

# *Chatham County*



*Approved FY 2018-2024  
Capital Improvements Program*

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# Chatham County 2018-2024 Capital Improvements Program Introduction

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## About the Capital Improvements Program (CIP)

The CIP is a long-term plan for funding the County's major capital needs. It shows how facilities, equipment, and other projects that cost \$100,000 or more could be scheduled and funded over the next seven years, beginning in FY 2018.

It is important to state upfront that this is a PLAN, not a BUDGET, since a budget controls the actual spending of allocated funds. While staff attempts to be as accurate as possible, it is difficult to estimate project costs exactly, particularly early in the planning process. Before funds can be spent they must be budgeted through the operating budget or, in most cases, through a separately adopted project ordinance.

The same is true for operating costs. As facilities are being planned, staff attempts to identify operating costs, such as staffing and utilities. The cost of these items depends on final square footage and operational issues that may not be apparent until the facility is far along in planning.

## CIP Process

The CIP is a plan which is updated annually during the budget process and may be modified at any time to reflect changing conditions. A CIP is a systematic way of anticipating, planning, and budgeting for major projects. The adoption of a CIP can improve the credit worthiness (bond rating) of a jurisdiction.

Timeline for adoption:

- CIP requests originate at the department level. Requests were submitted by departments on or before October 7, 2016.
- The Manager's Office is responsible for reviewing new and existing requests and recommending a proposed CIP to the Board of Commissioners. The recommended CIP will be presented on November 14, 2016.
- Commissioners obtain public input on the CIP before discussing it. A public hearing is scheduled for November 21, 2016.
- Commissioners review the recommendation in detail and make changes. Commissioners have a work session scheduled on November 22, 2016.

- The final action is adoption of the CIP, tentatively scheduled for the December 19, 2016 meeting.

## Overall Approach

Two new debt-funded projects are recommended in the CIP, a new Central Services Building for Chatham County Schools and renovation of the western portion of the Annex Building. The Central Services Building was a future project in last year's CIP. The renovation of the Annex Building, an existing project, is expanded to include renovation of the old Agriculture Building. In addition, the recommended CIP includes expanding the capacity of the new high school from 1,000 students/1,200 core to 1,200 students/1,400 core, which increases the project costs. The cumulative effect of these projects requires no additional resources for the debt model.

The Board of Commissioners has heard a recommendation from the Climate Change Committee to require LEED certification for new buildings. Since no decision about this recommendation has been made, the recommended CIP does not include the cost of LEED certification. The cost of obtaining LEED certification will require an additional 0.20 cents to be added to the debt model in FY 2018.

There are significant future projects on the horizon, namely the replacement of the county's emergency radio system, the construction of additional elementary or middle schools, and the construction of a shared western intake and water plant on Jordan Lake. These projects will also require debt funding and will add significantly to the county's debt load, which is already projected to be the highest in our population group. In addition, the radio system will require a shorter amortization period than typical projects, which would have a significant impact on the debt model. Considering only a rough estimate of the cost of this project, an additional 1.15 to 1.4 cents may be needed in FY 2019. More could be needed if the project is higher than projected. To ensure capacity for these critical projects, additional debt-funded projects, which are not deemed an absolute necessity, should be avoided in the near future.

## Recommended Changes

Recommended changes to the Approved 2017-2023 CIP (as amended) include:

Schools: School projects are recommended as requested by the Chatham County Board of Education, unless noted below.

- **Expand the capacity of the new high school from 1,000 students/1,200 core to 1,200 students/1,400 core.** ORED projections show that without this expansion, Northwood could be over capacity by 2024. Because the cost to expand Northwood, estimated at \$27 million, is more than expanding the capacity of the new high school (approximately \$9 million), the latter option is recommended. [\$9,370,958]
- **Add a new Central Services Building to open in August of 2022.** The existing Central Services Building has exceeded its capacity, and space in Horton Middle School that is currently occupied by Central Services personnel will be required for classroom use beginning in FY 2021. The county is interested in purchasing the old bus garage site. The school system has agreed that instead of a cash purchase, the funds can be used for the Central Services Building, essentially offsetting that cost. [+5,607,079]
- **Improve the traffic pattern at Perry Harrison School** to alleviate traffic congestion at drop-off and pick-up times. The student population at Perry Harrison Elementary School (more than 700 students) continues to surpass rated capacity and contributes to traffic backing up on Hamlet Chapel Road in both directions. [+423,500]
- **Add Northwood High School to the locker room renovation schedule in FY 2021.** Renovation of the locker room at Northwood High School was previously included in the Northwood expansion project, which is no longer being contemplated. [+360,000]
- **Increase funding for mobile classrooms.** Current enrollment figures and projections for growth indicate that additional mobile units may be needed. Six additional classrooms will be added to the existing project to allow Chatham County Schools to meet these space needs. [+480,000]
- **Increase funding for repair of Northwood High School Auditorium HVAC.** Cost estimates exceed the available budget and additional funds are requested and recommended. [+60,000]
- **Add Paving Overlay at Northwood High School.** Pot holes and cracks in the pavement at Northwood High School require repair. [+189,002].

Other projects: Other projects are recommended as requested by the agency or department, unless otherwise noted.

- **Add projects:** Chatham County Agriculture & Conference Center audiovisual equipment replacement in FY 2024 [+465,850], Body Cameras for the Sheriff's Office over three years [+223,667] to be funded through capital reserve and grants. The Sheriff originally requested that cameras for all sworn and detention officers be funded in FY 2018 from county revenues. The County Manager is recommending 1) that the project be phased in over three years to avoid having to replace all cameras in one year, 2) that the Sheriff's Office attempt to secure grant funds for cameras in FY 2019 and FY 2020, and 3) that Detention Officers share cameras instead of every officer having his own.
- **Add renovation of the old Agriculture Building to the Annex project.** The architect's programming study of the western Annex renovation showed that the Tax Office would not have enough space for long-term growth. Renovating the old Agriculture Building for Tax will provide adequate space for 15 to 20 years. Funds already accumulated for the Annex project will be used to offset the old Agriculture Building renovation as that project will be completed first. Additional funds are required for the Annex that cannot be absorbed in the contribution to the capital reserve. Because we will be borrowing funds in FY 2019 for several projects, the Annex can be added without substantially affecting the debt model. Additional costs result from the Agriculture Building renovation and the need to inflate the cost of the Annex by moving it out two years. [+3,368,763]
- **Increase the budget for Briar Chapel Park** to cover additional costs associated with construction of a playground, walking trail and picnic shelter. The costs will be covered by recreation fees paid by the Briar Chapel development. [+93,119]
- **Increase the budget for Social Services Software** to account for a decrease in the amount to be reimbursed by the state. [+16,410]

### **Add Future Projects:**

- **Schools Paving Repair:** Paved areas on all campuses continue to age and require repair on a regular basis. The project would require a funding source to provide annual paving repair.

- **New Schools/Capacity Expansion:** The existing future project to add new schools is modified to include either additional schools or additional modular space, whichever is more feasible.

**Deleted Projects/Projects Not Recommended**

- **Bike Lanes:** The Bike Lanes project has been deleted because the NCDOT has indicated that the county’s share of the project costs is currently estimated at \$1,162,247, which is substantially higher than the previous estimate of \$403,000 included in the FY17-23 CIP. NCDOT has indicated they will complete design and environmental documentation and administer and inspect construction of the project, but right-of-way acquisition would be the responsibility of the county. A cost for right-of-way has been included in the estimate of the county’s share of the project, but no right-of-way negotiations with landowners have been initiated so the cost included may be the cost to condemn the property.

The CIP includes both summaries of major projects, revenues and operating expenses and detailed descriptions of each project, including justifications, cost detail, funding sources, and impacts on the operating budget.

**Debt-Model Assumptions**

- 7.7 cents on property tax rate is dedicated annually. No additional contribution will be needed for the expanded capacity of the new high school, new central services building, and annex renovations. If Commissioners want to move ahead with requiring LEED certification, an estimated addition 0.2 cents will be needed.
- 2% annual growth in property tax revenues/base (growth since the last revaluation has averaged 2.1%).
- 2% annual growth in lottery proceeds. Impact fees are estimated to grow 2% until FY 2022, when Briar Chapel is expected to be built out. The development has been paying an addition \$2,000 per unit in impact fees, and that amount is subtracted from FY 2022.

**Other Assumptions**

Generally, construction costs are inflated 5% per year. Staff also recommends a 5-10 percent contingency for most projects.

Other project costs, such as equipment, and operating costs are usually

inflated by a factor of 3% per year, unless there is good reason to use another inflationary factor (which will be noted).

Operating costs are generally inflated 3% per year, unless costs are fixed by contract.

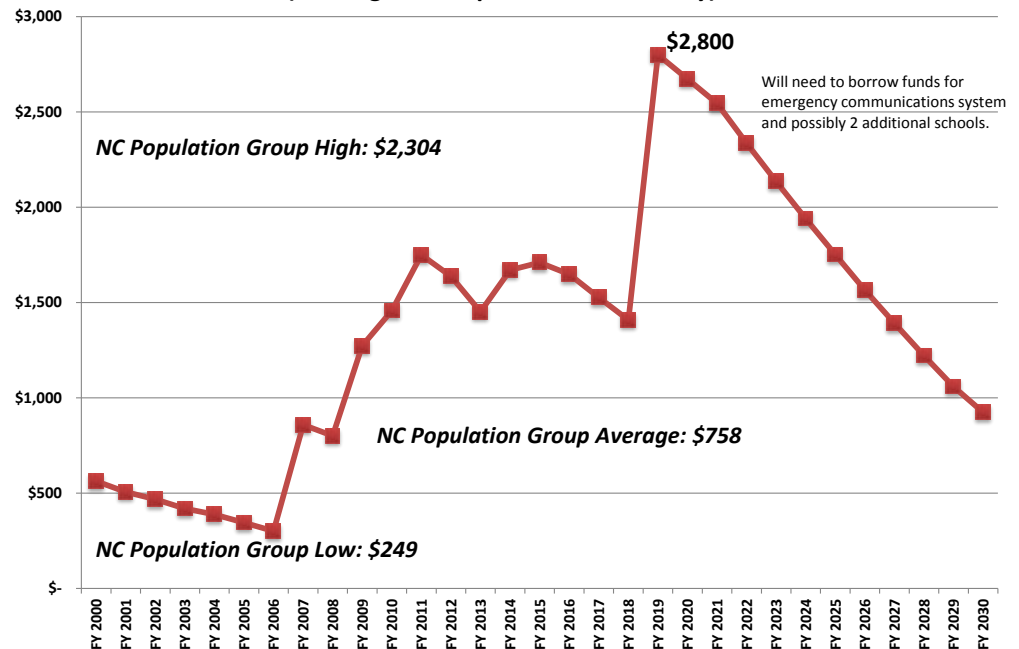
**Bond Rating**

Chatham’s ratings are exceptional. Chatham is one of only 9 other counties in North Carolina to hold a AAA rating from Standard and Poor’s and is by far the smallest county. Both ratings were upgraded in October 2014:

- Standard and Poor’s (S&P): AAA (up from AA+)
- Moody’s : Aa1 (up from Aa2/favorable outlook)

With a population more than twice as big as Chatham’s, Orange County is the next largest county to hold a AAA. Of the surrounding counties, Chatham’s combined rating is higher than Alamance, Lee, Harnett, Moore, and Randolph. Chatham holds the highest combined rating in its population group (50,000 to 99,999).

**Chatham County General Fund Debt Per Capita (Existing and Proposed CIP Debt Only)**



## Debt Indicators

Debt indicators are factored as if all projects are approved as recommended.

- Debt as a percent of assessed value: With a projected high of 2.07% in FY 2019, the county's indicator is projected to be slightly above the highest county (as of June 30, 2015) at 2.02% in its population group (50,000 to 99,999) and below the 8% legal maximum. (No county in NC is anywhere near the legal debt limit. The highest in the state is 2.976%.)
- Debt per capita: With a projected high of \$2,800 in FY 2019, the county per capita debt would exceed the current highest county (as of June 30, 2015) in its population group, \$2,304.
- Debt as a percent of the operating budget: Staff projects that, depending on decisions made in the operating budget, debt service may exceed the 15% maximum recommended by the Local Government Commission (LGC). The current model shows debt service exceeding 15% beginning in 2021. While this is an issue, the county differs from other counties in that funds for debt service have been set aside in a reserve account. Therefore, increases in debt service do not decrease Chatham County's flexibility to manage the operating budget, the primary concern of the LGC's maximum.

# Readers Guide

## County Buildings - Animal Shelter Expansion and Renovation

Approved-No Contracts

Project Status

**Project Budget:**  
The budget for the project as approved by project ordinance or as approved in the FY 2017-2023 CIP.

**Project Element:**  
Expense

**Funding Source:**  
Revenue

**Operating Effect:**  
Impact on Operating Budget.

Build a 7,931-square-foot addition to the existing Animal Control shelter and renovate the existing 2,600-square-foot building to meet the needs of animals, visiting public, and staff. Separation of adoptable animals from those who are ill or otherwise not available for adoption will facilitate adoptions of shelter animals. The new building will provide adequate space for staff, and conform to industry best practices.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Architectural Design & Construction Ad	322,056	0	0	313,430	0	0	0	0	0	0	313,430
Construction	3,930,654	0	0	0	3,766,876	0	0	0	0	0	3,766,876
Contingency	266,999	0	0	0	376,688	0	0	0	0	0	376,688
Feasibility Study	14,370	14,370	0	0	0	0	0	0	0	0	14,370
Furnishings & Equipment	110,985	0	0	0	108,012	0	0	0	0	0	108,012
Other Contracted Services	28,000	0	0	0	27,250	0	0	0	0	0	27,250
Permits & Connection Fees	22,400	0	0	0	21,800	0	0	0	0	0	21,800
<b>Total Project Element</b>	<b>4,695,464</b>	<b>14,370</b>	<b>0</b>	<b>313,430</b>	<b>4,300,626</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,628,426</b>
<b>Funding Source</b>											
Capital Reserves	4,681,094	0	0	313,430	4,300,626	0	0	0	0	0	4,614,056
General Fund Fund Balance	14,370	14,370	0	0	0	0	0	0	0	0	14,370
<b>Total Funding Source</b>	<b>4,695,464</b>	<b>14,370</b>	<b>0</b>	<b>313,430</b>	<b>4,300,626</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,628,426</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	936,219	1,872,437	902,700	902,700	0	0	0	0	0	4,614,056
Decreased Operating Costs	0	0	0	0	-20,237	-20,237	-20,237	-20,237	-20,237	-20,237	-121,422
Increased Operating Costs	0	0	0	0	188,329	182,728	188,210	193,856	199,672	205,662	1,158,457
<b>Total Operating Effect</b>	<b>0</b>	<b>936,219</b>	<b>1,872,437</b>	<b>902,700</b>	<b>1,070,792</b>	<b>162,491</b>	<b>167,973</b>	<b>173,619</b>	<b>179,435</b>	<b>185,425</b>	<b>5,651,091</b>

**Define Problem**

The animal control shelter was built in 1993 and its space is inadequate for dogs, cats, staff and the public.

The shelter is overcrowded. The 20 dog runs and the small area for cats stay full, making overcrowding the main reason for euthanizing animals. Between FY 2011 and FY 2016, 11,176 dogs and cats were sheltered, and 3,170 of these were euthanized for lack of space despite being eligible for adoption.

Public interest in the animal services field continues to increase. Encouraged by the national focus on animal welfare issues, local groups maintain interest in the way the county operates the Animal Services division. The Animal Services division operates the only county-run open admission facility in the area. To provide the best services to our community and animals, the division works to find positive outcomes for all healthy adoptable animals, to prevent pet overpopulation with spay and neuter efforts, and, when necessary, to give animals the most humane euthanasia possible.

A needs assessment conducted in 2014 by Bacon Group Inc. concluded that current animal intake numbers indicate a need for 34 dog kennels and 34 cat housing units. The needs assessment identified many problems with the existing facility including:

- A single kennel area contributes to disease transmission. Best practices for modern animal shelters call for separately contained and ventilated kennel areas for daily intake, bite quarantine, health quarantine, healthy strays, and adoptable animals. The existing shelter has one kennel room with 10 runs on either side,

**Project Totals:**  
Totals all expenditures and revenues, even those expended or received in previous years. Totals operating costs, but not those spent prior to FY 2017.



# Action Summary

Below is a summary of the status of projects in the CIP. Those that are shown as "approved" have already been approved by the Board of Commissioners, either in the FY 2017-2023 or by separate action and there is no substantial change in the project.

## **New** (has not been in a previous CIP)

- Schools - New Central Services Building
- Schools - Northwood High School Paving Overlay
- Schools - Perry Harrison Elementary School Traffic Pattern Improvement
- Schools - Wastewater Replacement at Silk Hope School
- Technology – Agriculture & Conference Audio/Visual Replacement
- Technology - Body cameras

## **Approved-No Contracts** (approved in a previous CIP; all or part of the main contract has not been executed, but the project may be in design)

- Community College - Health Sciences Building
- Community College - Pittsboro Campus - Roof Replacement
- County Buildings - Animal Shelter Expansion and Renovation
- County Buildings – Renovation of Old Agriculture Building and Annex
- Parks - Briar Chapel Park Improvements
- Schools - Bleacher Replacements (Indoor)
- Schools - Locker Room Renovations
- Schools - Mobile Classrooms
- Schools - New High School
- Schools - Northeast Elementary School
- Schools - Northwood High School Auditorium HVAC Replacement
- Schools - Roof Replacements
- Solid Waste & Recycling - Single Stream Recycling
- Technology - Increase Capacity for Data Storage
- Technology - Justice Center Audio/Visual Replacement
- Technology - Social Services Software
- Technology - Tax Software
- Technology - Telephone System Replacement - Countywide
- Voting Equipment Replacement
- Water - Haywood Water Main Replacement
- Water - Nature Trail Water Main Replacement
- Water - Planning Western Intake and Plant

## **Approved-Contracts Let** (approved in a previous CIP; main contract has been executed and project is underway)

- County Buildings - Chatham County Agriculture & Conference Center
- Emergency Communications - Next Generation 911
- Technology - Integrated Public Sector Software

## **Substantially Complete** (at least some punch list items remain; some other expenses may remain)

- Central Carolina Business Campus
- Schools - Joint School Bus & County Garage
- Solid Waste & Recycling - Replace Waste & Recycling Facility Office

## **Complete** (the project is wholly complete with no remaining expenses)

- County Buildings – Chatham County Detention Center
- Parks - Northeast District

## **Future** (the county does not have sufficient data or revenue to schedule the project; the project may be scheduled in future CIP)

- County Buildings - Emergency Operations Center Expansion
- County Buildings - Jail Renovation for Sheriff's Office
- County Buildings - Northeast Library
- Emergency Communications - Radio System Upgrade
- Schools - HVAC/Lighting Replacement
- Schools - New Central Services Building
- Schools - New Schools/Capacity Expansion
- Schools - Paving Repair
- Schools - Replace Gymnasiums at Bennett, Silk Hope and Bonlee
- Technology - Fiber Extension to Siler City
- Water District - Southwest Water District Distribution Lines Construction

## **Cancelled**

- Bike Lanes

## Total Cost of Each Project by Year

	Prior to FY 2017	Current Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	Totals
<b>911</b>										
Emergency Communications - Next Generation 911	55,358	166,074	0	0	0	0	0	0	0	221,432
<b>Total 911</b>	55,358	166,074	0	0	0	0	0	0	0	221,432
<b>General</b>										
Central Carolina Business Campus	8,375,860	0	28,000	0	0	0	0	0	0	8,403,860
Community College - Health Sciences Building	30,000	1,432,291	7,896,588	5,069,729	0	0	0	0	0	14,428,608
Community College - Pittsboro Campus - Roof Replacement	0	0	0	0	0	0	0	478,500	0	478,500
County Buildings - Animal Shelter Expansion and Renovation	14,370	0	313,430	4,300,626	0	0	0	0	0	4,628,426
County Buildings - Chatham County Agriculture & Conference Center	10,439,007	3,979,648	0	0	0	0	0	0	0	14,418,655
County Buildings – Renovation of Annex and Old Agriculture Building	1,565,606	200,000	3,082,389	2,583,770	0	0	0	0	0	7,431,765
Parks - Briar Chapel Park Improvements	676,967	214,257	246,938	0	433,490	0	0	0	0	1,571,652
Parks - Northeast District	3,227,645	3,178	0	0	0	0	0	0	0	3,230,823
Schools - Bleacher Replacements (Indoor)	119,838	0	0	272,250	0	0	0	0	0	392,088
Schools - Joint School Bus & County Garage	6,320,408	1,679,592	0	0	0	0	0	0	0	8,000,000
Schools - Locker Room Renovations	0	0	302,500	316,250	105,600	360,000	0	0	0	1,084,350
Schools - Mobile Classrooms	180,165	0	357,835	160,000	160,000	0	0	0	0	858,000
Schools - New Central Services Building	0	0	0	0	47,408	1,934,824	3,325,091	299,856	0	5,607,179
Schools - New High School	0	1,919,874	1,649,926	20,610,896	21,138,012	21,033,716	18,534	0	0	66,370,958
Schools - Northeast Elementary School	0	767,119	1,198,827	12,888,940	12,094,188	8,193	0	0	0	26,957,267
Schools - Northwood High School Auditorium HVAC Replacement	0	0	225,000	0	0	0	0	0	0	225,000
Schools - Northwood High School Paving Overlay	0	0	0	189,002	0	0	0	0	0	189,002
Schools - Perry Harrison Elementary School Traffic Pattern Improvement	0	0	0	38,500	0	0	0	0	0	38,500
Schools - Roof Replacements	3,576,141	2,069,403	158,240	657,570	0	0	0	0	0	6,461,354

## Total Cost of Each Project by Year

	Prior to FY 2017	Current Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	Totals
Schools - Wastewater Replacement at Silk Hope School	0	0	0	0	0	0	0	643,500	0	643,500
Technology – Agriculture & Conference Audio/Visual Replacement	0	0	0	0	0	0	0	0	299,475	299,475
Technology - Body cameras	0	0	79,401	112,376	31,860	0	0	0	0	223,637
Technology - Increase Capacity for Data Storage	315,838	0	0	0	723,906	0	0	0	0	1,039,744
Technology - Integrated Public Sector Software	853,994	40,000	160,200	0	0	0	0	0	0	1,054,194
Technology - Justice Center Audio/Visual Replacement	0	0	0	0	0	0	0	465,850	0	465,850
Technology - Social Services Software	0	129,832	164,033	0	0	0	0	0	0	293,865
Technology - Tax Software	0	0	0	436,000	0	0	0	0	0	436,000
Technology - Telephone System Replacement - Countywide	75,483	114,000	55,000	0	0	0	0	0	0	244,483
Voting Equipment Replacement	0	0	0	676,434	0	0	0	0	0	676,434
<b>Total General</b>	<b>35,771,322</b>	<b>12,549,194</b>	<b>15,918,307</b>	<b>48,312,343</b>	<b>34,734,464</b>	<b>23,336,733</b>	<b>3,343,625</b>	<b>1,887,706</b>	<b>299,475</b>	<b>176,153,169</b>
<b>Solid Waste &amp; Recycling</b>										
Solid Waste & Recycling - Replace Waste & Recycling Facility Office	1,476,289	30,982	0	0	0	0	0	0	0	1,507,271
Solid Waste & Recycling - Single Stream Recycling	37,635	643,465	0	0	0	0	0	0	0	681,100
<b>Total Solid Waste &amp; Recycling</b>	<b>1,513,924</b>	<b>674,447</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,188,371</b>
<b>Water</b>										
Water - Haywood Water Main Replacement	16,852	121,458	0	0	0	0	0	0	0	138,310
Water - Nature Trail Water Main Replacement	44,693	103,915	531,716	0	0	0	0	0	0	680,324
Water - Planning Western Intake and Plant	32,213	2,500	500,000	500,000	500,000	0	0	0	0	1,534,713
<b>Total Water</b>	<b>93,758</b>	<b>227,873</b>	<b>1,031,716</b>	<b>500,000</b>	<b>500,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,353,347</b>

# Funding Sources

The table below shows a summary of the funding sources for CIP projects by year. The major revenue sources are installment and other debt, fund balance, and insurance.

