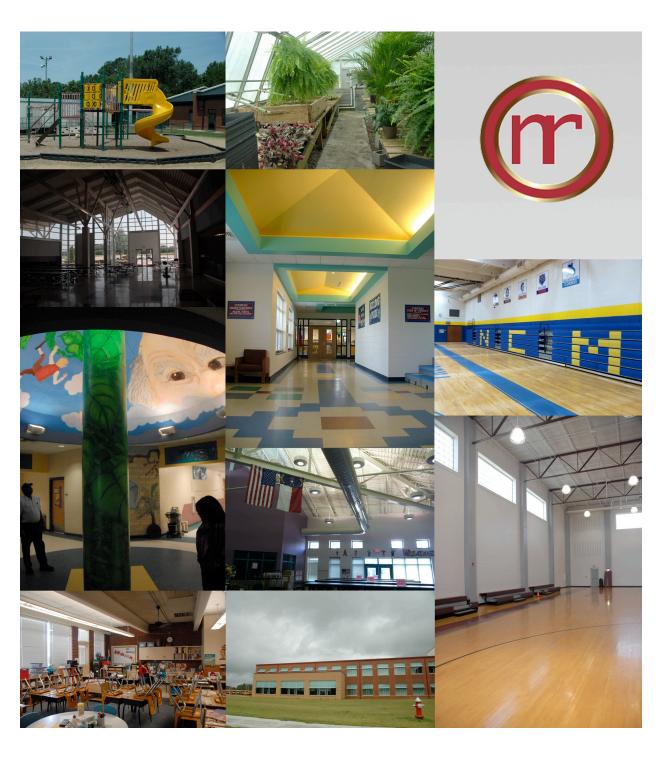
Nash-Rocky Mount Public Schools 2013 Capital Improvement Plan

APPROVED 06/03/2013



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2013

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Executive Summary

"The effective school establishes a well disciplined, secure, and wholesome learning environment, and maintains clean and orderly school buildings."

Claus and Girrbach

One of the objectives of the Nash-Rocky Mount Public Schools strategic plan is to provide a safe and nurturing environment for all our students. Today, our students learn in a physical environment that provides the best conditions that our budget allows. With the help of federal grants, lights have been upgraded, our operational funds have allowed us to replace many roofs and to update outdated mechanical systems, replacing them with highly efficient, technologically superior cost effective systems. These are a just a few examples of the many improvements we have accomplished throughout Nash-Rocky Mount Public Schools. While these improvements have cost millions over the years, they have effectively extended the useful life of our facilities for our all important educational needs.

In order to better meet our objective of providing a safe and nurturing learning environment for our students, our existing facilities must be upgraded to accommodate our students with 21st century safe learning environments. The Nash-Rocky Mount Public Schools' 2013 Long Range Facilities Needs Assessment, compiled and published by Smith Sinnett Architecture, identified over \$180 million in project requirements throughout the system. This Capital Improvement Plan (CIP) identifies over \$96 million of the \$180 million as pressing needs to help enable the NRMPS' vision, "Preparing ALL students for bright & prosperous futures by Deliberately and Intentionally providing Rigorous and Relevant instruction in every classroom, every day." This investment will offer significant improvements to the facilities serving Nash County and Rocky Mount City students.

Overview

A healthy infrastructure is the foundation for student success. The growth and development of the Nash-Rocky Mount Public Schools requires the provision of extensive capital improvements to provide this infrastructure. The school system infrastructure includes five categories: safety and security, communication, mechanical/efficiency, transportation, and facilities. In order for all students to succeed, these systems must work independently and in coordination. These improvements are designed as individual capital projects that can cost millions of dollars. Once the investment is made, the result is an infrastructure asset that can remain in service for decades with appropriate operations and maintenance. This Capital Improvement Plan (CIP) is the formalization of a facility and mechanical system study, which identifies and develops projects, which are needed in Nash Rocky Mount Public Schools.

Articles about environmental nuisances appear more and more frequently in the media. And research is uncovering growing evidence showing that facility conditions have a huge and often negative impact on student learning. One problem area that NRMPS faces today is the growing number of buildings that are 40+ years or older. Schools built since 1940 were built with a 50 year design life and were never intended to deliver the type of services demanded today with new tools, techniques, and teaching methods that increasingly don't fit the design of 40+year-old school designs. Twenty-two percent of NRMPS square footage is past its design life and an additional twenty-eight percent will exceed design life at the end of this 10-year CIP. Temperature and ventilation concerns are one of the worst problems in our schools today.

