

## ABSTRACT

Title of Document:

ADAPTATION AS A MEANS OF  
PRESERVATION: A NEW LIFE FOR THE  
FRANKLIN SCHOOL.

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When the Franklin School was built in 1869 in the heart of Franklin Square, a vibrant area of Washington, D.C., the school was the gold standard for D.C. public schools. However, despite a few renovations over the years, the building has deteriorated. Currently the Franklin school is empty, but despite its emptiness, it remains a lasting memory of Franklin Square's vibrant past. It is for this reason that the school needs to be adaptively reused. By redeveloping the Franklin School into a new and accessible public charter school the building can become an active environment once again, while connecting to its past history. However, there are many challenges that come with adaptively reusing a historic building. This thesis will explore those challenges while developing a proposition for the best way to adaptively reuse the Franklin School.

ADAPTATION AS A MEANS OF PRESERVATION: A NEW LIFE FOR THE  
FRANKLIN SCHOOL

By

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Master of Architecture  
Certificate in Historic  
Preservation  
2009

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2009

## Dedication

I dedicate this to my children. Bayla and Zahava, as you go through life remember that you can do anything you put your mind to. It may be difficult during the process, but in the end it is definitely worth all the effort.

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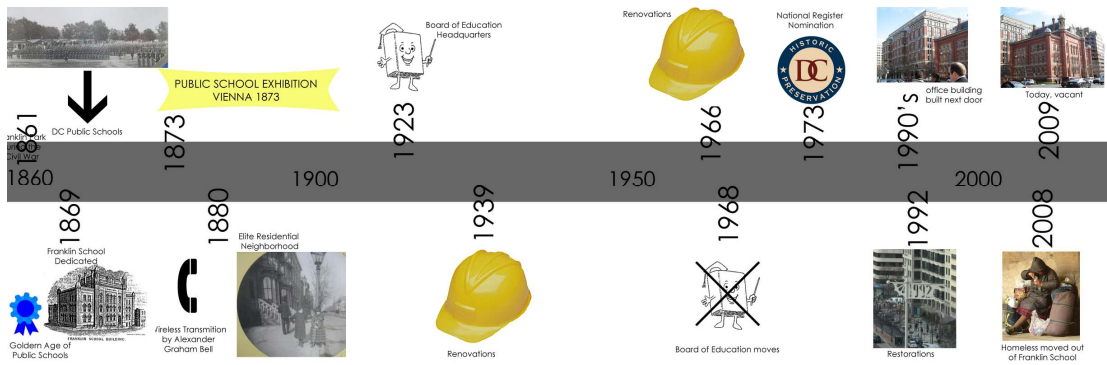
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# Chapter 1: The Franklin School

## *A History of the Franklin School*

At the corner of 13<sup>th</sup> and K Streets, NW, Washington, D.C., one building stands apart from its neighbors; a lone survivor of an up-scale neighborhood that once housed Washington's elite, but now features mostly modern office buildings built in the last 20 years -- the Franklin School. Built in 1869, the Adolph Cluss-designed Franklin School is a building rich in history and recognized for its influence over the architecture of the neighborhood and the city as a whole. Across the street, the Franklin Square Park also contributed to the neighborhood's importance as park for the neighborhood residents and as an extension of the Franklin School upon its completion. Today the Franklin School is long-vacant, except for a brief use as a homeless shelter, and its interior spaces are in desperate need of repair and refurbishment.

Through a look at the history of the Franklin School, one can discover the richness of this place and the need to not just preserve the Franklin School, but to adapt it for future use. It is through this adaptation that the area can once again become a vibrant neighborhood, thereby returning the building's influence over the city and its surrounding neighborhood.



**Figure 1 – Timeline, illustration by author**

Up until the time the Franklin School was built in 1869, the D.C. School system was in disarray. At that time there were no public schools, and the schools that existed needed help; they needed a new focus and a new model of education. In fact there was no concept of universal education at all at that time. With the conclusion of the Civil War, people sought various ways to reunite the country; universal education was to be one of those unifiers and Washington, D.C. was to serve as the model for the rest of the country.<sup>1</sup> “Universal education would safeguard the freedoms established by the Founding Fathers, erase social distinctions, create equal opportunity for all to better themselves, and raise moral standards.”<sup>2</sup> Public education had been available in Washington since 1805, but it was only open to males. Private education was open to females, but there were very few schools, and slaves were denied education altogether. As a result the city came up with plans for seven new schools that would each house public education for the city’s students.<sup>3</sup> (While these schools did serve females, they were not open to the African American population. However, Congress did establish a separate school system for them under the control of a new Board of Trustees set up specifically to oversee new schools for

<sup>1</sup> Lessoff, Alan and Christof Mauch. *Adolf Cluss: From Germany to America*. New York, NY.

Berghahn Books, pg. 143

<sup>2</sup> Lessoff pg. 143

<sup>3</sup> Lessoff, pg. 143

African Americans.) It was hoped that these seven new public schools, with the Franklin School as their flagship school, would serve as a model not just for future schools in the District of Columbia, but for schools throughout the entire nation.<sup>4</sup>

Since the Franklin School was to be the flagship school it needed to be located in a prominent area with a prominent design. The city therefore chose to house the school at the corner of 13<sup>th</sup> and K streets, NW, a “prestigious new neighborhood near the White House whose politically powerful residents included Secretary of War Edwin M. Stanton, Ohio senator John Sherman, future president James Garfield, and Commodore A. S. Wadsworth.”<sup>5</sup> But it was not the neighborhood alone that showcased the school’s prominence; the building and park did this as well.

