	$253,484	$25,348	$22,814	$38,023	$339,669
9	Roofing	$0	$0	$0	$0	$0
10	Structural	$0	$0	$0	$0	$0
11	Windows	$417,820	$41,782	$37,604	$62,673	$559,879
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$23,000	$2,300	$2,070	$3,450	$30,820
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$1,258,734	$125,873	$113,286	$188,810	$1,686,704
16	Flooring	$104,707	$10,471	$9,424	$15,706	$140,308
17	Painting	$394,292	$39,429	$35,486	$59,144	$528,351
18	Other Building Interior	$288,325	$28,833	$25,949	$43,249	$386,356
19	Mechanical	$250,000	$25,000	$22,500	$37,500	$335,000
20	Electrical	$1,000,000	$100,000	$90,000	$150,000	$1,340,000
21	Lighting	$275,000	$27,500	$24,750	$41,250	$368,500
22	Technology	$112,754	$11,275	$10,148	$16,913	$151,090
23	Plumbing	$78,300	$7,830	$7,047	$11,745	$104,922
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$825,710	$82,571	$74,314	$123,857	$1,106,451
26	ADA Ramps	$4,000	$400	$360	$600	$5,360
27	ADA Toilets	$1,933,210	$193,321	$173,989	$289,982	$2,590,501
28	Fire Alarm	$310,000	$31,000	$27,900	$46,500	$415,400
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$126,500	$12,650	$11,385	$18,975	$169,510
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$1,696,255	$169,625	$152,663	$254,438	$2,272,981
37	Kitchen Equipment	$206,000	$20,600	$18,540	$30,900	$276,040
38	Media Center Furniture	$45,000	$4,500	$4,050	$6,750	$60,300
39	Off Site	$0	$0	$0	$0	$0
40	Other	$304,500	$30,450	$27,405	$45,675	$408,030
	Total					**$15,975,304**

Renovations
Increases to the size of the sciences and CTE program spaces are the focus of renovations.

Additions
The potential addition to this campus would support several different programs. The school has enough student population that an Auxiliary Gym is warranted and could be placed adjacent to the existing Gymnasium. Additional large spaces are also needed in the CTE program and could be constructed near other similar programs. Within that addition an appropriate Teaching Kitchen could be constructed in support of the Self Contained students. The largest proposed addition would support the arts and the creation of a full sized Auditorium. This would include new space for the Chorus and Band programs. Both of those existing spaces are limited and need increased ceiling height and volume to function properly. The remainder of the added square footage would be in the support and storage areas.

Site
Site renovations would include the creation of a proper queue at the front of the building long enough to get all parent traffic off of Academic Drive. This would allow buses to have their own dedicated drop and parking area on the west side of the school, near the Gymnasium. The stadium is used heavily and great effort is put into keeping grass on the field. This school is of sufficient size and has enough programs using the field that a turf field should be considered.

Mechanical System
New Bern High uses Water Source Heat Pumps which have all be replaced in the last decade and are in good overall shape. The Cooling Tower has been well maintained and should last for some time to come, but the piping needs to be redone. The boilers have a gas pipe issue that will only allow one to work at a time and the boilers themselves have aged out.

Fire Alarm
This is the original system and finding replacement parts is difficult and costly . This should be replaced with an new addressable system.

Electric
This is the original equipment and is in good condition. Replacement should not be needed for the next 25 years or so.

Lighting
Most of the lighting is old T8 style fixtures and should be replaced with new energy efficient LED lights.

Potential Additions and Renovations

New Bern High

Craven County Schools

Space Inventory / Worksheet 2019

New Bern High

12/16/2019

Current Student Capacity (NCDPI)	1,733	Current Core Capacity (NCDPI)	1,871
Proposed Student Capacity	1733	**Proposed Core Capacity**	1871
	Number of Spaces	0	Square Footage

Total Cost	$27,884,812		
Cost / Student	$16,090		
Athletic / PE /Facilities			
	Number of Spaces		

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens				
Grades 1-3 Clsrms				
Grades 4-5 Clsrms				
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math	41	41		
Exceptional (self contained)	3	3		
Instructional Kitchen	1			1
Resource	7	9		
Computer				
ISS	1	1		
Sub-Total	53	54	0	1
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other	12	12	12	
Prep Rooms	6	1	6	
Math/Sci Computer Lab				
Sub-Total	18	13	18	0
Arts Education				
Visual Arts	2	2		
Art Project				
Art Sto. Kiln	2	2		
General Music				
Instrumental Music (Band)	1	1		1
Vocal Music (Chorus) + Sto.	1	1		1
Ensemble / Practice	1	1		1
Band Uniform Sto.	1	1		1
Instrument Sto.	1	1		1
Office / Library	1	1		1
Dance/Drama	2	2		
Sub-Total	12	12	0	6
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications	2	2		
Business/Office Ed.	5	5		
Cons/Occ Home Economics	2	2		
Service/Marketing				
Health Occupations	3	3		
Agri/Trade & Industry (Heavy)	3	3		2
Trade & Industry (Medium)	2	2	1	
Technology (Light)	1	1		
Communications/Misc				
Vocational Clsrms	2			2
Sub-Total	20	18	1	4
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage				
Boys/Girls Locker	4	4		
Boys/Girls Showers	2	2		
Coaches off./ Showers	2	2		
Training	1	1		
Laundry	1	1		
Storage / Office	1	1		
Officials/showers	1	1		
Lobby/cons./commons	1	1		
Auxiliary Gym	1			1
Weight Room	1	1		
Wrestling	1	1		
Health/P.E. Clsrms	3	3		
Sub-Total	20	19	0	1
Misc. Spaces				
ROTC		2		
Mobile Units				
Total	**123**	**116**	**19**	**12**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	7,484	8051	-567	
Support	3,650	2624	567	
Computer				
Sub-Total	11,134	10,675	0	0
Food Service		# of seatings		3
Dining	8,731	8732		
Kitchen	3,180	3946	-173	
Serving	1,260	1087	173	
Sub-Total	13,171	13,765	173	0
Auditorium		# of seats		0
Auditorium	6,736	2081	-2081	6,736
Stage / Dress / Sto.	4,000	1958	-1958	4,000
Lobby	1,200	767	-767	1,200
Sub-Total	11,936	4,806	0	11,936
Administration				
Administration	6,100	6638	-538	
Sub-Total	6,100	6,638	0	0
Storage				
Book Storage	1,440			1,440
General Storage	1,540	699	671	170
Sub-Total	2,980	699	671	1,610
Staff Support				
Staff Support	3,450	3583	-133	
Sub-Total	3,450	3,583	0	0
Total Renovated Spaces			844	
Demolition Totaling				
Total	**48,771**	**40,166**	**844**	**13,546**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field				
Sub-Total	0	0	0	0
Total	**0**	**0**	**0**	**9**

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at New Bern High in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