Today, many of our heating, ventilation, and air conditioning (HVAC) systems are simply inefficient, outdated and hard to maintain due to a lack of repair parts for equipment past its design life. Approximately 95 percent of NRMPS equipment is manufactured to operate with R-22 Freon which will phase out in five years. The drop-in replacement for R-22 is 20 percent less efficient which means equipment can still operate but will run longer and work harder to maintain space temperatures. Rocky Mount High School and the replacement construction at Middlesex Elementary School are the only schools that operate with 410-A, an environmentally friendly replacement for R-22.

Other areas, which impact learning, are noise, lights, and communication systems, security and transportation issues including parking lots, roadways and buses.

CIP Process

The CIP process started with a facilities needs assessment conducted by Smith Sinnett and Associates and a mechanical needs assessment conducted by Brady-Trane Energy Solutions. These partners and NRMPS staff presented the findings to the School Board with emphasis on more urgent needs. The presentation was followed by tours of eight schools that included high, middle and elementary sites and demonstrated the needs are similar at all level of education.

The facility needs assessment was condensed into major challenges that included major renovations, consolidation through construction, consolidation through expansion, major mechanical upgrades and equally important, safety and security upgrades. NRMPS staff presented the challenges to the School Board who provided guidance and focus for consolidating the challenges into a 10-year Capital Improvement Plan. This document is the culmination of the CIP process and gives the reader an appreciation of our challenges and a timeline for meeting the needs of Nash-Rocky Mount Public Schools.

Facility Cost Index

As these buildings age, they become more costly to maintain unless significant upgrades are made on a regular basis. Some of the Nash-Rocky Mount Public Schools (NRMPS) facilities are quite old with Red Oak Elementary nearing the century mark at 80 years old. Many life cycle analysts estimate the life cycle of a new facility at 50 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.

Cost is often one of these driving factors, and it is cheaper to fix up an old structure than it is to build a new one. Those 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.

On the following page is a table comparing the NDCDPI square footage data to two other metrics. The first compares the total square footage to the school's student capacity providing a value for the square footage per student at each facility. Although not all spaces are equal it does give some indication to overcrowding.

The second portion of the table deals with the Facility Cost Index (FCI). This calculation takes the deferred maintenance for a given building and divides it by the Current Building Cash Value or what NCDPI has appraised the building value to be. This produces a ration of the cost of improvement to the value of the facility. The closer the FCI is to the number one (1), the greater the probability that the building has exceeded its useful life. Again, although it is not a definitive calculation indicating a facility should be replaced, it is a supporting metric that should be considered prior to significant investment in any building.