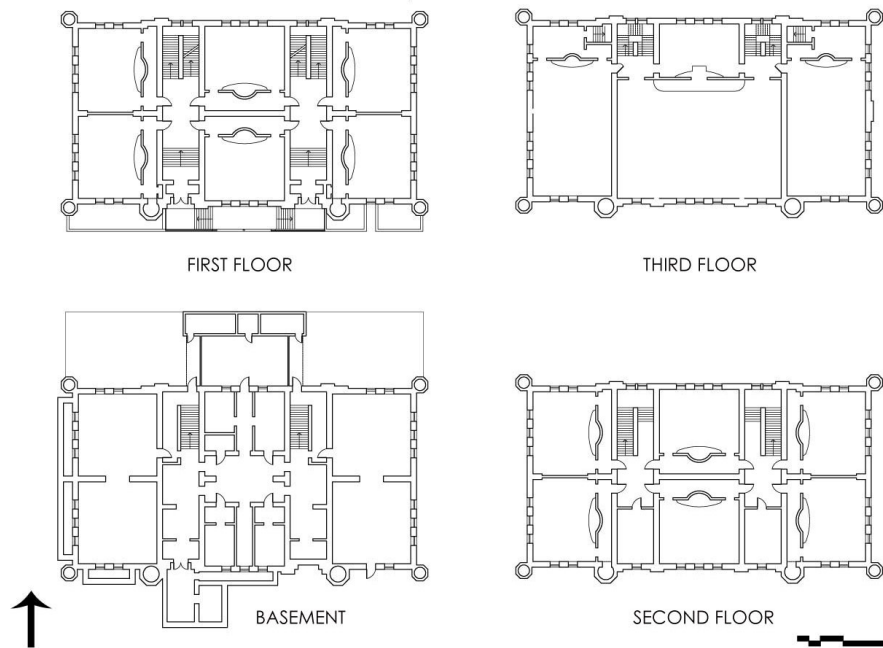
The city chose Adolf Cluss as the architect of the Franklin School. It was Cluss’s design that helped to reinforce the prominence of the building. The Historical images and drawings of the Franklin School show the building to have been one of the largest and most prominent buildings on the block and in the area. This can especially be seen in the drawing of the building as seen from Franklin Square Park.

The Sanborn map from 1903 is further proof of the prominence of the Franklin School. As the map shows, the Franklin School used to be surrounded by much smaller buildings; buildings not only small in height, but footprint as well, due to the residential nature of the neighborhood at the time. In fact, the site of the Franklin School can be divided into four lots the size of those adjacent to the building on K Street. Whereas each of the adjacent buildings does not encompass the full extent of their lots, the Franklin School does, except for a small portion in the back.

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<sup>4</sup> National Register Nomination Application

<sup>5</sup> Lessoff, pg. 145



**Figure 2 – Original Plans of the Franklin School, plans developed on the basis of originals acquired from the D.C. Office of Planning**

When Cluss designed the Franklin School, he created a “three winged” plan developed through three structurally independent classroom bays linked by two separate stairwell corridors. As the plans show, the two stairwells each serve a different entrance, the northern one for males and the southern one for females, creating a building that would finally allow for the public education of both girls and boys. When built, the entry floor contained classrooms only, while the second floor housed a library and administrative offices as well. The third floor had a large auditorium for concerts and events held at the Franklin School as well as two large grammar school rooms. Finally, the basement/ground floor had play space for the children as well as access to an exterior courtyard that originally contained the water closets and janitor’s yard. Despite the varying program elements initially located on

each floor, the interior spatial plan reinforces the symmetry of the building, also found in the design of the façade.

When the building was completed in 1869, Franklin School was an immediate success in design and educational system, marking the golden age of the D.C. Public School system. The building's design was so successful that critics felt it was too nice to be a public school, but should rather house the offices of the State Department. At the school's dedication ceremony, Alderman W. H. Chase even commented "I hope the time may never come when we would make less beautiful and attractive the places where our children are to receive an education...than we would the offices of State."<sup>6</sup> However, the success of the building, and school program, were not solely contained in Washington, D.C. In fact, in 1873 a model of the building was brought to a public school exhibition in Vienna. It was at that convention that the building's architect, Adolf Cluss, was awarded a medal for progressing education and architecture with the design of the Franklin School.

### *The Impact of Adolf Cluss*

While Adolf Cluss was born and educated in Germany, his greatest impact as an architect can be found in Washington, D.C., as illustrated by his success with the Franklin School. Cluss arrived in the United States in September 1848, and in Washington, D.C. by March 1849.<sup>7</sup> However, it was not until after the Civil War that Cluss began to make an impact on the architecture of Washington, D.C. At that time the city began to change, politically and socially and with that came the need for new

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<sup>6</sup> Lessoff, pg 149

<sup>7</sup> Lessoff, pg. 43

buildings. Cluss saw this as an opportunity to begin his own architecture firm thus marking the beginning of his impact on the nation’s capitol.

According to Richard Longstreth, “as a practitioner, Adolf Cluss had an enviable record. Few other architects have had a comparable, let alone greater impact, on the shape and character of Washington.”<sup>8</sup> Much of this is due to the fact that Cluss had the opportunity to design both public and private buildings, which he did successfully. For example, Cluss designed public buildings like the Smithsonian Arts and Industry Building and the Agricultural Department while also having the opportunity to design a variety of row houses, Eastern Market and the Concordia Opera House. These buildings could be found throughout the city helping to impact not only the city, but Cluss’s career as an architect as well.