	Prior to FY 2017	Current Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	Totals
<b>911</b>										
911 Funds	55,358	166,074	0	0	0	0	0	0	0	221,432
<b>Total 911</b>	55,358	166,074	0	0	0	0	0	0	0	221,432
<b>General</b>										
Bond Premium	1,447,733	825,000	0	0	0	0	0	0	0	2,272,733
Capital Reserves	1,306,470	2,263,267	3,347,868	7,487,820	1,005,436	360,000	0	1,587,850	299,475	17,658,186
Debt	0	0	0	0	47,408	1,934,824	3,325,091	299,856	0	5,607,179
Debt--Certificates of Participation (COPs)	7,364,593	0	0	0	0	0	0	0	0	7,364,593
Debt--Installment Purchase	1,157,659	0	166,861	2,583,770	0	0	0	0	0	3,908,290
Debt--Limited Obligation Bonds	15,259,524	7,952,907	10,745,341	36,469,565	33,232,200	21,041,909	18,534	0	0	124,719,980
Federal & State Reimbursement	0	42,981	51,535	0	0	0	0	0	0	94,516
General Fund Fund Balance	406,090	0	0	0	0	0	0	0	0	406,090
General Fund Operating Revenue	30,000	10,165	0	0	0	0	0	0	0	40,165
Grants, Gifts, Etc.	1,238,368	0	110,969	2,156,188	15,930	0	0	0	0	3,521,455
Interest	45,219	0	0	0	0	0	0	0	0	45,219
Operating Revenue	35,000	0	0	0	0	0	0	0	0	35,000
Recreation Exaction Fee	1,382,287	0	0	0	0	0	0	0	0	1,382,287
Recreation Exaction Fee--Briar Chapel	676,967	214,257	135,969	0	433,490	0	0	0	0	1,460,683
Transfer from Bus Garage	0	1,000,617	0	0	0	0	0	0	0	1,000,617
Transfer from General Fund	3,591,544	200,000	1,199,564	0	0	0	0	0	0	4,991,108
Transfer from Water Capital Reserve	1,829,868	40,000	160,200	0	0	0	0	0	0	2,030,068
<b>Total General</b>	35,771,322	12,549,194	15,918,307	48,697,343	34,734,464	23,336,733	3,343,625	1,887,706	299,475	176,538,169

# Funding Sources

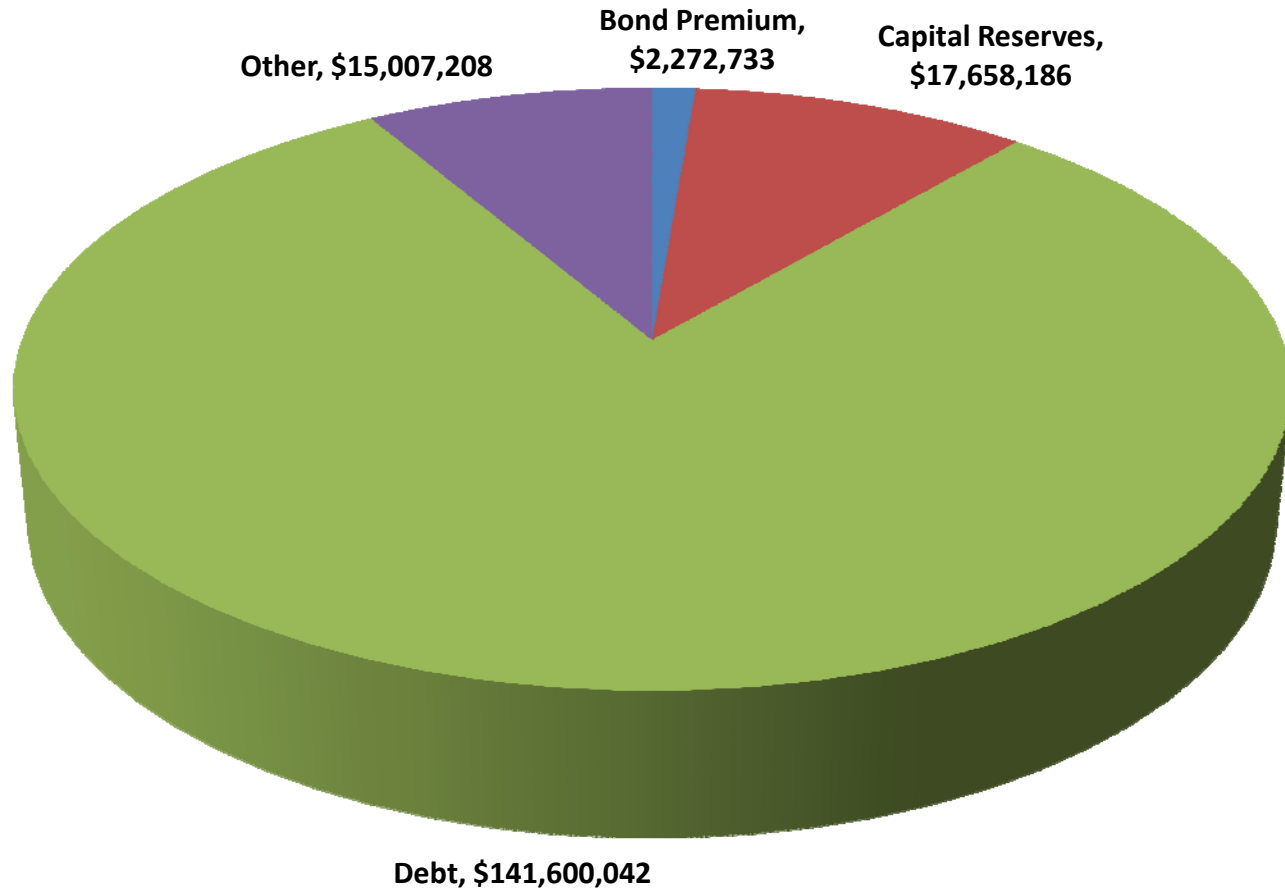
The table below shows a summary of the funding sources for CIP projects by year. The major revenue sources are installment and other debt, fund balance, and insurance.

	Prior to FY 2017	Current Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	Totals
<b><u>Solid Waste &amp; Recycling</u></b>										
Capital Reserves	37,635	612,465	0	0	0	0	0	0	0	650,100
Grants, Gifts, Etc.	0	31,000	0	0	0	0	0	0	0	31,000
Operating Revenue	10,750	0	0	0	0	0	0	0	0	10,750
Solid Waste Fund Balance	1,465,539	30,982	0	0	0	0	0	0	0	1,496,521
<b>Total Solid Waste &amp; Recycling</b>	<b>1,513,924</b>	<b>674,447</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,188,371</b>
<b><u>Water</u></b>										
Water Capital Reserve	93,758	227,873	1,031,716	500,000	500,000	0	0	0	0	2,353,347
<b>Total Water</b>	<b>93,758</b>	<b>227,873</b>	<b>1,031,716</b>	<b>500,000</b>	<b>500,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,353,347</b>

## CIP Funding Sources

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### General Fund CIP Funding Sources



### General Fund Capital Reserve

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The recommended CIP continues the practice of funding pay-as-you-go General Fund projects through a capital reserve. The capital reserve has a balance of \$5,763,293.

## Parks & Recreation

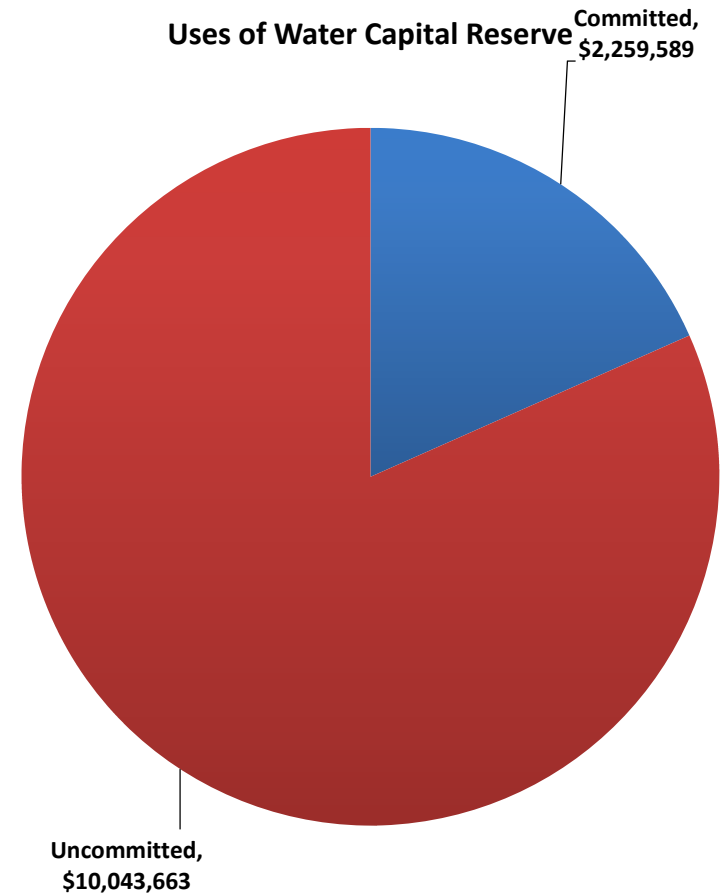
Parks Capital Reserve Fund: Staff recommends spending a small amount (\$3,178) for improvements to Northeast Park in FY 2017 to finish that project. These funds have already been appropriated to the Northeast Park project. Staff projects that approximately \$ 221,813 will be left in the capital reserve after remaining funds from Northeast Park are transferred to the reserve.

Recreation Fees: Recreation fees are established and collected in two districts. The fees must be spent in the district in which they are collected.

- Western District: Since the economic downturn the Western District, consisting of the Jordan-Matthews and Chatham Central High School districts, has generated \$4,384 in FY 2016. These funds will be used to reimburse the general fund until it is made whole for the purchase of Northwest Park. At the current rate of development, this will take many years, leaving no funding for additional land in this district.
- Eastern District: Since the economic downturn, the Eastern District, consisting of the Northwood High School district, has generated very little revenue until FY 2014 (\$195,936 in FY 2016), excluding Briar Chapel fees. Note that funds generated in Briar Chapel will be used to pay for improvements in the Briar Chapel Park, as agreed to by the developer. In prior years, funds generated by the Eastern District have been used to reimburse the general fund for the purchase of land for the Southeast District Park. However, the Board of Commissioners has approved using funds from the Coal Ash settlement to reimburse the General Fund.

## Water Capital Reserve

\$1,631,500 in availability fees were collected in FY 2016. Note that the scope of the regional western intake water plan is unknown and will require significant funding



# Operating Budget Effects

The table below shows the combined effect on the operating budget of the recommended projects for the next seven years. Operating effects include debt service, increased operating costs, decreased operating costs, additional revenues, and appropriation of revenue necessary to fund the project.

	Prior to FY 2017	Current Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024
<b>911</b>									
Decreased Operating Costs	0	-148,320	-152,770	-157,353	-162,073	-166,935	-171,944	-177,102	-182,415
Increased Operating Costs	0	197,760	203,693	209,804	216,098	222,581	229,258	236,136	243,220
<b>Total 911</b>	0	49,440	50,923	52,451	54,025	55,646	57,314	59,034	60,805
<b>General</b>									
Additional Revenues	-1,000	-41,000	-73,614	-73,801	-73,995	-74,874	-75,079	-75,290	-75,508
Contribution to Capital Reserve	2,578,492	3,159,776	5,063,647	3,427,518	688,281	691,147	490,826	490,826	74,868
Debt Service	1,698,461	2,739,760	2,682,514	5,396,297	8,116,155	8,137,213	15,103,778	14,701,672	14,368,696
Decreased Operating Costs	-126,000	-342,173	-354,869	-411,309	-418,225	-425,352	-432,691	-440,253	-448,042
General Fund Fund Balance	271,882	0	0	0	0	0	0	0	0
Increased Operating Costs	687,608	965,265	950,147	1,497,303	1,569,171	2,969,358	5,190,547	5,253,635	5,477,575
Transfer from Debt Reserve	-1,698,461	-2,739,760	-2,682,514	-5,396,297	-8,116,155	-8,137,213	-15,103,778	-14,701,672	-14,368,696
Transfer from General Fund	4,209,289	0	0	0	0	0	0	0	0
<b>Total General</b>	7,620,271	3,741,868	5,585,311	4,439,711	1,765,232	3,160,279	5,173,604	5,228,919	5,028,893
<b>Solid Waste &amp; Recycling</b>									
Decreased Operating Costs	-161,768	-145,850	-299,321	-308,260	-317,447	-326,889	-336,595	-340,141	-343,793
Decreased Revenue	0	27,113	27,926	28,764	29,627	30,515	31,431	32,374	33,345
Increased Operating Costs	5,600	181,501	25,307	28,052	54,086	59,899	61,668	72,336	74,505
Increased Revenue	0	-146,020	0	0	0	0	0	0	0
<b>Total Solid Waste &amp; Recycling</b>	-156,168	-83,256	-246,088	-251,444	-233,734	-236,475	-243,496	-235,431	-235,943



# Operating Budget Effects

The table below shows the combined effect on the operating budget of the recommended projects for the next seven years. Operating effects include debt service, increased operating costs, decreased operating costs, additional revenues, and appropriation of revenue necessary to fund the project.

	Prior to FY 2017	Current Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024
<b><u>Water</u></b>									
Decreased Operating Costs	0	0	-2,040	-24,480	-24,480	-24,480	-24,480	-24,480	-24,480
Decreased Operating Costs (Utility Fund)	0	0	-16,263	-16,751	-17,253	-17,771	-18,304	-18,853	-19,419
Increased Operating Costs (Utility Fund)	11,888	12,483	13,107	13,762	14,450	15,173	15,931	16,728	17,564
<b>Total Water</b>	11,888	12,483	-5,196	-27,469	-27,283	-27,078	-26,853	-26,605	-26,335

# Completed Projects

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The following projects were completed as of June 30, 2016.

<b>Project Name</b>	<b>Brief Description</b>	<b>Final Project Budget</b>	<b>Final Cost</b>
County Buildings – Chatham County Detention Center	Construct a 60,000-square-foot jail with a build-out capacity of 133 beds, and continue efforts to decrease the jail population.	\$16,781,728	\$ 16,419,865

# **911 Fund Projects**

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# Emergency Communications - Next Generation 911

Convert the 911 phone system and equipment to next generation technology.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Contingency	0	0	0	0	0	0	0	0	0	0	0
Furnishings & Equipment	221,432	55,358	166,074	0	0	0	0	0	0	0	221,432
<b>Total Project Element</b>	<b>221,432</b>	<b>55,358</b>	<b>166,074</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>221,432</b>
<b>Funding Source</b>											
911 Funds	221,432	55,358	166,074	0	0	0	0	0	0	0	221,432
<b>Total Funding Source</b>	<b>221,432</b>	<b>55,358</b>	<b>166,074</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>221,432</b>
<b>Operating Effect</b>											
Decreased Operating Costs	0	0	-148,320	-152,770	-157,353	-162,073	-166,935	-171,944	-177,102	-182,415	-1,318,912
Increased Operating Costs	0	0	197,760	203,693	209,804	216,098	222,581	229,258	236,136	243,220	1,758,550
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>49,440</b>	<b>50,923</b>	<b>52,451</b>	<b>54,025</b>	<b>55,646</b>	<b>57,314</b>	<b>59,034</b>	<b>60,805</b>	<b>439,638</b>

## Define Problem

The Chatham County Public Safety Answering Point (PSAP) is currently Phase II compliant, meaning that the system will give a caller's location, phone number, and location coordinates for both cell and land line calls. However, the PSAP is not capable of receiving text, video, or other types of smart phone applications. The exception to this is that the PSAP can use a text telephone device (TTY) to communicate with people who are deaf or hard of hearing. This is an effective communication device but does not allow the caller to be mobile. Text messaging and/or video are the primary means of communications today, and the equipment must be upgraded to receive these forms of communication.

To expand the capabilities of PSAPs, the NC State 911 Board has made next generation technology a priority. Next generation technology will enable communication centers to receive information in additional formats already used by the public, such as video and text. The National Emergency Numbering Association (NENA) has defined next generation standards for communication centers, but proposed no timeframe for implementation of the standard. However, the county should plan now for this significant upgrade of technology. The 911 fund will pay for this project.

## Recommended Solution

Implement next generation technology. Complete the purchase of hardware upgrades and replacements in FY 2016 to ensure compatibility with next-generation technology and contract with a provider for service.

## Alternatives

Three alternatives exist:

- 1) Plan now for the migration of Emergency Communications to next generation technology by monitoring future projects that are eligible for 911 funds.
- 2) Do no planning now and depend on grant funding from the State 911 board.
- 3) Do nothing. Maintain the current level of operations (e.g. Phase II compliance) even when next generation technology becomes available.

## Current Stage of Project

Costs increased last year because the original quote did not include licensing and an additional console. The project is behind schedule due to Centurylink availability, however completion is expected in FY 2017.

# **General Fund Projects**

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# Central Carolina Business Campus

Substantially Complete

Construct the infrastructure for Chatham County's 458-acre Business Campus in Siler City, including construction of roadways, water lines, sewer lines, and sewer pump stations.

<b>Project Budget</b>	<b>Budget</b>	<b>Prior to FY 2017</b>	<b>Current Year: FY 2017</b>	<b>Year 1: FY 2018</b>	<b>Year 2: FY 2019</b>	<b>Year 3: FY 2020</b>	<b>Year 4: FY 2021</b>	<b>Year 5: FY 2022</b>	<b>Year 6: FY 2023</b>	<b>Year 7: FY 2024</b>	<b>Project Totals</b>
<b>Project Element</b>											
Construction	7,258,416	7,258,414	0	8,000	0	0	0	0	0	0	7,266,414
Design, Engineering & Construction Ad	995,141	992,150	0	0	0	0	0	0	0	0	992,150
Land	129,204	125,296	0	20,000	0	0	0	0	0	0	145,296
<b>Total Project Element</b>	<b>8,382,761</b>	<b>8,375,860</b>	<b>0</b>	<b>28,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,403,860</b>
<b>Funding Source</b>											
Capital Reserves	0	0	0	15,821	0	0	0	0	0	0	15,821
Debt--Certificates of Participation (COP)	7,364,593	7,364,593	0	0	0	0	0	0	0	0	7,364,593
Grants, Gifts, Etc.	399,882	399,882	0	0	0	0	0	0	0	0	399,882
Interest	22,777	28,055	0	0	0	0	0	0	0	0	28,055
Transfer from General Fund	257,695	245,516	0	12,179	0	0	0	0	0	0	257,695
Transfer from Water Capital Reserve	337,814	337,814	0	0	0	0	0	0	0	0	337,814
<b>Total Funding Source</b>	<b>8,382,761</b>	<b>8,375,860</b>	<b>0</b>	<b>28,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,403,860</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	15,821	0	0	0	0	0	0	0	15,821
Debt Service	0	565,231	1,032,280	1,013,768	996,569	594,762	967,228	946,606	926,726	323,922	7,367,092
Increased Operating Costs	0	72,720	48,457	49,910	51,408	52,950	54,538	56,174	57,860	59,596	503,613
Transfer from Debt Reserve	0	-565,231	-1,032,280	-1,013,768	-996,569	-594,762	-967,228	-946,606	-926,726	-323,922	-7,367,092
<b>Total Operating Effect</b>	<b>0</b>	<b>72,720</b>	<b>64,278</b>	<b>49,910</b>	<b>51,408</b>	<b>52,950</b>	<b>54,538</b>	<b>56,174</b>	<b>57,860</b>	<b>59,596</b>	<b>519,434</b>

## Define Problem

Lack of property served by adequate infrastructure is a challenge for economic development. In 2000, Chatham County purchased property for a business campus in Siler City. At the time it was purchased, the property was located just outside the town limits of Siler City. The town has since annexed it and is providing water and sewer through infrastructure built by the county. In addition, the county has also provided roads to ensure easy access for potential development. Three entities are now located within the campus: Chatham Hospital, the Chatham Youth Development Center and Central Carolina Community College.

## Recommended Solution

The project is substantially complete.

## Current Stage of Project

The business park was substantially complete in November 2009. Many of the engineering design and construction administration problems are in the process of being resolved. All needed additional easements for the bridge and roadway and dedication of the additional right-of-way requested by NC Department of Transportation (NCDOT) have been obtained, except for two properties. Remaining issues include the DOT requirement for the county to post a ten-year bond

for future maintenance of the culverts.

Negotiations with the landowner for placement of a sign are in progress. Design and cost estimates for the sign are complete. Once negotiations for the sign easement are complete, the approval process will begin.

Because of engineering design and construction administration problems, additional easements and rights-of-way must be obtained in order for NCDOT to accept and maintain roads; plats have been recorded for easements and right-of-ways obtained to date. Once the final two properties are resolved, a final plat that satisfies NCDOT needs to be executed and recorded. DOT has executed the maintenance agreement. The County has initiated a contract to clear the right of way in preparation for transferring the maintenance of the roads and ROW to DOT.

### **Relation to Other Projects**

The Central Carolina Community College job training center is complete.

### **Professional Services Needed**

Engineering design work and construction management were needed.

### **Operating Impact**

Funds are needed for bonds, grounds maintenance and electricity. As taxpaying entities locate in the business campus, the county would see an increase in property and sales tax revenues.