Nash-Rocky Mount Schools Facility Cost Index 2013

2013						
		ADJ BLDG				
		CONT	ADJ BLDG	ADJ BLDG	Deferred	
DPI Code	Facility	VALUE	REPL COST	CASH VALUE	Maintenance	FCI
_	tary Schools					
	Bailey Elementary	\$1,455,158	\$14,551,583	\$14,551,583	\$206,530	0.0142
		\$1,453,130		\$8,654,421	\$1,648,721	0.1905
	Benvenue Elementary Cedar Grove Elementary				\$2,357,461	1.3761
		\$336,288				
	Coopers Elementary	\$1,000,007	\$10,093,557		\$1,525,138	0.1781
640-327	D.S. Johnson Elementary Fairview Early Childhood Center	\$875,096	\$8,792,509 \$6,610,222	\$5,902,220 \$6,233,439	\$4,893,554 \$538,211	0.8291
	· · · · · · · · · · · · · · · · · · ·	\$661,022				0.0863
	Englewood Elementary	\$784,820			\$2,761,290	0.5631
	M.B. Hubbard Elementary	\$735,869	\$7,449,109		\$2,175,301	0.3951
	Middlesex Elementary	\$1,104,221	\$11,081,497	\$9,138,297	\$1,887,699	0.2066
	Nashville Elementary	\$1,144,839	\$11,509,904		\$3,062,958	0.3464
	O.R. Pope Elementary	\$627,676			\$3,862,414	1.2572
	Red Oak Elementary	\$531,328	\$5,402,918	\$2,117,725	\$3,912,184	1.8474
	Spring Hope Elementary	\$1,002,827	\$8,957,373	\$5,858,074	\$3,159,786	0.5394
	Susie B. Baskerville Elementary	\$662,402	\$6,653,480		\$3,186,493	0.7955
	Swift Creek	\$687,258			\$4,568,901	1.2486
640-396		\$901,796		\$6,492,162	\$2,677,243	0.4124
640-400	Winstead Avenue Elementary	\$1,022,403	\$10,224,032	\$9,610,590	\$911,647	0.0949
	Elementary Subtotal	\$14,585,780	\$145,319,325	\$108,824,984	\$43,335,530	0.3982
	Middle School					
640-329	George R. Edwards Middle	\$1,962,960	\$15,726,776	\$9,664,395	\$7,115,438	0.7363
		\$1,962,960		\$8,198,313	\$5,295,604	0.7363
	J.W. Parker Middle					
	Rocky Mount Middle	\$2,362,521	\$29,031,681		\$7,212,394	0.4166
	Nash Central Middle	\$2,637,660			\$3,751,788	0.3293
	Red Oak Middle	\$2,043,286			\$587,554	0.0386
640-362	Southern Nash Middle	\$1,769,814	\$14,281,684	\$10,238,508	\$4,315,911	0.4215
	NACABILA CARAGADA	#12 207 000	#10F F20 044	Φ72 O1O 221	#20 270 C00	0.2027
	Middle Subtotal	\$12,397,999	\$105,538,844	\$72,010,231	\$28,278,688	0.3927
	High School					
640-346	Nash Central High	\$3,923,195	\$28,044,142	\$27,496,133	\$773,128	0.0281
	Northern Nash High	\$3,564,943			\$8,585,166	0.4844
640-361	Rocky Mount High	\$5,332,990		\$35,553,265	\$0	0.0000
640-364	Southern Nash High	\$3,943,239			\$5,847,118	0.2968
7.000	o da a form magni	\$5,5 TO,E55	ψ <u></u> = 0,000,07 1	ψ10,000,E01	\$3,3 11,1110	3.2300
	High Subtotal	\$16,764,367	\$115 234 504	\$100,471,399	\$15,205,413	0.1513
	Ingn Justoui	Ψ10,101,501	Ψ113,E31,30T	\$100,171,000	ψ13,203,113	0.1010
	School Subtotal	\$43,748,146	\$366,092,673	\$281,306,614	\$86,819,630	0.3086
	Johnson Jubitotal	ψ15,770,170	Ψ300,03 <i>L</i> ,073	ΨΔΟ1,300,014	Ψου,στο,σου	0.3000
	Other Facilities					
040.004	Other Facilities	#207.000	# 4.040.400	M4 F44 700	#2.004.04S	4.0500
640-331	Tar River Academy	\$397,862	\$4,019,109		\$2,801,342	1.8530
	N-RM Early College High	\$2,362,521	\$29,031,681		\$0	0.0000
	W.L. Greene	\$684,863	\$4,729,238		\$1,209,778	0.5792
	Central Offices	\$1,145,399	\$2,385,743		\$617,448	0.3812
	Bus Garage	\$516,500			\$85,157	0.0498
	Teacher Resource Center	\$315,000			\$193,424	0.1813
	Child Nutrition	\$165,000			\$262,321	0.2450
64030501	Oak Level / Maintenance	\$420,000	\$1,063,087	\$246,326	\$262,321	1.0649
	Other Subtotal	\$6,007,145	\$47,043,216	\$26,628,488	\$5,431,790	0.2040
	System Totals	\$49,755,291	\$413,135,889	\$307,935,102	\$92,251,420	0.2996
C NG	CDDI / Smith Sinnott Architecture	Ψ 10,1 00,201	\$ 110,100,000	4501,555,10L	Ψου, Εστ, 1ΕΟ	0.2330

Source: NCDPI / Smith Sinnett Architecture

NRMPS Challenges

While there are many challenges facing our district, that list has to be reduced to a number of critical projects that should warrant a first look. In the following pages we have identified several of these projects for consideration.