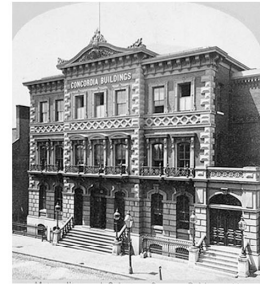
Adolf Cluss Buildings: Washington D.C. - Symmetry



John A Gray's Hotel



Franklin School



Concordia Opera House



Eastern Market



Smithsonian Arts and Industry Building



Agriculture Department

**Figure 3– Adolf Cluss Building Comparison: Symmetry, images of buildings, aside from Franklin School, compiled from <http://www.adolf-cluss.org>.**

There are many similarities between the individual buildings that Adolf Cluss designed and built in Washington, especially with the Franklin School (built during

<sup>8</sup> Lessoff, pg. 103

the height of Cluss's career in D.C.). One of the many similarities is Cluss' use of symmetry. The buildings pictured in figure 3 are examples of this. However, while one of the buildings, the John A. Gray Hotel, is not a completely symmetrical building the main section of its façade does incorporate ideas of symmetry. Another similarity found in Cluss's buildings is the detailing he used in his façade designs,

Adolf Cluss Buildings: Washington D.C. - Detailed Facade



Franklin Terrace



Franklin School



Concordia Opera House



Eastern Market

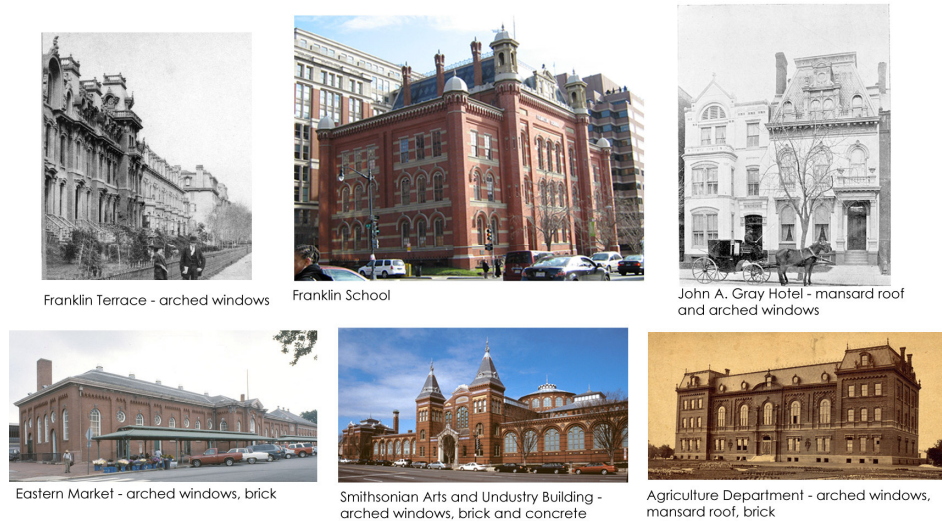


Smithsonian Arts and Industry Building

**Figure 4– Adolf Cluss Building Comparison: Detailed Facade, images of buildings, aside from Franklin School, compiled from <http://www.adolf-cluss.org>.**

such as cornices, brick patterning and arched windows. This detailing comes as a result of the picturesque nature of his buildings. In some of the facades, Cluss used a lot of the same detailing techniques; however, there are also some more unique facades as well, like the façade of the Concordia Opera House (figure 4). Like the similarities in

Adolf Cluss Buildings: Washington D.C. - Roof, Windows, and Materiality



**Figure 5 – Adolf Cluss Building Comparison: Roof, Window and Materiality, images of buildings, aside from Franklin School, compiled from <http://www.adolf-cluss.org>.**

symmetry and detailing found in Cluss’ buildings, the buildings also resemble each other in the use of materiality, roof and window form. For example, Cluss often used arched windows and bricks as building material. One can also find many examples of the mansard roof found in the Franklin School.

Adolf Cluss Buildings: Washington D.C. - Schools

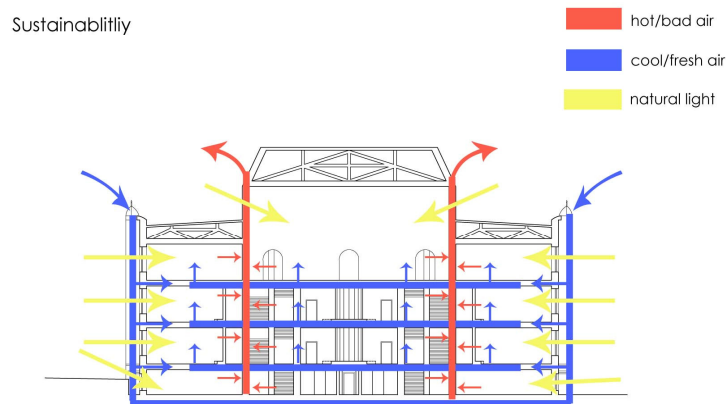
Similarities: Mansard Roof, Symmetry, Brick construction, Arched windows, Detailed Facade, Light and Air



**Figure 6 – Adolf Cluss Building Comparison: Schools, images of buildings, aside from Franklin School, compiled from <http://www.adolf-cluss.org>.**

Adolf Cluss designed many other schools, especially in Washington, D.C. Just like there are resemblances between the Franklin School and his other buildings, there are many similarities between the schools he designed. As shown in figure 8 the Franklin School has similarity in symmetry, façade detailing, materiality, and even massing. When it comes to massing, most of the schools have a central piece that rises in height above the rest of the building. For the Franklin School this is not the typical central bell tower, but the entire central wing of the building.

Adolf Cluss's influence on architecture is not solely found in his expression of a new type of architecture; rather he is also influential for incorporating what we today may describe as "sustainable" elements into his designs. This was an aspect of design Cluss excelled in at a time when architects were beginning to ignore the traditional design methods such as natural ventilation and sunlight due to technological advances. Cluss however, chose to continue to use these ideas in his designs and the Franklin School is an excellent example.