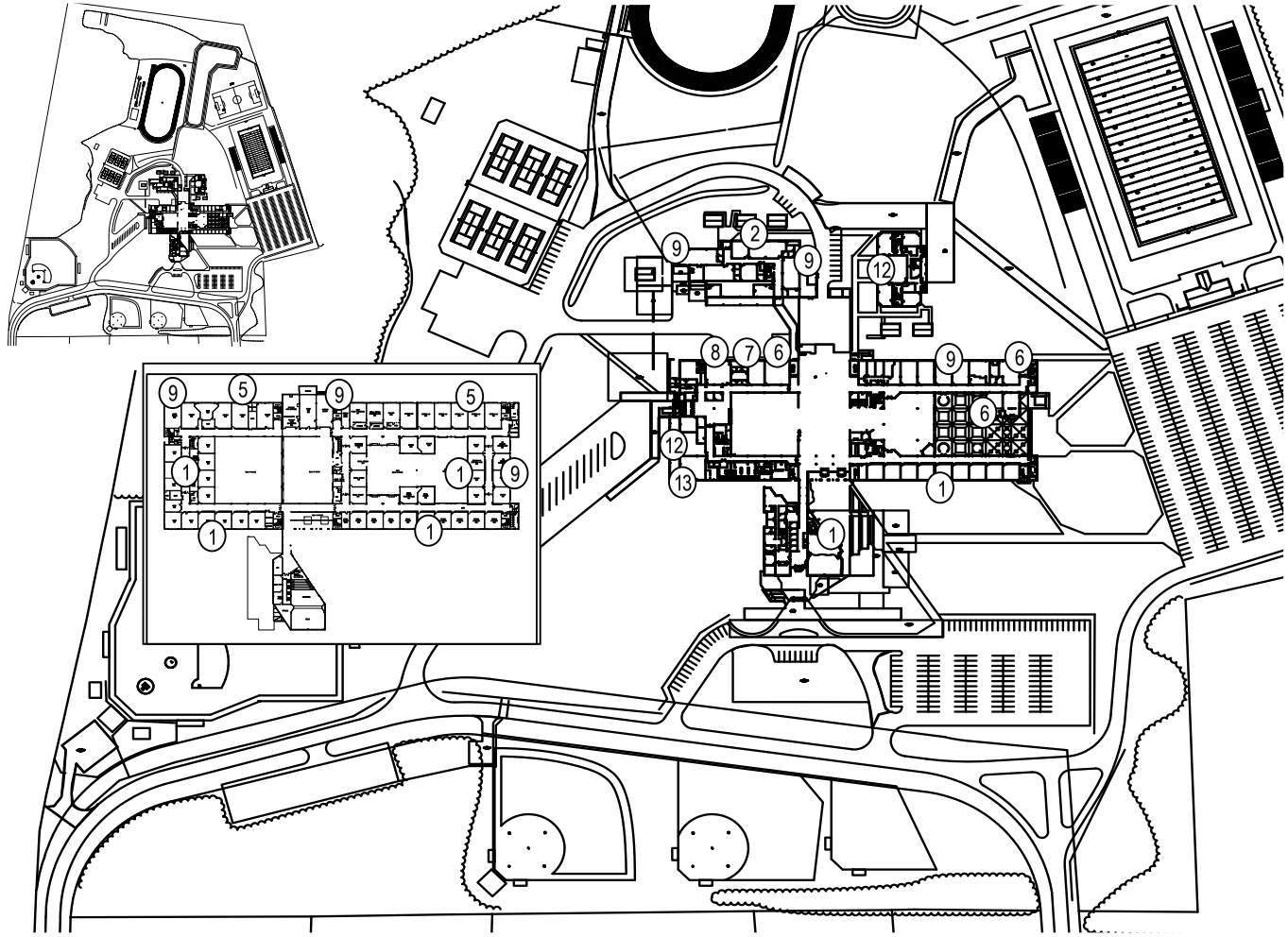
New Bern High

Additions / Renovations	Proposed Student Capacity			1,733
	Proposed Core Capacity			1,871
Student Capacity				
Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Academic Spaces	1	650	274.72	$178,571
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	6	5,817	280.29	$1,630,443
Vocational	4	7,500	277.21	$2,079,108
Physical Education Etc.	1	6,500	324.67	$2,110,388
Misc. Spaces (Extra Toilets / Lobby / Corr)		5,261	180.00	$947,016
Renovations	19	17,941	220.00	$3,947,020
Core Capacity				
Media Center		0	0.00	$0
Food Service		0	0.00	$0
Auditorium		11,936	320.22	$3,822,024
Administration		0	249.75	$0
Storage		1,610	249.75	$402,098
Staff Support		0	249.75	$0
Renovations		844	72.80	$61,440
Athletic / PE Facilities				
Track	0			$0
Football To Artifical Turf	0	81000	12.95	$1,048,950
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		34,013	$328.40	$11,169,647
Circulation/ Mechanical/Toilets/Walls	38.00%	12,925	$328.40	$4,244,466
Subtotal Renovated		18,785	$213.39	$4,008,460
Athletics				$1,048,950
Site Improvements				$110,000
Other (Lecture Hall Demolition)		9886	14	$138,404
Sub Total				$20,719,927
Inflation (3% for 3 years)	9.00%			$1,864,793
Contingency (%)	10.00%			$2,258,472
Sub Total				$24,843,193
A-E Fees (%)	10.00%			$2,484,319
Financing Charges	1.00%			$278,848
Other Fees and Services				$278,451
Site	0			$0
Owners Contingency (furn., equipment)				$218,000
Total				**$27,884,812**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

New Bern High School | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

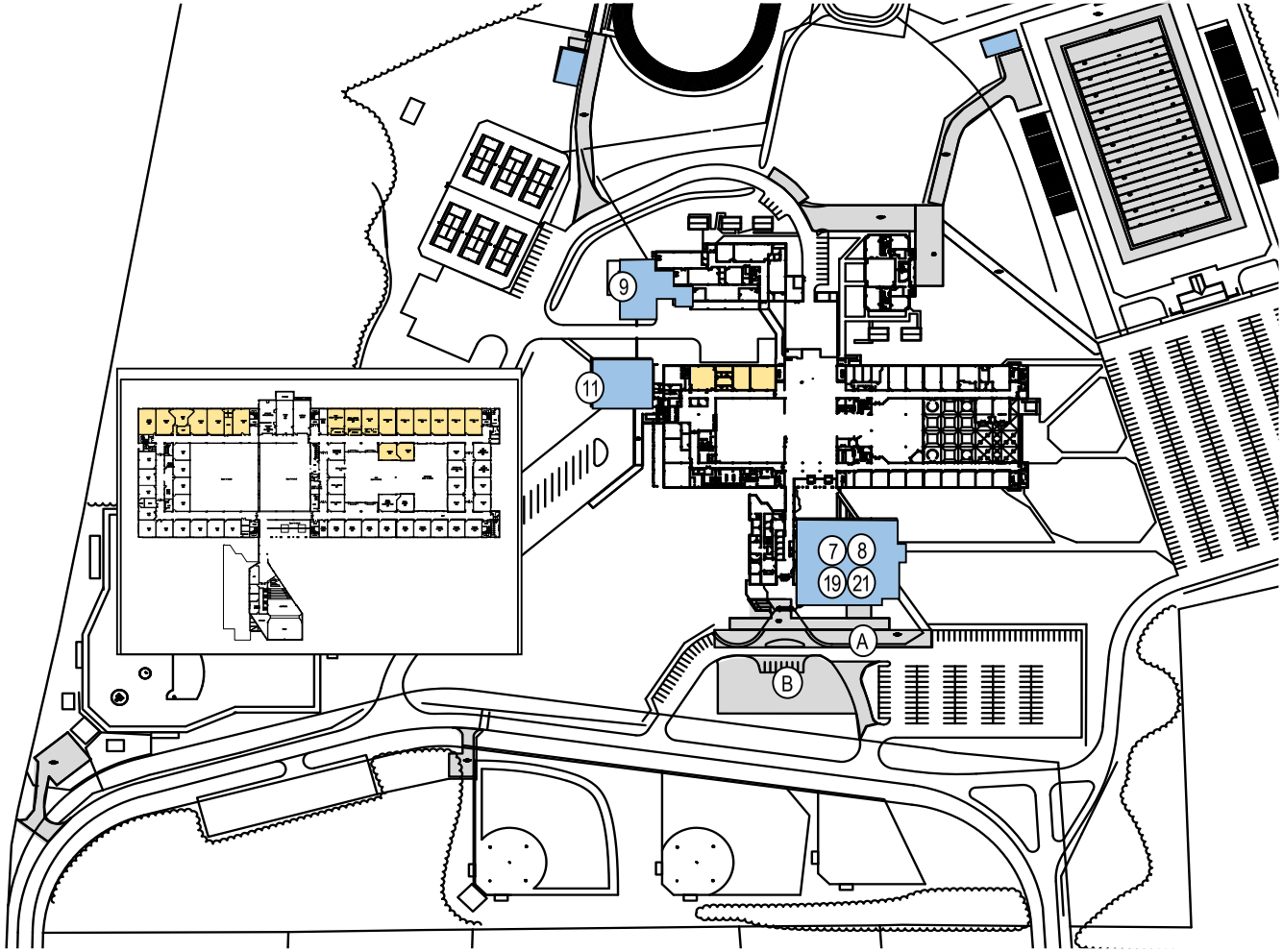
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Space Profile for Renovation Projects Based on NC School Planning Recommendations

New Bern High School | **2019**

Potential



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
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A Drive
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CONNOTES RENOVATION

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West Craven High School

There have been several expansions to this facility since it was first constructed in 1971. The most recent addition to the campus is the Auditorium which was built in 2003 followed by several buildings related to the Athletic Program and field maintenance. Havelock and West Craven High were built at the same time and the initial construction was based on the same prototype.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
1-038 -001	West Craven High	BOE	74.4	$992,850	$992,850
1-038 -110	West Craven High- across Streets F	BOE	0.6	$5,000	$5,000
		Total	75.0	$997,850	$997,850

Insurance / GIS Data

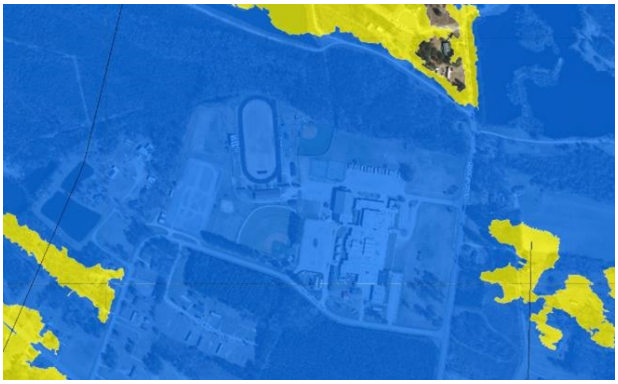
At 170,000 square feet West Craven High is slightly smaller than Havelock High at 200,000 sf. This site is 20 acres larger and all of the nearly 75 acres are used. It is situated in a rural area and within about one mile of the Neuse River and less than 1/2 mile of Swift Creek.

Insurance Data

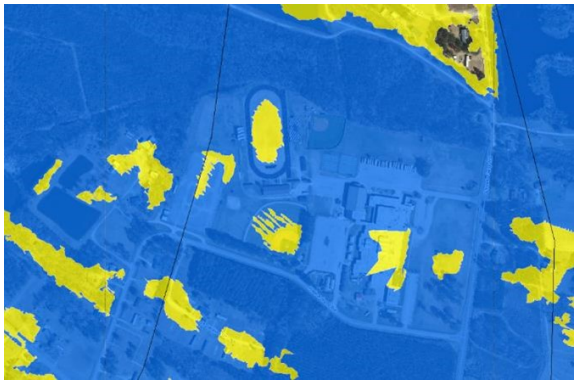
WEST CRAVEN HS		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25037201	MAIN BUILDING	NC2	1/1/1971	48	103093	$21,455,944
	CR addition/ Voc / Band	NC1	1/1/1990	29	30719	
	6 Cr Addition	NC1	1/1/1998	21	9181	
25037202	FIELD HOUSE	JM1	1/1/1980	39	5639	$858,491
	Field House Addition	F2	9/1/2008	11	2644	
25037203	LARGE GREENHOUSE	F1	1/1/2004	15	1000	$58,742
25037206	PRESSBOX/BLEACHERS	F1	1/1/2004	15	1	$323,078
25037208	ATHLETIC FIELD LGHTS	NC1	1/1/2004	15	1	$595,968
25037213	FTBL CONCESSION STND	F1	1/1/2004	15	1200	$70,457
25037226	AUDITORIUM	NC2	1/1/2003	16	16030	$2,405,284
	Totals / Average $/sf				169508	$25,767,964
	Average Construction Date		1996			
	Average Age			27		

Flood Mapping

The entire building and site are within the 100 year flood zone. The building elevation is 10 ft. ASL with the flood level at 11.2 ft. ASL. The 500 year flood level is 13.6 which would put the building nearly four feet under water.



