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**Darlington County School District**  
Darlington, South Carolina  
August 8, 2012

## **Darlington Area Schools - Building Evaluations**

**School Name:** St. John's Elementary      Observed By: Creed/Carter  
**Principal:** Ms. Jean Taylor  
**Grade Levels:** 3K – 5th  
**Site Size:** Approximately 12 Acres  
**Student Population:** 667 (Approximate Student Population)  
**Staff Size:** 86 (Approximate Staff Size)

### **Campus Overview and General Observations:**

St. John's Elementary sits on a 12 acre site in the historic district on downtown Darlington. The site is abutted by Hwy 52 as it runs through downtown and by Park Street across the front of the campus; along the back the site drops off very quickly toward the Swift Creek. The site of the campus has been an educational institution since 1818 and fortunately two of the older classroom buildings have remained and been renovated and restored while still keeping much of the exterior architectural integrity in place.

Access to the main entrance of the school is easily identifiable by a large set of monumental stairs that lead up to the main hall, unfortunately this sometimes makes it hard for disabled visitors to gain access although an elevator is available on the far left of the building.

Campus layouts, as exist at St. Johns Elementary School, create security issues as doors to all buildings typically must remain unlocked to allow access to students and staff. Traversing the campus in inclement weather is also problematic as rain, cold and wind are not only an inconvenience to students and staff but also add additional safety hazards. The above combined with some grade issues especially as relating to ADA, create inconveniences for students.

Campus buildings consist of a combination of construction types including: masonry load bearing walls and bar joists with low sloped roofs; wood framed with brick veneer and plaster with low sloped roofs; masonry load bearing walls and steel beams with standing seam metal roofs. The ages of the buildings dictate varying compliance to a variety of building codes creating many noncompliant conditions as it relates to current codes.

Athletic facilities include a gymnasium. Also of note is the auditorium which is in the three story classroom building.



FACILITIES OVERVIEW					
SYSTEM	0 (adequate)	1 (mild need)	2 (strong need)	3 (critical need)	REMARKS
<b>Safety and Health</b>					
Site Security				■	The Campus is an open campus with numerous access points and no means of control.
Traffic Patterns				■	Pedestrians on campus are not protected from the elements Drainage is poor Traffic patterns are awkward for parents and buses
Main Entrance			■		Easily recognizable but not ADA accessible Once inside a visitor could sneak by office staff.
Exterior Doors		■			Lack energy efficiency Have some hardware issues Have some ADA issues considering, clearances, pull pressure, and hardware
Interior Doors		■			ADA door clearances Non-rated doors in some instances Non-rated glass in some instances Hardware replacement is needed to meet ADA
Windows			■		Do not meet OSF egress requirements in some instances Are not energy efficient in some Operation is questionable on many windows
Fire Alarm	■				Recently replaced Emergency lights require testing for foot candles and to ensure batteries are functioning



Fire Protection		■			Three story building is sprinklered As new buildings are added and buildings are renovated sprinklers will be required to be added.
Technology		■			Most instructional areas have had technology upgrades Removal of abandoned wiring is recommended
HVAC		■			Appear adequate
Mold/Moisture			■		There is some evidence of mold growth in certain areas especially lower level classrooms and on exterior of brick veneer
Plumbing			■		While plumbing systems appear to be functioning, many fixtures are not in good condition nor meet ADA accessibility requirements
Teacher Work Areas			■		Appear to be lacking in quantity and technology
Electrical			■		Most switches are not ADA compliant GFI breakers are needed at wet areas
Lighting		■			Appears to be sufficient lighting levels
Electrical Rooms			■		Storage is occurring in front of panels Noncompliant floor clearances exist In some instances wiring was not color coded per NEC Some panels are old and replacement breakers may be unavailable
Data/Server					
ADA Compliance				■	Many noncompliant toilets Many room side door clearances are noncompliant Ramps and rails are noncompliant. Grades on exterior sidewalks between buildings create many non

					compliant issues as does entry into some buildings
Code Compliance				■	Numerous violations including: life safety; energy efficiency; accessibility; and seismic to name a few.
Roof		■			Roof to building B, in need of replacement soon
Structure		■			Minor cracking of masonry is evident Seismic upgrades may be required
<b>Appearance and Finishes</b>					
Curb Appeal		■			Although the historic buildings offer great curb appeal, the cafeteria buildings architectural style detracts from the campus, it is recommended that in the future if this building is ever renovated or replaced that its architecture be more in tune with the two historical buildings on campus
Grounds		■			While average as compared to other schools in the District, additional landscaping is needed Site drainage is an immediate need and should be addressed considering the entire site and downstream capacities Re-stripping of staff and visitor parking areas is recommended
Exterior Envelope				■	Paint is peeling on exterior upper fascia boards Exterior door frames are in need of caulk and paint Masonry requires some tuck pointing
Ceilings				■	Water stains are evidence of roof leaks in some areas