**Figure 7 – Sustainable Elements, image by author using a section developed from the originals acquired from the D.C. Office of Planning**

Cluss's design showcases his use of natural ventilation and light. While radiators were used to heat the building, Cluss integrated a flue system on the exterior of the building to naturally vent out the bad air cast from the radiator system while bringing fresh air into the school. As the diagram shows (fig. 7) the flues located at the exterior of the building are used to draw in fresh air, while the central ducts expel the stale air. Ducts underneath each floor are used to distribute the fresh air into the individual rooms and hallways. Cluss also located the hallways and staircases in the center of the building to allow the classrooms to have access to large exterior windows allowing for a lot of natural daylight. Even in the Great Room, located on the third floor of the building, Cluss made sure to provide natural daylight. By extending the central portion of the building, Cluss was able to place clerestory windows in the Great Room providing it with substantial natural light.

#### *National Register Requirements*

In 1966 Congress established the National Historic Preservation Act (NHPA). The establishment of this act was the result of a concern that many of our nation's historically significant properties were being lost and destroyed. The purpose of the act was to create a way to preserve many of these properties for public education. A result of this act was the creation of the National Register of Historic Places and Landmarks (NRHP or NRHL). The act stated that "the Secretary [of Interior] in consultation with national historic and archaeological associations shall establish or revise criteria for properties to be included on the National Register and criteria for

National Historic Landmarks...”<sup>9</sup> Once the National Park Service (NPS) was established in 1916, the Secretary of Interior placed this task upon NPS who has created the set criteria for a building or landmark to be placed on the National Register. When evaluating a building or landmark, the property’s age, integrity and significance needs to be examined. If a building is old enough to be considered historic, 50 years or older, still looks as it did in the past, and has historic significance it has the ability to be added onto the NRHP or NRHL. However, what makes a building historically significant? According to NPS, a property needs to either have the potential to provide historical information or be associated with significant historical events, activities, people or architectural time period.<sup>10</sup>

Since the Franklin School fit these criteria, it was placed on the National Register in 1973. Of major importance for the Franklin School becoming a nationally registered historic building was its architectural significance and its impact on the development of public school education. The two areas of significance are intertwined. When the city first decided to build the Franklin School they wanted it, along with six other buildings, to become a model for a new form of education within Washington, D.C. The Franklin School became the flagship school of these seven new schools; the place where the new educational system was developed. The goal of the new program was to interact with the community including the Smithsonian Institute and Corcoran School of Art. This connection was made through music programs, public lectures and the exhibition of student artwork. To make sure this program was carried out to its fullest, the school superintendant was even housed

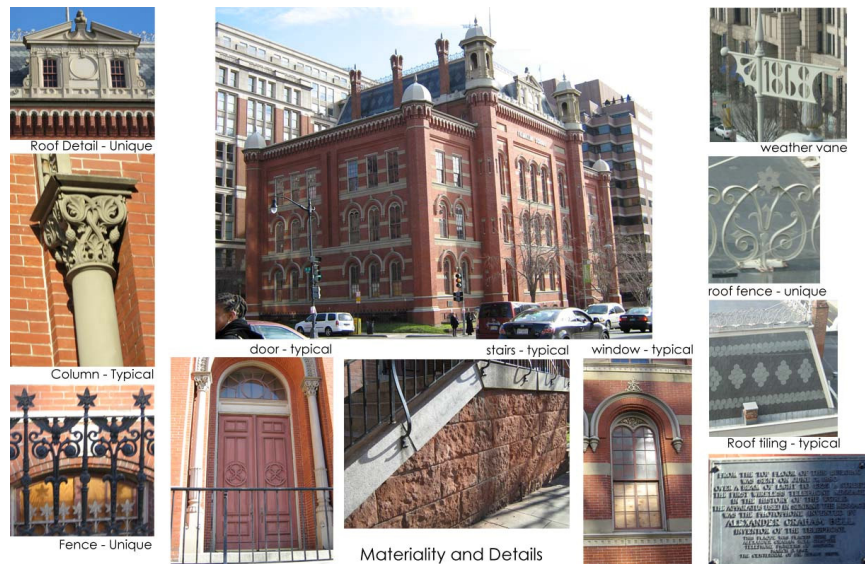
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<sup>9</sup> National Historic Preservation Act of 1966, 16 U.S.C section 470-470x-6

<sup>10</sup> National Register of Historic Places: Fundamentals, *National Register of Historic Places*.  
[http://www.nps.gov/nr/national\\_register\\_fundamentals.htm](http://www.nps.gov/nr/national_register_fundamentals.htm)

within the Franklin School making the building the hub of public education in Washington, D.C.<sup>11</sup>

To draw the attention of and gain the support of Congress and the nation, the city determined that the building needed to “rival new federal government buildings such as the nearby White House and Department of the Treasury Building and to be a landmark in a rapidly developing city.”<sup>12</sup> To accomplish this task, Adolf Cluss chose to use a traditional German brickwork design called *Rundbogenstil* along with placing most of the building’s detailing along the upper stories so that it could be seen from different points around the city (figure 8). Through the use of *Rundbogenstil* and its Renaissance purity of line, proportion and structure, Cluss designed a new type of building for a new era in public school education.



**Figure 8 – Building Materiality, images by author**

These elements make up the architectural significance of the Franklin School that allowed it to become part of the National Register. However, the nomination still

<sup>11</sup> National Register Nomination Application

<sup>12</sup> National Register Application, pg 13

needed to prove that the building was old enough to be located on the registry and had maintained its architectural integrity. Since the Franklin School was placed on the registry in 1973 it easily passed the age criteria. This is especially true since the time of significance was dated between 1869, when the Franklin School was built, and 1925, when the building became the administrative headquarters for the Board of Education. (Also included in this time period is Alexander Graham Bell's successful wireless transmission test from the Franklin School. While this adds to the significance of the building by connecting it to an important historical figure, it was not listed as one of the decisive criteria for the building's inclusion.) There were also minimal exterior changes to the building, so that the Franklin School maintained its integrity. According to the nomination application,<sup>13</sup> the only exterior change made to the building was the realignment of the stairs leading to the buildings main entrances. Originally, these staircases were perpendicular to the building, but over the years they had been adjusted to run parallel as well. Since this was a minimal change, it was determined that the Franklin School maintained its architectural integrity and therefore met all the criteria to be listed on the National Register.