The completion of our remaining safety/security needs is of the utmost importance in efforts to upgrade our facilities. Second to that, we have to upgrade and maintain our mechanical systems in order to provide a comfortable learning environment for our students and staff. Equally important, the inventory of aged schools with high FCI must be reduced through consolidation and schools with mid range FCI must be renovated to provide a 21st Century learning environment

The following challenges, listed in order of planned completion, are the result of a careful review of the needs for each school, and a number of factors that go into identifying them as challenges for the near future. In the case of the high schools, parity with our baseline high school, existing conditions and overcrowding were important to consider. The actual condition of all sites and their needs in relation to maintaining or extending the life expectancy were important as well.

The capacity of each site also was a factor as was its Facility Cost Index. Schools that might be overcrowded could be good candidates for additions and renovations to handle the increased load. But, that element alone cannot be the single determining factor. The Facility Cost Index provides us a rationale tool to help decide if the cost of a project makes sense based on the existing condition/value of the facility. Other factors included size of the school, program content and geographic needs.

List of Challenges

The challenges are addressed in order of recommended completion grouped into two phases. Phase I outlines safety and security upgrades needed at all schools; consolidates old schools with a high FCI into new or expanded sites; renovates two middle schools; and addresses the most urgently needed mechanical upgrades as well as replacing an aging bus fleet. Phase II provides for renovations at high schools, middle schools and elementary schools, plus replaces remaining aged mechanical equipment. Phase II work will take place between Summer 2018 and Summer 2024.

The following depicts the list of challenges in the recommended order of completion and grouped into the two phases.

Phase I Accomplishments

Upgrade Electrical and Security

Replace Activity Buses

Consolidate Swift Creek at a New Red Oak Area School

Consolidate Johnson Elementary and Pope Elementary at Fairview Early Childhood

Renovate Southern Nash Middle

Construct NRMPS Early College

Replace Mechanical Systems at Benvenue Elementary, Cedar Grove Elementary, Englewood Elementary, MB Hubbard Elementary, Susie C. Baskerville Elementary, Williford Elementary, J.W. Parker Middle, and Nash Central Middle

Renovate Edwards Middle

Phase II Accomplishments

Renovate Rocky Mount Middle for Consolidation with Parker Middle

Renovate Northern Nash High

Renovate Southern Nash High

Renovate Spring Hope Elementary

Renovate Nashville Elementary

Renovate Middlesex Elementary

Renovate Williford Elementary

Renovate Cedar Grove Elementary

Renovate Parker Middle

Replace Mechanical Systems at Coopers Elementary, Winstead Avenue Elementary, Red Oak Middle, and Nash Central High

The guiding question which served as the cornerstone for the CIP was "How do we make Nash-Rocky Mount Public Schools a premier school district?" The answer to this question is quite simple. Demonstrate the ability to plan, budget and prioritize the needs of the division into a plan that is congruent with the vision and mission of the school system. In other words, justify clearly each challenge. The following depicts the list of challenges in the recommended order of completion along with justification for each project and grouped into the two phases.

Challenge: Upgrade Safety and Security

Year 1 \$4,672,168

Year Start: 2013 Year Finish: 2014

Justification:

This challenge completes safety and security needs within NRMPS.

This initiative installs the remaining classroom locksets that enable teachers to secure their doors during a lockdown without exposing themselves and their students to potential life threatening intruders. An equally important security improvement is the ability to control visitors entering the facility during the school day. Structural modifications to the facility can force visitors to enter through the school office for proper identification, to sign-in and to obtain a visitor's pass. This challenge also addresses needs for security cameras, security alarm systems, technology infrastructure to support security upgrades, and upgrades to VOIP phones.

Challenge: Replace Activity Buses Year 1 \$900,000

Year Start: 2013 Year Finish: 2014

Justification:

Nash-Rocky Mount Public Schools is responsible for making sure students are safely and efficiently transported to and from school each day. A total fleet of 32 activity buses are used on a daily basis to transport our 17,000 students on a wide variety of instructional and extra-curricular activities, including athletic and band trips. The fleet has a number of buses that are soon to exceed the age and mileage for replacement. New activity buses have not been purchased in a number of years. As our fleet gets smaller, the remaining buses accrue more miles, repair parts are harder to find and these parts are more expensive.

Currently, our school system needs to replace 9 activity buses from the fleet of 34. These buses are an average 21.5 years old and have high mileage. While these activity buses are adequately maintained to meet state standards, they have exceeded their replacement schedule. Currently, the state replaces school buses older than a 1993 year model at either 160,000 miles or at 20 years in age. Additionally it is becoming more challenging to procure replacement parts for these buses as manufacturers brand them obsolete. Activity bus replacement is a responsibility of each school district and not the state.

