



Public Schools of North Carolina  
State Board of Education  
Department of Public Instruction

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# Report to the North Carolina General Assembly

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Plant Operation Service Report  
*G.S. 115C-546.2*

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**Date Due: April 15, 2017**  
Report # 63  
DPI Chronological Schedule, 2016-2017

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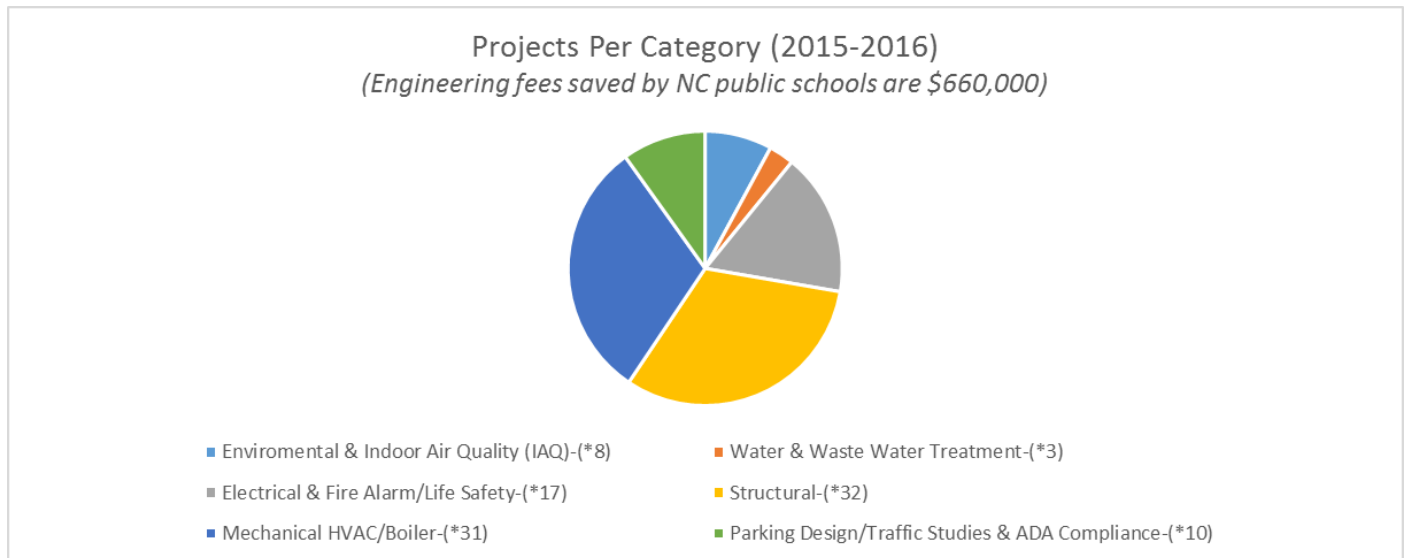
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The purpose of Plant Operation within Healthy and Safe Schools Support Division is to assist each local school administrative unit with effective management of the learning environment with respect to air quality, energy, environmental stewardship, hazardous materials and water and waste water quality as well as effective control of maintenance/construction costs, utility/operations costs, and protection of current school assets.

Given the economic conditions, many school districts are faced with maintaining older (but still useful) facilities. Schools across the state depend on the Department of Public Instruction's Plant Operation Section to provide experienced professional engineering for effective solutions to their facility-related issues. Plant Operation streamlines facility maintenance by (1) providing technical consulting and (2) professional design solutions uniquely tailored for the public schools. These services are available to all of the schools of North Carolina and are especially invaluable in areas where services are scarce or unaffordable. With more than half of the North Carolina's school districts identified as low wealth, the technical assistance provided by this section is vital to those counties that may be unable to afford private consulting services. Through wide-ranging professional services, this section effectively ensures facilities are conducive to a safe and cost-effective learning environment.



(\*)-Number of projects that fall under each category.