### *The Franklin School Today*

By 1923, the Franklin School was no longer in use as a public school. Instead it became the home to the Board of Education. The new use led to a number of changes in the building as well. The smallest change was the upgrade in the mechanical system coupled with the obstruction of the natural ventilation system. Changes also occurred to the historic façade and exterior staircase, as mentioned

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<sup>13</sup> National Register Application, pg 4

earlier. Despite these changes, the building still had many constraints for the Board of Education, so in 1968 they left the Franklin School for a larger building. This put the building in danger of destruction, especially with the character of the Franklin Square neighborhood changing into a business district. As a result, in 1973 the Franklin School was added to the National Register of Historic Buildings.<sup>14</sup> However, while this helped to prevent the building's demolition, it was not sufficient to prevent the building's neglect (especially now that the building is vacant).



View looking West - Towards Franklin Park



View looking East - Towards Franklin School

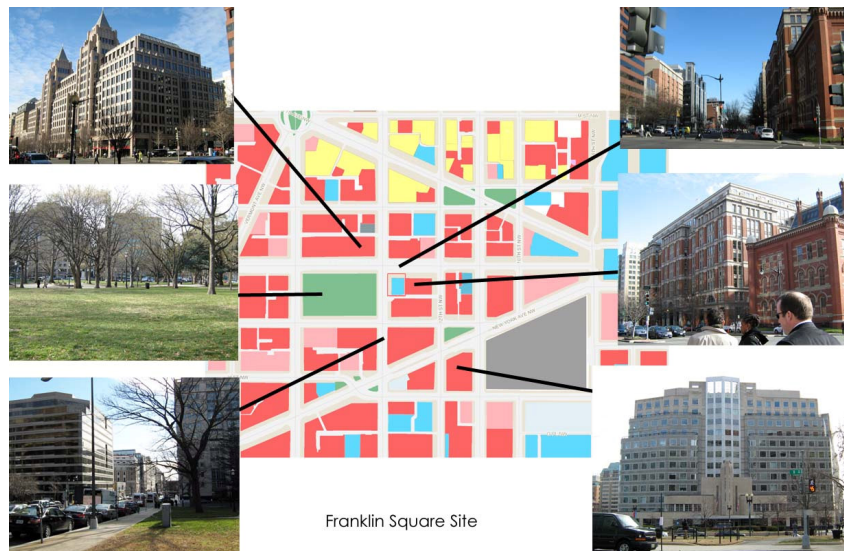
**Figures 9 and 10 – Panoramic Elevations of the Franklin School and Park along 13<sup>th</sup> street, image by author**

With the change in character of the Franklin Square neighborhood to a business district, the Franklin School is no longer the largest, most significant building in the area. Today most of the buildings in the area are high-rise office buildings that diminish the scale and prominence the Franklin School once had. These buildings are designed in a variety of materials and styles and most differ significantly from the Franklin School. The only building that attempts to relate to the Franklin School is

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<sup>14</sup> McLeod, Ferrara and Ensign, *The Franklin School Building*. Washington, D.C.: National Trust for Historic Preservation, 1973

the office building next door. It uses the same materials with a horizontal patterning in its façade that tries to resemble its historic neighbor (fig. 11).



**Figure 11 – Franklin Square Site Images, site plan adapted from the D.C. Office of Planning, images by author**

But it's not just the buildings that have changed the character of the neighborhood, the park too has changed over the years; it is no longer a vibrant park filled with neighborhood residents (fig.12). The park is either empty or used by homeless people. Its central space has a fountain often not in use and empty park benches since the park is rarely used by employees of the neighboring buildings. When occupied the users are rarely employees of the neighboring buildings on a lunch break, but the homeless of D.C.



## Chapter 2: Adaptation as a Means of Preservation

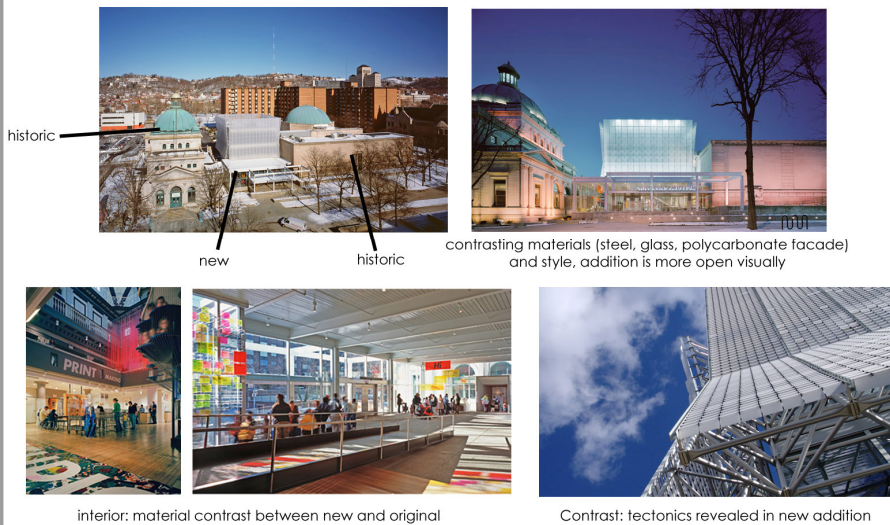
### *Current Issues in Adaptive Reuse*

Historic buildings have their own inherent beauty and character that need to be preserved, while introducing new elements into their design. There are many approaches to this, but one of the most widely used approaches is to use contrasting and complimenting elements in the building's design. This means that new forms and additions to the building should contrast with the original building, to reveal the historic fabric versus what was added, while areas of the original building that have been modified should be done in a way that compliments the existing structure. How does one employ these ideas? Contrast can come about through a change in massing, form and/or materiality, while complement is best approached by picking up on key building elements, such as façade composition, existing building forms, interior detailing and/or material, and reusing them in a new way.