Challenge: Consolidate Swift Creek at a New Red Oak School

Year 2 \$19,385,535

Year Start: 2014 Year Finish: 2017

Justification:

This challenge consolidates Red Oak Elementary and Swift Creek Elementary onto one site. These two schools have a combined K-5 student population located on two campuses approximately 7 miles apart. All buildings on the Red Oak campus were constructed in the 30's, 40's and 50's. While they have been maintained well, they are still extremely old and inadequate for today's school environment. The classrooms do not meet the DPI standards and the administrative areas are too small. While the gymnasium is certainly an asset to the school, the kitchen is too small and needs to be enlarged or replaced for proper food service and sanitation. There are site issues with both car and bus traffic. With that said, and considering the high facility cost index for this site (1.85), this school would not be a good candidate for any type of renovation to the existing facilities. However, with the recent addition of sewer service, a good portion of the site would now be available for new construction if needed.

Buildings on the Swift Creek campus were constructed between the late 40's and early 60's, so these facilities have also exceeded their design life, and the school has a high facility cost index (1.25). The school is served by onsite water/sewer systems, which may limit any additional capacity without significant upgrades. The cafeteria/kitchen is inadequate both by its basement location and lack of proper food prep areas. There are numerous problems with infrastructure systems such as mechanical and electrical that would need to be remedied for continued long term use. Exterior windows are in need of replacement, as are most ceiling areas. The school does have more than adequate gym space and is one of the few schools in the district to have an auditorium. Due to its location in the northern part of the district, it may be viable to consider renovations to this school and increase its student population if consolidation does occur. However, stating that, the wastewater system limits student population to about 450 students. An utilities engineer will have to assess the site to determine the maximum capacity.

According to the NRMPS Reassignment Study – 2013-2014 Recommended Attendance Zone Statistics – All Levels, the combined school population will be 589 students. This population is in line with Bailey Elementary (620) our benchmark school, Coopers Elementary (624) and Spring Hope (550).

<u>Challenge: Consolidate Johnson Elementary and Pope Elementary In An Expanded Fairview Early Childhood School</u> Year 2 \$20.018,917

Year Start: 2014 Year Finish: 2017

Justification:

This scenario explores the option of consolidating two older school sites with a high facility cost index onto a newer site that can be expanded for the additional growth.

Initial construction at Johnson Elementary occurred in 1960 with additions to follow in 1974, 1979, 1990, and 1992. The school infrastructure is outdated in that the inadequate electrical cannot support 21st Century technology and the mechanical system does not provide for fresh air makeup, dehumidification, and relies on a single-point discharge hanging from the classroom ceiling. This facility presents a number of additional problems for continued long-term use. Many of its core spaces such as administration and media are below DPI guidelines, and its facility cost index is quite high. Replacement of windows, doors, ceilings and exterior soffits are required to maintain the school to our standards. This specific site is also hampered by severe vehicular accessibility problems for staff, parent and bus traffic with only Fairview Road as the main thoroughfare. This issue is further complicated by the close proximity of the Fairview Early Childhood Center next door. This school should be considered for decommissioning or repurposing based on the facility cost index of 0.83. These shortcomings result in an unsatisfactory learning environment for today's students

Pope Elementary started service in 1940 and expanded in 1950, 1956, and 1985. This school has a number of issues that make it a good candidate for decommissioning. The facility cost index (1.38) should be of concern when considering any upgrades to this school. The inefficiencies of such a small school (about 225 students) make it difficult to provide similar amenities and programs as larger schools. Not only is the site small, this school continues to be on a well/septic field system which may not make it a good candidate for any expansion or improvement. Due to a fire several years ago, approximately ½ of the classrooms have been upgraded with new finishes and equipment. The remaining classrooms remain as they have always been and are in need of some renovations. Most of the support spaces such as the media center, cafeteria, multipurpose and art/music are under programmed per DPI standards. Exterior windows in the older section should be replaced. The small site currently mixes car, van and bus traffic which can get severely congested. Mechanical and electrical systems in the older sections of the building are in need of upgrades. Due to the projected improvements at this site and its current student population, some consideration should be given for consolidation with other schools.