Effective



Preliminary

Life Cycle Analysis

At nearly 50 years of age, the main building is beginning to show its age, but is in good overall condition. The facility has been well maintained and should continue to provide service for the next twenty years before maintenance costs begin to increase beyond a reasonable measure.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
WEST CRAVEN HS						
MAIN BUILDING - 1971	22	70	60	80	1971	48
MAIN BUILDING - 1990	41	70	60	80	1990	29
MAIN BUILDING - 1998	59	80	70	90	1998	21
FIELD HOUSE - 1970	-9	40	30	50	1970	49
FIELD HOUSE - 2008	29	40	30	50	2008	11
LARGE GREENHOUSE - 2004	5	20	10	30	2004	15
PRESSBOX/BLEACHERS - 2004	15	30	20	40	2004	15
ATHLETIC FIELD LGHTS - 2004	15	30	20	40	2004	15
FTBL CONCESSION STND - 2004	25	40	30	50	2004	15
AUDITORIUM - 2003	64	80	70	90	2003	16

Utility Providers

Electrical	Duke / Progress Energy
Sewer	Craven County Water and Sewer
Water	Craven County Water and Sewer
Natural Gas	Piedmont Natural Gas

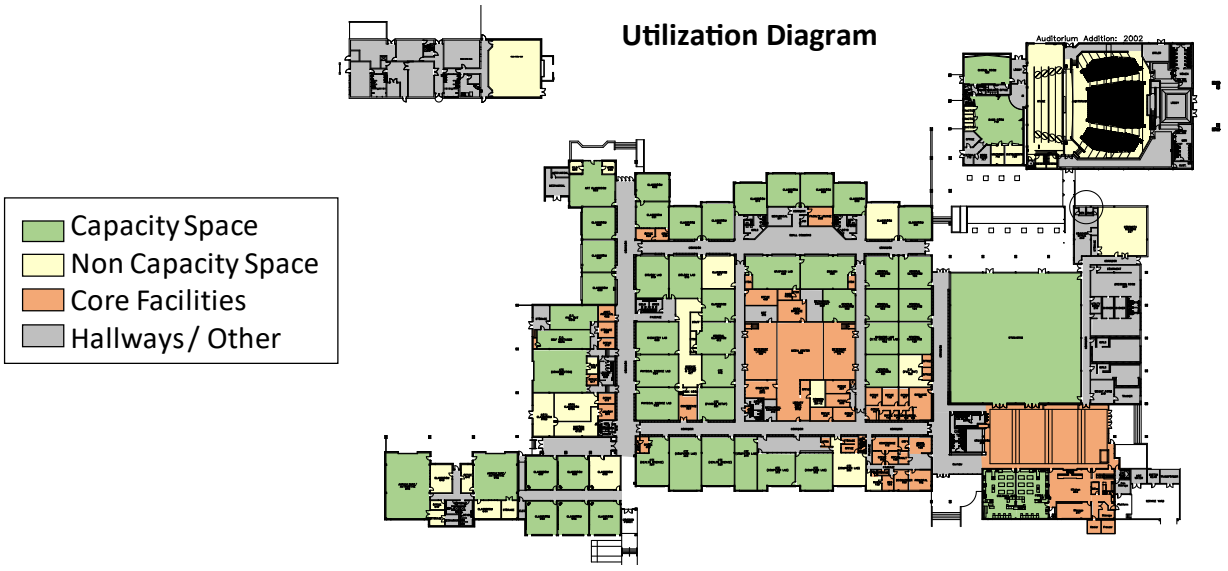
Square Footage Per Program (Based on Use)

Most of the spaces in the school are smaller than the minimum standards. This includes the spaces that were constructed in the 1990's. The programs with the most issue are the sciences and CTE programs. Several CTE classrooms have less than half of the recommended square footage.



Capacity / Use Diagram (Optimized for 2021)

Core facilities are concentrated near the front of the building with office and other staff spaces scattered around the school. Classrooms line the perimeter and central areas of the building and are distal from the noise producing spaces. There are many interior rooms without windows.



West Craven High

Facility Details

As older buildings go, West Craven High is in good overall condition and was built with good materials and construction means. The only downfall of the site is that it is located in a flood zone and if something is not done to correct this, significant damage will occur to the buildings. The floor plan does not comply with current education philosophies in the way the building clusters interior rooms together. Natural light is known to keep students awake and focused on classwork.

Building Images

Below are several images of the facility depicting some potential improvements. There are items on both the interior and exterior of the buildings ranging from limited parking to ADA compliance. These are only a few that have a large impact to the deferred maintenance.



Asphalt in Failure



Surveillance Issue



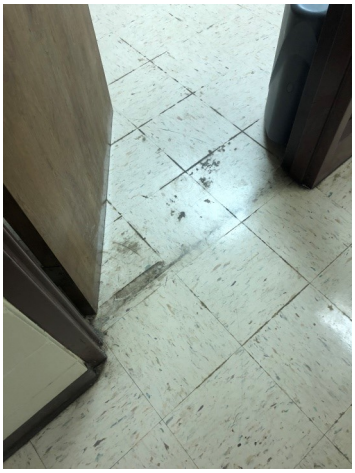
Track in Failure



Ceilings and Lights



ADA Compliance



Vapor Barrier



Water Line Repairs



Mechanical Issues



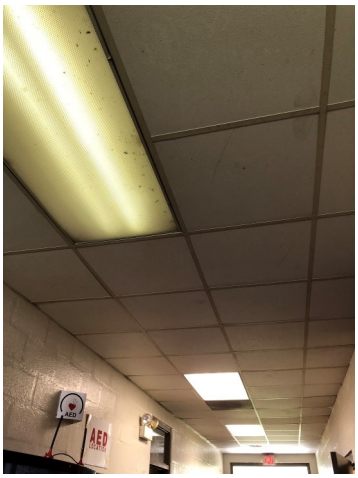
Casework



Floor Repairs



Lead P-trap



Old Lights



Aged Mechanical

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.

Potential Improvements

Starting with the site, there are several opportunities for improvements. Much of the asphalt at the school is in various levels of failure. Depending on the level of decay, there are various improvements ranging from replacement to restriping proposed to provide a long term approach to pavement. The queue is very short and can be lengthened by separating the bus and parent traffic with parents using the southern entrance. Additional parking along with curves that will slow traffic could be incorporated. Finally with the building being below the 100 year flood zone, or a 1% chance every year of a flood to that magnitude it would be practical to invest in mitigation of a flood event. The potential exists to build a small levy around the school to reduce damage to the property. This would take the form of a gently sloping three foot hump around the main building to keep the water out. Stormwater systems with one way valves and pumps would remove any rainfall inside the perimeter and it would be design to be almost unnoticeable to vehicular and other traffic.

At this point nearly all of the roofing is in failure and has exceeded its life cycle. Replacement of the membrane on all but the Fieldhouse is warranted at this time. Windows are another item to consider when looking at the thermal capacity if the building envelope.

On the interior the largest potential improvement is associated with the mechanical system, detailed later. The vapor barrier on the floors is nearing the end of its reasonable life cycle and has already shown signs of failure. This will continue unless the vapor is allowed to release from the slab into the building. Removal and polishing of the tile flooring will permit the vapors to pass freely and not pull mastic up between the edges of the tiles. The last major item relates to compliance with ADA and restroom facilities as well as complying with the current code on travel distances to the facilities.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

West Craven High

			10.00%	9.00%	15.00%	
#	Item	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$22,650	$2,265	$2,039	$3,398	$30,351
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$995,069	$99,507	$89,556	$149,260	$1,333,393
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$1,096,000	$109,600	$98,640	$164,400	$1,468,640
7	Canopy (cov. Walks)	$324,921	$32,492	$29,243	$48,738	$435,394
8	Other Site	$386,935	$38,694	$34,824	$58,040	$518,493
9	Roofing	$1,842,546	$184,255	$165,829	$276,382	$2,469,012
10	Structural	$0	$0	$0	$0	$0
11	Windows	$0	$0	$0	$0	$0
12	Walls	$12,000	$1,200	$1,080	$1,800	$16,080
13	Other Building Exterior	$60,920	$6,092	$5,483	$9,138	$81,633
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$476,599	$47,660	$42,894	$71,490	$638,642
16	Flooring	$934,292	$93,429	$84,086	$140,144	$1,251,951
17	Painting	$294,476	$29,448	$26,503	$44,171	$394,597
18	Other Building Interior	$285,858	$28,586	$25,727	$42,879	$383,050
19	Mechanical	$1,500,000	$150,000	$135,000	$225,000	$2,010,000
20	Electrical	$1,175,000	$117,500	$105,750	$176,250	$1,574,500
21	Lighting	$260,000	$26,000	$23,400	$39,000	$348,400
22	Technology	$66,729	$6,673	$6,006	$10,009	$89,418
23	Plumbing	$44,400	$4,440	$3,996	$6,660	$59,496
24	Other PME	$46,800	$4,680	$4,212	$7,020	$62,712
25	Code / Safety	$29,750	$2,975	$2,678	$4,463	$39,865
26	ADA Ramps	$27,000	$2,700	$2,430	$4,050	$36,180
27	ADA Toilets	$829,300	$82,930	$74,637	$124,395	$1,111,262
28	Fire Alarm	$285,000	$28,500	$25,650	$42,750	$381,900
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$170,288	$17,029	$15,326	$25,543	$228,186
31	Abatement	$24,047	$2,405	$2,164	$3,607	$32,223
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$30,000	$3,000	$2,700	$4,500	$40,200
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$1,115,455	$111,545	$100,391	$167,318	$1,494,709
37	Kitchen Equipment	$182,000	$18,200	$16,380	$27,300	$243,880
38	Media Center Furniture	$112,500	$11,250	$10,125	$16,875	$150,750
39	Off Site	$0	$0	$0	$0	$0
40	Other	$1,578,620	$157,862	$142,076	$236,793	$2,115,351
	Total					**$19,040,268**

Renovations

Attempting to make every room in the entire school the appropriate size would be an unreasonable solution to this nearly 50 year old building. The proposed solution focuses on the rooms that are currently undersized the most. The first on the list are the Self Contained classrooms where a renovation here could include the creation of an appropriately sized teaching kitchen. The sciences are the next program that needs some larger spaces. This is the concept of taking three undersized spaces and making them into two. In the arts section relocation of programs to appropriately sized spaces in conjunction with renovations in those rooms to get the appropriate square footage in each. The school is the size where an Auxiliary Gymnasium would allow for all PE classes as well as the multiple athletic programs.
Several Core areas can be renovated out of existing classrooms and some renovations could occur to the Kitchen and Serving Lines in support of an expansion at the Kitchen itself.