The best way to understand these ideas is to look at precedents of other historic buildings that have been adaptively reused through the methods of contrast and complementation. While there are many buildings to choose from, there are three in particular that express these ideas of contrast and compliment, the Children's Museum of Pittsburgh, the Wormley School in Washington, D.C. and the Mill City Museum in Minnesota.

Precedent Study: Contrast vs Compliment

Children's Museum of Pittsburgh, Pittsburgh, PA



**Figure 13 – Adaptive Re-Use Precedent: Children’s Museum of Pittsburgh, images from [www.pittsburghkids.org](http://www.pittsburghkids.org) and [www.kearch.com](http://www.kearch.com)**

The Children’s Museum of Pittsburgh, by Koning Eizenberg Architects, is a successful example of the use of contrast in adaptive re-use. Furthermore, it exemplifies the reuse of multiple historic buildings into one larger building. The original museum was located in a historic post office, however, due to visitor increase the museum needed to expand. The plan was to expand by creating an addition to connect the museum to a historic planetarium down the street. Koning Eizenberg chose to design this addition through the ideas of contrast; they chose to express the idea of contrast through materiality, tectonics and style. They used a polycarbonate screen façade, steel and glass throughout the building, opposing the stone structure of the two historic buildings. They also chose to reveal the structure of the addition, especially of the polycarbonate façade, in contrast to hidden structure of the two historic buildings.

original materials - brick



original building

compliment Wormley School with use of brick and similar forms



proposed townhouses

**Figure 14 - Adaptive Re-Use Precedent: Wormley School, images from [www.cunninghamquill.com](http://www.cunninghamquill.com)**

The Wormley School is an adaptive re-use project that for an old D.C. public school. Unlike the Franklin School, however, the Wormley School's interior was completely destroyed due to water damage. This resulted in the need for a completely new interior inside. The Wormley School design also includes the addition of townhouses next door. These townhouses were designed using the ideas of complementation. While these townhouses are separate from the historic building, they pick up on material usage, brick, and building form found in the Wormley School to compliment instead of contrast with the building.

Mill City Museum; Minneapolis, MN



contrast:  
ceiling material  
compatible:  
material  
has grain  
pattern in it



compatible:  
memory of  
rail track  
retained



new addition within ruins



contrating  
materials in  
addition: steel,  
glass and wood  
vs. stone

**Figure 15 - Adaptive Re-Use Precedent: Mill City Museum, images from Meyer Scherer Rockcastle**

The last precedent, the Mill City Museum by Meyer Scherer Rockcastle Architects, uses both ideas of contrast and compliment in its design. The addition located within the ruins of the mill employs the ideas of contrast. This addition is mainly glass and steel opposing the stone of the ruins. The steel is further emphasized through color; a contrast here is made between existing steel and new steel, the new steel is painted red. Contrast can also be found in the new ceiling material used at the building's entrance. However, while the material itself contrasts to the original concrete, the architects chose to include a grain pattern onto the material as a way to compliment the original building by connecting the the building's past. Complementation can also be found in the way the architects chose to preserve the memory of the mill. While the materiality of the new addition does contrast it compliments the memory of the mill by using materials with an industrial feel. Another way in which the memory of the mill was retained was by revealing

parts of the building's past within the building. For example, the rail lines are revealed in the space where the rail corridor used to run.

*How Does the Franklin School's Listing on the National Register Impact its Adaptation?*

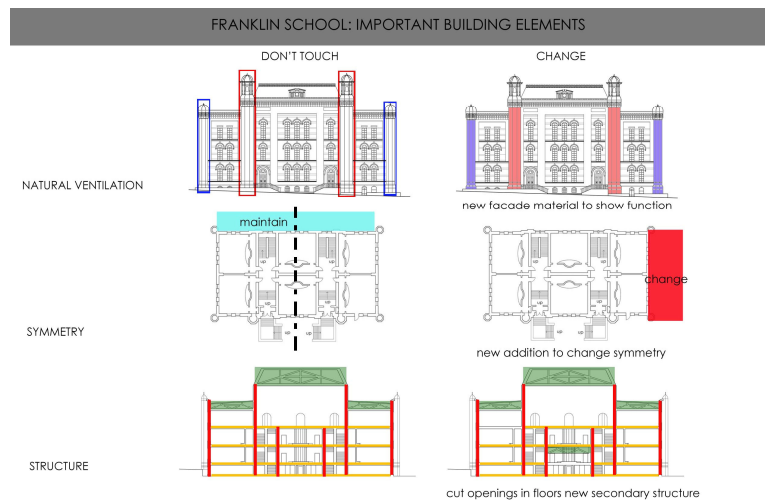
Since the Franklin School is listed on the National Register its adaptation is regulated through the standards set by the Secretary of the Interior. While the standards do not actually decide what features of a building are historic and thus should not be altered, they provide guidelines for the state preservation boards to use when evaluating a design proposal for a historic building. For instance, the Secretary of Interior standards propose four approaches to the treatment of a historical building: preservation, rehabilitation, reconstruction, and restoration, with preservation being the most restrictive.<sup>15</sup> Since these standards do not determine how a historic building should be preserved it is up to the State Historic Preservation Office (SHPO) and its preservation review board, to come up with a set of design guidelines. These guidelines advise which parts of a historic building should not be changed through its adaptation. For example, in Washington, D.C., the guidelines focus on areas such as exterior modifications, energy conservation, accessibility, and how an addition may be added to the building. In D.C., as well as in many other states, the focus is on maintaining the building's exterior character. These guidelines determine that there should be a harmonious distinction between the new and the historic, be it through