# Community College - Health Sciences Building

Approved-No Contracts

Construct a 40,000 square-foot Health Sciences building. The option also exists to construct a multi-purpose space attached through a common corridor.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Architectural Design & Construction Ad	1,240,970	0	372,291	496,388	372,291	0	0	0	0	0	1,240,970
Construction	10,455,588	0	0	7,318,912	3,136,676	0	0	0	0	0	10,455,588
Contingency	1,287,799	0	0	0	1,287,799	0	0	0	0	0	1,287,799
Feasibility Study	30,000	30,000	0	0	0	0	0	0	0	0	30,000
Furnishings & Equipment	191,675	0	0	0	191,675	0	0	0	0	0	191,675
Land & Easements	1,060,000	0	1,060,000	0	0	0	0	0	0	0	1,060,000
Other Contracted Services	162,575	0	0	81,288	81,288	0	0	0	0	0	162,576
<b>Total Project Element</b>	<b>14,428,607</b>	<b>30,000</b>	<b>1,432,291</b>	<b>7,896,588</b>	<b>5,069,729</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14,428,608</b>
<b>Funding Source</b>											
Debt--Limited Obligation Bonds	14,428,607	0	1,432,291	7,896,588	2,969,729	0	0	0	0	0	12,298,608
General Fund Operating Revenue	0	30,000	0	0	0	0	0	0	0	0	30,000
Grants, Gifts, Etc.	0	0	0	0	2,100,000	0	0	0	0	0	2,100,000
<b>Total Funding Source</b>	<b>14,428,607</b>	<b>30,000</b>	<b>1,432,291</b>	<b>7,896,588</b>	<b>5,069,729</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14,428,608</b>
<b>Operating Effect</b>											
Debt Service	0	0	0	0	315,970	631,940	631,940	1,353,782	1,317,690	1,281,598	5,532,920
Increased Operating Costs	0	0	0	0	294,450	279,698	287,418	295,355	305,518	311,911	1,774,350
Transfer from Debt Reserve	0	0	0	0	-315,970	-631,940	-631,940	-1,353,782	-1,317,690	-1,281,598	-5,532,920
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>294,450</b>	<b>279,698</b>	<b>287,418</b>	<b>295,355</b>	<b>305,518</b>	<b>311,911</b>	<b>1,774,350</b>

## Define Problem

The population of Chatham County is expected to grow exponentially over the next 25 years. This growth is fueled by the development of Chatham Park and by the potential impact of the Chatham Advanced Manufacturing and Moncure megasites. Currently, there is a significant amount of growth taking place in northeast Chatham. This growth provides additional challenges for Central Carolina Community College (CCCC) to meet the needs of the citizens of Chatham County as well as the potential increased County workforce.

A new Health Sciences building offers many opportunities. Data suggests that graduates from associate degree programs in health sciences maintain a much higher rate of continued employment the first five years after graduation than other program offered by the community college. These graduates also typically have a higher mean wage than graduates from other programs. Employment projections for health care programs continue to be very positive.

A new Health Sciences building will expand program offerings in a growing field.

## Recommended Solution

Construct a new Health Sciences building on a site at Briar Chapel to open August 2019.



## Alternatives

1. One option is to not take any action. Central Carolina Community College will continue to offer the various programs we have at our Chatham County locations. This option could become problematic for students in the future as the population of Chatham County grows and the health sciences programs become more competitive to enter. Students may seek educational opportunities outside of the County.
2. Another option would be to construct the proposed building in the Briar Chapel area of Chatham County. This location would be close to planned health care sites and would serve a growing area of Chatham County. CCCC would be able to expand health sciences opportunities for all residents and new degree options would be available for students.
3. A third option would be to construct this building on the Pittsboro campus. CCCC would be able to expand health sciences opportunities for all residents and new degree options would be available for students.

## Current Stage of Project

An architect has been selected. The County Board of Commissioners decided not to include a geothermal system but asked that energy-efficient systems be included.

The size of the building has decreased from 46,000 SF to 40,000 SF based on a programming review conducted by the architect. While there is some cost differential associated with a smaller building, the type and quality of building will be slightly more than what was originally projected. Construction costs will be offset by \$2.1 million in NC Connect Bonds that the college will receive and allocate to the project.

The building will include an early voting/voting site for northeast Chatham, which has been very difficult to find in past elections. The site has been master planned for a 10,000-square-foot library to be added in the future.

## Description of Land Needs

Approximately 4 acres are needed.

## Professional Services Needed

Professional design, architecture, and construction will be needed.

## Operating Impact

Additional funding will be needed for utilities and building maintenance.

# Community College - Pittsboro Campus - Roof Replacement

Approved-No Contracts

Replace the roof on Building 42 on the Pittsboro Campus.

Project Budget	Budget	Prior to FY 2017	Current Year:								Project Totals	
			FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024		
<b>Project Element</b>												
Architectural Design & Construction Ad	12,100	0	0	0	0	0	0	0	0	12,100	0	12,100
Construction	418,500	0	0	0	0	0	0	0	0	418,500	0	418,500
Contingency	41,850	0	0	0	0	0	0	0	0	41,850	0	41,850
Engineering & Construction Administrati	6,050	0	0	0	0	0	0	0	0	6,050	0	6,050
<b>Total Project Element</b>	<b>478,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>478,500</b>	<b>0</b>	<b>478,500</b>
<b>Funding Source</b>												
Capital Reserves	478,500	0	0	0	0	0	0	0	0	478,500	0	478,500
<b>Total Funding Source</b>	<b>478,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>478,500</b>	<b>0</b>	<b>478,500</b>
<b>Operating Effect</b>												
Contribution to Capital Reserve	0	0	68,357	68,357	68,357	68,357	68,357	68,357	68,357	68,357	0	478,500
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>68,357</b>	<b>68,357</b>	<b>68,357</b>	<b>68,357</b>	<b>68,357</b>	<b>68,357</b>	<b>68,357</b>	<b>68,357</b>	<b>0</b>	<b>478,500</b>

## Define Problem

The roof on Building 42 on the Pittsboro campus is original to the building (1996). The roof is a membrane-type roof and will need replacing in approximately 7 years. The college is not currently experiencing issues with the roof; however, college officials anticipate the likelihood that it will need to be replaced sometime within the timeframe of the county's CIP. Since the roof is no longer under warranty, the repair costs will be paid for by the College and the County.

## Recommended Solution

A new roof should be planned for this building by 2022.

## Alternatives

- 1) Replace the roof with a new roof. A roofing engineer would need to be hired to determine the best roofing option available.
- 2) Make minor repairs to the roof as issues develop and work with a roofing engineer to determine whether there are short-term solutions that will alleviate the need for a roof replacement.

## Professional Services Needed

A roofing engineer would be needed.

# County Buildings - Animal Shelter Expansion and Renovation

Approved-No Contracts

Build a 7,931-square-foot addition to the existing Animal Control shelter and renovate the existing 2,600-square-foot building to meet the needs of animals, visiting public, and staff. Separation of adoptable animals from those who are ill or otherwise not available for adoption will facilitate adoptions of shelter animals. The new building will provide adequate space for staff, and conform to industry best practices.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Architectural Design & Construction Ad	322,056	0	0	313,430	0	0	0	0	0	0	313,430
Construction	3,930,654	0	0	0	3,766,876	0	0	0	0	0	3,766,876
Contingency	266,999	0	0	0	376,688	0	0	0	0	0	376,688
Feasibility Study	14,370	14,370	0	0	0	0	0	0	0	0	14,370
Furnishings & Equipment	110,985	0	0	0	108,012	0	0	0	0	0	108,012
Other Contracted Services	28,000	0	0	0	27,250	0	0	0	0	0	27,250
Permits & Connection Fees	22,400	0	0	0	21,800	0	0	0	0	0	21,800
<b>Total Project Element</b>	<b>4,695,464</b>	<b>14,370</b>	<b>0</b>	<b>313,430</b>	<b>4,300,626</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,628,426</b>
<b>Funding Source</b>											
Capital Reserves	4,681,094	0	0	313,430	4,300,626	0	0	0	0	0	4,614,056
General Fund Fund Balance	14,370	14,370	0	0	0	0	0	0	0	0	14,370
<b>Total Funding Source</b>	<b>4,695,464</b>	<b>14,370</b>	<b>0</b>	<b>313,430</b>	<b>4,300,626</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,628,426</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	936,219	1,872,437	902,700	902,700	0	0	0	0	0	4,614,056
Decreased Operating Costs	0	0	0	0	-20,237	-20,237	-20,237	-20,237	-20,237	-20,237	-121,422
Increased Operating Costs	0	0	0	0	188,329	182,728	188,210	193,856	199,672	205,662	1,158,457
<b>Total Operating Effect</b>	<b>0</b>	<b>936,219</b>	<b>1,872,437</b>	<b>902,700</b>	<b>1,070,792</b>	<b>162,491</b>	<b>167,973</b>	<b>173,619</b>	<b>179,435</b>	<b>185,425</b>	<b>5,651,091</b>

## Define Problem

The animal control shelter was built in 1993 and its space is inadequate for dogs, cats, staff and the public.

The shelter is overcrowded. The 20 dog runs and the small area for cats stay full, making overcrowding the main reason for euthanizing animals. Between FY 2011 and FY 2016, 11,176 dogs and cats were sheltered, and 3,170 of these were euthanized for lack of space despite being eligible for adoption. Public interest in the animal services field continues to increase. Encouraged by the national focus on animal welfare issues, local groups maintain interest in the way the county operates the Animal Services division. The Animal Services division operates the only county-run open admission facility in the area. To provide the best services to our community and animals, the division works to find positive outcomes for all healthy adoptable animals, to prevent pet overpopulation with spay and neuter efforts, and, when necessary, to give animals the most humane euthanasia possible.

A needs assessment conducted in 2014 by Bacon Group Inc. concluded that current animal intake numbers indicate a need for 34 dog kennels and 34 cat housing units. The needs assessment identified many problems with the existing facility including:

- A single kennel area contributes to disease transmission. Best practices for modern animal shelters call for separately contained and ventilated kennel areas for daily intake, bite quarantine, health quarantine, healthy strays, and adoptable animals. The existing shelter has one kennel room with 10 runs on either side,

making it difficult to separate animals, control disease, treat sick animals, and provide appropriate care.

- Public and staff areas of the shelter are inadequate. The lobby serves as offices for the shelter manager and shelter attendants and also is where adoption services are provided to the public. As a result, newly arrived animals are in the same area as animals being considered by the public for adoption. This creates confusion and stress for the public, staff and animals.
- The building has only one restroom for staff and no public restrooms.
- There is inadequate space for treatment of animals that come into the shelter in need of testing, immunization and simple first-aid procedures. The “kitchen” serves as an animal treatment room, laundry room, utility room, storage and is also where staff washes dishes and equipment.
- There is inadequate space for staff. The facility does not allow staff to function efficiently, safely, and, when necessary, out of the view of the public. The animal control supervisor and four animal control officers are housed in a leased trailer adjacent to the shelter building.
- Additional storage space is required. A wooden storage building behind the kennel runs currently provides storage for dog and cat food. More permanent solutions should be considered that will not require employees to transport food between buildings in all kinds of weather and that will reduce pests and vermin from having access to the food sources of shelter animals.
- There are several areas of concern for the safety of the staff, public, and animals. Open kennel drain trenches pose a risk of injury as well as transmission of disease due to washing excrement past kennels of healthy animals. The chain link fencing, coated steel cable systems, and plastic guillotine doors are showing wear due to aging and represent potential hazards. Replacement of these materials with more current materials will decrease risk of injury to the staff. The current kennel wall surfaces have deteriorated and continue to do so. This allows for diseases like deadly canine parvo virus to stabilize in the setting and reinfect other incoming animals. The steel columns and interior walls are constantly being exposed to harsh chemicals and moisture, causing them to rust. The current euthanasia area is outdoors. While it is covered, it is still exposed to elements such as rain, cold, and heat, creating stress for animals and staff during the euthanasia process. According to the American Shelter Veterinarians Standards of Care report, euthanasia should be performed in a location where other animals can neither see nor hear the process.
- The current shelter does not facilitate the adoption of cats and dogs. When the public comes to the shelter for the potential purpose of adopting animals, they are not presented with a clear choice. Due to space limitations, the “adoptable” dogs are intermingled with strays not available for adoption, dogs quarantined for observation for rabies symptoms, and dogs whose temperaments are not suitable for adoption. Potential adopters know that many of the dogs they are viewing will be euthanized in the shelter, which keeps many people from visiting the shelter. The shelter has no interior “meet and greet” area for potential adopters to interact with the dogs, so they are normally directed to take the dog outside on a leash to interact for a short time.

## **Recommended Solution**

Renovate and expand the existing animal control shelter to provide a facility that is safe, healthy and functional for staff, visitors, and animals.

The Bacon Group needs assessment included recommendations for the design of a new shelter and renovations to the existing space that will provide separate intake and adoption buildings and include future space for spay/neuter surgery and education for the public. The design recommendations will address the problems identified with the existing facility, as discussed above, and make shelter operations more efficient. The separation of the buildings and updated HVAC systems will work to reduce disease transmission between animal populations and facilitate the adoption of animals. Future space for spay/neuter surgery would eliminate the need for staff to transport animals to and from veterinarian offices for surgery. Space for public education would permit outreach to the community and enhance public awareness of the roles and responsibilities of the community in reducing euthanasia due to pet overpopulation and disease control. The recommendation calls for fundraising for these two future spaces.

Continue discussions and partnerships with non-profit agencies to create more options for positive outcomes for the shelter animals.

## **Alternatives**

- 1) Do nothing. Continue to operate the existing facility despite the problems and community interest in improvements. Because the agency is required to meet certain housing standards in the Animal Welfare Act, services would have to be cut to meet requirements for inspection by the North Carolina Department of Agriculture. Disease and illness in the animal population would continue to be a costly issue and both staff morale and customer satisfaction would be compromised.
- 2) Partner with a local nonprofit agency to house an adoption center in the Pittsboro area that would draw animals from the animal control shelter as well as from

# County Buildings - Animal Shelter Expansion and Renovation

Approved-No Contracts

other sources. While such a partnership could increase the adoption rate, it does not meet the critical and immediate need to expand and renovate the existing facility. A new facility is needed to provide sheltering to support animal control enforcement and best practices for protecting animal health and improving outcomes.

3) Partner with a nonprofit group to oversee and manage the animal sheltering capabilities in the county. This could be a viable option if there was a local nonprofit group that could sustain the core functions and funding of the shelter. However, there is no local agency with positive past performance of operating as a shelter.

4) Renovate and expand the existing animal control facility according to design recommendations from the Bacon Group. The new facility will provide separate intake and adoption areas and house 143 animals. The building would have a life expectancy of 25 to 30 years.

Construction will address essential needs for animal shelter operations, including:

- A new building that adds an additional 40 kennels for canines and 42 cat housing units.
- Updated staff spaces that include shelter administrative offices, grooming areas, food prep areas, laundry room with commercial grade appliances, designated treatment rooms, break room and janitorial area.
- A sally port/intake area for officers to safely load and unload animals without escape. A designated euthanasia area will be in this structure.
- Private feral cat holding room in the intake area to reduce travel and stress.
- The renovation of the existing facility would increase the efficiency of the current building. This building would house field office staff, sick isolation and dangerous animal holding.

Several community members and nonprofit agencies have expressed interest in conducting fundraising campaigns to strengthen the availability of funds for a new shelter. Although not essential to shelter operations, the recommendation includes shell space that can be completed in the future with private donations. This space could serve as a community education and training room to host meetings and educational events. The design also includes design of a surgical suite that could be added later through fundraising.

## **Description of Land Needs**

Existing two acres.

## **Professional Services Needed**

Planning and architectural services will be needed. A preliminary needs assessment and cost estimates were completed in 2014.

## **Operating Impact**

Additional funds will be needed for staffing, equipment, and building maintenance.

# County Buildings - Chatham County Agriculture & Conference Center

Approved-Contracts Let

Construct a new agricultural center for Chatham County of approximately 35,000 square feet.

Project Budget	Budget	Current		Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	Project Totals
		Prior to FY 2017	Year: FY 2017								
<b>Project Element</b>											
Architectural Design & Construction Ad	850,000	906,307	21,200	0	0	0	0	0	0	0	927,507
Construction	10,729,674	9,220,885	2,200,100	0	0	0	0	0	0	0	11,420,985
Contingency	536,480	0	0	0	0	0	0	0	0	0	0
Debt Service	0	0	1,038,567	0	0	0	0	0	0	0	1,038,567
Feasibility Study	35,000	35,000	0	0	0	0	0	0	0	0	35,000
Financing Costs	120,150	89,712	0	0	0	0	0	0	0	0	89,712
Furnishings & Equipment	853,563	45,981	719,781	0	0	0	0	0	0	0	765,762
Other Contracted Services	92,088	141,122	0	0	0	0	0	0	0	0	141,122
Permits & Connection Fees	201,084	0	0	0	0	0	0	0	0	0	0
<b>Total Project Element</b>	<b>13,418,039</b>	<b>10,439,007</b>	<b>3,979,648</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14,418,655</b>
<b>Funding Source</b>											
Bond Premium	1,381,949	1,447,733	0	0	0	0	0	0	0	0	1,447,733
Debt--Limited Obligation Bonds	12,001,090	8,939,116	2,979,031	0	0	0	0	0	0	0	11,918,147
Interest	0	17,158	0	0	0	0	0	0	0	0	17,158
Operating Revenue	35,000	35,000	0	0	0	0	0	0	0	0	35,000
Transfer from Bus Garage	0	0	1,000,617	0	0	0	0	0	0	0	1,000,617
<b>Total Funding Source</b>	<b>13,418,039</b>	<b>10,439,007</b>	<b>3,979,648</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14,418,655</b>
<b>Operating Effect</b>											
Additional Revenues	0	0	-40,000	-65,000	-65,000	-65,000	-65,000	-65,000	-65,000	-65,000	-495,000
Debt Service	0	804,656	1,068,566	1,044,326	1,019,399	1,238,968	956,627	929,990	902,000	1,282,075	9,246,607
Decreased Operating Costs	0	0	0	0	0	0	0	0	0	0	0
Increased Operating Costs	0	61,334	193,991	275,414	279,027	287,234	291,199	299,906	304,253	311,133	2,303,491
Transfer from Debt Reserve	0	-804,656	-1,068,566	-1,044,326	-1,019,399	-1,238,968	-956,627	-929,990	-902,000	-1,282,075	-9,246,607
<b>Total Operating Effect</b>	<b>0</b>	<b>61,334</b>	<b>153,991</b>	<b>210,414</b>	<b>214,027</b>	<b>222,234</b>	<b>226,199</b>	<b>234,906</b>	<b>239,253</b>	<b>246,133</b>	<b>1,808,491</b>

## Define Problem

The current building was built in 1956 and has never had a major renovation. Storage space is inadequate. The original building was not compliant with the Americans with Disabilities Act (ADA). To get to the lower floor, wheel-chair-bound clients must use their vehicles or go around the building on the street. The building is inefficient to heat and cool, and upstairs restrooms have no air conditioning and limited ventilation. Participants in educational programs complain about the condition of the facilities and the lack of parking in close proximity to the current building. Also, the lack of reserved loading zone space makes it difficult for the staff to load and unload equipment and materials necessary for programs. Many Extension educational programs are being moved offsite and rent must be paid for a larger meeting space to meet client demands.

## Recommended Solution

Build a stand-alone Chatham County Agriculture & Conference Center to house the natural resources and agricultural agencies and to provide a meeting facility that all county departments, Central Carolina Community College and nonprofit agencies could use and the public could rent.

The new facility would allow ample meeting space/auditorium for expanded programs and corporate or educational meetings that might last for several days. Meetings of this size would have the potential to attract new food and lodging establishments and other businesses that provide services for out-of-town visitors. The facility will also include storage space, a teaching kitchen/laboratory and a catering kitchen in proximity to the auditorium, one set of bathroom facilities for staff that includes shows and ample parking for both cars and trucks with trailers. Land should also be adequate for a Livestock Show Ban, mini arboretum and demonstration plots, which may be added in the future and funded with private donations. The advantages of building on the west side of the Central Carolina Community College (CCCC) Pittsboro Campus are that it is centrally located within the county and the sustainable agriculture program at the college would be a good partner for many programs.

The facility is currently scheduled to open mid-2016.

## Alternatives

(1) Expand and renovate the County Agricultural Building. A study conducted by Hobbs Architects in 2008 estimated that it would cost between \$7 and \$8 million to add 17,000 square feet, replace mechanical and electrical systems, improve energy efficiency, add an elevator and make the building ADA compliant, and renovate the existing building on site. This option did not include a civic center, but did include a larger meeting room (with seating at tables for approximately 250) and other meeting spaces.

(2) A meeting center could be built as a stand-alone facility and the agricultural agencies stay in the existing building. This would not address the current and future space needs for these agencies and their customers. This option would require hiring additional staff to run the facility.

(3) Relocation of the agricultural agencies to a new facility would free up the County Agricultural Building for other county departments that need to be in the county government complex. The agricultural agencies do not need to be located in the current county government complex. Grant funding is probably not an option due to the lack of grant opportunities.

## Current Stage of Project

The county purchased approximately 100 acres to the west of Central Carolina Community College's Pittsboro Campus for the Agriculture & Conference Center and future college expansion. On September 15, 2014 the Board of Commissioners awarded the base bid for the project and construction began November 17, 2014. The contractor fell behind schedule and several delays pushed back the anticipated opening date of the facility. Both sides of the building are close to completion and the Certificate of Occupancy (CO) is anticipated before the end of the year. The status of the fire pump and tank is the main impediment in the receipt of the CO. Manufacturing issues have delayed delivery, and the life safety systems will not allow people to occupy the facility until that equipment is in place.

## Description of Land Needs

The county purchased approximately 100 acres west of Pittsboro on US Business 64. The property would also be used for future expansion of CCCC. CCCC officials have been involved in master planning the site.

## Professional Services Needed

Architectural design and construction management were needed.

## Operating Impact

Additional funds will be needed for utilities, building maintenance, and expanded programs. Some of this cost would be offset by revenue from rental of the meeting spaces and facility.

# County Buildings – Renovation of Annex and Old Agriculture Building

Approved-No Contracts (Part)

FY 2013 to FY 2019: Renovate the old Agriculture Building and the Courthouse Annex for the Manager's Office, Finance, Tax, and Register of Deeds to expand into space vacated by the courts, Cooperative Extension, Soil and Water Conservation District, and the Farm Service Agency.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Construction	3,294,438	1,294,438	0	2,508,886	2,200,000	0	0	0	0	0	6,003,324
Contingency	200,000	0	0	250,889	220,000	0	0	0	0	0	470,889
Design, Engineering & Construction Ad	319,484	176,588	200,000	219,614	0	0	0	0	0	0	596,202
Furnishings & Equipment	249,080	94,580	0	103,000	163,770	0	0	0	0	0	361,350
<b>Total Project Element</b>	<b>4,063,002</b>	<b>1,565,606</b>	<b>200,000</b>	<b>3,082,389</b>	<b>2,583,770</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,431,765</b>
<b>Funding Source</b>											
Capital Reserves	338,348	0	0	1,728,143	0	0	0	0	0	0	1,728,143
Debt-Installment Purchase	521,542	0	0	166,861	2,583,770	0	0	0	0	0	2,750,631
Transfer from General Fund	3,203,112	1,565,606	200,000	1,187,385	0	0	0	0	0	0	2,952,991
<b>Total Funding Source</b>	<b>4,063,002</b>	<b>1,565,606</b>	<b>200,000</b>	<b>3,082,389</b>	<b>2,583,770</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,431,765</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	0	1,728,143	0	0	0	0	0	0	1,728,143
Debt Service	0	0	0	0	72,916	145,832	145,832	312,411	304,082	295,753	1,276,826
Transfer from Debt Reserve	0	0	0	0	-72,916	-145,832	-145,832	-312,411	-304,082	-295,753	-1,276,826
Transfer from General Fund	0	2,952,990	0	0	0	0	0	0	0	0	2,952,990
<b>Total Operating Effect</b>	<b>0</b>	<b>2,952,990</b>	<b>0</b>	<b>1,728,143</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,681,133</b>

## Define Problem

Many of the county's offices are located in rental space or have outgrown existing space. Excluding special-purpose buildings such as jail, courts, libraries, garage, and animal shelter, a space needs study completed in 2009 by the Wooten Company found:

- The County occupied more than 10,000 square feet in office/storage rental space (equivalent to \$120,000 per year in rent).
- The County needed an additional 20,000 square feet in office/storage space to meet immediate needs.
- An additional 37,000 square feet will be needed in 5 to 10 years.
- An additional 86,000 square feet will be needed in 20 years. The purchase of the Performance Building helped address about one-half of the short-term needs. Approximately 14,500 square feet is occupied, with the remainder of the building being rented out in the short term.