					Communication wires are laying on ceiling systems
Walls		■			For most part in good shape
Flooring		■			Combination of VCT, quarry and carpet. Carpet in media center in need of replacement
Comments:					

**Building Information:**

Building A: Three Story Classroom Building (4K, 4<sup>th</sup> and 5<sup>th</sup> Grades; science and computer)

Year Occupied:	1915	
Renovations:	Some	
First Floor:	11,656	
Second Floor:	11,656	
Third Floor:	<u>11,656</u>	
Total:	34,970	34,970

Total Classrooms: 20 Classrooms  
Total Occupancy: 20/classroom x 20 = 400

**Building Systems:**

Footings:	Spread
Structure:	Wood Frame with wood veneer
Exterior Walls:	Brick Veneer/cast stone
Fenestration:	Aluminum Double Hung and fixed Storefront
Exterior Doors:	Hollow Metal Frames and Aluminum Storefront
Elevated Floor:	Wood frame
Roof System:	4-Ply Built-up Roof on wood
Finishes:	Hard wood quarry tile floors. Some walls glazed block
Plumbing Systems	Copper Supply/Cast Iron Waste
Mechanical Systems:	
First Floor:	
Second Floor:	
Other:	
Electrical System:	240/480V System
Fire Alarm:	Recently upgraded



Emergency Lights: Wall mounted battery backup

**2006 IBC Code Review:**

Utilities	City of Darlington	
Occupancy	Educational Type "E"	
Construction Type	II B Unprotected/Un-sprinkled	
Area Allowed	14,500 sf	
Maximum Stories	Two (2) Stories	
<b>Fire Rated Assemblies:</b>		
Fire Barriers	Corridors - Not Rated	(1 hr. req.)
Structural Steel	No Ratings	(1 hr. req.)
Floor/Ceiling	No Ratings	(1 hr. req.)
Roof/Ceiling	No Ratings	(1 hr. req.)
Fire Walls	None Required	



**Toilets:**

Toilet Counts	Appear to be adequate
ADA Accessibility	Noncompliant

**Building B: Three Story Classroom Building (3K, 4K, 1<sup>st</sup> and 2<sup>nd</sup>, Admin, auditorium, Art and Media)**

Year Const.:	1818
Renovations:	Some
First Floor:	17,458
Second Floor:	17,458
Third Floor:	<u>17,458</u>
Total:	52,374

52,374

Total Classrooms:	26 Classrooms
Total Occupancy:	26 classrooms x 20 = 520

**Building Systems:**

Footings:	Spread
Structure:	Wood Frame
Exterior Walls:	Brick Veneer / cast stone
Fenestration:	Aluminum Double Hung and fixed Storefront
Exterior Doors:	Hollow Metal Frames and Aluminum Storefront
Elevated Floor:	Wood Joist
Roof System:	4-Ply Built-up Roof on wood decking
Finishes:	Floors QT Corridors/VCT Classrooms; acoustic ceilings; and Painted CMU walls, some glazed block walls. Carpet in Media
Plumbing Systems	Copper Supply/Cast Iron Waste
<b>Mechanical Systems:</b>	
First Floor:	
Second Floor:	
Other:	
Electrical System:	240/480V System





Fire Alarm: Recently upgraded  
Emergency Lighting: Wall mounted battery backup

**2006 IBC Code Review:**

Utilities	City of Darlington	
Occupancy	Educational Type "E"	
Construction Type	II B Unprotected/Un-sprinkled	
Area Allowed	14,500 sf	
Maximum Stories	Two (2) Stories	
Fire Rated Assemblies:		
Fire Barriers	Corridors - No Ratings	(1 hr. req.)
Structural Steel	No Ratings	(1 hr. req.)
Floor/Ceiling	No Ratings	(1 hr. req.)
Roof/Ceiling	No Ratings	(1 hr. req.)
Fire Walls	None Required	
Toilets:		
Toilet Counts	Appear to be adequate	
ADA Accessibility	Noncompliant	



**Building C: Two Cafeteria/Kitchen on ground / Third Grade on Second**

Year Const.:	1953	
Renovations:	Some	
First Floor:	9423	
Second Floor:	<u>9423</u>	
Total:	18,846	24,700

Total Classrooms: 6 x 20 Second Floor = 120  
Total Occupancy: 120 + Cafeteria =

**Building Systems:**

Footings:	Spread
Structure:	Masonry Load bearing
Exterior Walls:	CMU/Brick Veneer
Fenestration:	Aluminum Double Hung and fixed Storefront
Exterior Doors:	Hollow Metal Frames and Aluminum Storefront
Elevated Floor:	Composite Slab on Steel Frame
Roof System:	Standing seam metal roof
Finishes:	Average. Floors QT Corridors/VCT Classrooms; acoustic. ceilings; and Painted CMU walls, VCT cafeteria Copper Supply/Cast Iron Waste
Plumbing Systems	
Mechanical Systems:	
First Floor:	
Second Floor:	
Other:	
Electrical System:	240/480V System
Fire Alarm:	Recently upgraded