In this scenario, Johnson Elementary would be demolished to make room for expansion construction at Fairview Early Childhood. Under this scenario the congested parking and traffic flow issues can be addressed and the site can be graded to provide improved drainage. Pope Elementary property can demolished, repurposed or sold in its current condition. The Nash-Rocky Mount Public Schools Long Range Facility Needs Assessment - 2013 lists the adjusted cash value of Pope Elementary as \$3,072,229.

Challenge: Renovate Southern Nash Middle

Year 3 \$6,237,144

Year Start: 2015 Year Finish: 2018

Justification:

Southern Nash Middle is over capacity. There is adequate acreage on this site although most, if not all of it, is not desirable for building purposes. With the most recent addition, the useable site is too small and does not have adequate parking, entrance ways or site amenities for a middle school. The majority of the buildings on the SNMS campus are reaching or exceeding their design life, as are many of the interior finishes. The building is still clad with older style windows and the mechanical systems are outdated and in need of replacement. Consideration should be given to possibly reducing the number of students or looking for a new site.

<u>Challenge: Construct a Nash-Rocky Mount Public Schools Early College</u> Year 3 \$3,823,886

Year Start: 2015 Year Finish: 2017

Justification:

While this program is currently housed in a collection of mobile units on the campus of Nash Community College, programmatically it is desirable to provide more permanent space for these students. Options included in the past have looked at the purchase of a modular unit to house both classroom and administrative functions. More permanent brick and mortar space is also desirable for this growing program.

Challenge: Replace Mechanical Systems

Year 4 \$6,451,738

Year Start: 2016 Year Finish: 2018

Justification:

A comprehensive assessment of all mechanical systems throughout the district was recently completed. The results show that this specific piece of our infrastructure is in immediate need of upgrades, repairs and replacement. Of specific concern is the large number of units still using the old R-22 refrigerant which is being phased out of production. The replacement product for these units will be expensive and not as efficient as the R-22, likely resulting in decreased comfort levels. Additionally, many of our schools lack the Direct Digital Control (DDC) systems which allow us to monitor comfort levels, make changes and to increase our operational efficiency. None of the systems impacted by this challenge currently provide fresh air make-up or dehumidification. Both of these shortcomings become very impactful as new windows and tighter building envelops drive the need for mechanically driven air exchange. Again, many of our mechanical systems have exceeded their design life, and combined with the refrigerant changes, will present enormous challenges as we move forward. This challenge starts replacing those systems.

<u>Challenge: Renovate Edwards Middle</u> Year 4 \$10,051,297

Year Start: 2016 Year Finish: 2018

Justification:

The main construction of this building took place in the early 60's, with other major additions in the mid-70's. The site has issues with acreage limits and traffic configurations. The building exterior is in need of both cosmetic and some structural repairs. It is a campus style setup with multiple buildings which presents challenges moving students throughout the day. As with many of our schools, Edwards Middle has issues with older mechanical systems, outdated electrical services and needed lighting upgrades. Interior finishes as well as older windows and doors in need of replacement are also of concern. With a complete renovation, the useful life could be extended as planned upgrades would greatly improve the functionality and appearance of the site.

<u>Challenge: Renovate Rocky Mount Middle for Consolidation with Parker Middle</u> Year 6 \$16,429,228

Year Start: 2018 Year Finish: 2020

Justification:

This challenge discusses the possibility of consolidating Parker Middle students into Rocky Mount Middle. This option frees Parker Middle to be repurposed into an Alternative School to accommodate Tar River Academy students. For more information regarding specifics of each site, refer to the Nash-Rocky Mount Public Schools Long Range Facilities Assessment – 2013.

According to the NRMPS Reassignment Study – 2012-2014 Recommended Attendance Zone Statistics – All Levels Parker Middle will have 353 students who, under this scenario, would go to Rocky Mount Middle. Also per the reassignment study, Rocky Mount Middle will have a 513 student population, for a total attendance of 866 students. While that population will exceed the projected enrollment at Edwards Middle (488) and Nash Central Middle (614), it is less than Red Oak Middle (890) and Southern Nash Middle (946).

<u>Challenge: Renovate Northern Nash High</u> Year 6 \$20,393,118

Year Start: 2018 Year Finish: 2021

Justification:

When the student reassignment plan is in place, this facility will be over capacity, which will increase the stress on this 1960's era main campus. Many of the infrastructure systems, such as the mechanical equipment, are beyond the design life expectancy and are in need of immediate replacement. The original windows remain in many parts of the buildings and should be replaced with energy saving insulated windows. The campus also has ADA accessibility issues, will need a roof on the main building in the near future and has numerous site issues as well such as aging asphalt. In general, a full renovation would be required to increase capacity and to extend the life of the building.