## Recommended Solution

When the Justice Center was complete, the clerk of court and district court moved into that building, freeing the Annex for additional county office space. Space needs accommodations are as follows:

- Register of deeds moved to the space occupied by the clerk of court.
- Tax expanded into area occupied by register of deeds.
- Manager's office expanded into district court.
- Renovation of the old Agriculture Building will allow the Tax Department to be housed in a single space with better accessibility for the public. Register of Deeds, will expand into the area currently occupied by the Tax Assessment Division.



- When the renovation of the Old Agriculture Building is complete, the upper western portion of the Annex will be renovated to allow Finance to expand, and improvements to the exterior of the building will be made to improve security and appearance.

## **Alternatives**

Many options exist for addressing space needs; however, a change to one project may have a chain reaction and change many projects and/or plans. The options presented address the major areas of concern noted in the space needs study and provide a reasonable foundation for the county to meet its space needs for the foreseeable future.

## **Current Stage of Project**

The Board of Commissioners approved proceeding with renovating the eastern half of the annex building, which was completed at the end of January 2014. The Manager's Office, including the County Attorney, is now consolidated in the expanded space, and the Register of Deeds office moved into the renovated space formerly occupied by the clerk of court. MIS moved into the space vacated by temporary superior court in the same timeframe. When the new Agriculture and Conference Center is complete, the old Agriculture building will be renovated, and the Tax department will move into the vacant space. This will accommodate the Tax Department's growing space needs and make them more visible and accessible to the public. After the Tax Department moves into their new space, renovation of the western half of the upper annex will begin. The area vacated by Tax will be left as is until a future tenant is identified. The mechanical room located in the Finance area will be relocated to the ground floor as part of the renovation to provide additional space for the Finance Department.

## **Relation to Other Projects**

The project is related to the Performance Building renovation, construction of the Justice Center, and construction of the new Agriculture and Conference Center. Together, these projects go a long way towards addressing the county's space needs. The renovations to the annex building could not occur if the justice center had not been constructed. The renovation of the Old Agriculture Building could not occur if the new Agriculture & Conference Center had not been constructed.

## **Professional Services Needed**

Detailed architectural drawings and construction management will be needed.

# Parks - Briar Chapel Park Improvements

Approved-No Contracts (Part)

Accept donation of the 62-acre Briar Chapel Park with existing regulation soccer, football, baseball, and softball field; fence and light the athletic fields; and construct a restroom/concessions building, trails, and other improvements over several phases using recreation fees paid by the Briar Chapel development.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Architectural Design & Construction Ad	18,950	18,950	0	0	0	0	0	0	0	0	18,950
Construction	0	0	0	0	0	0	0	0	0	0	0
Contingency	69,632	0	0	0	0	0	0	0	0	0	0
Engineering & Construction Administrati	73,499	0	0	0	0	0	0	0	0	0	0
Equipment	87,785	9,519	81,558	0	0	0	0	0	0	0	91,077
Facilities	1,166,087	637,818	132,699	246,938	0	433,490	0	0	0	0	1,450,945
Other Contracted Services	32,680	10,680	0	0	0	0	0	0	0	0	10,680
Permits & Connection Fees	12,600	0	0	0	0	0	0	0	0	0	0
Technology	17,300	0	0	0	0	0	0	0	0	0	0
<b>Total Project Element</b>	<b>1,478,533</b>	<b>676,967</b>	<b>214,257</b>	<b>246,938</b>	<b>0</b>	<b>433,490</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,571,652</b>
<b>Funding Source</b>											
Grants, Gifts, Etc.	250,000	0	0	110,969	0	0	0	0	0	0	110,969
Recreation Exaction Fee--Briar Chapel	1,228,533	676,967	214,257	135,969	0	433,490	0	0	0	0	1,460,683
<b>Total Funding Source</b>	<b>1,478,533</b>	<b>676,967</b>	<b>214,257</b>	<b>246,938</b>	<b>0</b>	<b>433,490</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,571,652</b>
<b>Operating Effect</b>											
Additional Revenues	0	0	0	-1,360	-1,360	-1,360	-2,040	-2,040	-2,040	-2,040	-12,240
Increased Operating Costs	0	123,697	86,181	87,818	90,376	93,009	107,953	111,115	114,373	117,730	932,252
<b>Total Operating Effect</b>	<b>0</b>	<b>123,697</b>	<b>86,181</b>	<b>86,458</b>	<b>89,016</b>	<b>91,649</b>	<b>105,913</b>	<b>109,075</b>	<b>112,333</b>	<b>115,690</b>	<b>920,012</b>

## Define Problem

As part of its conditional use permit (CUP), Briar Chapel development was required to construct a park. However, the CUP did not specify the level to which the facilities must be developed. Briar Chapel has constructed a 62-acre facility consisting of parking, roadways and a football, regulation soccer, and two baseball fields. The athletic fields lacked fencing, lighting, bleachers, and restroom and concessions that would make the fields optimal for use. Six years ago, Briar Chapel officials approached the county about giving the park to the county. Based on the 2009 Parks and Recreation Comprehensive Master Plan, many recreation facilities are needed in the county, including nine soccer fields, four football fields and five softball fields. Accepting the park from Briar Chapel and making improvements would alleviate part of this deficit. In addition, several athletic groups, including East Chatham Baseball, Chatham Soccer League, and East Chatham Football Association, have expressed interest in using the fields.

## Recommended Solution

Using recreation fees paid by Briar Chapel, the county would make improvements to the fields as fees are collected. The facilities will be constructed in priority order as funds become available through Briar Chapel recreation fees and possibly with grant money from Parks and Recreation Trust Fund (PARTF).

1. Fencing of all fields
2. Lighting of the football field
3. Restroom/concession building and supporting utilities

4. Lighting of the parking lots
5. Storage shed
6. Entrance sign and gate
7. Bleachers and benches for all fields
8. Soccer goals
9. Lighting of two baseball/softball fields
10. Dugouts, bases and pitching mounds
11. Walking trail
12. Scoreboard
13. Playground with shade structure
14. Directional signage

## Alternatives

The county could have chosen not to accept the park and allow Briar Chapel to operate it through its Homeowners Association. The CUP does require that the park be open to the public. Since there is no requirement that Briar Chapel develop the park beyond the state the county received it, the athletic facilities would be less than optimal. Fencing was needed on the baseball fields to keep balls from hitting spectators. The soccer field needed fencing to keep balls from rolling down a steep embankment. All athletic fields need bleachers for spectators. Without lighting, the fields can only be used during daylight hours. Without restroom and concession facilities, the park would not provide the amenities most participants and spectators expect and game play would be limited. In addition, the Building Inspections Division has stated that a restroom will be required.

## Current Stage of Project

Briar Chapel completed construction of the athletic fields, two gravel parking lots, and main entrance, paved the entrance road and constructed the entrance bridge. The county took ownership of the park in June 2012. Using recreation fees from Briar Chapel, the county completed fencing, lighting of the football field and gates. The restroom/concessions stand construction was completed in August 2015. By June 2017 soccer goals, bases, pitcher mounds, benches, concession equipment, dugouts, bleachers, and directional signage will be purchased, the scoreboard will be installed, and irrigation spray heads will be replaced.

The county applied for PARTF grant money for FY 2014 and FY 2015, but funding was not awarded. Another PARTF application will be submitted in May 2017 for the playground, walking trail, and picnic shelter. If the grant is not awarded, the county will construct these facilities as recreation fees collected from Briar Chapel permit.

Depending on the availability of recreation fees, the plan for FY 2020 includes construction of a new multipurpose field with lights, dugouts, paving, parking, restroom with storage, scoreboard, bleachers, and sidewalk to tie to the school connector.

## Relation to Other Projects

Improvements to Briar Chapel Park are related to construction of other parks. These facilities will provide the basic infrastructure for the county and community organizations to offer recreational programming, such as league play, in other areas of the county.

## Professional Services Needed

Architectural services were needed to design the restroom/concessions building. Engineering and construction administration will be needed for water and sewer connections and designing the remaining facilities. Existing county staff has provided oversight to construction and installation of other improvements.

## Operating Impact

Additional funds will be needed to operate and maintain the facility. Additional revenues will be realized from renting the concession stand and fields and from program fees.

# Parks - Northeast District

Completed

Develop a district park located in the northeast quadrant of the county on 66 acres located on Big Woods Road.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Construction	1,663,213	1,596,433	0	0	0	0	0	0	0	0	1,596,433
Contingency	0	0	0	0	0	0	0	0	0	0	0
Design, Engineering & Construction Ad	225,543	160,577	0	0	0	0	0	0	0	0	160,577
Equipment	31,372	23,382	3,178	0	0	0	0	0	0	0	26,560
Facilities	0	0	0	0	0	0	0	0	0	0	0
Land	1,382,287	1,382,287	0	0	0	0	0	0	0	0	1,382,287
Other Contracted Services	0	64,966	0	0	0	0	0	0	0	0	64,966
<b>Total Project Element</b>	<b>3,302,415</b>	<b>3,227,645</b>	<b>3,178</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,230,823</b>
<b>Funding Source</b>											
Capital Reserves	1,081,636	1,006,866	3,178	0	0	0	0	0	0	0	1,010,044
Grants, Gifts, Etc.	838,486	838,486	0	0	0	0	0	0	0	0	838,486
Interest	6	6	0	0	0	0	0	0	0	0	6
Recreation Exaction Fee	1,382,287	1,382,287	0	0	0	0	0	0	0	0	1,382,287
<b>Total Funding Source</b>	<b>3,302,415</b>	<b>3,227,645</b>	<b>3,178</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,230,823</b>
<b>Operating Effect</b>											
Additional Revenues	0	-1,000	-1,000	-1,000	-1,000	-1,000	-1,000	-1,000	-1,000	-1,000	-9,000
Increased Operating Costs	0	68,564	72,739	74,921	77,169	79,484	81,869	84,325	86,855	89,461	715,387
<b>Total Operating Effect</b>	<b>0</b>	<b>67,564</b>	<b>71,739</b>	<b>73,921</b>	<b>76,169</b>	<b>78,484</b>	<b>80,869</b>	<b>83,325</b>	<b>85,855</b>	<b>88,461</b>	<b>706,387</b>

## Define Problem

Based on the 2009 Parks and Recreation Comprehensive Master Plan, the county should construct a number of facilities to meet the recreation needs of county residents. When facilities at Northwest Park and Briar Chapel are complete, the county will still need seven lighted baseball fields, four lighted softball fields, three footballs, seven soccer fields, 14 picnic shelters, 16 playground activities, and 12 miles of trails, according to standards identified in the master plan. In addition, the northeast area of the county is growing faster than any other area in the county. In FY 2008, the county purchased approximately 66 acres on Big Woods Road in order to construct a park in the northeastern quadrant. The land purchase was funded from recreation fees. Construction included a baseball field, multi-purpose field, walking trail, shelter, playground, and needed infrastructure, such as parking and a concession/restroom building. The master plan calls for Phase 2 improvements to include a second restroom/concession building, a second playground, field lighting, a mini picnic shelter, additional one-quarter-mile walking trail and horseshoes.

## Recommended Solution

Between the facilities offered in the Southwest District Park, Briar Chapel, Northwest Park, and Northeast Park, the county would eliminate many of the facility deficits identified in the master plan and provide basic infrastructure for the Parks and Recreation Department to run its existing programs.

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## Alternatives

The county has already received a PARTF grant for Phase 1 and was obligated to construct the facilities as outlined in the agreement with the state. The main issue with this project is deciding whether Phase 2 should follow the recommendation of the master plan or be modified to include a recreation center, a more expensive option. Because of poor soils, staff recommends that Phase 2 not include the recreation center.

## Current Stage of Project

Phase 1 construction began October 2010 and was completed July 2011. A shed to store equipment for dragging and prepping fields and dugouts for the ball field were completed in September 2012. Bleachers were installed, but a permit for the scoreboard could not be issued due to conflicting interpretations of whether the bleachers met requirements of the American Disability Act (ADA). In August 2015, the county sold the existing bleachers and purchased three ADA-compliant bleachers. One set was installed at the multipurpose field and two were installed at the softball field. The bleacher project is complete. The scoreboard installation was finished in August 2016. Phase 1 is complete.

## Relation to Other Projects

The Northeast District Park's development is related to construction of the Southwest District Park, Northwest District Park, and Briar Chapel Park. These facilities will provide the basic infrastructure for the county to offer recreational programming, such as league play, in other areas of the county. Since funding is limited, the county must prioritize park improvements.

## Professional Services Needed

Design and engineering services and construction management were needed.

## Operating Impact

Additional funds were needed for park staff and grounds maintenance.

# Schools - Bleacher Replacements (Indoor)

Approved-No Contracts (Part)

Renovate and/or install new indoor bleachers at Chatham Central, Jordan-Matthews, J.S. Waters, Moncure, and Horton Middle.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Construction	392,088	119,838	0	0	272,250	0	0	0	0	0	392,088
<b>Total Project Element</b>	392,088	119,838	0	0	272,250	0	0	0	0	0	392,088
<b>Funding Source</b>											
Capital Reserves	0	0	0	0	272,250	0	0	0	0	0	272,250
General Fund Fund Balance	392,088	119,838	0	0	0	0	0	0	0	0	119,838
<b>Total Funding Source</b>	392,088	119,838	0	0	272,250	0	0	0	0	0	392,088
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	68,032	68,032	68,032	68,063	0	0	0	0	0	272,159
<b>Total Operating Effect</b>	0	68,032	68,032	68,032	68,063	0	0	0	0	0	272,159

### Define Problem

The high schools are still using bleachers that were installed in the 1950s. The bleachers at J. S. Waters, Moncure, and Horton Middle are the original bleachers from when these schools were built in the 1950s. The age of the bleachers makes it difficult to obtain parts to keep them operating properly. Within the next five to 10 years parts will be very difficult, if not impossible, to obtain.

### Recommended Solution

Renovate and/or install new indoor bleachers to comply with recommendations of the bleacher inspector and reduce liability.

### Current Stage of Project

Chatham Central and Jordan-Matthews High Schools replacements are complete. J.S. Waters, Moncure and Horton Middle are scheduled for FY 2019.

### Relation to Other Projects

The project is related to the Northwood renovation project.

# Schools - Joint School Bus & County Garage

Substantially Complete

Build a new 33,196 square-foot garage to be shared by the county and Chatham County Schools.

Project Budget	Budget	Current		Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	Project Totals
		Prior to FY 2017	Year: FY 2017								
<b>Project Element</b>											
Architectural Design & Construction Ad	692,687	583,029	17,244	0	0	0	0	0	0	0	600,273
Construction	6,297,153	5,632,253	506,801	0	0	0	0	0	0	0	6,139,054
Contingency	774,854	0	50,000	0	0	0	0	0	0	0	50,000
Equipment	27,500	48,379	0	0	0	0	0	0	0	0	48,379
Financing Costs	0	56,747	0	0	0	0	0	0	0	0	56,747
Other Contracted Services	207,806	0	0	0	0	0	0	0	0	0	0
Pay Interest (from Bond Premium)	0	0	104,930	0	0	0	0	0	0	0	104,930
Transfer to Agriculture Project	0	0	1,000,617	0	0	0	0	0	0	0	1,000,617
<b>Total Project Element</b>	<b>8,000,000</b>	<b>6,320,408</b>	<b>1,679,592</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,000,000</b>
<b>Funding Source</b>											
Bond Premium	0	0	825,000	0	0	0	0	0	0	0	825,000
Debt--Limited Obligation Bonds	8,000,000	6,320,408	854,592	0	0	0	0	0	0	0	7,175,000
<b>Total Funding Source</b>	<b>8,000,000</b>	<b>6,320,408</b>	<b>1,679,592</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,000,000</b>
<b>Operating Effect</b>											
Debt Service	0	328,574	638,914	624,420	609,516	740,800	571,983	556,057	539,321	766,574	5,376,159
Decreased Operating Costs	0	0	-175,619	-180,887	-186,314	-191,903	-197,660	-203,590	-209,698	-215,989	-1,561,660
Increased Operating Costs	0	0	276,673	256,545	264,241	272,168	280,333	288,743	297,407	306,328	2,242,438
Transfer from Debt Reserve	0	-328,574	-638,914	-624,420	-609,516	-740,800	-571,983	-556,057	-539,321	-766,574	-5,376,159
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>101,054</b>	<b>75,658</b>	<b>77,927</b>	<b>80,265</b>	<b>82,673</b>	<b>85,153</b>	<b>87,709</b>	<b>90,339</b>	<b>680,778</b>

## Define Problem

A needs assessment and building program completed by a consultant in 2011 found that both the county and school garage facilities were undersized, inefficient for operations and outdated. The consultant recommended that both facilities be replaced.

The existing county garage is 2,415 square feet and is in very poor condition. The consultant found that the garage should be approximately 4,293 square feet to provide adequate service. Some of the issues found with the county facility include:

- Overall, the county garage is in poor condition
- There is insufficient storage space
- Flies are a problem during summer months, presumably due to the facility's location at the closed landfill
- The parking area is not paved, which creates a lot of dust and dirt settlement within the building.
- There is no customer waiting area or restroom.
- The existing bay spaces get crowded when two vehicles are being worked on simultaneously.
- A dedicated, organized, and adequately sized parts room is needed.

# Schools - Joint School Bus & County Garage

Substantially Complete

The existing school garage is 10,628 square feet on four acres and is inadequate. The consultant found that the garage should be approximately 21,546 square feet to provide adequate service.

Some of the issues found with the existing school building include:

- The building overall and the dimensions of usable space within the bus garage are inadequate for servicing the 128-bus and 72-vehicle fleet. The facility has four bus bays and a half bay with a short door for fleet vehicles.
- Additional space is needed for parking buses (the existing facility does not have enough property for all buses to be housed at the garage during the summer). Approximately 12 acres is needed for the current bus and vehicle fleet.
- Office space is inadequate in size and configuration for the responsibilities assigned.
- The bus bays are too short to accommodate the new large capacity buses
- There are no permanently installed indoor bus vehicle lifts.
- The outdoor “bus lift” consists of four moveable, independently adjusted hydraulic jacks set outdoors
- An adequately sized and dedicated tire changing room and a significantly larger and separate tire storage area are needed
- The garage does not have a bay or area available to do body work.
- The parts room is too small to accommodate an adequate inventory of bus and fleet vehicle parts.
- The department would benefit from having a formal conference/meeting room.
- A large multipurpose/meeting room on the premises would prove efficient for transportation staff training as well as for bus driver training.
- Restrooms are not ADA compliant.

The regional director has stated that the Chatham County Schools bus garage is the worst in the entire region.

## **Recommended Solution**

Build a joint garage facility to be shared by the county and Chatham County Schools. The facility could provide service for school buses, fleet vehicles for both the county and school system, and also large county solid waste and utility vehicles. Because the school system is a larger operation, the new joint garage would be operated by the schools with financial assistance from the county.

## **Alternatives**

Approximately one million dollars can be saved if the county’s portion of the project is removed. The school system had proposed giving the county the existing bus garage.

## **Current Stage of Project**

Construction is complete. Punch list close-out is in progress. The move in date for the school side was April of 2016. The county moved in July of 2016.

## **Description of Land Needs**

Twelve to 25 acres will be needed in a centralized location, preferably along US 64 between Pittsboro and Siler City, where buses and large trucks could easily enter and exit the facility. The county already owns land near the closed landfill that will be used for this purpose.

## **Professional Services Needed**

Architectural and engineering services were needed.



# Schools - Locker Room Renovations

Approved-No Contracts

Renovate the locker rooms at Jordan Matthews, Chatham Central, Moncure, JS Waters, and Northwood schools.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Construction	662,800	0	0	275,000	287,500	96,000	360,000	0	0	0	1,018,500
Contingency	66,280	0	0	27,500	28,750	9,600	0	0	0	0	65,850
<b>Total Project Element</b>	<b>729,080</b>	<b>0</b>	<b>0</b>	<b>302,500</b>	<b>316,250</b>	<b>105,600</b>	<b>360,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,084,350</b>
<b>Funding Source</b>											
Capital Reserves	729,080	0	0	302,500	316,250	105,600	360,000	0	0	0	1,084,350
<b>Total Funding Source</b>	<b>729,080</b>	<b>0</b>	<b>0</b>	<b>302,500</b>	<b>316,250</b>	<b>105,600</b>	<b>360,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,084,350</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	129,308	153,759	200,321	200,321	200,321	200,321	0	0	0	1,084,351
<b>Total Operating Effect</b>	<b>0</b>	<b>129,308</b>	<b>153,759</b>	<b>200,321</b>	<b>200,321</b>	<b>200,321</b>	<b>200,321</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,084,351</b>

## Define Problem

The dressing/locker rooms in some of our schools require renovation to meet current standards. Floors are cracked, thus causing tripping hazards; restroom facilities are inadequate; and home and visiting teams share one restroom. Some of the shower areas are in disrepair. While they are functional, they are not of the same quality as the rest of the building. Lockers in the male dressing rooms require renovation, and in one case, they are made of wood which can absorb germs and bacteria.

## Recommended Solution

The school system requests to renovate the locker rooms to bring them up to the standards of the rest of the district's gyms. In the last few years, the school system has replaced flooring, installed energy efficient lighting, replaced bleachers, repainted, renovated restrooms, added concession areas, enhanced entranceways, and installed HVAC in the high school gyms. This final project will bring all aspects of the gyms to the same quality.

## Current Stage of Project

Northwood High School had not been included in this project pending a decision about whether to expand Northwood or build a new high school. Since Northwood will not be expanded, the locker room will need to be renovated to maintain quality.

## Professional Services Needed

Architectural and engineering services will be needed.