Emergency Lighting: Wall mounted battery backup

**2006 IBC Code Review:**

Utilities	City of Darlington	
Occupancy	Educational Type "E"	
Construction Type	II B Unprotected/Un-sprinkled	
Area Allowed	14,500 sf	
Maximum Stories	Two (2) Stories	
Occupant Load		
Fire Rated Assemblies:		
Fire Barriers	Corridors - No Ratings	(1 hr. req.)
Structural Steel	No Ratings	(1 hr. req.)
Floor/Ceiling	No Ratings	(1 hr. req.)
Roof/Ceiling	No Ratings	(1 hr. req.)
Fire Walls	None Required	
Toilets:		
Toilet Counts	Appear to be inadequate	
ADA Accessibility	Noncompliant	

**Building 4: Gymnasium**

Year Const.:	1953	
Renovations:	Minimal	
First Floor:	<u>24,739</u>	
Total:	24,739	24,739

**Building Systems:**

Footings:	Spread
Structure:	Steel Bar Joist on Load Bearing Masonry
Exterior Walls:	Load Bearing CMU/Brick Veneer
Fenestration:	Aluminum Double Hung and fixed Storefront
Exterior Doors:	Hollow Metal Frames and Aluminum Storefront
Roof System:	Standing Seam Metal Roof
Finishes:	Average to poor. Floors-VCT and hardwoods/tile
Plumbing Systems	Copper Supply/Cast Iron Waste
Mechanical Systems:	
Gym and Lobby:	No A/C, electric heat
Electrical System:	277/480V System
Fire Alarm:	
Emergency Lighting:	



**2006 IBC Code Review:**

Utilities	City of Darlington
Occupancy	Educational Type "E"
Construction Type	II B Unprotected/Un-sprinkled
Area Allowed	14,500 sf





Maximum Stories	Two (2) Stories
Occupant Load	
Fire Rated Assemblies:	
Fire Barriers	Corridors appear to meet 1 hr. req.
Structural Steel	No Ratings Required
Roof/Ceiling	No Ratings Required
Fire Walls	Required to separate assembly
Toilets:	
Toilet Counts	Appear to be inadequate
ADA Accessibility	Appear to be noncompliant



Total Campus Square Footage 130,930

**Assessment of Major Spaces:**

Administration:	Cramped spaces Entry has no space for display Office waiting is inadequate for the school size. Visitor could bypass office and gain access to entire school. Secure airlock should be created
Guidance Offices:	The guidance areas appear to be small Space lacks conference areas for individual and group meetings
Classrooms:	Classroom numbers appear adequate for the student population. Toilet facilities in classroom buildings are inadequate and do not meet current ADA standards
Science Labs	None Present
Media Center:	Lack of natural light Low ceilings create a confined feel Carpet needs replacing. Moisture like smell
Cafeteria:	The size is adequate for the size school Serving line while they work is inside the kitchen proper Toilet facilities are inadequate and do not meet ADA standards
Physical Education:	The existing gym is in need of renovations and lacks air-conditioning. Renovation of toilet rooms is needed The existing locker rooms have been abandoned?
Arts Rooms:	Additional Art Room recommended



Natural light is lacking  
Additional sinks are needed  
Outdoor areas for 2-D and 3-D art are suggested

**Music Spaces:** The sizes of the rooms do not appear to be adequate.  
Access to the rooms since they are behind the stage is awkward

**Other:** Contiguous buildings to increase security  
Consideration of air quality when selecting mechanical systems  
Low flow toilets and plumbing fixtures  
LED lighting where applicable  
Auxiliary Gym renovations to include air-conditioning  
Removal of buildings no longer serving a useful function

**General Observations:** Guard rails at numerous stairs do not meet height or spacing requirements on today's codes. Difficult for ADA navigation on campus due to site and building elements.

**Recommendations:**

It is difficult to compare the code issues and needs of this school with others in the district because of the age of its buildings. However, as a minimum some additional signage should be installed at key points directing visitors to appropriate ADA accessible pathways. In addition, all handrails and guardrails should be checked for appropriate heights and spacing between pickets, this is especially true since the school houses younger children.

There appear to be some moisture intrusion issues especially on the ground floor of the "B" building. The moisture intrusion issue should be addressed. The carpet in the Media center is also in need of immediate replacement.

Because of the Historical Nature of the buildings, Buildings A and B should remain on campus. However, it is the architect's opinion than in looking at a 20 year plan the existing cafeteria/third grade building could be demolished and replaced with a new more efficient building that would also create interior connections to the "B" building and possibly the "A" building. This new building could be built to complement/imitate the architectural character of the "A" and "B" buildings. If this is not selected major renovations are recommended.

Because of the constraints on the site with regards to parent and bus drop off and the nature of this unique site, the architect believes that this campus is probably at maximum capacity and attempts to contain growth at this school should be made.