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<sup>15</sup> Introduction: Choosing an Appropriate Treatment for the Historic Building, *The Secretary of Interior's Standards*. [http://www.nps.gov/history/hps/tps/standguide/overview/choose\\_treat.htm](http://www.nps.gov/history/hps/tps/standguide/overview/choose_treat.htm)

massing and or materiality. This is also why there are generally no restrictions in the District on a building’s interior, since that will not be seen from the street.<sup>16</sup>

In the case of the Franklin School these preservation guidelines hold true. This means that the exterior of the building, especially its facade which has been restored over the years, should not be altered so as to take away from its historic integrity. However, this does not technically mean it can not be altered at all, but that any alterations made to the façade or massing of the building need to be done in a way so that they retain the importance of Adolf Cluss’s design (fig. 16). Another important feature of the Franklin School is its symmetry and 3 wing plan. Any new addition or change to the building’s interior should work with both of these elements.



**Figure 16 – Franklin School: Important Building Elements, image by author**

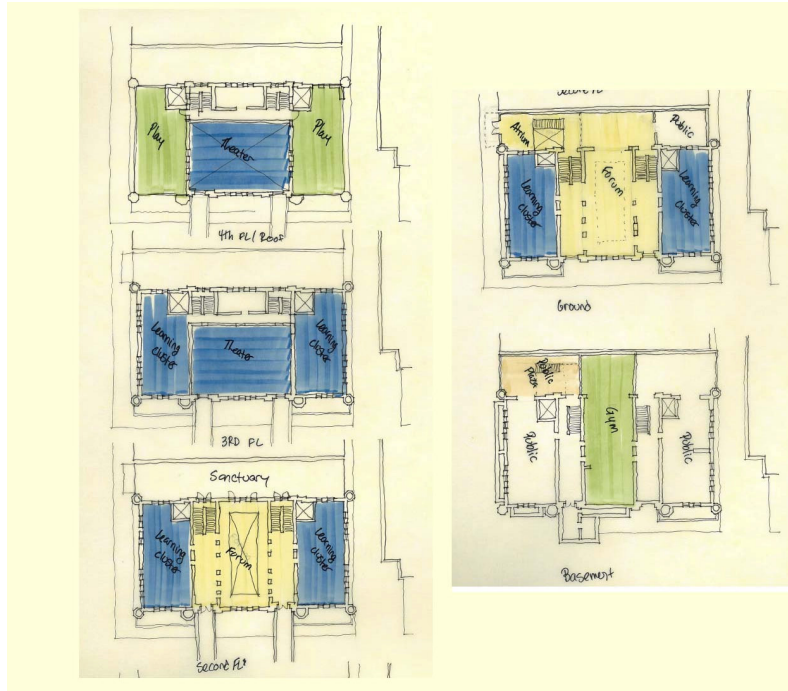
However, while only the building’s exterior is original to Cluss’s design, there are a number of interior spaces that have great importance; the classrooms, the stairwells and the great hall on the top floor of the building. These spaces have been considered important due to Cluss’s architectural design moves for these spaces.

<sup>16</sup> Historic Preservation Design Guidelines, *D.C. Office of Planning*.  
<http://planning.dc.gov/planning/cwp/view,A,1284,Q,570650.asp>

However, many of those moves have been significantly altered over the years; some are even hidden beneath alteration. For example, the great hall's original frescos have been painted over and the classrooms and great hall have been subdivided into offices. In fact, according to the DCSHPO's office, the new design for the building can continue to subdivide the spaces and keep the original frescos hidden so long as the new walls do not touch the ceiling and the frescos are not removed. Do these conditions maintain the historic character of the Franklin School? Probably not. For that reason, these rooms should not be included on the National Registry.

#### *Grappling with the Issues of Adaptive Reuse in the Franklin School*

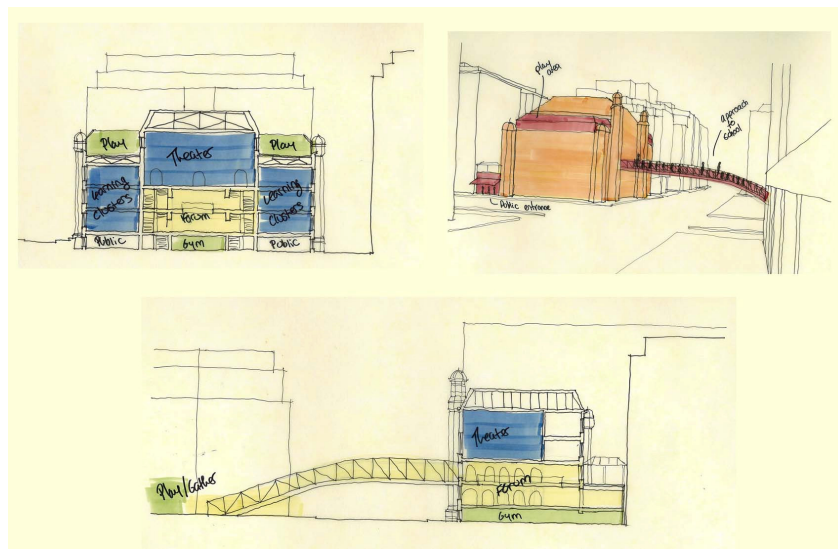
There are many ways in which one can approach the adaptive reuse of the Franklin School. Since the Franklin School's interior is intact there are three options for its adaptation: keep the interior as it is, modify it, or create a completely new plan like in the Wormley School. This section will go through three potential schemes, each of which resolves some of the challenges that the adaptive reuse of the Franklin School poses. Each scheme maintains the building's symmetry and three winged plan, and some of the most important architectural elements of the building's design.