# Schools - Mobile Classrooms

Approved-No Contracts

Purchase modular classrooms to alleviate overcrowding at Siler City Elementary, Northwood High School, and other schools as space is needed.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Construction	293,000	155,040	0	357,835	160,000	160,000	0	0	0	0	832,875
Design, Engineering & Construction Ad	80,150	25,125	0	0	0	0	0	0	0	0	25,125
Other Contracted Services	4,850	0	0	0	0	0	0	0	0	0	0
<b>Total Project Element</b>	<b>378,000</b>	<b>180,165</b>	<b>0</b>	<b>357,835</b>	<b>160,000</b>	<b>160,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>858,000</b>
<b>Funding Source</b>											
Capital Reserves	112,662	180,165	0	357,835	160,000	160,000	0	0	0	0	858,000
Transfer from Water Capital Reserve	265,338	0	0	0	0	0	0	0	0	0	0
<b>Total Funding Source</b>	<b>378,000</b>	<b>180,165</b>	<b>0</b>	<b>357,835</b>	<b>160,000</b>	<b>160,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>858,000</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	53,331	59,331	248,446	248,446	248,446	0	0	0	0	858,000
Increased Operating Costs	0	6,377	9,757	14,058	20,671	30,857	31,783	32,736	33,718	34,730	214,687
<b>Total Operating Effect</b>	<b>0</b>	<b>59,708</b>	<b>69,088</b>	<b>262,504</b>	<b>269,117</b>	<b>279,303</b>	<b>31,783</b>	<b>32,736</b>	<b>33,718</b>	<b>34,730</b>	<b>1,072,687</b>

## Define Problem

With one NC certified megasite in the western side of the county, another megasite being readied in the southeast, and the Chatham Park development coming in Pittsboro, Chatham County is on the brink of unprecedented growth.

Some schools, particularly Siler City Elementary and Northwood High School, are currently overcrowded. Siler City Elementary, with a brick and mortar capacity of 671 and a serviceable capacity of 768, currently has an average daily membership of 699. The school is floating seven English-as-a-second-language (ESL) classes, one art class, one academically or intellectually gifted (AIG) class, one-half of a music teacher and one-half of a physical education teacher.

Northwood High School has a brick and mortar capacity of 1,005 and a serviceable capacity of 1,330. The current average daily membership is 1,289. In addition to classroom space, Northwood needs more cafeteria and office space for teachers, counselors, and administrators.

A short-term solution to overcrowding is needed to provide the schools with additional space and give the school system time to develop a plan that will account for the impending growth.

## Recommended Solution

Purchase twelve modular classrooms; three for Siler City Elementary, one for Northwood High School, and eight to be placed as needed over the next three years.

## Alternatives

One alternative to purchasing modular classrooms is to immediately redistrict student attendance zones.

# Schools - Mobile Classrooms

Approved-No Contracts

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## **Current Stage of Project**

Four modular classrooms were purchased and set up during the summer of 2015. Three are located at Siler City Elementary and one at Northwood High School. All are currently being used as classroom spaces.

## **Professional Services Needed**

Architectural and engineering design services will be needed.

## **Operating Impact**

Additional funds will be needed for utilities to operate the modular classrooms.

# Schools - New Central Services Building

New

Construct a new building for Central Services.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Construction	0	0	0	0	0	0	1,487,640	2,550,240	212,520	0	4,250,400
Construction Administration	0	0	0	0	0	0	27,048	46,368	11,592	0	85,008
Contingency	0	0	0	0	0	0	148,764	255,024	21,252	0	425,040
Design, Engineering & Construction Ad	0	0	0	0	0	42,504	212,520	0	0	0	255,024
Equipment	0	0	0	0	0	0	0	247,940	49,588	0	297,528
Financing Costs	0	0	0	0	0	0	0	166,667	0	0	166,667
Other Contracted Services	0	0	0	0	0	4,904	58,852	58,852	4,904	0	127,512
<b>Total Project Element</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>47,408</b>	<b>1,934,824</b>	<b>3,325,091</b>	<b>299,856</b>	<b>0</b>	<b>5,607,179</b>
<b>Funding Source</b>											
Debt	0	0	0	0	0	47,408	1,934,824	3,325,091	299,856	0	5,607,179
<b>Total Funding Source</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>47,408</b>	<b>1,934,824</b>	<b>3,325,091</b>	<b>299,856</b>	<b>0</b>	<b>5,607,179</b>
<b>Operating Effect</b>											
Debt Service	0	0	0	0	0	0	99,750	799,500	778,500	757,500	2,435,250
Increased Operating Costs	0	0	0	0	0	0	0	24,598	25,336	26,096	76,030
Transfer from Debt Reserve	0	0	0	0	0	0	-99,750	-799,500	-778,500	-757,500	-2,435,250
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24,598</b>	<b>25,336</b>	<b>26,096</b>	<b>76,030</b>

## Define Problem

The existing Central Services Building has exceeded its capacity resulting in the creation of inefficient satellite offices around the county. In addition, a 2014 facility conditions assessment indicates the building has surpassed its intended lifespan and is in need of costly repairs. The necessary repairs do not address the space issue.

Recent student population projections for Horton Middle School indicate that school space currently occupied by Central Services personnel will be required for classroom use beginning with FY 2021.

## Recommended Solution

Construct a new central services building to accommodate all departments in one location. The county is interested in purchasing the old bus garage site. The school system has agreed that instead of a cash purchase, the funds can be used for the Central Services Building, essentially offsetting that cost.

## Alternatives

Repair existing building and continue to operate with inefficient satellite offices.

# Schools - New Central Services Building

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New

## **Professional Services Needed**

Architectural design, construction, and engineering services will be needed.

## **Operating Impact**

Additional funds will be needed for equipment, supplies, and maintenance.

# Schools - New High School

Approved-No Contracts

Construct a new high school in the northeast quadrant of the county to open August of 2021 to address overcrowding and provide for the expected growth in the high school student population. The new high school will be built to accommodate up to 1,200 students initially, with the core capacity sized to accommodate 1,400 students.

Project Budget	Budget	Prior to FY 2017	Current	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	Project Totals
			Year: FY 2017								
<b>Project Element</b>											
Architectural Design & Construction Ad	1,932,001	0	656,722	1,497,787	0	0	0	0	0	0	2,154,509
Construction	47,508,428	0	0	0	18,983,354	19,129,380	16,500,916	0	0	0	54,613,650
Contingency	3,900,674	0	0	0	925,444	932,563	804,425	0	0	0	2,662,432
Engineering & Construction Administrati	828,000	0	0	0	235,763	237,576	236,670	8,161	0	0	718,170
Financing Costs	0	0	0	0	166,667	0	0	0	0	0	166,667
Furnishings & Equipment	2,375,421	0	0	0	0	536,520	3,190,885	0	0	0	3,727,405
Land	0	0	1,263,152	0	0	0	0	0	0	0	1,263,152
Other Contracted Services	525,762	0	0	152,139	299,668	301,973	300,820	10,373	0	0	1,064,973
Temporary Classrooms for Flex Space	0	0	0	0	0	0	0	0	0	0	0
<b>Total Project Element</b>	<b>57,070,286</b>	<b>0</b>	<b>1,919,874</b>	<b>1,649,926</b>	<b>20,610,896</b>	<b>21,138,012</b>	<b>21,033,716</b>	<b>18,534</b>	<b>0</b>	<b>0</b>	<b>66,370,958</b>
<b>Funding Source</b>											
Debt--Limited Obligation Bonds	57,070,286	0	1,919,874	1,649,926	20,610,896	21,138,012	21,033,716	18,534	0	0	66,370,958
<b>Total Funding Source</b>	<b>57,070,286</b>	<b>0</b>	<b>1,919,874</b>	<b>1,649,926</b>	<b>20,610,896</b>	<b>21,138,012</b>	<b>21,033,716</b>	<b>18,534</b>	<b>0</b>	<b>0</b>	<b>66,370,958</b>
<b>Operating Effect</b>											
Debt Service	0	0	0	0	1,677,071	3,354,141	3,354,141	7,185,457	6,993,891	6,802,326	29,367,027
Increased Operating Costs	0	0	0	0	0	0	0	2,082,768	2,145,251	2,209,609	6,437,629
Transfer from Debt Reserve	0	0	0	0	-1,677,071	-3,354,141	-3,354,141	-7,185,457	-6,993,891	-6,802,326	-29,367,027
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,082,768</b>	<b>2,145,251</b>	<b>2,209,609</b>	<b>6,437,629</b>

## Define Problem

The building of new schools is a complex process. An important step in the process is the determination of location, size, and timing (i.e., when does the projected enrollment necessitate a new school). To that end, Chatham County Schools has continued its long-standing relationship with the Operations Research/Education Laboratory of North Carolina State University (OR/Ed) to assist in making fiscally responsible, timely, and appropriate decisions. OR/Ed consultants have conducted interviews with planning and permitting personnel, verifying and updating (as necessary) growth projection and optimization scenarios.

In 2007, a study conducted by OR/Ed determined that Northwood and Jordan-Matthews had reached their brick and mortar capacities. This study recommended that a new high school be constructed in the northeast part of the county to alleviate overcrowding

Since 2007, additions have been added to both schools to meet this growth. At Jordan-Matthews, a new cafeteria was added, the existing cafeteria was renovated to create additional classroom space, and additional classroom modular units were placed on the campus. At Northwood, an eight-classroom modular building and a new Fine Arts wing were added as well.

Between 2007 and 2011, population growth in Chatham slowed, and construction of a new high school was pushed back in order to ensure that completion of the school would be accompanied by the necessary student population. One of the main goals was to make sure programming was not diminished at Northwood High School.

### **Recommended Solution**

Construct a new high school in the northeast quadrant of the county to open August of 2021 to address overcrowding and provide for the expected growth in the high school student population. The new high school will be built to accommodate up to 1,200 students initially, with the core capacity sized to accommodate an additional 200 students.

School administration staff is exploring the possibility of creating a three-year modular school on the construction site to house a 9th grade academy and provide earlier capacity relief to Northwood High School.

### **Alternatives**

1. Build an addition to Northwood to expand the brick and mortar capacity to 1,500 students to provide a temporary solution to the need for an additional high school. However, based on OR/Ed projections, even with an expansion, Northwood could exceed the expanded capacity in less than ten years.
2. Redistrict the entire district at the high school level to make use of empty seats in the western part of the county. Note that this will negatively impact transportation-related issues (length of ride, efficiency ratings, etc.).
3. Do nothing and continue adding modular units to Northwood.

### **Current Stage of Project**

An architectural contract has been awarded for construction of a new high school, and the schematic design is complete and has been endorsed by the Board of Education. If the new capacity scenario (i.e., built to serve 1,200 and cored for 1,400 students, instead of the previously approved 1,000/1,200) is approved, the design will be adjusted to address the additional capacity.

### **Description of Land Needs**

An appropriately located 75-acre site has been identified and approved by the Board of Education as its preferred location for the new high school. Due diligence work (i.e., traffic study, soil borings, environmental assessments, etc.) is underway and is expected to be concluded by December 2016.

### **Professional Services Needed**

Detailed architectural drawings and construction management will be needed.

### **Operating Impact**

Additional funds will be needed for utilities, maintenance, and locally funded personnel.

# Schools - Northeast Elementary School

Approved-No Contracts

Construct a 96,827-square-foot elementary school in the northeastern area of Chatham County to open in August 2020.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Architectural Design & Construction Ad	1,028,828	0	17,119	1,112,742	0	0	0	0	0	0	1,129,861
Construction	23,801,494	0	0	0	11,560,952	9,960,204	0	0	0	0	21,521,156
Contingency	2,380,149	0	0	0	578,048	498,010	0	0	0	0	1,076,058
Engineering & Construction Administrati	352,941	0	0	0	185,457	186,883	4,280	0	0	0	376,620
Financing Costs	0	0	0	0	166,667	0	0	0	0	0	166,667
Furnishings & Equipment	1,935,625	0	0	0	228,255	1,278,226	0	0	0	0	1,506,481
Land & Easements	600,000	0	750,000	0	0	0	0	0	0	0	750,000
Other Contracted Services	457,270	0	0	86,085	169,561	170,865	3,913	0	0	0	430,424
<b>Total Project Element</b>	<b>30,556,307</b>	<b>0</b>	<b>767,119</b>	<b>1,198,827</b>	<b>12,888,940</b>	<b>12,094,188</b>	<b>8,193</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26,957,267</b>
<b>Funding Source</b>											
Debt--Limited Obligation Bonds	30,556,307	0	767,119	1,198,827	12,888,940	12,094,188	8,193	0	0	0	26,957,267
<b>Total Funding Source</b>	<b>30,556,307</b>	<b>0</b>	<b>767,119</b>	<b>1,198,827</b>	<b>12,888,940</b>	<b>12,094,188</b>	<b>8,193</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26,957,267</b>
<b>Operating Effect</b>											
Debt Service	0	0	0	0	704,856	1,409,712	1,409,712	3,019,975	2,939,462	2,858,948	12,342,665
Increased Operating Costs	0	0	0	0	0	0	1,309,980	1,349,279	1,389,757	1,431,450	5,480,466
Transfer from Debt Reserve	0	0	0	0	-704,856	-1,409,712	-1,409,712	-3,019,975	-2,939,462	-2,858,948	-12,342,665
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,309,980</b>	<b>1,349,279</b>	<b>1,389,757</b>	<b>1,431,450</b>	<b>5,480,466</b>

## Define Problem

Research and Education Laboratory at North Carolina State University (OR/Ed) has projections for North Chatham Elementary that indicate the school will exceed brick and mortar capacity in the next five years. Perry Harrison's current enrollment has outpaced OR/Ed projections and will exceed serviceable capacity in the same amount of time. These same projections show an addition 250 students at these two schools in the next ten years without factoring in growth escalation and the potential impact of Chatham Park. Both schools provide space for pre-K students as well as regular elementary school students. Chatham Park is proposing to begin building homes in the area north of US 64 sometime in the next two years. Construction of a new Northeast Elementary school is needed to meet this growth in a timely fashion.

## Recommended Solution

Build a new elementary school in the northeast area of the county to be sized to meet existing growth and the anticipated onset of Chatham Park.

## Alternatives

1. Continue adding modular classrooms to North Chatham and Perry Harrison to provided needed classroom spaces. This does not address the related core (cafeteria, media center, counseling, traffic, etc.) capacity issues.
2. Build additions to North Chatham and Perry Harrison to address foreseeable classroom and core capacity needs on campuses with limited space for new construction.
3. Do nothing and negatively impact educational opportunities



# Schools - Northeast Elementary School

Approved-No Contracts

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## **Current Stage of Project**

At their September 12, 2016 meeting, the Chatham County Schools Board of Education approved siting the Northeast Elementary School on a parcel of land located on Andrews Store Road. Currently the site is undergoing due diligence to determine the feasibility of constructing the school at this location.

## **Description of Land Needs**

Approximately 15 to 20 buildable acres will be needed.

## **Professional Services Needed**

Planning, design, engineering and architectural services will be needed.

## **Operating Impact**

Additional funds will be needed for utilities to operate the school.

# Schools - Northwood High School Auditorium HVAC Replacement

Approved-No Contracts

Replace heating ventilation and air-conditioning (HVAC) at Northwood High School Auditorium.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Construction	150,000	0	0	210,000	0	0	0	0	0	0	210,000
Contingency	15,000	0	0	15,000	0	0	0	0	0	0	15,000
<b>Total Project Element</b>	165,000	0	0	225,000	0	0	0	0	0	0	225,000
<b>Funding Source</b>											
Capital Reserves	165,000	0	0	225,000	0	0	0	0	0	0	225,000
<b>Total Funding Source</b>	165,000	0	0	225,000	0	0	0	0	0	0	225,000
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	165,000	0	60,000	0	0	0	0	0	0	225,000
<b>Total Operating Effect</b>	0	165,000	0	60,000	0	0	0	0	0	0	225,000

## Define Problem

The HVAC system at Northwood Auditorium is over thirty years old and has exceeded its lifecycle. The system is deteriorating rapid, failure is imminent, and parts have become unavailable. The system must be replaced to continue intended use of the auditorium.

## Recommended Solution

Replace existing obsolete, chilled water system and unit heaters.

## Current Stage of Project

The NHS Auditorium HVAC design is being re-evaluated to meet budget restraints. Construction was estimated to begin February 2016. However, project estimates indicate the need for additional funding. Therefore, construction has been delayed to FY 2018.

## Professional Services Needed

Design and/or engineering services will be needed.

# Schools - Northwood High School Paving Overlay

New

Repair pot holes and cracks in the pavement at Northwood High School in FY 2019.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Construction	0	0	0	0	171,820	0	0	0	0	0	171,820
Contingency	0	0	0	0	17,182	0	0	0	0	0	17,182
<b>Total Project Element</b>	0	0	0	0	189,002	0	0	0	0	0	189,002
<b>Funding Source</b>											
Capital Reserves	0	0	0	0	189,002	0	0	0	0	0	189,002
<b>Total Funding Source</b>	0	0	0	0	189,002	0	0	0	0	0	189,002
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	0	94,501	94,501	0	0	0	0	0	189,002
<b>Total Operating Effect</b>	0	0	0	94,501	94,501	0	0	0	0	0	189,002

## Define Problem

Current student and bus parking areas at Northwood High School are in need of immediate attention in the form of repair and a paving overlay. A review of paving at all schools determined that these two areas are the most in need of immediate attention across the district

## Recommended Solution

Overlay the student and bus parking lots at Northwood High School.

## Alternatives

If nothing is done the cracks and pot holes will grow worse and more extensive paving repair will be needed.

# Schools - Perry Harrison Elementary School Traffic Pattern

New

Improve the traffic pattern at Perry Harrison Elementary in FY 2019.

Project Budget	Budget	Current		Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	Project Totals
		Prior to FY 2017	Year: FY 2017								
<b>Project Element</b>											
Contingency	0	0	0	0	38,500	0	0	0	0	0	38,500
<b>Total Project Element</b>	0	0	0	0	38,500	0	0	0	0	0	38,500
<b>Funding Source</b>											
Capital Reserves	0	0	0	0	423,500	0	0	0	0	0	423,500
<b>Total Funding Source</b>	0	0	0	0	423,500	0	0	0	0	0	423,500
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	0	211,750	211,750	0	0	0	0	0	423,500
<b>Total Operating Effect</b>	0	0	0	211,750	211,750	0	0	0	0	0	423,500

## Define Problem

The student population at Perry Harrison Elementary School (over 700 students) continues to surpass rated capacity and contributes to traffic backing up on Hamlet Chapel Road in both directions. Due to a perceived increase in accidents at the intersection of Hamlet Chapel, Manns Chapel, and River Road, the NC Department of Transportation instituted a four-way stop, which is also contributing to this issue. Because this is a long-standing problem at PHES, we do not believe the opening of the new Northeast Elementary School and the subsequent decrease in student population will eliminate this situation.

## Recommended Solution

Implement a DOT recommended traffic pattern which will increase the queue line, reduce backup both on and off campus, and provide a potentially safer drop-off and pick-up situation for Perry Harrison students and their parents.

## Alternatives

- 1) Do nothing and continue allowing traffic to backup both on and off campus.
- 2) Hire an off-duty police officer to direct traffic twice daily. This alternative does not address the traffic backup issue.

## Professional Services Needed

Design and engineering services will be needed.

# Schools - Roof Replacements

Approved-No Contracts (Part)

Replace the roofs at JS Waters, SAGE Academy, Moncure, Administration Building, Horton Middle, Bennett, Pittsboro (remaining), Chatham Central High, North Chatham Elementary, Maintenance Department, Perry Harrison Elementary, Siler City Elementary, Jordan-Matthews High School, and Northwood High School.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Construction	7,010,802	3,267,355	1,778,564	131,400	559,200	0	0	0	0	0	5,736,519
Contingency	0	0	177,856	13,140	55,920	0	0	0	0	0	246,916
Design, Engineering & Construction Ad	83,410	306,377	112,983	13,700	42,450	0	0	0	0	0	475,510
Other Contracted Services	348	2,409	0	0	0	0	0	0	0	0	2,409
<b>Total Project Element</b>	<b>7,094,560</b>	<b>3,576,141</b>	<b>2,069,403</b>	<b>158,240</b>	<b>657,570</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,461,354</b>
<b>Funding Source</b>											
Capital Reserves	0	0	2,069,403	158,240	657,570	0	0	0	0	0	2,885,213
Debt--Installment Purchase	1,098,043	1,157,659	0	0	0	0	0	0	0	0	1,157,659
Transfer from General Fund	2,496,517	1,780,422	0	0	0	0	0	0	0	0	1,780,422
Transfer from Water Capital Reserve	3,500,000	638,060	0	0	0	0	0	0	0	0	638,060
<b>Total Funding Source</b>	<b>7,094,560</b>	<b>3,576,141</b>	<b>2,069,403</b>	<b>158,240</b>	<b>657,570</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,461,354</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	579,326	300,992	1,002,448	1,002,448	0	0	0	0	0	2,885,214
Transfer from General Fund	0	1,256,299	0	0	0	0	0	0	0	0	1,256,299
<b>Total Operating Effect</b>	<b>0</b>	<b>1,835,625</b>	<b>300,992</b>	<b>1,002,448</b>	<b>1,002,448</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,141,513</b>

## Define Problem

The school system replaced roofs in the worst condition with Qualified School Construction Bonds (QSCBs), including Bonlee (FY 2012), part of Pittsboro Elementary and Silk Hope (FY 2013). A roofing assessment conducted as part of the planning process for QSCBs found that many roofs in the system are in need of major replacement and repair in the near future.

## Recommended Solution

Repair of school roofs is prioritized ahead of other school system buildings. Based on limited funding, school and county administration have worked out a plan to phase the roofs as follows:

FY 2013: JS Waters funded with a combination of leftover Margaret Pollard funds and county fund balance.

FY 2014: SAGE Academy and Moncure School funded with a one-time windfall of motor vehicle taxes (resulting from the state collecting vehicle taxes four months earlier than counties)

FY 2015: Finished SAGE and Moncure. Administration and Horton Middle, funded with capital reserve.

FY 2016: Remainder of Horton Middle, Bennett, and Pittsboro funded with capital reserve.

FY 2017: Chatham Central and North Chatham funded with capital reserves.

FY 2018: Maintenance Department, Perry Harrison, and Siler City Elementary funded with capital reserves.

FY 2019: Jordan-Matthews and Northwood high schools funded with capital reserves.

## **Alternatives**

If repairs and replacements are not made, the school system will incur increasing roof maintenance costs and facility damage. When it rains hard, the school system must repair the damage caused by leaks.

## **Current Stage of Project**

J. S. Waters was completed April 1, 2014. Moncure and SAGE are complete. Punch list close-out is in progress for Horton and Administration. Design is complete for Bennett and Pittsboro Elementary, with an estimated construction completion of December 2016. Design is in progress for Chatham Central and North Chatham.

## **Relation to Other Projects**

When a roofing assessment was obtained, it showed that fewer roofs could be repaired with Qualified School Construction Bonds (QSCB) funds than originally estimated. The school system has submitted a separate request for the remaining repairs and replacements that the roofing assessment showed was needed.

# Schools - Wastewater Replacement at Silk Hope School

New

Replace wastewater system at Silk Hope Elementary School.