Additions

In the renovations, several spaces would be lost to other programs or due to combining of rooms. The result is several new spaces would need to be added to make up for that loss. There are several new general type classrooms that would be needed. The creation of a new arts area including a new larger Band Room along with a Dance and Drama space should be considered. Finally creating several of the larger CTE spaces would allow a shifting of other CTE programs into the spaces once used by other classes.

Site

Buses and auto traffic share the same entrance. By creating a new queue that meets NCDOT standards and adding parking along the front, the separation of parent and bus traffic could be achieved. Canopies and other site options like security fencing, ADA

Mechanical System

West Craven High has three air cooled chillers providing cold water which are all in good condition. The building still has its original Air Handling Units and ductwork that has aged out, leaks and needs to be replaced. There is no dehumidification possible at this school and the vented attic is adding to the moisture issues. The Gymnasium has a split system with no platforms available for servicing.

Fire Alarm

The fire alarm system is old and should be replaced.

Electric

The original main gear and sub-panels should be replaced along with branch circuits, switches and outlets.

Lighting

Most of the school still has T8 fixtures that should be replaced with LED lights.

Potential Additions and Renovations

West Craven High

Craven County Schools

Space Inventory / Worksheet 2019

12/2/2019

West Craven High

Current Student Capacity (NCDPI)	1,140
Proposed Student Capacity	1140
	Number of Spaces

Current Core Capacity (NCDPI)	1,254
Proposed Core Capacity	1254
0	Square Footage

Total Cost	$13,070,848
Cost / Student	$11,466

Room Name	NCDPI Count	Existing Count	Reno-vated	New
Academic Spaces				
Pre-K Clsrms				
Kindergartens				
Grades 1-3 Clsrms				
Grades 4-5 Clsrms				
4-8 LA/SS/Math				
Grades 6-8 Math/Sci Clsrms				
Grades 5-8 Science Clsrms				
(9-12) Eng. / F-Lang. / SS / Math	24	24		5
Exceptional (self contained)	1	2	2	
Instructional Kitchen	1		1	
Resource	5	5		
Computer				
ISS	1	1		
Sub-Total	32	32	3	5
High School Science Classrooms				
Physical /Bio /Chem /Phy /Other	7	7	2	
Prep Rooms	4	4		
Math/Sci Computer Lab				
Sub-Total	11	11	2	0
Arts Education				
Visual Arts	2	1	1	
Art Project				
Art Sto. Kiln	2	1	1	
General Music				
Instrumental Music (Band)	1	1		1
Vocal Music (Chorus) + Sto.	1	1		
Ensemble / Practice	1	1	1	
Band Uniform Sto.	1	1	1	
Instrument Sto.	1	1	1	
Office / Library	1	1	1	
Dance/Drama	2	2	-1	1
Sub-Total	12	10	5	2
Vocational				
Keyboarding Labs				
Exploratory Labs				
Computer Applications	1	2		
Business/Office Ed.	1	5		
Cons/Occ Home Economics	1	2		
Service/Marketing	1			
Health Occupations	1	3		
Agri/Trade & Industry (Heavy)	3	1		2
Trade & Industry (Medium)	2	2		1
Technology (Light)	1	1		
Communications/Misc	2			
Vocational Clsrms	2	1		1
Sub-Total	15	17	0	4
Physical Education Etc.				
Multi/Main Gymnasium	1	1		
Stage				
Boys/Girls Locker	4	4		
Boys/Girls Showers	2	2		
Coaches off./ Showers	2	2		
Training	1	1		
Laundry	1	1		
Storage / Office	1	1		
Officials/showers	1	1		
Lobby/cons./commons	1	1		
Auxiliary Gym	1			1
Weight Room	1	1		
Wrestling	1	1		
Health/P.E. Clsrms	2	2		
Sub-Total	19	18	0	1
Misc. Spaces				
ROTC	3	3		
Mobile Units				
Total	**89**	**88**	**10**	**12**

Room Name	NCDPI SF	Existing SF	Reno-vated	New SF
Media Center				
Media (RLV)	5,474	5561		
Support	3,290	3439	-149	
Computer				
Sub-Total	8,764	9,000	0	0
Food Service	# of seatings			3
Dining	5,852	5839		
Kitchen	2,566	1819	1819	1,256
Serving	940	431	509	
Sub-Total	9,358	8,089	2,328	1,256
Auditorium	# of seats			0
Auditorium	4,514	5633		
Stage / Dress / Sto.	4,000	4067		
Lobby	1,200	2659		
Sub-Total	9,714	12,359	0	0
Administration				
Administration	5,460	4388	2000	
Sub-Total	5,460	4,388	2,000	0
Storage				
Book Storage	1,130		1130	
General Storage	1,230	457	773	
Sub-Total	2,360	457	1,903	0
Staff Support				
Staff Support	3,050	486		2,564
Sub-Total	3,050	486	0	2,564
Total Renovated Spaces			6,231	
Demolition Totaling				
Total	**38,706**	**34,779**	**6,231**	**3,820**

This facility planning sheet is utilized to specifically identify need and to convert need to cost. It does not present information on the re-allocation of existing

Facility Name	STD	Existing	Reno-vated	New
Track				
Track				
Pole Vault				
High Jump				
Long / Triple Jump				
Shot Put / Discus				
Fencing				
Sub-Total	0	0	0	0
Football				
Field				
Lighting				
Home Stadium				
Press Box				
Visitors Seating				
Scoreboard				
Irrigation				
Fencing				
Additional Parking				
Sub-Total	0	0	0	0
Soccer Field				
Field				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Fencing				
Sub-Total	0	0	0	0
Baseball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	0
Softball				
Field				
Dugouts				
Lights				
Bleachers				
Scoreboard				
Field Irrigation				
Concessions / Toilets				
Press Box				
Fencing				
Sub-Total	0	0	0	9
Tennis Courts				
Number of Courts				
Lights				
Fencing (as Required)				
Sub-Total	0	0	0	0
Field House				
Field House				
Sub-Total	0	0	0	0
Concessions				
Concessions				
Sub-Total	0	0	0	0
Play Field				
Field				
Sub-Total	0	0	0	0
Total	**0**	**0**	**0**	**9**

Potential Additions and Renovations

The adjacent table shows the square footage and costs of potential expansions and general renovations that could be made at West Craven High in an effort to meet the NCDPI minimum standards. Costs are applied to each type of improvement based on recent market value for the item.

The overall budget includes the additions, renovations, and three years worth of inflation. A ten percent contingency is included due to recent market fluctuations and potential curriculum changes in the near future.

Craven County Schools

Cost Estimate Worksheet: 2019

West Craven High

Additions / Renovations	Proposed Student Capacity			1,140
	Proposed Core Capacity			1,254
Student Capacity				
Space Type	Number of Spaces	SF	Cost / SF Based on Need	Total Cost
Academic Spaces	5	4,250	224.77	$955,294
H.S. Science Classrooms	0	0	0.00	$0
Arts Education	2	3,904	286.59	$1,118,830
Vocational	4	9,250	283.15	$2,619,149
Physical Education Etc.	1	0	0.00	$0
Misc. Spaces ()			180.00	$0
Renovations	10	2,554	127.72	$326,187
Core Capacity				
Media Center		0	0.00	$0
Food Service		1,256	374.62	$470,529
Auditorium		0	0.00	$0
Administration		0	249.75	$0
Storage		0	0.00	$0
Staff Support		2,564	249.75	$640,359
Renovations inc toilets/mech		8,531	148.02	$1,262,740
Athletic / PE Facilities				
Track	0			$0
Football	0			$0
Soccer Field	0			$0
Baseball	0			$0
Softball	9			$0
Tennis Courts	0			$0
Field House	0			$0
Concessions	0			$0
Play Field	0			$0
Subtotal New		21,224	$273.47	$5,804,160
Circulation/ Mechanical/Toilets/Walls	38.00%	8,065	$273.47	$2,205,581
Subtotal Renovated		11,085	$143.34	$1,588,927
Athletics				$0
Site Improvements				$90,000
Other ()				
Sub Total				$9,688,668
Inflation (3% for 3 years)	9.00%			$871,980
Contingency (%)	10.00%			$1,056,065
Sub Total				$11,616,713
A-E Fees (%)	10.00%			$1,161,671
Financing Charges	1.00%			$130,708
Other Fees and Services				$161,756
Site	0			$0
Owners Contingency (furn., equipment)				$779,000
Total				**$13,070,848**

West Craven High

Space Profile for Renovation Projects Based on NC School Planning Recommendations

West Craven High School — **2019**

Existing

1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

West Craven High

Space Profile for Renovation Projects Based on NC School Planning Recommendations

West Craven High School — **2019**

Potential

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Early College

This program is housed on the Craven Community College main campus in New Bern. The facilities used by the students are owned and maintained by the College. They are in good condition. The site is well located off of Hwy 70 providing easy access to all students.

Insurance for the building is not through NCDPI.

Utility Providers
Craven Community College



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-212-020	Craven Early College	CCC-TRUSTTES	100.2	$56,196,100	$3,807,600
8-212 -032	Craven Early College-East Lot	CCC-TRUSTTES	1.9	$272,180	$272,180
8-212 -045	Craven Early College-East CE	CCC-TRUSTTES	2.0	$2,263,840	$753,740
		Total	3.9	$2,536,020	$1,025,920

Facility Details

The main building is about 14,000 and shares spaces with other college programs.

Building Images

Below are several images of the facility depicting some of the student spaces.



Exterior



Classroom



Floors and Entry



Administration

Deferred Maintenance - Summary

Since CCC owns and maintains the building the only items that are controlled to some extent is the security and technology.