### **Project Category Overview**

#### Mechanical HVAC/Boiler Projects

- Boiler troubleshooting
- Chiller troubleshooting & design
- Energy efficient boiler conversions

- Energy efficient HVAC upgrade design
- Energy management controls troubleshooting/design
- Boiler pipe maintenance

#### Structural Projects

- Roofing design and troubleshooting
- Construction liaison services.
- Bleacher inspection

- Provide energy efficient roof system design
- Structural Inspections
- Effective construction and maintenance savings

#### Electrical & Fire Alarm/Life Safety Projects

- Electrical Service design and upgrades
- Standby power setup and support
- Access control system review and troubleshooting

- Energy efficient interior and exterior lighting improvements
- Fire alarm and burglar alarm to best suit schools and budget

#### Environmental & Indoor Air Quality (IAQ) Projects

- Effective hazardous material management
- Remediation guidance
- Indoor Air quality

- Site evaluation & planning
- Storm water management

### Water & Waste Water Treatment Projects

- Waste Water UV Disinfection
- Sand filter Inspections/Troubleshooting
- Septic tank troubleshooting
- Cost effective waste water treatment expansion
- Water treatment troubleshooting/adjustment
- Well water troubleshooting
- Cost effective water treatment design

### Parking Design/Traffic Studies & Americans with Disabilities Act (ADA) Compliance Projects

- Evaluation of existing school traffic patterns
- Adding additional staff parking
- Exterior and interior egress evaluation
- Mobile classroom accessibility compliance
- Safer bus traffic routing
- Improving pedestrian safety on school property
- Restroom compliance evaluation

### Various Support & Training

Our support may include a simple site visit or phone conversation for many of the maintenance issues LEAs handle on a daily basis. Without this service, school maintenance personnel throughout the state would be forced to make do, and in many cases make repairs that could be insufficient or hazardous for students and staff. In addition to furnishing support services, the Plant Operation Section also provides valuable training in facility-related Asbestos Remediation, Waste Water Plant Operation and School Maintenance Electrician review, exam, and certification.

## **Testimonials**

*“Cabarrus County Schools would like to thank DPI Plant Operations for the tremendous help with our Concord Middle School Chiller Replacement project. Due to their professionalism and knowledge, this project was a great success. We were able to save money by using their services and not having to hire outside engineering services.”*

**William VanWieren, Cabarrus County Schools**

*“Halifax is a rural low wealth county that has utilized the valuable services of the Plant Operations Section numerous times. They have provided engineering services for replacements and upgrades to HVAC, sewer systems, parking lots, roofing, electrical, decks and canopies. Most recently, the boiler replacement at Hollister Elementary School came in under budget as a direct result of the involvement of these professionals. Please continue to support this service for all LEAs.”*

**Tony Alston, Halifax County Schools**

*“The Plant Operations staff with DPI have responded to our needs with professionalism and much needed knowledge with services that our rural LEA cannot provide. These efforts have saved us money when Martin County Schools desperately needed engineering services. Our hope, is for the Plant Operations Division to continue to serve all of North Carolina’s maintenance and facility services in our public schools.”*

**Gary Speller, Martin County Schools**

*“I would like to thank the DPI Plant Operation staff for all the help they have provided to Granville County Public Schools. We have used this tremendous asset several years now for HVAC, foundation, structural and crack repair issues. Every member of the Plant Operations staff was very helpful, polite and treated my staff and me with the utmost respect. DPI has a great asset that all LEA’s should take advantage of through Plant Operation section. I look forward to working with DPI on future projects as I look at ways to save valuable funds for our District.”*

**Gilbert Wilson, Granville County Schools**

*“As Anson is a rural district funding is challenging at times so having Plant Operation personal available has proven invaluable to our district. Their knowledge and professionalism has helped me make safe and economical choices for our district. They have offered assistance with four projects thus far and fielded many phone calls from me seeking guidance. One example is a gym at our middle school that exhibited what I thought to be unsafe foundation issues. For a short period I stopped utilization of the gym disrupting school functions. I called plant operation who promptly came down and took a look at the building and blueprints and determined daily school functions could resume while repairs were implemented over a 5 year plan that staff developed. The knowledge and experience being a phone call away was beneficial to Anson County Schools and its students.”*

**Michael C Napier, Anson County Schools**

*“Alleghany County Schools have called on the Plant Operation staff many times to provide help with chillers, boilers, roofing systems, structural engineering, property evaluation and acquisition, electrical and mechanical concerns, and moisture related issues. The Plant Operation staff is one of the most trusted sources of relevant information we have at DPI. Alleghany County Schools can thank the Plant Operation staff for saving our taxpayers thousands of dollars.”*

**Paul Crouse, Alleghany County Schools**