Project Budget	Budget	Current									Project Totals	
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024		
<b>Project Element</b>												
Construction	0	0	0	0	0	0	0	0	585,000	0	585,000	
Contingency	0	0	0	0	0	0	0	0	58,500	0	58,500	
<b>Total Project Element</b>	0	0	0	0	0	0	0	0	643,500	0	643,500	
<b>Funding Source</b>												
Capital Reserves	0	0	0	0	0	0	0	0	643,500	0	643,500	
<b>Total Funding Source</b>	0	0	0	0	0	0	0	0	643,500	0	643,500	
<b>Operating Effect</b>												
Contribution to Capital Reserve	0	0	0	0	0	0	214,500	214,500	214,500	0	643,500	
<b>Total Operating Effect</b>	0	0	0	0	0	0	214,500	214,500	214,500	0	643,500	

## Define Problem

The two main parts of the current Silk Hope School wastewater system are located approximately .5 miles apart, and one part is on privately-owned land. This arrangement was agreed upon several years ago without any easements being put in place. Two years ago, North Carolina Department of Environmental Quality (NCDEQ) made establishing this easement a part of the licensing renewal process. Due to the private landowner's past relationship with NCDEQ, finalizing this easement has proven to be difficult to achieve.

## Recommended Solution

Change to an updated and more efficient wastewater system which will be located entirely on school property.

## Alternatives

Do nothing and continue using the current outdated and less efficient system which is located partly on school property and partly on privately owned property.

## Professional Services Needed

Engineering services will be needed.

# Technology – Agriculture & Conference Audio/Visual Replacement

New

Replace all audio/visual equipment in the Chatham County Agriculture & Conference Center.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Contingency	0	0	0	0	0	0	0	0	0	27,225	27,225
Equipment	0	0	0	0	0	0	0	0	0	272,250	272,250
<b>Total Project Element</b>	0	0	0	0	0	0	0	0	0	299,475	299,475
<b>Funding Source</b>											
Capital Reserves	0	0	0	0	0	0	0	0	0	299,475	299,475
<b>Total Funding Source</b>	0	0	0	0	0	0	0	0	0	299,475	299,475
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	0	0	0	0	74,869	74,869	74,869	74,868	299,475
<b>Total Operating Effect</b>	0	0	0	0	0	0	74,869	74,869	74,869	74,868	299,475

## Define Problem

The Chatham County Agriculture & Conference Center AV infrastructure is newly installed in 2016. While all equipment The Chatham County Agriculture & Conference Center AV infrastructure is newly installed in 2016. While all equipment warranties and support are just beginning, over the next seven years degradation and problems will occur. By 2023, all functioning components will need replacing. Some items may fail before then, especially with extensive use, but those could be replaced with comparable items. Testing and monitoring of equipment, along with controlling access, will enable optimum life and functionality until the full replacement.

## Recommended Solution

Replace all audio/visual equipment in the Ag/Conference Center, including wiring that cannot be functionally verified at acceptable carrier levels. Racks are standard and are not anticipated to need replacing.

## Alternatives

1. Do nothing: Audio/Video equipment, like any hardware equipment has a limited functional life. AV equipment is commercial quality, but still susceptible to the effects of use, abuse, and age. As failures are reported, MIS evaluates and coordinates repairs. Each year, MIS reviews the infrastructure and evaluates the status in terms of existing strengths and weaknesses. Doing nothing would result in reports of malfunctions which may impact revenue generating events, which is unacceptable.
2. Replace equipment in total. The equipment is integrated, so efforts to decouple and replace components could cause more disruption than a full replace. Major failures caused by lack of proper equipment integration would be avoided with this approach and all equipment would be refreshed.
3. Replace components as they fail. This approach will be workable for the early years after initial install. This approach addresses failures as they occur. Matching parts would still remain mostly obtainable, as long as original manufacturers of the equipment are still in business. Failures would be expected to occur on a higher frequency and involve major components as time passes, especially after the five-year mark of 2021. The equipment would then be of differing ages and possibly of differing makes/models. This could cause some complexity in managing the equipment and hinder its effectiveness. These unexpected failures could impact usage during events and affect revenue.



## Technology – Agriculture & Conference Audio/Visual Replacement

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New

### **Operating Impact**

After the new equipment is installed, annual support would continue until the next upfit. This continued support is expected to be equivalent to support in existence prior to the upgrade.

# Technology - Body cameras

New

Purchase body cameras, servers, and media storage to capture use-of-force situations in a video format for the Sheriff's Office.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Equipment	0	0	0	79,401	112,376	31,860	0	0	0	0	223,637
<b>Total Project Element</b>	0	0	0	79,401	112,376	31,860	0	0	0	0	223,637
<b>Funding Source</b>											
Capital Reserves	0	0	0	79,401	56,188	15,930	0	0	0	0	151,519
Grants, Gifts, Etc.	0	0	0	0	56,188	15,930	0	0	0	0	72,118
<b>Total Funding Source</b>	0	0	0	79,401	112,376	31,860	0	0	0	0	223,637
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	0	50,506	50,506	50,506	0	0	0	0	151,518
Increased Operating Costs	0	0	0	0	0	0	96,194	122,490	34,727	104,851	358,262
<b>Total Operating Effect</b>	0	0	0	50,506	50,506	50,506	96,194	122,490	34,727	104,851	509,780

## Define Problem

Currently the Chatham County Sheriff's Office (CCSO) is involved in use-of-force situations that are not all captured on video. Video documentation of the use-of-force allows the CCSO to review, document, and share with the public and other criminal justice partners. Patrol officers were involved in 58 documented use-of-force situations in 2015, 89 in 2014, 118 in 2013, and 102 in 2012. This gives an average over a four-year period of 92 use-of-force events. Each use-of-force event is an encounter that has the potential to escalate from simple hands on a suspect for arrest to using lethal force. The body camera will document use-of-force situations and will be instrumental in evaluating use-of-force situations. The captured video will be valuable in guiding policy updates, enforcing policy, capturing evidence, and holding staff accountable in every use-of-force situation.

## Recommended Solution

The Sheriff requests the purchase of a total of 147 cameras in FY 2018. Because the cameras must be replaced every three years, the County Manager recommends phasing in the purchase of body cameras with all patrol deputies to receive cameras in FY2018. The remainder of Sheriff sworn personnel will get cameras in FY 2019 and 20 cameras will be available in the detention center in FY 2020. The Sheriff requested a camera for all detention officers, but cameras can be rotated for shared use among shifts. Grant funds should be pursued to help offset the cost of the cameras.

## Alternatives

There are three alternatives.

1. One option is to purchase body cameras for every deputy and detention officer that will capture video as the deputy sees the situation. This option also allows the capture of sound and further helps clarify the need for the use of force.
2. Another option is to continue to utilize in-car camera systems. Currently in-car camera systems are utilized by patrol, civil, and some court personnel. These cameras are effective in capturing vehicle pursuits and prisoner transports. However, they do not always capture use of force due to the position of the cameras in the vehicle. Most use-of-force situations will be out of view from the camera. Audio will be available only if the officer is still in range of the in-car camera system. Use-of-force situations away from car cameras, such as in buildings, are not captured. In-car camera systems are very costly, must be moved from car to car when a vehicle is taken off line, and are limited to field staff.
3. A third option is that the Sheriff's Office can continue to document use of force in written reports and utilize video captured by in-car camera systems.

### **Operating Impact**

Cameras will have to be updated and replaced on a regular schedule and there will be annual support and maintenance costs.

# Technology - Increase Capacity for Data Storage

Approved-No Contracts (Part)

Provide a secure storage system for the county's increasing data storage needs.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Equipment	1,039,744	315,838	0	0	0	723,906	0	0	0	0	1,039,744
<b>Total Project Element</b>	1,039,744	315,838	0	0	0	723,906	0	0	0	0	1,039,744
<b>Funding Source</b>											
Capital Reserves	767,862	43,956	0	0	0	723,906	0	0	0	0	767,862
General Fund Fund Balance	271,882	271,882	0	0	0	0	0	0	0	0	271,882
<b>Total Funding Source</b>	1,039,744	315,838	0	0	0	723,906	0	0	0	0	1,039,744
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	285,258	120,651	120,651	120,651	120,651	0	0	0	0	767,862
Decreased Operating Costs	0	-126,000	-126,000	-126,000	-126,000	-126,000	-126,000	-126,000	-126,000	-126,000	-1,134,000
General Fund Fund Balance	0	271,882	0	0	0	0	0	0	0	0	271,882
Increased Operating Costs	0	195,586	74,144	67,083	73,222	76,505	16,883	17,389	17,911	18,448	557,171
<b>Total Operating Effect</b>	0	626,726	68,795	61,734	67,873	71,156	-109,117	-108,611	-108,089	-107,552	462,915

## Define Problem

Chatham County's data storage needs continue to grow as more automation is introduced and existing systems continue to be used. Also increasing is the use and reliance on audio and video files for the jail, emergency operations center and recording of commissioner meetings. There is increasing interest in audio/video solutions, such as video-conferencing, which will continue to fuel storage needs. Public records retention laws require long-term storage. Data storage has grown exponentially, from 200 gigabytes in 2005 to 53,000 gigabytes in 2013, and 107,000 gigabytes (107 TB) in 2015. The MIS Department has revised policies to reduce storage needs. Storage usage is monitored closely to avoid reaching maximum capacity, and focused effort is being made to complete the domain migration project that will enable reclamation of space.

## Recommended Solution

The storage area network (SAN) in place is adequate to meet anticipated needs as long as additional space is added as needed and drives that go out of support are upgraded. Manufacturer end-of-sale for the existing core unit is expected in 2016. Five years after end of sale (FY 2021), the manufacturer will no longer support the equipment through its normal partner network. The core units should be replaced before 2021 to ensure optimum capacity and performance. The base equipment has been well maintained. New state-of-the-art drives have been added through a two-phase approach which increased the space needs and set the stage for elimination of older, slower drives.

A second SAN provides backup and duplication of the county's critical operations to ensure recovery in the event of a disaster. This structure has been serving the county well and has had complimentary upgrades to match the primary SAN; however, the secondary SAN does not have capacity to fully match the performance of the primary SAN and is not capable of running all county systems.

SAN space can be expanded as the county's data storage needs grow. A threshold of 80% usage is the point at which more space should be added. Replacements of drives need to be planned to occur near the time support expires.

# Technology - Increase Capacity for Data Storage

Approved-No Contracts (Part)

A third component of the county's data management system is server virtualization, a technology that enables one large server to function as multiple servers, thereby eliminating the one-to-one dependence of software to hardware. The virtual infrastructure and data storage infrastructure do not need to follow the same replacement and maintenance cycles. Data storage systems have longer life expectancies. The virtual infrastructure will be upgraded independent of data storage.

## Alternatives

The life expectancy of the SAN may be long enough to support a drive replacement strategy through 2020 instead of a full replacement as long as adequate vendor support for the overall device can be maintained. MIS will continue to work closely with the vendor to ensure adequate functionality of this critical set of equipment.

MIS is evaluating Internet-based 'cloud' solutions for long-term storage. Offsite storage of backups and long-term data that requires very little access would reduce the overall cost of county storage. Internet-access would be imperative for disaster recovery with a cloud storage solution, so Internet access and bandwidth are a primary concern when considering a cloud solution. Improvements in this area are underway, but more work remains to be done to achieve the stability and performance needed.

## Current Stage of Project

Phase one of the project was completed in July 2009 with the installation of the SAN. By leveraging the SAN and virtualization, MIS originally eliminated 19 physical servers. This trend continues as MIS is still expanding the use of the SAN on an annual basis to meet data needs. New software applications are evaluated for their ability to run in a 'virtual' environment. As of 2016, 107+ servers run virtually.

Phase two of the project was completed in October 2009 with the installation of a backup SAN to provide redundant storage and a disaster recovery (DR) site. Continued maintenance of the system has proceeded annually.

In 2014, the core controllers were upgraded to the most current available, with a projected life expectancy into 2020.

In 2015, new drives were installed and changes staged to eliminate drives known to soon go out of support.

In 2016, additional drive upgrades due to end of support were completed, and a full assessment of the systems was performed. Alternatives, specifically 'cloud' based storage, will be assessed to determine most economical choice for the future. New technologies will be explored to determine the direction onsite storage should take at the next full replacement point.

Removal of old domain data occurring from the 'Domain Migration Project' has freed up space. As a result of making the improvements, both SAN devices have remained in good shape. MIS will continue to monitor SAN usage reliability of drives and will continue to work with support vendor to ensure no loss of support occurs in planning for the future.

## Relation to Other Projects

This project is related to the Space Needs Study. When MIS was relocated to the former temporary superior court, the servers were powered down prior to the move. Careful planning and the purchase of the Site Recovery Manager (SRM) software resulted in a successful and trouble-free move that was transparent to county staff.

This project is also related to the new Integrated Public Sector Software project because it will increase data storage needs.

## Technology - Increase Capacity for Data Storage

Approved-No Contracts (Part)

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### Operating Impact

With the SAN and virtualization, the cost of purchasing and maintaining physical servers has, for the most part, been eliminated, and energy costs have been reduced. Dell, the manufacturer of the SAN, estimates that for every server virtualized there is a savings of 7,000kwh of electricity annually or about \$700 in energy costs, and a related reduction of carbon emissions. When the hardware is replaced MIS will pursue the most economical support strategy, which may be one of pre-purchased maintenance and support. This approach bundles maintenance and support into the purchase price of the equipment so there will be no unexpected additional charges for maintenance and support for five years.

# Technology - Integrated Public Sector Software

Purchase software specifically designed to support the public sector that integrates human resources and finance.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Equipment	1,500,000	853,994	40,000	160,200	0	0	0	0	0	0	1,054,194
Software	0	0	0	0	0	0	0	0	0	0	0
<b>Total Project Element</b>	<b>1,500,000</b>	<b>853,994</b>	<b>40,000</b>	<b>160,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,054,194</b>
<b>Funding Source</b>											
Transfer from Water Capital Reserve	1,500,000	853,994	40,000	160,200	0	0	0	0	0	0	1,054,194
<b>Total Funding Source</b>	<b>1,500,000</b>	<b>853,994</b>	<b>40,000</b>	<b>160,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,054,194</b>
<b>Operating Effect</b>											
Decreased Operating Costs	0	0	-34,710	-37,331	-38,451	-39,604	-40,793	-42,016	-43,277	-44,575	-320,757
Decreased Operating Costs (Utility Fun	0	0	0	-16,263	-16,751	-17,253	-17,771	-18,304	-18,853	-19,419	-124,614
Increased Operating Costs	0	74,702	78,437	82,359	86,477	90,801	95,341	100,108	105,114	110,369	823,709
Increased Operating Costs (Utility Fund)	0	11,888	12,483	13,107	13,762	14,450	15,173	15,931	16,728	17,564	131,085
<b>Total Operating Effect</b>	<b>0</b>	<b>86,590</b>	<b>56,210</b>	<b>41,872</b>	<b>45,037</b>	<b>48,394</b>	<b>51,950</b>	<b>55,719</b>	<b>59,712</b>	<b>63,939</b>	<b>509,423</b>

## Define Problem

The lack of integrated software to manage finance and human resources causes difficulty in managing accounting operations and personnel. In addition to the operational inefficiencies, the fragmented approach to software is difficult and costly to maintain and support.

While the functions of finance, accounting and human resources overlap in many areas, the software that currently supports these departments is not integrated and, in some cases, is antiquated and error-prone. For example, the lack of Human Resources (HR) software means that employee status changes must be manually entered into the accounting (payroll) software. Employee status information and job applications are maintained on Excel spreadsheets. The software used to track training was developed in-house using an outdated version of Microsoft Access. The accounting software runs on a mainframe and is backed up on tape drives.

## Recommended Solution

Purchase and install integrated Enterprise Resource Planning (ERP) software including financial, payroll, human resource management and utility billing modules that will allow the county to manage its core functions with a single application. The software is modular and can be expanded to incorporate additional county processes in the future.

## Current Stage of Project

A cross-functional team with representatives from the County Manager's Office, Finance, Human Resources, and MIS conducted a review of software offerings including visits and interviews with other counties to benchmark available software. The team selected Tyler Technologies, a vendor whose Munis software is used extensively by NC local governments. The implementation process has begun and Finance went live in March 2015. HR implementation began in April 2015 and went live in January 2016. The software will be upgraded to the most current supported version late in FY 2017, with roll out of the utility module estimated to begin in FY 2018.

**Professional Services Needed**

The vendor will provide project management and guidance throughout the installation, including business process consulting, conversion of current data, training and support.

**Operating Impact**

There will be annual maintenance and license support fees. The new software will computerize all human resource functions and integrate them with payroll. Outside vendors will also benefit from a more efficient and easy to use payment processing module.



# Technology - Justice Center Audio/Visual Replacement

Approved-No Contracts

Replace all audio/visual equipment in the Historic Courthouse and the Justice Center.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Contingency	42,350	0	0	0	0	0	0	0	42,350	0	42,350
Equipment	423,500	0	0	0	0	0	0	0	423,500	0	423,500
<b>Total Project Element</b>	<b>465,850</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>465,850</b>	<b>0</b>	<b>465,850</b>
<b>Funding Source</b>											
Capital Reserves	465,850	0	0	0	0	0	0	0	465,850	0	465,850
<b>Total Funding Source</b>	<b>465,850</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>465,850</b>	<b>0</b>	<b>465,850</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	66,550	0	0	0	133,100	133,100	133,100	0	465,850
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>66,550</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>133,100</b>	<b>133,100</b>	<b>133,100</b>	<b>0</b>	<b>465,850</b>

## Define Problem

The Historic Courthouse and Justice Center AV equipment was newly installed in 2012. Many of the equipment manufacture warranties are or soon will be expired and a general support contract is in development to address repairs and maintenance. Repairs are occasionally needed, but over the next three to five years the severity of failures is expected to increase. By 2023, the aging equipment will need to be fully replaced, if not sooner.

## Recommended Solution

Replace all audio/visual equipment in the Historic Courthouse and Justice Center, including wiring, that cannot be functionally verified at acceptable carrier levels. Racks are standard and are not anticipated to need replacing.

## Alternatives

1. Do nothing: Audio/Video equipment, like any hardware equipment has a limited functional life. AV equipment is commercial quality, but still susceptible to the effects of use, abuse, and age. As failures are reported, MIS evaluates and coordinates repairs. Each year, MIS reviews the infrastructure and evaluates the status in terms of existing strengths and weaknesses. Doing nothing would result in reports of malfunctions in operations in the courtrooms, which is unacceptable.
2. Replace equipment by courtroom, by floor, or some other area breakdown: Since much of the equipment is integrated, the efforts to decouple and replace smaller areas would likely cause more disruption than a full replace. If this approach were used, it is likely that the costs of some areas could be included in the annual operating budget, thereby addressing replacements somewhat sooner. Potential major failures would be avoided with this approach and ultimately all equipment would be uplifted. However, the equipment would then be of differing ages and possibly of differing makes/models. This could cause some complexity and possibly hinder integration of building-wide systems.
3. Replace components as they fail: This is the method currently used as issues arise. This approach addresses failures as they occur. This is a workable method while the installation is still relatively recent. Matching parts are still mostly obtainable. Original manufacturers of the equipment are still in business. Failures would be expected to occur on a higher frequency and involve major components as time passes, especially after the five-year mark of 2017. These unexpected failures could impact usage and court functions.

## **Operating Impact**

After the new equipment is installed, annual support would continue until the next uplift. This continued support is expected to be equivalent to support in existence prior to the upgrade.

# Technology - Social Services Software

Approved-No Contracts

Purchase additional software for the Department of Social Services (DSS).

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Furnishings & Equipment	8,935	0	8,935	0	0	0	0	0	0	0	8,935
Other Contracted Services	186,470	0	76,467	119,603	0	0	0	0	0	0	196,070
Software Expense	82,050	0	44,430	44,430	0	0	0	0	0	0	88,860
<b>Total Project Element</b>	<b>277,455</b>	<b>0</b>	<b>129,832</b>	<b>164,033</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>293,865</b>
<b>Funding Source</b>											
Capital Reserves	159,903	0	76,686	112,498	0	0	0	0	0	0	189,184
Federal & State Reimbursement	117,552	0	42,981	51,535	0	0	0	0	0	0	94,516
General Fund Operating Revenue	0	0	10,165	0	0	0	0	0	0	0	10,165
<b>Total Funding Source</b>	<b>277,455</b>	<b>0</b>	<b>129,832</b>	<b>164,033</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>293,865</b>
<b>Operating Effect</b>											
Additional Revenues	0	0	0	-6,254	-6,441	-6,635	-6,834	-7,039	-7,250	-7,468	-47,921
Contribution to Capital Reserve	0	0	84,952	104,232	0	0	0	0	0	0	189,184
Decreased Operating Costs	0	0	0	-4,807	-7,375	-7,549	-7,730	-7,916	-8,109	-8,309	-51,795
Increased Operating Costs	0	0	0	15,328	15,865	16,420	16,995	17,590	18,205	18,842	119,245
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>84,952</b>	<b>108,499</b>	<b>2,049</b>	<b>2,236</b>	<b>2,431</b>	<b>2,635</b>	<b>2,846</b>	<b>3,065</b>	<b>208,713</b>

## Define Problem

DSS currently operates with several different software systems, some of which have been modified by people no longer employed with the county and are difficult to maintain and support. For example, the agency uses Laserfiche (LF) for document storage and retrieval. This is a customized solution that requires someone with the appropriate skill set to modify. Not all programs have been scanned into LF and there are changes to existing programs that need to be made. This has been difficult for MIS and there has been no significant progress toward reducing reliance on paper and effectively using electronic records in over two years. DSS has been unable to make any changes or additions to the current document storage system (Laserfiche). There are not resources within our MIS Department to work effectively in this system, which has led to problems in adding new DSS programs into the system (e.g. child support and childcare subsidy) and to make modifications when needed. Hiring or contracting with someone who can customize our existing program is cost prohibitive and creates risk should that person leave or no longer be available.

## Recommended Solution

Evaluate software that will be more functional 'out-of-the-box' without significant customization that will serve as the controlling application for the agency and integrate operations including document storage, retrieval, and indexing. A more effective and efficient system could also slow the growth of staff in the face of increasing population growth and Medicaid (including applications from the Affordable Care Act) and Food and Nutrition Services caseloads.

## Alternatives

- 1) Do nothing. While the existing system is still technically functional, the difficulties in support and maintenance and the inability to make any additions to the system make this option unattractive. For some programs, information must be stored in two different places because a document may be required for a program that uses a paper record and a program that is in LF.
- 2) Contract with an agency or individual to provide updates and further customization and considering other document storage solutions. Further customization

will provide greater functionality than the existing system; however, this will also require ongoing and expensive costs to identify persons who have the required expertise. Sustaining a unique customized solution is a high-risk option. There would also need to be coordination with MIS Department in order for a contractor to be able to access the network, etc.

3) Evaluate replacement software that will provide the standardization and functionality required by DSS, and be easier to support and maintain.

### **Current Stage of Project**

DSS worked with MIS and other jurisdictions to identify the best solution. Northwoods is the most frequently utilized solution for DSS agencies in NC and has been identified to address the problems with the current document storage solution. Counties using Northwoods report being very happy with the product and emphasize the ease of utilization and time-saving benefits. Presently MIS and DSS are working together with Northwoods to develop a plan for implementation starting in FY 17. This will include a team comprised of MIS and DSS employees (both case worker/social workers and management) to plan for the transition to the new system. Some data from the AS400 (i.e. case number and person number) will be transferred into Northwoods so as not to require manual data entry on every case.