Craven County Schools

Deferred Maintenance / Other

Early College

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$0	$0	$0	$0	$0
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$0	$0	$0	$0	$0
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$0	$0	$0	$0	$0
7	Canopy (cov. Walks)	$0	$0	$0	$0	$0
8	Other Site	$0	$0	$0	$0	$0
9	Roofing	$0	$0	$0	$0	$0
10	Structural	$0	$0	$0	$0	$0
11	Windows	$0	$0	$0	$0	$0
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$0	$0	$0	$0	$0
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$0	$0	$0	$0	$0
16	Flooring	$0	$0	$0	$0	$0
17	Painting	$0	$0	$0	$0	$0
18	Other Building Interior	$0	$0	$0	$0	$0
19	Mechanical	$0	$0	$0	$0	$0
20	Electrical	$0	$0	$0	$0	$0
21	Lighting	$0	$0	$0	$0	$0
22	Technology	$6,710	$671	$604	$1,007	$8,991
23	Plumbing	$0	$0	$0	$0	$0
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$21,000	$2,100	$1,890	$3,150	$28,140
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$0	$0	$0	$0	$0
28	Fire Alarm	$0	$0	$0	$0	$0
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$0	$0	$0	$0	$0
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$0	$0	$0	$0	$0
37	Kitchen Equipment	$0	$0	$0	$0	$0
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$37,131**

Reserved

Reserved

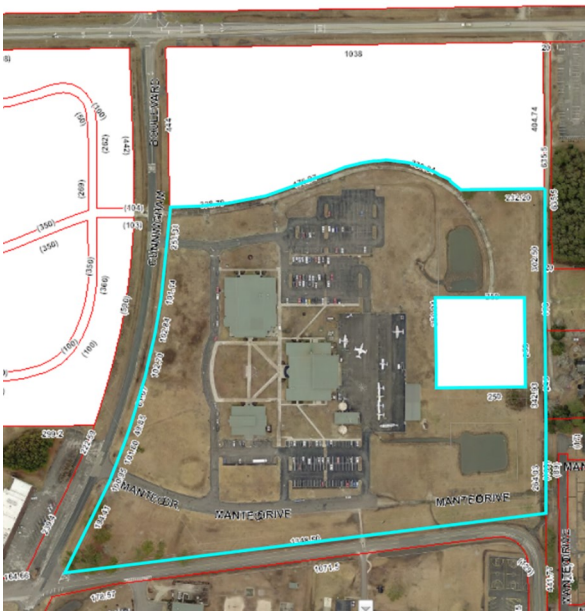
Early College East

This school uses several buildings, some of which are maintained by the school system. The wing adjacent to the Media Center at Havelock Middle School has several classrooms dedicated to this program. Information related to that portion of Early College East is listed with HMS in an effort to reduce confusion and duplication of data.

The adjacent site houses the Havelock—Craven County Public Library and the Havelock branch of Craven Community College.



Craven County Schools



Craven Community College

Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
6-065 -008	Early College East High	CCC-TRUSTEES	24.4	$608,750	$608,750

Insurance and Other Data

Most of the information on the two buildings owned and operated by Craven County Schools can be found with Havelock Middle.

Utility Providers

Electrical	Carteret Craven
Sewer	City of Havelock
Water	City of Havelock
Gas	NA

Craven Community College

Facility Details

The school uses the small brick building on the West side of campus for students and administration. The west side of Havelock Middle is also used for classrooms. Students must walk between the two buildings on campus as well as across Middle School Lane to get to their classrooms on the CCC campus.

There is very limited parking available for students and staff on the HMS site and the area for their parking is also the bus lot for HMS. Students will do pickup and drop-off on the CCC site.

Building Images

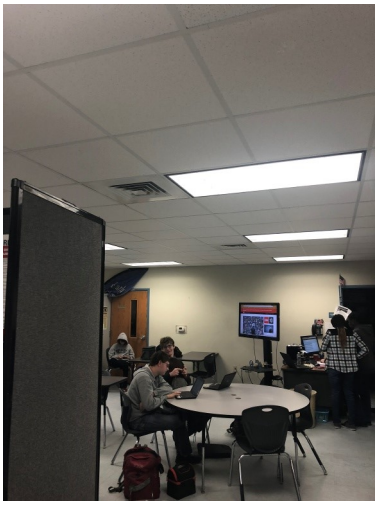
Below are several images of the facility depicting some potential improvements. The images below and any noted improvements are from the small classroom building only.



Exterior



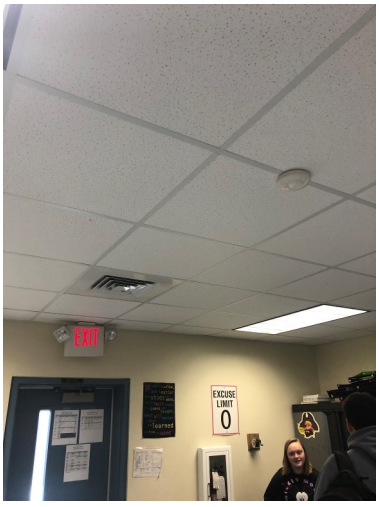
Drive and Walkway



Classroom



Flooring



Ceilings

Potential Improvements

At the time of inspection it was noted that construction had just started for a building on the community college property that would partially be available to the Early College East program. When this building opens, it will change how the school currently uses the spaces on the HMS site. Improvements noted here are dedicated additional parking and walkways for students and technology and safety issues.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

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Craven County Schools

Deferred Maintenance / Other

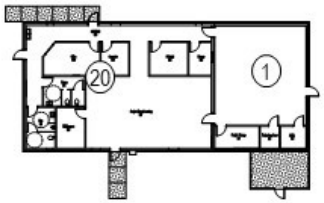
Early College East

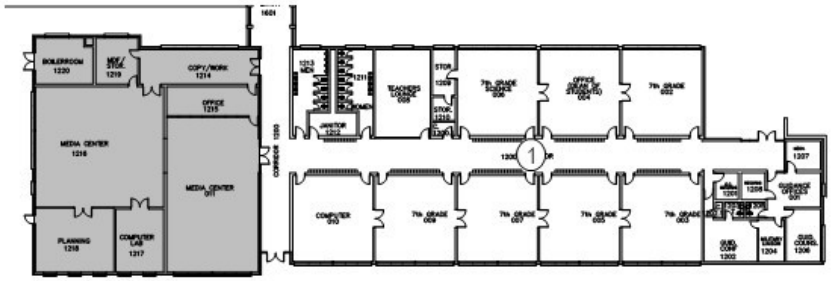
			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$0	$0	$0	$0	$0
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$58,162	$5,816	$5,235	$8,724	$77,937
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$0	$0	$0	$0	$0
7	Canopy (cov. Walks)	$0	$0	$0	$0	$0
8	Other Site	$1,753	$175	$158	$263	$2,350
9	Roofing	$0	$0	$0	$0	$0
10	Structural	$0	$0	$0	$0	$0
11	Windows	$0	$0	$0	$0	$0
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$0	$0	$0	$0	$0
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$0	$0	$0	$0	$0
16	Flooring	$0	$0	$0	$0	$0
17	Painting	$7,216	$722	$649	$1,082	$9,669
18	Other Building Interior	$0	$0	$0	$0	$0
19	Mechanical	$0	$0	$0	$0	$0
20	Electrical	$0	$0	$0	$0	$0
21	Lighting	$0	$0	$0	$0	$0
22	Technology	$5,810	$581	$523	$872	$7,785
23	Plumbing	$7,400	$740	$666	$1,110	$9,916
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$10,500	$1,050	$945	$1,575	$14,070
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$0	$0	$0	$0	$0
28	Fire Alarm	$0	$0	$0	$0	$0
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$24,000	$2,400	$2,160	$3,600	$32,160
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$0	$0	$0	$0	$0
37	Kitchen Equipment	$0	$0	$0	$0	$0
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$153,887**

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Early College East High School — **2019**

Existing





1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Other Facilities

Danyus School

F.R. Danyus School is located in the middle of residential construction. It's unique parcel wraps around several neighboring parcels. The building is a combination of one and two story spaces.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-007 -298	West Street School	NB-C BOE	2.4	$82,250	$82,250
8-007 -299	West Street School Northwest Parc	NB-C BOE	0.1	$4,550	$4,550
		Total	2.5	$86,800	$86,800

Insurance Data

Insurance / GIS Data

NCDPI does not indicate this building is insured by them.

Utility Providers

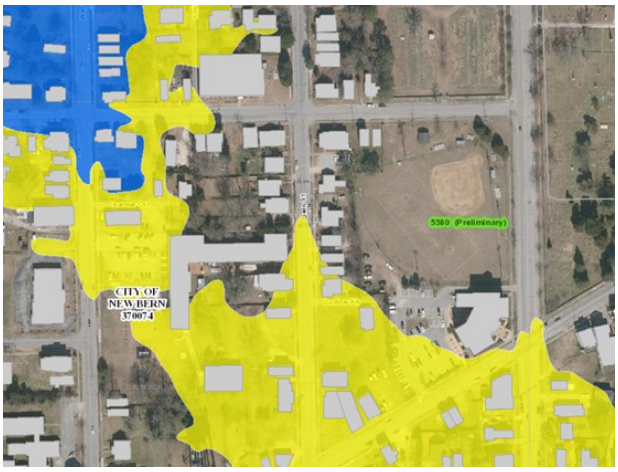
Electrical	City of New Bern
Sewer	City of New Bern
Water	City of New Bern
Gas	

Flood Mapping

A portion of the campus is currently shown in the 100 year Flood Zone. The Preliminary Flood Zone includes a larger portion of the site and some of the building.



Effective



Preliminary

Life Cycle Analysis

No information on initial construction is provided.

Facility Details

This school supports the CCA Head Start and Early Head Start programs and has supported more than 150 students at one time.

Building Images

No images provided

Potential Improvements

No improvements are proposed.

Deferred Maintenance - Summary

No deferred maintenance items have been identified.

Reserved - Maintenance

Renovations
NA

Additions
NA

Site
NA.

MECHANICAL SYSTEM
NA

FIRE ALARM
NA

ELECTRIC
NA

LIGHTING
Na

Administrative

There has been one expansion to this facility since it was first constructed in 1968. The building is located in a business area and is centrally located within the county. The site has adequate parking for most events.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-208 -011	Administration Building	NB-C BOE	2.9	$3,136,600	$820,800

Insurance Data

BOE		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25020001	MAIN BUILDING	NC2	1/1/1968	51	22900	$3,436,114
			1/1/1969	50		
	Totals / Average $/sf				22900	$3,436,114
	Average Construction Date		1968			
	Average Age			51		

Insurance / GIS Data

At 23,000 square feet this one story building, parking, and loading area take up the entire three acre site. This is a metal building and will age faster than other buildings.

Flood Mapping

The effective flood map shows a portion of the site and the northern addition are in the 100 year flood zone. It appears that information was incorporated into the mapping database prior to the installation of the stormwater pond to the west. The preliminary map shows a reduced impact and takes the retention pond into consideration.