<u>Challenge: Renovate Southern Nash High</u> Year 6

\$10,583,085

Year Start: 2018 Year Finish: 2021

Justification:

Southern Nash High is similar to Northern Nash High in that it was also built during the 1960's. This school has also had a major addition in the past 12 years but still has a number of items in need of immediate attention. Most of the mechanical infrastructure needs to be replaced and/or upgraded in the main building, and many of the interior and exterior finishes should be improved. There are also site access issues at this school along with aging asphalt throughout the site. With a low facility cost index number (0.30), Southern Nash High is a good candidate for a complete renovation to bring it up to the baseline level for equipment, functionality and infrastructure.

<u>Challenge: Renovate Spring Hope Elementary</u> Year 7 \$1,500,000

Year Start: 2019 Year Finish: 2021

Justification:

With original construction in 1936 and additions in 1950, 1954, 1957, and 1997, parts of Spring Hope Elementary have seen almost 80 years of service. Electrical wiring and plumbing lines have a service life of 70 years which puts the 1936 constructed facility well past its service life. That point plus the fact a 1936 facility cannot support 21st Century educational technology drive the need for replacement construction. The older buildings have no fresh air make-up or dehumidification in the air conditioning system. Some students recently experienced asthmatic reactions when exposed to chemicals and dust in their classroom environment. The 1950 era cafeteria is also primed for replacement. With a 0.54 FCI and recent 1997 construction, Spring Hope Elementary is worthy of continued use.

<u>Challenge: Renovate Nashville Elementary</u> Year 7

\$1,500,000

Year Start: 2019 Year Finish: 2021

Justification:

Buildings at Nashville Elementary were constructed in 1936, 1953, 1958, and 2000. Franklin D. Roosevelt was elected president when the "Grammar Building" was completed in 1936. At 76 years of age this building is beyond what most would consider its life cycle. Similar to Spring Hope Elementary, parts of the site have served for almost 80 years and experience the same plumbing, electrical wiring and air conditioning issues and cannot support 21st Century educational technology. Nashville Elementary has 98,852 square feet of buildings. About 24,720 SF, which includes the cafeteria, is in need of replacement. With a 0.35 FCI and recent 2000 construction, Nashville Elementary is also worthy of continued use.

<u>Challenge: Renovate Middlesex Elementary</u> Year 7

\$1,500,000

Year Start: 2019 Year Finish: 2021

Justification:

Although Middlesex has the most recent construction of all elementary schools in 2012, older additions were built in 1951, 1961, and 1975. Although the oldest building is less than 70 years old, it will be when renovations are complete. As such the 300 Building/Media Center is a prime candidate for replacement. The classrooms are small, lack sufficient electrical distribution, plus function without adequate dehumidification and fresh air make-up while relying on Bard units with single point discharge and excessive operating noise. With a 0.21 FCI, this expenditure will take Middlesex Elementary well into the 21st Century.

<u>Challenge: Renovate Williford Elementary</u> Year 8

\$4,354,281

Year Start: 2020 Year Finish: 2022

Justification: FCI 0.41

Classroom construction occurred in 1954, 1956, 1962, and 1997, with Communities in Schools construction in 2001. Located in a residential neighborhood, this 6.5 acre site is well below NCDPI minimums for an adequate school site. But, with a 0.41 FCI and a major addition in 1997, the site is worthy of continued use for many years. The expenditure of funds can convert Williford Elementary into a modern site capable of providing children an education using current technology for many years. Old leaky windows, poor air conditioning, out dated plumbing fixtures, deficient technology are candidates for replacement or upgrades.

<u>Challenge: Renovate Cedar Grove Elementary</u> Year 8 \$4,744,225

Year Start: 2020 Year Finish: 2022

Justification:

This school has a number of issues that make it a good candidate for decommissioning. The facility cost index (1.38) should be of concern when considering any upgrades to this school. The inefficiencies of such a small school (about 225 students) make it difficult to provide similar amenities and programs as larger schools. Not only is the site small, this school continues to be on a well/septic field system which may not make it a good candidate for any expansion or improvement. Due to a fire several years ago, approximately ½ of the classrooms have been upgraded with new finishes and equipment. The remaining classrooms remain as they have always been and stand in need of some renovations. Most of the support spaces such as the media center, cafeteria, multipurpose and art/music are under-programmed per DPI standards. Exterior windows in the older section should be replaced. The small site currently mixes car, van and bus traffic which can become severely congested. Mechanical and electrical systems in the older sections of the building are in need of upgrades. Due to the projected improvements at this site and its current student population, some consideration should be given for consolidation with other schools.