### **Professional Services Needed**

The software vendor would be expected to provide installation and training.

### **Operating Impact**

There will be annual maintenance and support fees.

# Technology - Tax Software

Approved-No Contracts

Replace current software with a system that will provide improved functionality for staff and the public.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Furnishings & Equipment	436,000	0	0	0	436,000	0	0	0	0	0	436,000
<b>Total Project Element</b>	436,000	0	0	0	436,000	0	0	0	0	0	436,000
<b>Funding Source</b>											
Capital Reserves	436,000	0	0	0	436,000	0	0	0	0	0	436,000
<b>Total Funding Source</b>	436,000	0	0	0	436,000	0	0	0	0	0	436,000
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	0	145,333	0	290,667	0	0	0	0	0	436,000
Increased Operating Costs	0	0	0	0	0	49,450	50,934	52,462	54,035	55,656	262,537
<b>Total Operating Effect</b>	0	0	145,333	0	290,667	49,450	50,934	52,462	54,035	55,656	698,537

## Define Problem

The current Tax Office software is based on out-of-date programming languages (COBOL, RPG) and runs on an old platform (AS 400) with limited storage space. Storage space is running out with only two slots open to add storage space. Also, because of the old technology, availability of support and maintenance programmers is very limited.

For normal appraisal usage, the software does not consider some of today's criteria (bedrooms, etc.) for appraising property.

The system is slow and it is difficult to develop the queries needed to provide information to the public and to county staff. Requests for information from the public have increased with the economic recovery, and it can take from several hours to several days to write a query that will retrieve the requested data. Queries also play a critical role in the development of the county budget by providing information on sales ratios, percent changes, value changes, high and low values, foreclosures by area, neighborhood, township, etc. They are also needed to assist in the collection of delinquent taxes by pulling areas of high delinquencies and mapping them to visit.

## Recommended Solution

Replace the existing tax software in approximately three to six years, depending on the county revaluation schedule. The replacement of tax software must be done so as not to effect revaluation.

## Alternatives

One alternative is to take no action at this time. However, given the uncertainty of continued support, and the need to replace software without affecting a revaluation, this approach could impact county operations.

Another alternative would be to develop custom software in-house, but the needed resource and skill is not available.

## Current Stage of Project

The Tax Office is reviewing software packages and talking to other counties to understand functionality, cost, customer satisfaction, and usability of tax software currently on the market.

# Technology - Tax Software

Approved-No Contracts

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## **Professional Services Needed**

The vendor will provide project management and guidance throughout the installation, including business process consulting, conversion of current data, training and support.

## **Operating Impact**

There will be annual maintenance and license support fees.

# Technology - Telephone System Replacement - Countywide

Approved-No Contracts (Part)

Replace the county's existing phone systems with a centralized system that will seamlessly connect all county departments.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Contingency	23,801	0	0	0	0	0	0	0	0	0	0
Equipment	238,013	75,483	114,000	55,000	0	0	0	0	0	0	244,483
<b>Total Project Element</b>	<b>261,814</b>	<b>75,483</b>	<b>114,000</b>	<b>55,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>244,483</b>
<b>Funding Source</b>											
Capital Reserves	261,814	75,483	114,000	55,000	0	0	0	0	0	0	244,483
General Fund Fund Balance	0	0	0	0	0	0	0	0	0	0	0
<b>Total Funding Source</b>	<b>261,814</b>	<b>75,483</b>	<b>114,000</b>	<b>55,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>244,483</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	192,909	34,452	34,452	0	0	0	0	0	0	261,813
Decreased Operating Costs	0	0	-5,844	-5,844	-5,844	-5,844	-5,844	-5,844	-5,844	-5,844	-46,752
General Fund Fund Balance	0	0	0	0	0	0	0	0	0	0	0
Increased Operating Costs	0	84,628	124,886	26,710	27,623	28,569	29,551	30,570	31,628	32,727	416,892
<b>Total Operating Effect</b>	<b>0</b>	<b>277,537</b>	<b>153,494</b>	<b>55,318</b>	<b>21,779</b>	<b>22,725</b>	<b>23,707</b>	<b>24,726</b>	<b>25,784</b>	<b>26,883</b>	<b>631,953</b>

## Define Problem

The county replaced its phone system in 2008. Currently, existing phones consist of both digital and IP types with approximately 3% able to meet today's capabilities of a centralized system. The phone network consists of six separate phone systems, all NEC brand, but installed by two different vendors and made up of two different varieties of hardware. Of these, all but one has experienced major failures. Hardware failures carry the risk of prolonged outages because parts are no longer being manufactured. The various systems do not interface well, which often causes confusion for end users. With various hardware systems in multiple locations, IT staff support takes significant time and effort to address problems when they do occur.

## Recommended Solution

The objective for the telephone system is to have seamless and flexible voice communication across all departments. A software-based system provides the best option for meeting this goal. Benefits include:

- 1) Reduced risk of failures
- 2) Elimination of the need for hardware replacement
- 3) Centralized management, which is more efficient for staff
- 4) Reliable communication regardless of device or location; multiple devices can be used.
- 5) Integration with email.

In addition, the system is mature, proven and generally accepted as good direction in industry.

## Alternatives

'Cloud' or leased solutions continue to be assessed as new options are provided. So far, these solutions have not revealed benefits beyond those of the recommended solution in terms of functionality, but are considerably more expensive than hosting the software in house.

# Technology - Telephone System Replacement - Countywide

Approved-No Contracts (Part)

## **Current Stage of Project**

In 2015, the new software based system was installed and became operational for MIS, the new Detention Center, the Parks and Recreation Department, and the new Solid Waste & Recycling Facility Buildings. In 2016, the Emergency Operations Center, Sheriff's Office, Animal Services, Department of Social Services (DSS), Board of Elections, and a remote Sheriff's Office were brought on line. Deviations from original plans occurred due to a major failure in the old system supporting DSS. The final stage of the project is targeted for completion by the end of FY 2018 and will include the Dunlap and Performance buildings, Backup 911 Center, remaining Siler City locations and the Annex building.

## **Relation to Other Projects**

Fiber optic cable was installed between county buildings in Pittsboro in FY 2009 with funding from building projects. Fiber to the new Detention Center and new Solid Waste & Recycling Facility Office is complete and includes the ability to serve the Animal Shelter.

Upgrades to leased lines to enable quality of service (QOS) and proper speeds are nearly completed.

Upgrades to switch infrastructure to provide capacity for connection of phones has remained a step ahead of the phone project.

## **Operating Impact**

The centralized system will require annual software assurance and support fees. The software assurance ensures continual updates and new versions of the software in perpetuity. Without the software assurance, the ability to receive updates and releases would require either a repurchase of the software or a 'catch up' on the unpaid software assurance as it stood at that time.



# Voting Equipment Replacement

Approved-No Contracts

Replace voting equipment for Chatham County elections.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Contingency	61,494	0	0	0	61,494	0	0	0	0	0	61,494
Equipment	614,940	0	0	0	614,940	0	0	0	0	0	614,940
<b>Total Project Element</b>	<b>676,434</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>676,434</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>676,434</b>
<b>Funding Source</b>											
Capital Reserves	676,434	0	0	0	676,434	0	0	0	0	0	676,434
<b>Total Funding Source</b>	<b>676,434</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>676,434</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>676,434</b>
<b>Operating Effect</b>											
Contribution to Capital Reserve	0	169,109	169,109	169,108	169,108	0	0	0	0	0	676,434
Decreased Operating Costs	0	0	0	0	-27,088	-27,088	-27,088	-27,088	-27,088	-27,088	-162,528
Increased Operating Costs	0	0	0	0	28,445	29,298	30,177	31,083	32,015	32,976	183,994
<b>Total Operating Effect</b>	<b>0</b>	<b>169,109</b>	<b>169,109</b>	<b>169,108</b>	<b>170,465</b>	<b>2,210</b>	<b>3,089</b>	<b>3,995</b>	<b>4,927</b>	<b>5,888</b>	<b>697,900</b>

## Define Problem

The M-100 Optical Scan voting equipment owned by Chatham County has an average expected life span of 12-14 years or slightly longer if maintained properly. The county currently owns 30 optical scanners and 21 Automark ballot marking devices. This equipment was purchased and maintained with State grant funds, which are no longer available. By 2019, the county's voting equipment will be approximately 15 years old. Maintenance has been performed each year since purchase. Potential changes in Federal and State laws will require voting systems to perform in new ways as technology changes. A change in state law this year eliminated the use of direct record electronic (DRE) voting systems beginning 2018, which some of the larger counties use. This may prompt voting systems manufacturers to develop new equipment and the state to certify new equipment.

## Recommended Solution

Purchase new equipment that is certified by the State of North Carolina and the National Testing Group with the most current software and any licenses or maintenance agreements that are required. Figures in the CIP are based on the original cost of the existing equipment inflated by 3% per year, but it is not likely that the same equipment will be purchased. Therefore, the figure in the CIP should be considered a placeholder until more is known.

There are many different types of voting equipment, but most are not certified for use in North Carolina. Only one optical scanner is certified for use in North Carolina. The optical scanner will not replace the Automark ballot-marking devices. Based on current law, some type of equipment will still be needed that meets access requirements for disabled voters. The current replacement for the Automark is the Expressvote ballot-marking system. The Expressvote is not currently certified for use in North Carolina, but is in the certification process. The Expressvote uses touch screen technology to produce a paper ballot that can be inserted into the optical scanner.

## Alternatives

State statutes require the use of voting equipment for most elections. Hand counting of paper ballots is not permitted, except in the case of audits or recounts. The county could replace existing equipment with newer versions of the same equipment or different equipment, if it is state certified. Equipment maintenance becomes more expensive as the equipment ages, and the policies of the seller prohibit using anyone other than the seller for service. The current Automark was purchased in 2008 and may be able to be used for several more years. Another alternative is to replace the Automark units as they fail.

## **Operating Impact**

Additional funds will be needed for equipment maintenance, but costs for the new system should be roughly the same as the old system. Generally, the licensing and software upgrade for the first year is included in the purchase, and is renewed yearly. Beginning the second year after purchase, an annual maintenance and licensing plan would likely be necessary.

# **Solid Waste & Recycling Fund Projects**

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# Solid Waste & Recycling - Replace Waste & Recycling Facility Office

Substantially Complete

Construct an approximately 5,100-square-foot office building adjacent to the existing modular office and demolish the modular upon completion of the new structure.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Construction	1,203,649	1,198,152	30,982	0	0	0	0	0	0	0	1,229,134
Contingency	31,979	0	0	0	0	0	0	0	0	0	0
Design, Engineering & Construction Ad	103,308	114,058	0	0	0	0	0	0	0	0	114,058
Feasibility Study	10,750	10,750	0	0	0	0	0	0	0	0	10,750
Furnishings & Equipment	132,384	132,864	0	0	0	0	0	0	0	0	132,864
Owner Contracts/Admin Costs	16,480	20,465	0	0	0	0	0	0	0	0	20,465
<b>Total Project Element</b>	<b>1,498,550</b>	<b>1,476,289</b>	<b>30,982</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,507,271</b>
<b>Funding Source</b>											
Operating Revenue	10,750	10,750	0	0	0	0	0	0	0	0	10,750
Solid Waste Fund Balance	1,487,800	1,465,539	30,982	0	0	0	0	0	0	0	1,496,521
<b>Total Funding Source</b>	<b>1,498,550</b>	<b>1,476,289</b>	<b>30,982</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,507,271</b>
<b>Operating Effect</b>											
Increased Operating Costs	0	5,600	7,307	7,527	7,753	7,985	8,225	8,471	8,726	8,987	70,581
<b>Total Operating Effect</b>	<b>0</b>	<b>5,600</b>	<b>7,307</b>	<b>7,527</b>	<b>7,753</b>	<b>7,985</b>	<b>8,225</b>	<b>8,471</b>	<b>8,726</b>	<b>8,987</b>	<b>70,581</b>

## Define Problem

The current 1,400-square-foot modular office unit was installed in 1997. The modular unit is in need of new carpet, wallpaper, roof repairs, and possibly two new HVAC units in the near future. The condition of this modular unit conveys an unprofessional appearance for the county's award-winning program and provides poor working conditions for professional staff. Additionally, the modular unit has limited storage space, no conference room to hold meetings or trainings, and no room for future growth. The Solid Waste & Recycling Division has 13 employees who are currently spread between the modular unit (five employees) and the 300-square-foot scale house (eight employees) at the end of County Landfill Road near the closed landfill.

At this location, the county currently provides land-clearing debris disposal, inert debris disposal, electronics recycling, tire recycling, waste oil recycling, pesticide container recycling, household hazardous waste disposal, scrap metal recycling, and common household material recycling for small businesses. Customers have to weigh their loads at the old scale house, unload near the modular unit, go back to the scales to weigh empty and then come back to the modular unit to pay, if required. This is an inconvenient and confusing process for many customers.

## Recommended Solution

Build a new office facility adjacent to the existing modular unit and demolish the modular unit upon completion of the new office. The new office should have ample storage space, room to consolidate all staff and provide for future growth, and a conference room large enough for department meetings and potential education and training events. New above-ground scales would be installed at the new office to provide more efficient flow of traffic and ease of access to services. The existing scales are 22 years old and would be left in place as a backup, as it would be more expensive to move these scales than to purchase new ones. Staff recommends proceeding with the project now rather than delaying the project to 2017. The funds for this project are available in the Solid Waste and Recycling Enterprise Fund. The inflation costs associated with a delay would be much more than the interest earned and would save approximately \$220,000.

## Alternatives

- 1) The Environmental Quality Director explored other options, including a pre-fabricated building. Preliminary numbers indicated the possibility for savings, but there would be trade-offs in the quality of the building.
- 2) The existing modular unit could be upgraded and an additional unit could be brought in to house the eight employees currently in the scale house. The scales would also need to be replaced or relocated in order to locate the scales nearer to the disposal and recycling services provided.

## Current Stage of Project

The Board of Commissioners approved a budget ordinance authorizing the construction on August 18, 2014. Hobbs Architects was contracted to perform the design and construction administration. Muter Construction was selected to complete the project. The project began in October 2014 and was scheduled to be completed July 2015. The building was substantially completed September 2015 and the new scales were completed October 2015. Site work and remaining exterior improvements have been completed. Final completion has not yet been issued as there have been some roof leaks that the contractor must rectify. Once those have been addressed, the project will be closed out.

## Description of Land Needs

Adjacent to existing building on county land.

## Professional Services Needed

Architectural, design, and construction management services are needed.

# Solid Waste & Recycling - Single Stream Recycling

Approved-No Contracts

Upgrade the Collection Center recycling program to single-stream. This means that all household recyclables would be collected in one container as opposed to the current source-separated program with nine containers.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Construction	390,629	220	388,120	0	0	0	0	0	0	0	388,340
Contingency	39,063	0	5,563	0	0	0	0	0	0	0	5,563
Engineering & Construction Administrati	20,000	37,415	16,085	0	0	0	0	0	0	0	53,500
Furnishings & Equipment	306,130	0	233,697	0	0	0	0	0	0	0	233,697
<b>Total Project Element</b>	<b>755,822</b>	<b>37,635</b>	<b>643,465</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>681,100</b>
<b>Funding Source</b>											
Capital Reserves	755,822	37,635	612,465	0	0	0	0	0	0	0	650,100
Grants, Gifts, Etc.	0	0	31,000	0	0	0	0	0	0	0	31,000
<b>Total Funding Source</b>	<b>755,822</b>	<b>37,635</b>	<b>643,465</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>681,100</b>
<b>Operating Effect</b>											
Decreased Operating Costs	0	-161,768	-145,850	-299,321	-308,260	-317,447	-326,889	-336,595	-340,141	-343,793	-2,580,064
Decreased Revenue	0	0	27,113	27,926	28,764	29,627	30,515	31,431	32,374	33,345	241,095
Increased Operating Costs	0	0	174,194	17,780	20,299	46,101	51,674	53,197	63,610	65,518	492,373
Increased Revenue	0	0	-146,020	0	0	0	0	0	0	0	-146,020
<b>Total Operating Effect</b>	<b>0</b>	<b>-161,768</b>	<b>-90,563</b>	<b>-253,615</b>	<b>-259,197</b>	<b>-241,719</b>	<b>-244,700</b>	<b>-251,967</b>	<b>-244,157</b>	<b>-244,930</b>	<b>-1,992,616</b>

## Define Problem

Chatham County’s current recycling program is inefficient and inconvenient. Recyclables are separated at the source, requiring residents to sort into 9 categories: aluminum cans; steel cans; cardboard; mixed paper; newspaper; plastic; brown glass; clear glass; green glass. These 9 categories require multiple bins at the Collection Centers.

Each Collection Center has at least 8 recycling bins and busier sites have more than 10, with up to 18 at the busiest site, Cole Park. Given the limited space at the Collection Centers, the recycling bins are spread around the site, requiring visitors to make multiple stops in their vehicle or walk back and forth across the site to deposit recyclables. Residents walking around bins and through traffic lanes create safety hazards for other vehicles and county trucks.

The layout of recycling bins also increases the amount of time that each visitor spends in the Collection Center. Coupled with rising visitation (up 13% overall in the past five years), this leads to increased congestion in the sites and more activity for site attendants to oversee.

Source-separated recycling requires frequent hauling, including many hauls of containers that are not full. For example, aluminum and steel cans are collected in compartmentalized 30-yd containers. When one side fills up, the entire box must be hauled. The same is true for glass containers, which are compartmentalized into three sections for brown, clear, and green glass.

County drivers make 2,840 hauls per year from the Collection Centers and travel a total of 64,000 miles hauling those recyclables. Paper products are picked up and hauled directly to market in Burlington or Raleigh. Cans are hauled directly to market in Siler City, and plastic and glass are hauled to the Main Facility to be

consolidated before going to market in Raleigh.

In addition to inefficiencies at the Collection Centers, residents report frustration with the inconvenience of separating recyclables at home. In a survey conducted in the summer of 2013, residents were asked what obstacles prevent them from recycling more, or recycling at all. Results showed that 23% of residents' recycling habits are inhibited by the current source separated system.

The opportunity to increase recycling is evident in the results of two waste characterization studies completed in 2011 and 2014. The 2011 study revealed that 34% of waste collected in compactors was recyclable material. Despite education and outreach methods over the past 3 years, the diversion of recyclable material from the waste stream has remained stagnant. The 2014 study revealed that 36% of the waste collected in compactors was recyclable and that 12% of waste collected in bulky containers was recyclable. This amounts to 2,890 tons of recyclables being sent to the landfill each year, costing the county \$138,718 annually in tipping fees and perpetuating our reliance on out-of-county landfills.

## **Recommended Solution**

Upgrade recycling program to single-stream collection.

Single stream recycling would improve customer service by making recycling more convenient and streamlining visits to the Collection Centers, thereby alleviating crowding and traffic congestion.

Recycling participation is anticipated to increase approximately 25% by weight, which would divert more materials from the waste stream, save the county money on tipping fees and decrease our dependence on out-of-county landfills. With only one recycling bin and an easier choice at home, we anticipate receiving more recyclables from current recyclers and new recyclables from households that did not previously recycle.

Single-stream recycling would also limit the number of containers required at each Collection Center and reduce the number of recycling hauls for county drivers. Improvements would be made at the Main Facility to consolidate recyclables before hauling them to market.

By increasing recycling participation by 25% and diverting these materials from the landfill, the county would save \$19,900 annually on tipping fees and fuel for transportation.

## **Alternatives**

1) Upgrade recycling program to single stream collection. The county would collect all 9 categories of household recyclables in one container at each Collection Center.

2) Upgrade recycling program to single stream minus glass collection. The county may be able to receive a higher rebate for single stream recyclables without glass. To maintain current glass revenue, the county would continue to separate green, brown, and clear glass, requiring residents to continue sorting.

3) Build new northeast Collection Center to alleviate congestion at Cole Park, which is the most crowded Collection Center. Since 2010, we have seen the following increases in visitation:

- Cole Park: 12%
- Pittsboro: 33%
- Siler City: 26%
- All 12 Collection Centers: 13%

Cole Park has experienced nearly the same rise in visitation (12%) as all 12 Collection Centers combined (13%) over the past 5 years. This alternative would not alleviate the increase in visitation at the next two busiest Collection Centers; Pittsboro and Siler City.

4) Do nothing. The problems associated with the current recycling program would continue. Visitation at Collection Centers will continue to rise as population in the county increases, resulting in more crowding. Recycling participation is anticipated to remain stagnant, despite continued education efforts. Recyclable materials will continue to be thrown away and the county will pay for disposal of these items at the landfill.

## **Current Stage of Project**

Chatham County was awarded a grant from NC Department of Environmental Quality (NCDEQ) in the amount of \$31,000 to purchase compacting roll-off systems to collect single stream recycling. The county was also awarded a \$30,000 grant from NCDEQ for recycling bins as giveaways to help motivate residents who do not recycle. Responses to requests for qualifications (RFQs) for the design of the recycling station were received in October, 2015. The contract for engineering services was awarded to Smith & Gardner in December 2015. The decision to switch to a dual stream recycling system delayed the project. Changes in the recycling market resulted in a decision to switch from single stream to single stream minus glass. Glass will continue to be kept separate and all other household recyclables will be mixed. A request for proposals (RFP) was issued in July 2016. Contracts are expected to be awarded in October 2016.

An RFP for construction of the recycling station was completed in July 2016 and the contract was awarded to Simpson Construction on September 14, 2016. Construction is currently in progress.

The installation of the concrete pads at the collection centers was completed August 2016. The compactors will be installed and electrical work completed by December 2016. The recycle station is projected to be completed early 2017. Single stream recycling minus glass will begin in early 2017.

## **Professional Services Needed**

Engineering design work and construction management are needed.

## **Operating Impact**

The project will result in one-time operational costs and capital outlay for completion of the project. Additionally, annual recycling revenue is expected to decrease. However, these costs will be partially offset by savings in transportation and hauling due to changes in operations, as well as savings from a reduction in disposal costs for waste.



# **Water Fund Projects**

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# Water - Haywood Water Main Replacement

Approved-No Contracts

Replace the existing four-inch water main under the railroad tracks on Haywood Road with a six-inch water main.

Project Budget	Budget	Current		Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	Project Totals
		Prior to FY 2017	Year: FY 2017								
<b>Project Element</b>											
Construction	112,100	0	112,100	0	0	0	0	0	0	0	112,100
Contingency	11,210	0	2,758	0	0	0	0	0	0	0	2,758
Design, Engineering & Construction Ad	15,000	16,852	6,600	0	0	0	0	0	0	0	23,452
<b>Total Project Element</b>	<b>138,310</b>	<b>16,852</b>	<b>121,458</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>138,310</b>
<b>Funding Source</b>											
Water Capital Reserve	138,310	16,852	121,458	0	0	0	0	0	0	0	138,310
<b>Total Funding Source</b>	<b>138,310</b>	<b>16,852</b>	<b>121,458</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>138,310</b>

## Define Problem

As part of the Southeast Water District project completed in 2010, a six-inch water main was installed along Haywood Road, Moncure Loop and River Point Road. These lines do not provide adequate fire protection because of a four-inch section that crosses the CSX railroad tracks on Haywood Road. North Carolina Department of Environmental Quality (NCDEQ) requires all fire hydrants be served by a minimum six-inch water line. This four-inch section prevents the fire department from utilizing fire hydrants in the area. Instead, fire departments must fill pumper trucks with water from the nearest water point. If the fire hydrants were usable, the fire department rating might improve and the insurance premiums might decrease.