Effective



Preliminary

Life Cycle Analysis

At 51 years of age, this building is nearing the end of its useful life. Several portions of the building are showing their age and the roof is currently in failure.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
BOE						
MAIN BUILDING Central Services- 1968	9	60	50	70	1968	51
MAIN BUILDING Central Services- 1969	10	60	50	70	1969	50

Utility Providers

Electrical	City of New Bern
Sewer	City of New Bern
Water	City of New Bern
Gas	NA

Facility Details

The exterior of the building is beginning to fail. The roof is a key indicator and is a metal roof that should last the entire life of the building. The interior finishes are dated but in good overall condition. The infrastructure is original and it is often excessively hot or cold depending on the season and where in the building you are located.

Every square inch of this building is being used. The floor plan consists of a series of angles and circular corridors and is inefficient. Although there are no standards for how many square feet of administrative type space is appropriate for a Central Office, additional space is needed and the site is not sufficiently large for a substantial expansion to this 50 year old building. A new, larger site would be appropriate.

Building Images

Below are several images of the facility depicting some potentially needed improvements.



Asphalt



Exterior Walls



Offices



Print Area

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.

Potential Improvements

Most of the items for consideration are related to the building envelope or the mechanical and electrical systems. As previously mentioned, the roof is being patched in an effort to stop leaks. The metal exterior walls are in the same condition but do not collect water like a roof does. Another area of potential improvement involves renovations restrooms to make them fully ADA compliant.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Central Offices

#	Item	Subtotal	10.00% Contingency	9.00% Inflation	15.00% Soft Cost	Total
1	Roadway Improvements	$0	$0	$0	$0	$0
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$38,594	$3,859	$3,473	$5,789	$51,716
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$0	$0	$0	$0	$0
7	Canopy (cov. Walks)	$0	$0	$0	$0	$0
8	Other Site	$0	$0	$0	$0	$0
9	Roofing	$401,691	$40,169	$36,152	$60,254	$538,266
10	Structural	$0	$0	$0	$0	$0
11	Windows	$20,000	$2,000	$1,800	$3,000	$26,800
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$0	$0	$0	$0	$0
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$0	$0	$0	$0	$0
16	Flooring	$69,452	$6,945	$6,251	$10,418	$93,066
17	Painting	$43,510	$4,351	$3,916	$6,527	$58,303
18	Other Building Interior	$0	$0	$0	$0	$0
19	Mechanical	$350,000	$35,000	$31,500	$52,500	$469,000
20	Electrical	$107,256	$10,726	$9,653	$16,088	$143,723
21	Lighting	$5,907	$591	$532	$886	$7,915
22	Technology	$13,420	$1,342	$1,208	$2,013	$17,983
23	Plumbing	$7,400	$740	$666	$1,110	$9,916
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$10,500	$1,050	$945	$1,575	$14,070
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$172,500	$17,250	$15,525	$25,875	$231,150
28	Fire Alarm	$47,256	$4,726	$4,253	$7,088	$63,323
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$0	$0	$0	$0	$0
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$0	$0	$0	$0	$0
37	Kitchen Equipment	$0	$0	$0	$0	$0
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$1,725,232**

Renovations
No renovations, beyond those described in the deferred maintenance section, are suggested at this time due to the combination of age and investment that would be required to reconfigure nearly all of the interior spaces.

Additions
No additions are suggested based on the limited size of the parcel.

Site
Site improvements are related to deferred maintenance issues.

MECHANICAL SYSTEM
The building uses eight split systems of various age and decay. This contributes to the hot and cold areas within the building. All units should be replaced.

FIRE ALARM
The building still has original equipment and it should be replaced.

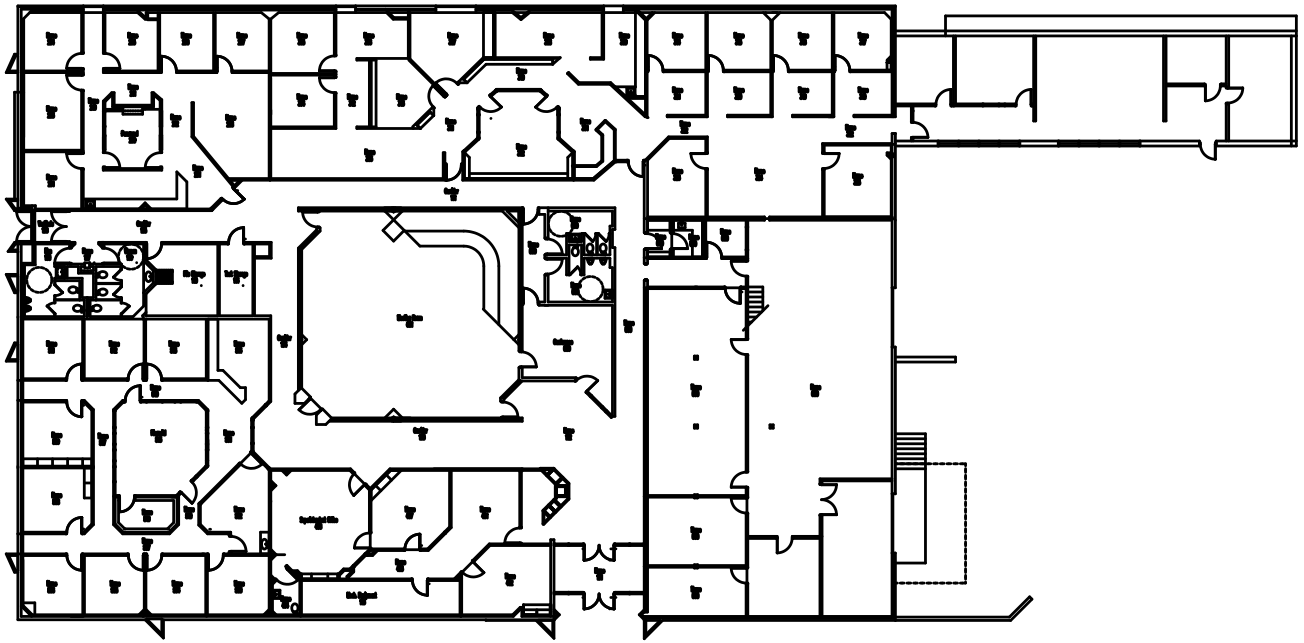
ELECTRIC
The electrical system is 50 years old and replacement would be reasonable, from the main equipment all the way to the individual outlets and switches.

LIGHTING
There is a mix of different lighting types and all old fixtures should be replaced with LED.

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Central Offices — **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

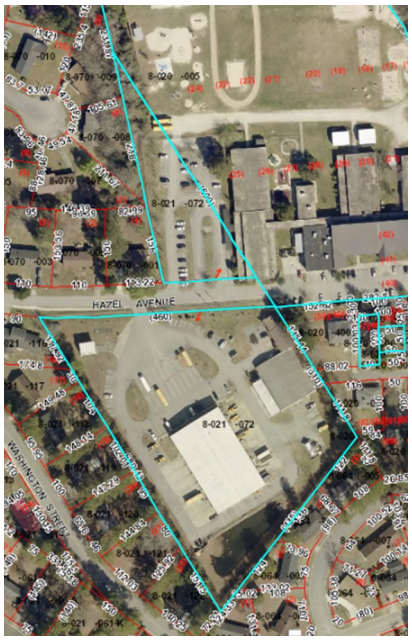
CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Child Nutrition Warehouse

The warehouse has been used by various departments over the years. With the first construction in 1956, a large portion of the building is 63 years old, with the remainder only 10 years younger. The site shares a parcel with the Bus Garage and J.T. Barber. It is located within a residential neighborhood, not conducive to the activities here. Additionally, the building is also in a flood zone.

Below the two CN buildings are noted as Maintenance Building 56 and 67.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-020 -005	J.T. Barber E.	BOE	11.0	$251,750	$251,750
8-020 -006	J.T. Barber E. West Parcel off Cobb St	BOE	0.1	$6,000	$6,000
8-020 -008	J.T. Barber E. Center Parcel off Cobb St	BOE	0.1	$6,000	$6,000
8-020 -012	J.T. Barber E. East Parcel off Cobb St	BOE	0.1	$6,000	$6,000
8-021 -072	J.T. Barber Partial and Bus Garage	BOE	5.5	$138,750	$138,750
		Total	16.7	$408,500	$408,500

Insurance Data

GENERAL SVCS		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25020501	MAINTENANCE BUILDING 56	F1	1/1/1956	63	7078	$1,462,402
	MAINTENANCE BUILDING 67	JM1	1/1/1967	52	4720	
25020502	NEW BUS GARAGE	NC1	7/1/2008	11	19251	$3,623,747
25020503	NEW REFRIGERATION	F2	7/1/2008	11		$247,907
	Totals / Average $/sf				31049	$5,334,056
	Average Construction Date		1984			
	Average Age			34		

Insurance / GIS Data

At 12,000 square feet the building is small for a Child Nutrition building supporting the number of schools it currently does. The portion of the site associated directly with the CN building limits the ability of staff to easily load and unload materials.

Child Nutrition Warehouse

Flood Mapping

The entire parcel is withing the 100 year flood zone. Flood dampers were in the process of being installed during the site visit, allowing flood waters to exit the building once they get in. This site is not conducive to additional construction.



Effective



Preliminary

Life Cycle Analysis

At 63 years of age, this building is beyond its anticipated life cycle. After Hurricane Florence, portions of the building were renovated bringing some life back into the facilities. However, as this structure remains a metal building nearing the end of its useful life.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
Child Nutrition						
MAINTENANCE BUILDING - 1956	-3	60	50	70	1956	63
MAINTENANCE BUILDING - 1967	8	60	50	70	1967	52
NEW REFRIGERATION - 2008	9	20	10	30	2008	11

Utility Providers

Electrical	City of New Bern
Sewer	City of New Bern
Water	City of New Bern
Gas	NA

Child Nutrition Warehouse

Facility Details

The building is old with an exposed wood ceiling using ceiling fans to supplement the mechanical system. The building is in a flood plain and during severe weather events, the contents are moved to another location. The building's location in a residential neighborhood should also be taken into consideration before significant investment is made to this site.

Building Images

Below are several images of the facility depicting the existing conditions.