<u>Challenge: Renovate Parker Middle for Consolidation of Tar River, Day Treatment and Hope</u> Year 9 \$2,603,808

Year Start: 2021 Year Finish: 2023

Justification:

Construction at Parker Middle occurred in 1962 and 1979. The building structure is sound, air conditioning system is in fair condition, but with no dehumidification or fresh air make-up, and the roof is generally in good condition. Under this initiative, the 40 Tar River Academy students could utilize 9 classrooms in the 100 Hall and 9 classrooms on the 200 Hall while the 83 Day Treatment Center students could utilize the 13 classrooms on the 400 Hall. The halls, admin area, media center, gym and cafeteria could be renovated for \$4,000,000. Renovations would focus on HVAC upgrades, window and door replacement, hall lighting upgrades, new gym lights and a reduced number of new bleachers.

<u>Challenge: Replace Aging Mechanical Equipment</u> Year 10 \$1,141,658

Year Start: 2022 Year Finish: 2024

Justification:

A comprehensive assessment of all mechanical systems throughout the district was recently completed. The results show that this specific piece of our infrastructure is in immediate need of upgrades, repairs and replacement. Of specific concern is the large number of units still using the old R-22 refrigerant which is being phased out of production. The replacement product for these units will be expensive and not as efficient as the R-22, likely resulting in decreased comfort levels. Additionally, many of our schools lack the Direct Digital Control (DDC) systems which allow us to monitor comfort levels, and make changes to increase our operational efficiency. Again, many of our mechanical systems have exceeded their design life, and combined with the refrigerant changes, will present enormous challenges as we move forward. This challenge starts replacing those systems.

Sa S	Vear 1 Upgrade Safety and Security at All Schools and Replace Activity Buses	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
See See All and	grade aty and ary and schools Replace tiivity uses	:					_				
ry ntary ntary	010	Consolidate Swift Creek at a New Red Oak Plus Johnson and Pope at Fairview	Renovate Southern Nash Middle and Construct Early College	Replace Mechanical Systems and Renovate Edwards Middle		Renovate Rocky Mount Middle, Northern Nash High and Southern Nash High	Renovate Spring Hope, Nashville and Middlesex	Renovate Williford and Cedar Grove	Renovate Parker Middle	Replace Aging Mechanical Equipment	Develop Next 10- Year Capital Improvement Plan
ntary ntary	\$39,830 \$151,586		1	\$492.000							
ntary	\$135,367			\$442,984				\$4,744,225		\$380.200	
Englewood Elementary \$3	\$22,203	Consolidate		\$1.079.294							
ary	\$97,108			\$648,573			\$1.500.000				
69	\$156,717 \$20,764	Consolidate \$19.385.535					\$1,500,000				
tary Elementary	\$152,111			\$549,059			\$1,500,000				
	\$22,031 \$135,088 \$172,190	Consolidate		\$583,872				\$4,354,281		\$250,000	
George R. Edwards Middle \$1.W. Parker Middle \$1	\$27,742 \$150,268			\$10,051,297					\$2,603,808		
Nash Central Middle \$1 Red Oak Middle \$1 Booky Mount Middle	\$182,105 \$192,079			\$1,259,764		¢16 400 008				\$248,882	
e	\$39,943		\$6,237,144			0.72,621,010					
Nash Central High	\$188,931									\$262,576	
Northern Nash High \$6 Rocky Mount High	\$627,145 \$0					\$20,393,118					
Southern Nash High \$1,0	\$1,016,885					\$10,583,085					
ənter	\$21,121 \$143,200	\$20,018,917									
NRMPS Early College High \$ Activity Buses \$9	\$31,944		\$3,823,886								
Column Total \$5,5	\$5,572,168	\$39,404,452	\$10,061,030	\$16,503,035	\$0	\$47,405,431	\$4,500,000	\$9,098,506	\$2,603,808 Total:	\$1,141,658 \$136,290,088	