## Recommended Solution

Replace the existing four-inch water main under the railroad tracks with a six-inch water main and connect the six-inch water main along old US 1 with the six-inch water main on Haywood Road.

## Alternatives

The only alternative is to do nothing, which would prevent the fire department from utilizing the hydrants and continue the inability to provide minimal fire flow requirements set forth by NCDEQ.

## Current Stage of Project

The design work has been completed. The CSX encroachment is pending. The project has been given approval by the state to begin construction. The two needed easement acquisitions have been secured. Pending CSX approval, the project will go out for bid in January 2017, with construction beginning during the first part of 2017.

## Relation to Other Projects

The project is related to the Southeast Water District completed in 2010. Because of funding limitations, the budget did not cover replacing this section of the water line.

## Description of Land Needs

None

## Professional Services Needed

Engineering, surveying, and construction phase services are under contract. The required railroad encroachment is under review and the North Carolina Department of Transportation (NCDOT) and Moncure Fire Department approvals have been obtained.

# Water - Haywood Water Main Replacement

Approved-No Contracts

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## Operating Impact

None.

# Water - Nature Trail Water Main Replacement

Approved-No Contracts

Replace all the existing water mains in the Nature Trail Mobile Home Park.

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Construction	543,800	0	60,422	483,378	0	0	0	0	0	0	543,800
Contingency	32,380	0	6,042	48,338	0	0	0	0	0	0	54,380
Design, Engineering & Construction Ad	75,000	44,693	37,451	0	0	0	0	0	0	0	82,144
<b>Total Project Element</b>	<b>651,180</b>	<b>44,693</b>	<b>103,915</b>	<b>531,716</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>680,324</b>
<b>Funding Source</b>											
Water Capital Reserve	651,180	44,693	103,915	531,716	0	0	0	0	0	0	680,324
<b>Total Funding Source</b>	<b>651,180</b>	<b>44,693</b>	<b>103,915</b>	<b>531,716</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>680,324</b>
<b>Operating Effect</b>											
Decreased Operating Costs	0	0	0	-2,040	-24,480	-24,480	-24,480	-24,480	-24,480	-24,480	-148,920
<b>Total Operating Effect</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-2,040</b>	<b>-24,480</b>	<b>-24,480</b>	<b>-24,480</b>	<b>-24,480</b>	<b>-24,480</b>	<b>-24,480</b>	<b>-148,920</b>

## Define Problem

The county took over responsibility for operating and maintaining the Nature Trail Mobile Home Park water distribution system in 1983. The existing water mains are very old and were improperly installed. Some of the water mains were installed under and around the residences. When employees have to repair water mains located under these homes, their structural stability could be compromised. The county spends approximately 288 employee and equipment hours per year repairing these water lines, at an estimated annual cost of \$24,480.

## Recommended Solution

Replace all of the existing water mains in the Nature Trail Mobile Home Park. The project will allow the county to reduce the amount of time county employees spend on maintenance and eliminate the problems with lines being installed too close to residences.

## Alternatives

The only alternative to doing the necessary repair is to do nothing and continue to have problems with the old, improperly installed lines.

## Current Stage of Project

The Water Department applied for a Community Development Block Grant (CDB) but was denied funding for this project. Before the application, the Board of Commissioner, through the CIP process, had already approved funding the project wholly from water capital reserve. The county has secured the services of an engineering/consulting firm to design and develop construction plans for bidding purposes. The design of the construction plans are in the final stages and the plans should be available sometime in October 2016. The project is recommended to begin in the spring 2017, because any further delay will increase the county's maintenance costs.

# Water - Planning Western Intake and Plant

Approved-No Contracts

Construct a water intake and treatment plant on the west side of Jordan Lake

Project Budget	Budget	Current									Project Totals
		Prior to FY 2017	Year: FY 2017	Year 1: FY 2018	Year 2: FY 2019	Year 3: FY 2020	Year 4: FY 2021	Year 5: FY 2022	Year 6: FY 2023	Year 7: FY 2024	
<b>Project Element</b>											
Design, Engineering & Construction Ad	2,200,000	32,213	2,500	500,000	500,000	500,000	0	0	0	0	1,534,713
<b>Total Project Element</b>	2,200,000	32,213	2,500	500,000	500,000	500,000	0	0	0	0	1,534,713
<b>Funding Source</b>											
Water Capital Reserve	2,200,000	32,213	2,500	500,000	500,000	500,000	0	0	0	0	1,534,713
<b>Total Funding Source</b>	2,200,000	32,213	2,500	500,000	500,000	500,000	0	0	0	0	1,534,713

## Define Problem

Chatham County is approaching the capacity of the existing Jordan Lake Water Treatment Plant and additional supply will be needed in the future. The existing maximum demand for water is approximately 2.8 million gallons per day (mgd). Expanding the capacity at the existing plant requires constructing a pipeline across Jordan Lake which is extremely expensive due to the cost of boring the lake.

## Recommended Solution

Construct a new intake and water treatment plant on the west side of Jordan Lake in cooperation with the partnering jurisdictions of Orange Water and Sewer Authority (OWASA), the City of Durham and the Town of Pittsboro. Only funds for engineering services required to plan the project are currently budgeted.

## Current Stage of Project

A scope of work for the initial feasibility study for the new intake and water treatment plant has been developed and an engineering firm has been selected to complete the study. The study is complete, and the partners are investigating finance and timing issues. Durham was the lead agency and paid 100% of the cost for the initial feasibility study. Chatham is incurring costs for its allocation request, the regional water supply plan, and an interconnection study. The Jordan Lake Partnership memorandum of understanding (MOU) assesses a \$2,500 fee in support of the costs of each year of general activities by the Partnership by payment to the City of Durham.

## Relation to Other Projects

The Durham interconnect project will provide additional water supply while the new intake and water plant are planned and constructed.

## Description of Land Needs

Land is needed on the western shore of Jordan Lake. The number of acres is not yet determined.

## Professional Services Needed

Environmental and engineering services will be needed.

## Operating Impact

There will be significant operational impact, but the scope of that impact will be determined as the project becomes more refined.

# **Future Projects**

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## Future Projects

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Currently, the county lacks sufficient data, revenue, or debt capacity to schedule these projects. If these issues are resolved, these projects may appear in a future CIP.

### County Buildings - Emergency Operations Center Expansion

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Future

Expand the Emergency Operations Center so the Communications Division can expand.

#### Define Problem

The existing Emergency Operations Center (EOC) houses the EOC meeting room where decision makers gather during disasters to make informed decisions on response and recovery efforts. It also houses the Chatham County Public Safety Answering Point (PSAP), better known as the 911 Communications Center. The EOC was completed and occupied in 1994. The communications room was built to hold four telecommunicator consoles and associated telephone and radio equipment. In the past few years the number of consoles has increased to six, with one of those being placed in the corner of the EOC meeting room because the communications room is full. If existing estimates for population growth in Chatham County are fulfilled, the Communications Division will need to hire more full-time telecommunicators. This will require more consoles and associated equipment. Since the communications room is currently filled to capacity, there is no room for this needed expansion.

#### Recommended Solution

Obtain a feasibility study to determine the best option to expand communications/EOC.

#### Alternatives

1. Do nothing. Continue to place the consoles in the EOC portion of the building. This would reduce the space in the EOC, which is already too small and is filled to capacity during activations.
2. Expand the current Emergency Operations Center, either by constructing a second floor addition or building out from the building. The EOC was originally intended to allow a second story but current building codes would need to be evaluated to determine if a second floor or a build out is feasible.
3. The current backup center in Siler City could be used to expand communications. Smaller consoles would have to be used, so this solution would not allow the backup center to mirror the primary center.
4. Build an entirely new Emergency Operations/Communications Center at undetermined location.

#### Professional Services Needed

A feasibility study would be required for cost estimates and to determine if current building codes would allow the second story. If allowed, additional architectural design, and construction administration services would be needed.

#### Operating Impact

Additional funds will be needed for utilities, technical equipment and building maintenance

### County Buildings - Jail Renovation for Sheriff's Office

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Future

Renovate the current jail when the new detention center opens to provide additional space for the Sheriff's Office

#### Define Problem

When the new detention center opens, the 8,941 square feet of space that currently houses inmates and staff will be available for other use. The space needs study indicated the need for 1,943 square feet of additional space in the Sheriff's Office immediately and an additional 2,697 square feet within the next 5 to 10 years.

#### Recommended Solution

Renovate the unused jail space. Staff recommends retaining an architect for feasibility, cost estimates and schematic design for an approximate cost of \$18,000 to evaluate the best use of the space and the cost of renovation. The additional space could meet the Sheriff's Office medium-term needs for additional storage and office space.

### **Alternatives**

- 1) The current jail could be renovated and provide space for the Sheriff's Office, including storage of evidence and additional staff space.
- 2) Keep the current jail in operation for overflow and weekenders.
- 3) Do nothing. If the space is left unused, the area will still require heating and cooling to prevent the formation of mold and mildew.
- 4) Build a new Sheriff's Office at the new Detention Center location that would provide more staff space.

### **Current Stage of Project**

The initial architectural evaluation for renovation of the detention center was quite costly, and that evaluation has been revised to be more affordable. Staff is finalizing a cost estimate for the project including furnishings and equipment. Existing maintenance issues are being addressed and will be complete in the FY 2017. Vacant space has been located that can provide a short-term solution for space needs until the full cost of the renovation is complete and the project can be scheduled.

### **Professional Services Needed**

Architectural and engineering services were needed for the feasibility study.

## **County Buildings - Northeast Library**

**Future**

Build a library branch in the northeastern area of the county.

### **Define Problem**

The library system has experienced significant changes since a facilities study was completed in 2001 by library consultant Phil Barton. The Town of Goldston completely refurbished a building for a library. The Central Carolina Regional Library system dissolved and Chatham County entered into a new partnership with Central Carolina Community College. A joint-use facility was constructed on the Pittsboro campus where both students and members of the public have received library services in the same building since 2010.

Wren Memorial Library recently completed a major renovation project initiated by the Town of Siler City. In addition to a welcoming environment throughout the building, much needed storage space was added by enclosing in an unused carport area. The community greatly benefits from an updated meeting room including audio/visual equipment installed by the county for presentations and group activities.

In 2014, a follow up library strategic plan, also authored by Barton, identified Northeast Chatham as an area that, although experiencing ongoing residential growth, did not have a nearby library location. Residents in this area who come to the Chatham County Community Library in Pittsboro have said that they would rather not travel such a distance to use the library.

Alternatives proposed to alleviate this situation have included leasing space and purchasing book-dispensing vending machines. Each of these options has limitations and shortcomings. The library has an established e-reader program that minimizes the transportation issue by providing downloadable books and devices for circulation.

### **Recommended Solution**

A suggestion which combines two alternatives has emerged as a viable solution. The concept would be to use land along 15-501 provided by Briar Chapel development and to construct another joint-use facility.

The growth in the northeastern quadrant of Chatham County has necessitated planning for other needs, such as the construction of new schools. The county currently lacks the debt capacity to add a library with these other projects on the horizon. CCCC has initiated the process of having a health sciences classroom facility completed in 2019 on the Briar Chapel tract of land. A future project to build a 10,000-square-foot library, along with an early voting site adjacent to the new classroom building has been proposed.

An advantage of this proposal is that a 10,000-square-foot facility would not require the purchase of any additional land. Most of the site preparation would occur at the time the health sciences project moves forward. CCCC and the library have an established working relationship. The location on 15-501 is easily accessible to anyone living in the NE quadrant of the county. The residents of the Briar Chapel development would also have easy



access to a library without the inconvenience of library users driving through their neighborhood.

**Description of Land Needs**

Acreage adequate to construct a 10,000-square-foot facility.

**Professional Services Needed**

Professional design, architecture and construction would be needed.

**Operating Impact**

Additional funding would be needed for operational expenses.

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## **Emergency Communications - Radio System Upgrade**

Future

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Replace current emergency radio system infrastructure and radios with a modern state-of-the-art system.

**Define Problem**

The existing VHF frequency radio system used by county public safety and other agencies is approximately 30 years old. The system has been maintained by replacing and upgrading equipment as needed, but rapidly increasing communication demands are rendering the system obsolete. The county currently has five different tower sites that broadcast communications to fire, emergency medical services, law enforcement, school system, animal control, and the public works radio systems. Each site has a generator backup and is monitored 24/7 for issues that may arise, such as insufficient power during transmission or electrical service failure. The current system covers about 90% of the county. The mandated adoption of narrow banding created some unanticipated degradation of communications. Responders in northeast (particularly Carolina Meadows) and southwest Chatham cannot communicate back to the 911 Center at all times on their portable radios, but instead must use a vehicle radio. Also, because the frequencies are closer, Chatham County can hear other counties when they are paging, and vice versa. A short-term solution to the problem can be addressed in the operating budget with the addition of remote radio sites in Goldston and Carolina Meadows. However, a permanent replacement for the existing system will be needed in the future, and the cost of the project will be significant because it will include construction of at least eight new towers, upgrading the county's existing towers, and upgrading the existing radios used by several departments. A recent analysis conducted jointly by the Emergency Operations/Communications Division and Motorola determined that a total of 13 towers are necessary to provide 95% coverage inside buildings in Chatham County, with towers heights of between 300 and 400 feet. The county's current regulations allow towers up to only 199 feet. The cost to construct a new tower is approximately \$1,500,000, including land purchase, tower construction, equipment to run the tower and a building to house the equipment and the generator.

**Recommended Solution**

An ad hoc advisory committee with representation from each organization involved identified alternatives and the advantages and disadvantages of each. Because the project is extremely complex – involving obtaining land, constructing towers, and selecting the best technology – the county would benefit from hiring a consultant who can better define the overall project plan and the associated costs. When a project plan is in place, along with a recommendation for a system and the associated costs, the county will better understand how to plan for the project and ensure adequate funding is available.

**Alternatives**

Staff has identified all possible alternatives but will need input from other agencies to fully define the advantages and disadvantages of each one:

- 1) 800 MHZ VIPER: The state is currently promoting this system, although other jurisdictions often experience busy signals when trying to use the frequency. The county would have to keep its existing VHF system for paging responders.
- 2) 700 MHZ: The federal government is considering a mandate to require that public safety agencies use 700 MHZ. If this happened, grant money may become available to cover the costs, which are unknown at this time.
- 3) Simulcast: Simulcast would use current tower sites and agencies would not have to choose the channel they wish to use for transmission as they must do currently.
- 4) Chatham County 800 MHZ: Chatham County could choose to set up its own 800 MHZ radio system, which would be compatible with other

counties on VIPER and other 800 systems. This option would be the most costly.

### **Current Stage of Project**

An RFP was issued for a consultant to validate or revise Motorola's findings for coverage, develop specifications for a bid, assist in finding revenues to fund the project, assist in the bidding process, and oversee the project until completed. The study that was produced contains some issues that require clarification and follow-up. For example, during the course of the study, AT&T permits for new towers expired and AT&T's interest in renewal of the permits is uncertain. Due to the scope and cost of the project, staff is also asking an independent consultant to review the study.

### **Description of Land Needs**

Between 2 and 4 acres will be needed for each tower site.

## **Schools - HVAC/Lighting Replacement**

Future

Upgrade outdated and inefficient HVAC and lighting.

### **Define Problem**

Only two of the 17 Chatham County Schools were constructed during the last ten years (Margaret Pollard Middle and Virginia Cross Elementary) using energy efficient construction and mechanical systems. The 2014 Chatham County Schools Facility Conditions Assessment indicates that HVAC systems in the majority of the remaining 15 schools have outlived their projected life expectancy, are inefficient, and need replacement. In addition, most of the lighting in these schools is provided by outdated/inefficient T-12 lighting fixtures, which could be replaced with more energy efficient T-8 lighting. Taking care of these two issues at our schools will potentially result in substantial energy savings for the district, and would create an opportunity to take advantage of more environmentally responsible (e.g., geothermal HVAC) technologies and systems. This project would provide a to-be-determined amount of money to be used each year to upgrade HVAC/lighting systems in prioritized order over several years.

### **Recommended Solution**

Create a long-term (seven years or longer) project that will provide a to-be-determined amount of money to be used annually to upgrade HVAC and lighting systems to provide more energy efficient systems.

### **Alternatives**

- 1) Do nothing and continue patching existing HVAC systems to keep them running until they completely fail.
- 2) Do nothing and continue paying higher energy costs for lighting.

### **Professional Services Needed**

Design and engineering services will be needed.

### **Operating Impact**

Energy costs will be decreased with more modern and efficient systems.

## **Schools - New Schools/Capacity Expansion**

Future

Construct new schools, add additions to existing schools, and/or add modular classrooms as most feasible.

### **Define Problem**

Based on OR/Ed projections, growth associated with Chatham Park and the potential of the megasites in Moncure and Siler City bringing new residents, new schools, additions to existing schools, and/or modular classrooms will be needed within the next 10 years to accommodate student population growth.

### **Recommended Solution**

The population figures will be monitored on a yearly basis, and financial and architectural planning will begin when it is apparent that the capacity expansion is needed.

**Alternatives**

Do nothing.

**Professional Services Needed**

Architectural and design services will be needed.

**Operating Impact**

Additional funds will be needed for equipment, supplies, maintenance, and staff.

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## Schools - Paving Repair

Future

Repair paving on all campuses.

**Define Problem**

Paved areas on all our campuses continue to age and increasingly need repair. Having a scheduled funding source to address these needs will allow us to do so in a more strategic way, including asphalt overlays and crack/pothole repair.

**Recommended Solution**

Create a long-term (seven years or longer) project that will provide a to-be-determined amount of money to be used annually to address paving repair issues and provide improved campuses for the students and staff of Chatham County Schools.

**Alternatives**

- 1) Do nothing. This alternative would allow the issues to deteriorate.
- 2) Patch cracks/potholes as funds allow.

**Professional Services Needed**

Design and engineering services will be needed.

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## Schools - Replace Gymnasiums at Bennett, Silk Hope and Bonlee

Future

Replace gymnasiums at Bennett, Silk Hope, and Bonlee schools.

**Define Problem**

The gymnasiums at Bennett, Silk Hope, and Bonlee schools are in poor condition. Chatham County Schools has determined that it is more economical to replace them rather than renovate them.

**Recommended Solution**

Replace the gymnasiums at Bennett, Silk Hope, and Bonlee schools with gyms that meet the current size and features standards recommended by the Department of Public Instruction. The same design will be used on all gyms, with adjustments for site conditions, to reduce design costs.

**Alternatives**

Chatham County Schools explored adding on to each gym to provide space for spectators and restrooms at a rough estimate of \$400,000 per gym. This option was not pursued because of the age and condition of the gyms.

**Professional Services Needed**

Detailed architectural drawings and construction management will be needed.

### **Operating Impact**

Utility and maintenance costs are expected to decline because of updated systems and materials.

## **Technology - Fiber Extension to Siler City**

Future

Extend County fiber to Siler City.

### **Define Problem**

Currently Chatham County uses leased lines to provide network access to offices in Siler City, including the Backup 911 Center, Health Department, Social Services, Wren Library, and Sheriff. Leased lines depend on the service capacity levels of third-party providers and incur monthly recurring costs indefinitely. The departments connected by leased lines in Siler City frequently experience slow network response and would benefit from an extension of county-owned fiber. Extending fiber to Siler City would be an efficient and cost-effective solution to slow network response and enable a better placement of the backup SAN. A county fiber connection at the Backup 911 Center also provides a redundant link that is sufficient to continue operations for the county should the primary location be disrupted.

### **Recommended Solution**

The 2015 North Carolina Rural Assembly Conference identified potential sources of funding for broadband services and collaborative strategies. A collaborative effort that takes advantage of funding opportunities would be a more effective solution than an independent county effort. The county will continue with planned network upgrades and continue to pursue a broadband collaboration that will include improved redundant links.

### **Alternatives**

1. Do nothing: Planned changes in switches, potential cabling and leased line upgrades are in process. Continue to use leased lines as needed despite slow network response times until changes are in place and the problem can be reassessed. Leased lines provide a minimum estimated (not guaranteed) speed. These can be increased, but at a higher cost. Leased lines can be disconnected when a location is no longer needed which may serve the county better until various construction and renovation projects are completed.
2. Extend Fiber to Siler City: Fiber has the capacity to run network traffic at near light-speed. Fiber can provide fast speeds well into the future. With more system vendors now beginning to mandate 'external cloud' access to their systems, the demand for stable, resilient and fast internet access may outpace county capacity. Once in place, there is no further maintenance to fiber required beyond addressing cuts if they occur. Dedicated fiber to the Backup 911 cCenter would provide best access to county technical data and systems resources in the event of a problem with the primary connection or a local disaster.
3. Pursue a collaborative effort that could lead to wider service possibilities and mix funding from various sources to put a county-wide broadband foundation in place sooner.

### **Relation to Other Projects**

Since this project would include the extension of fiber to the Emergency Operations Backup Center, E-911 funds could contribute to the funding of the project.

### **Operating Impact**

Extension of county-owned fiber will eliminate approximately \$15,000 per year from the MIS operating budget to lease lines based on current costs. However, as access needs increase, leased line updates for additional speed will be needed at potentially higher monthly costs.

## **Water District - Southwest Water District Distribution Lines Construction**

Future

Install approximately 48 miles of water distribution mains in the Southwest Water District.

### **Define Problem**

In order to provide county residents with a public source of drinking water, the Chatham County Board of Commissioners formed the Southwest Water District. The district is comprised of Bear Creek and Gulf townships. In November 2004, voters approved a bond referendum for extension of water lines in the district. Funding would be obtained from USDA-Rural Development. Since voting on the district, the county has solicited signups in the area to meet the requirements of USDA funding and needed density for operations. To date, the county has not received enough signups for the project to be viable. In addition, the preliminary engineering report is now outdated and would have to be redone for the project to move forward.

**Recommended Solution**

Assuming sufficient sign-ups, the project would include installation of approximately 48 miles of distribution main, ranging in diameter from six to eight inches, located on NCDOT rights-of-way. In addition to the new connections, the Southwest Chatham Water District would assume the ownership of the Southwest Chatham area water system currently owned and operated by Chatham County. This system consists of approximately 900 residential, commercial, and industrial customers. Water for the district would be provided through a bulk purchase arrangement with the Chatham County Utilities. Operation and maintenance of the district would also be provided by Chatham County Utilities through a contractual arrangement.

**Professional Services Needed**

The preliminary engineering report that was completed several years ago will have to be updated to reflect changes in material and labor costs and changes in demand projection based on growth.

**Operating Impact**

Additional funds would be needed for maintenance of the lines and water production, which should be offset by revenues generated in the district.