Exterior Block



Mechanical System



Limited Space



Exposed Wood



ADA Compliance



Renovations

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.

Potential Improvements

Any improvements made to this building should take into consideration it is in a flood zone and when possible the improvement should be sufficiently raised to keep it out of the flood level. A canopy should be considered, to allow for loading and unloading of items without getting the materials wet. Infrastructure and ADA compliance should also be at the forefront of improvements.

The function of the building would be improved if additional square footage could be added. Some additional space for the warehouse space, some administrative area and a commercial test kitchen added, so that staff and kitchen workers can prepare, test, and practice making the food that will be served. Although these spaces would be appropriate to add, the age of the building and the fact that it is in a flood zone makes these additions unreasonable.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Child Nutrition

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$0	$0	$0	$0	$0
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$0	$0	$0	$0	$0
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$0	$0	$0	$0	$0
7	Canopy (cov. Walks)	$18,000	$1,800	$1,620	$2,700	$24,120
8	Other Site	$0	$0	$0	$0	$0
9	Roofing	$30,510	$3,051	$2,746	$4,576	$40,883
10	Structural	$0	$0	$0	$0	$0
11	Windows	$0	$0	$0	$0	$0
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$0	$0	$0	$0	$0
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$0	$0	$0	$0	$0
16	Flooring	$0	$0	$0	$0	$0
17	Painting	$0	$0	$0	$0	$0
18	Other Building Interior	$0	$0	$0	$0	$0
19	Mechanical	$288,000	$28,800	$25,920	$43,200	$385,920
20	Electrical	$24,000	$2,400	$2,160	$3,600	$32,160
21	Lighting	$5,550	$555	$500	$833	$7,437
22	Technology	$0	$0	$0	$0	$0
23	Plumbing	$3,700	$370	$333	$555	$4,958
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$18,500	$1,850	$1,665	$2,775	$24,790
26	ADA Ramps	$18,000	$1,800	$1,620	$2,700	$24,120
27	ADA Toilets	$0	$0	$0	$0	$0
28	Fire Alarm	$36,000	$3,600	$3,240	$5,400	$48,240
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$0	$0	$0	$0	$0
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$0	$0	$0	$0	$0
37	Kitchen Equipment	$0	$0	$0	$0	$0
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$592,628**

Child Nutrition Warehouse

Renovations

No renovations proposed outside of the deferred maintenance list.

Additions

No additions proposed due to age of building and the flood zone issue.

Site

The addition of a queue for J.T. Barber on the site where buses and cars park could be useful to improve circulation at the school. Careful consideration to traffic issues should be reviewed prior to this change.

MECHANICAL SYSTEM

Some improvements to the mechanical system have been made, but the system is old and should be replaced with a new split system or direct exchange type system.

FIRE ALARM

It would be appropriate to install a fire alarm system.

ELECTRIC

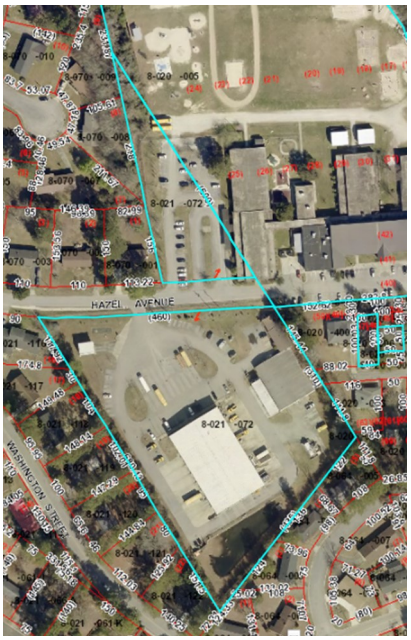
The original switchgear and transformers are still in operation and have exceeded the 30 year life expectancy.

LIGHTING

Some lighting has been replaced with LED lighting in the office area. This should continue into the bays.

Bus Garage

The bus garage shares parcel information with Child Nutrition and J.T. Barber. The facility was constructed in 2008 and is in good condition. Renovations have occurred to the mechanical system which is now operating well.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-020 -005	J.T. Barber E.	BOE	11.0	$251,750	$251,750
8-020 -006	J.T. Barber E. West Parcel off Cobb St	BOE	0.1	$6,000	$6,000
8-020 -008	J.T. Barber E. Center Parcel off Cobb St	BOE	0.1	$6,000	$6,000
8-020 -012	J.T. Barber E. East Parcel off Cobb St	BOE	0.1	$6,000	$6,000
8-021 -072	J.T. Barber Partial and Bus Garage	BOE	5.5	$138,750	$138,750
		Total	16.7	$408,500	$408,500

Insurance Data

GENERAL SVCS		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25020501	MAINTENANCE BUILDING 56	F1	1/1/1956	63	7078	$1,462,402
	MAINTENANCE BUILDING 67	JM1	1/1/1967	52	4720	
25020502	NEW BUS GARAGE	NC1	7/1/2008	11	19251	$3,623,747
25020503	NEW REFRIGERATION	F2	7/1/2008	11		$247,907
	Totals / Average $/sf				31049	$5,334,056
	Average Construction Date		1984			
	Average Age			34		

Insurance / GIS Data

At 20,000 square feet the building occupies a good portion of the area dedicated to the Bus Garage. Parking is supplemented at J.T. Barber for buses that are in need of repair.

Life Cycle Analysis

The building is listed in the 100 year flood plain. It is higher than the Child Nutrition Warehouse, but still at risk of potential flooding in the building, and almost all of the site.



Effective



Preliminary

Life Cycle Analysis

At only eleven years of age, this building has many years of useful life remaining. The structure is a metal building which is appropriate for this use, but the useful life is shorter than some brick and mortar schools.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
Bus Garage						
NEW BUS GARAGE - 2008	49	60	50	70	2008	11

Utility Providers

Electrical	City of New Bern
Sewer	City of New Bern
Water	City of New Bern
Gas	

Facility Details

The building is new and in good condition. The building contents are of significant value. The infrastructure for the lubricant systems, air, and lifting equipment constitute a significant value and should be protected.

Building Images

Below are several images of the facility.



Main Entry



Classroom



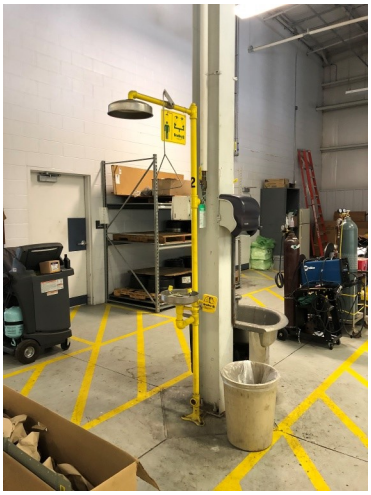
High Bays



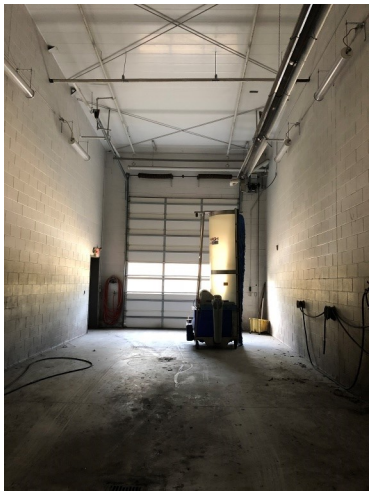
Quality Lifts



Shared Space



Safety Equipment



Wash & Paint Bays

The following pages describe the potential renovations and additions along with the list of items that should be considered to help keep the facility functioning properly.

Potential Improvements

As a newer building that complies with the recent building code, little improvement is needed to the building at this time. Equipment has not worn out and systems are still relatively youthful. The potential improvements include the addition of a generator as the facility will likely become an island in a severe rain event and it may house materials from the Child Nutrition Warehouse.

Parking is at a premium at this location. Buses are parked at various locations including the north side of J.T. Barber. Additional parking around the building would be reasonable, but the site is limited. Some consideration could be given to adding bus parking at the smaller lots associated with the site.

It would also be reasonable to consider a satellite garage somewhere near the Havelock area. Smaller repairs and the storage of frequently used materials, tools, and other equipment would cut down on travel time.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown. The entire list of subcategories has been provided to the Maintenance Department. The entire list is also provided as a secondary document to the school system in 11x17 format.

Inflation and a contingency allowance are included for each category. Often there are unforeseen issues which are only discovered after construction has started. Therefore a 10% contingency is included for each item. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market for a total of 9% on each item. If the projects can be executed earlier it would result in a savings or provide funds to complete other projects. The last category noted as “Soft Costs” include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department where the school system may be able to avoid some if not all of these costs.

Craven County Schools

Deferred Maintenance / Other

Transportation

#	Item	Subtotal	10.00% Contingency	9.00% Inflation	15.00% Soft Cost	Total
1	Roadway Improvements	$0	$0	$0	$0	$0
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$0	$0	$0	$0	$0
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$0	$0	$0	$0	$0
7	Canopy (cov. Walks)	$0	$0	$0	$0	$0
8	Other Site	$0	$0	$0	$0	$0
9	Roofing	$0	$0	$0	$0	$0
10	Structural	$0	$0	$0	$0	$0
11	Windows	$0	$0	$0	$0	$0
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$0	$0	$0	$0	$0
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$0	$0	$0	$0	$0
16	Flooring	$0	$0	$0	$0	$0
17	Painting	$0	$0	$0	$0	$0
18	Other Building Interior	$0	$0	$0	$0	$0
19	Mechanical	$0	$0	$0	$0	$0
20	Electrical	$225,000	$22,500	$20,250	$33,750	$301,500
21	Lighting	$0	$0	$0	$0	$0
22	Technology	$0	$0	$0	$0	$0
23	Plumbing	$3,700	$370	$333	$555	$4,958
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$10,500	$1,050	$945	$1,575	$14,070
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$0	$0	$0	$0	$0
28	Fire Alarm	$0	$0	$0	$0	$0
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$0	$0	$0	$0	$0
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$0	$0	$0	$0	$0
37	Kitchen Equipment	$0	$0	$0	$0	$0
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$320,528**

Renovations
None proposed at this time.

Additions
None proposed at this time.

Site
The potential for J.T. Barber to use a part of the site for queueing. This would require additional coordination with all three groups sharing this parcel.

MECHANICAL SYSTEM
No issues

FIRE ALARM
No issues

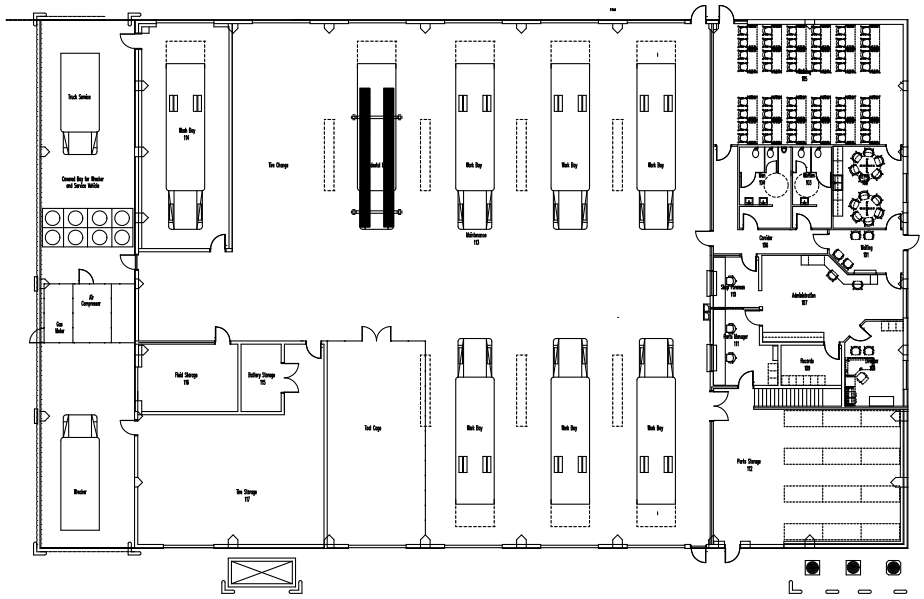
ELECTRIC
No issues

LIGHTING
No issues

Space Profile for Renovation Projects Based on NC School Planning Recommendations

Bus Garage | **2019**

Existing



1. Classrooms
2. Exceptional (SC)
3. Resource
4. Computer
5. Science
6. Art
7. Music
8. Instrumental
9. Vocational
10. Gym / Multipurpose
11. Auxiliary Gym
12. Weight Room
13. Wrestling Room
14. Health / PE Class
15. Media Center
16. Media Support
17. Dining
18. Kitchen
19. Auditorium
20. Administration
21. Storage
22. Staff Support

A Drive
B Parking
C Bus Parking / Drop

CONNOTES RENOVATION

CONNOTES NEW CONSTRUCTION

Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205, Raleigh NC 27607
T(919) 781.8582

Maintenance Facilities

There have been several additions to this building since its first construction in 1951. The building is located to the north west of many of the schools, but has relatively easy access to Hwy 70. The northern portion of the site is heavily wooded and will likely be determined to be wetlands.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
8-222 -078	Maintenance Department	BOE	10.2	$508,500	$508,500
8-222 -104	Maintenance Department- East Lot	NB-C BOE	0.3	$6,000	$6,000

Insurance Data

FACILITIES SUPPORT SVCS		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25020401	MAIN BUILDING	NC2	1/1/1951	68	23304	$3,496,739
25020402	GARAGE	JM1	1/1/1965	54	1232	$184,859
25020403	YARDS & GRNDS BLDG	F2	1/1/1970	49	6389	$791,939
	Totals / Average $/sf				30925	$4,473,537
	Average Construction Date		1962			
	Average Age			57		

Insurance / GIS Data

At 33,000 square feet, the buildings are at a reasonable proportion of the overall site.

Life Cycle Analysis

This is one of the oldest buildings used by Craven County Schools. The building is beyond its anticipated life expectancy and has a building envelope with several portions in failure. A level of acceptance, understanding, and occupant skills will allow this building to be used for several years beyond what was expected. This is in part to the willingness to live without certain amenities and levels of refinement. However, the buildings will not last forever and a replacement of these spaces will be needed at some future date.

Item	Remaining Life	AVERAGE LIFE EXPECTANCY (IN YEARS)	LOW	HIGH	Year Placed Or Replaced	YEARS IN SERVICE
FACILITIES SUPPORT SVCS						
MAIN BUILDING-1951	-8	60	50	70	1951	68
GARAGE-1965	6	60	50	70	1965	54
YARDS & GRNDS BLDG-1970	11	60	50	70	1970	49

Facility Details

The building is old and has many components either in failure or not up to today's standards. Funds for improvements to the Maintenance Department buildings are of a lower priority than any other buildings in the school system. In some cases, equipment that is removed from service at a school will be brought to this site and used until the unit is completely worn out.

Building Images

No images provided

Potential Improvements

Improvements at this site are limited to roofing that is aged out and repairs are no longer an option and some safety and security type issues. The infrastructure has been recently reworked. As with the bus maintenance program, a remote warehouse in Havelock would be appropriate.

Deferred Maintenance - Summary

The following page is a summary of the deferred maintenance items and or potential improvements identified at the facility. The table uses general headings per the NCDPI five year Facility Needs Survey. Each of the forty items listed has up to twenty subcategories where individual counts of doors, window square footage and their associated cost per square foot is tabulated. The subcategories are then summed to align with the general heading shown.

Inflation and a contingency allowance are included for each category, held at 10%. Historically construction inflation increases at about 3% per year and it often takes up to 3 years to bring a project to market. The last category noted as "Soft Costs" include any design, survey, permitting, testing and balancing or financing fees that may be needed should the improvement come to fruition. Many of the individual items can be completed by the Maintenance Department possibly allowing the school system to avoid some of the costs.

Craven County Schools

Deferred Maintenance / Other

Facility Support / Maintenance

			10.00%	9.00%	15.00%	
#	**Item**	Subtotal	Contingency	Inflation	Soft Cost	Total
1	Roadway Improvements	$0	$0	$0	$0	$0
2	Site Utilities	$0	$0	$0	$0	$0
3	Parking / Drives	$0	$0	$0	$0	$0
4	Sewer System	$0	$0	$0	$0	$0
5	Water System (well)	$0	$0	$0	$0	$0
6	Grading / Drainage	$0	$0	$0	$0	$0
7	Canopy (cov. Walks)	$0	$0	$0	$0	$0
8	Other Site	$0	$0	$0	$0	$0
9	Roofing	$331,322	$33,132	$29,819	$49,698	$443,971
10	Structural	$0	$0	$0	$0	$0
11	Windows	$0	$0	$0	$0	$0
12	Walls	$0	$0	$0	$0	$0
13	Other Building Exterior	$0	$0	$0	$0	$0
14	Partition/Wall Const	$0	$0	$0	$0	$0
15	Ceilings	$0	$0	$0	$0	$0
16	Flooring	$0	$0	$0	$0	$0
17	Painting	$0	$0	$0	$0	$0
18	Other Building Interior	$0	$0	$0	$0	$0
19	Mechanical	$0	$0	$0	$0	$0
20	Electrical	$0	$0	$0	$0	$0
21	Lighting	$0	$0	$0	$0	$0
22	Technology	$0	$0	$0	$0	$0
23	Plumbing	$7,400	$740	$666	$1,110	$9,916
24	Other PME	$0	$0	$0	$0	$0
25	Code / Safety	$10,500	$1,050	$945	$1,575	$14,070
26	ADA Ramps	$0	$0	$0	$0	$0
27	ADA Toilets	$0	$0	$0	$0	$0
28	Fire Alarm	$0	$0	$0	$0	$0
29	Sprinkler	$0	$0	$0	$0	$0
30	Other Code / Safety	$0	$0	$0	$0	$0
31	Abatement	$0	$0	$0	$0	$0
32	Indoor Air Quality	$0	$0	$0	$0	$0
33	In Gound Fuel Tanks	$0	$0	$0	$0	$0
34	Radon	$0	$0	$0	$0	$0
35	Other Environmental	$0	$0	$0	$0	$0
36	Furniture / Equipment	$0	$0	$0	$0	$0
37	Kitchen Equipment	$0	$0	$0	$0	$0
38	Media Center Furniture	$0	$0	$0	$0	$0
39	Off Site	$0	$0	$0	$0	$0
40	Other	$0	$0	$0	$0	$0
	Total					**$467,957**

Renovations
No renovations proposed

Additions
No additions proposed

Site
No site improvements proposed

MECHANICAL SYSTEM
The Desert Air unit is in good condition and does not need to be replaced at this time.

FIRE ALARM
This has a relatively new system that does not need replacement.

ELECTRIC
The electric switchgear and sub-panels have been replaced and are in good condition.

LIGHTING
The lighting is newer and does not need to be replaced at this time.

Parcel on 8th Street

This parcel previously supported the Old Bridgeton Elementary School. The building and hard surfaces have been removed.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
2-002 -001	Vacant Lot on N B Street - waterfron	BOE	5.8	$578,990	$578,990
2-002 -031	Vacant Parcel on N B Street NE	BOE	0.7	$6,900	$6,900
		Total	6.5	$585,890	$585,890

Insurance Data

OLD BRIDGETON ES		CNST TYP1	DATE BLT1	Age	BLDG SQFT1	BLDG REPL COST
25020101	MAIN BUILDING	JM1	1/1/1953	66	4300	$4,985,601
	Demolished	JM1	1/1/1957	62	4200	
		NC2	1/1/1968	51	26750	
25020102	AUDITORIUM	NC1	1/1/1955	64	5500	$744,074
	Totals / Average $/sf				40750	$5,729,675
	Average Construction Date		1958			
	Average Age			61		

Insurance / GIS Data

The parcel data is from Craven County GIS. The Insurance information is here for reference and was pulled from data dating back to 2016. NCDPI is no longer insuring the property.

Parcel west of Church
Off SR 1160

This small parcel is very small and will not support the programs and services currently offered by the school system.



Craven County GIS

Parcel #	Name	Owner	Acreage	Total Value	Land Value
6-011 -001	Parcel West of Church off SR 1160	BOE	1.1	$112,000	$112,000

Insurance / GIS Data

No structures are located here and NCDPI is not providing insurance on the parcel.