**Figure 17 – Franklin School Adaptive Reuse Design Scheme 1: Plans, image by author**

The first design scheme maintains many of the original design ideas on the interior of the building, while making some exterior changes to the building’s façade. As the plan illustrates (fig. 17), this scheme proposes two additions to the building, one in the rear and one on the roof, which maintains the building’s symmetry. The rear addition is used as a second means of access into the building, along K Street. The new entrance, unlike the building’s original entry, would be handicap accessible. This addition is also shorter than the original building, rising only two stories, creating one level of distinction between the new and historic elements. However, due to the new entry on K Street, this addition takes up the full length of the Franklin School, hiding the entire rear exterior façade (albeit the least important façade). While the façade issue here is quite minor, the length of the addition can pose some problems since it is not set back from the original boundary of the Franklin School.

While the height does reduce this problem, it poses another challenge that the scheme does not solve well; the location of the elevator(s). Part of the accessibility issues within the building is that the only vertical means of movement through the building is via the two staircases. This scheme proposes to place two new elevators next to the staircases, however, these elevators cut into the learning spaces; located in historic classroom space. If the addition in the rear was the full height of the Franklin School the elevators could be located in the addition instead.

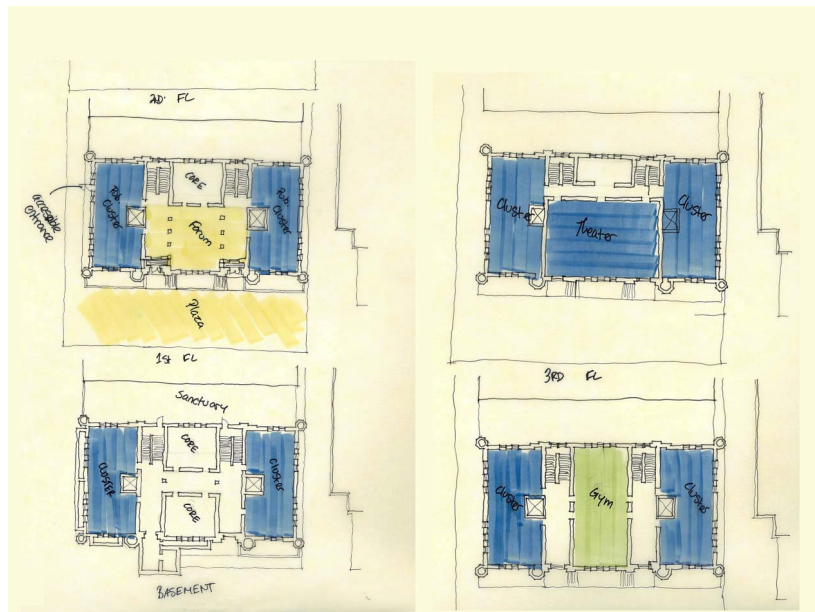


**Figure 18 – Franklin School Adaptive Reuse Design Scheme 1: Section and Perspective Drawings, image by author**

One of the most obvious changes in this scheme is the addition of a bridge on the front façade of the building. This bridge is used to create a connection between the park and Franklin School while creating another accessible means of egress. However, while this bridge does do a nice job in creating this connection and leading visitors through the building, especially the central forum space, it does pose some preservation and urban design problems. First of all, the bridge makes the historic entry into the building useless, especially since it establishes the second floor as the main entry along 13<sup>th</sup> street. It is also an obvious addition to the historic façade, one

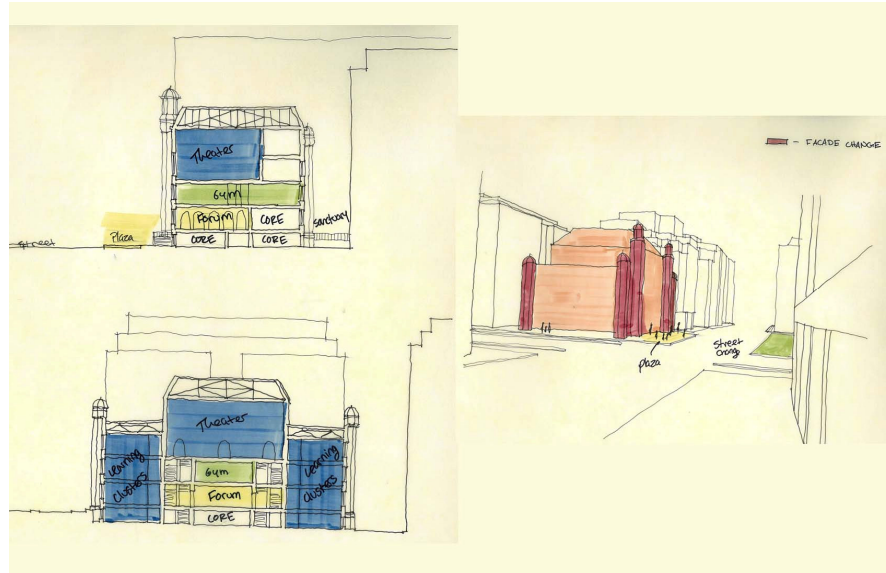
that doesn't just lightly touch the façade, but will affect the placement of windows and doors. The bridge also poses challenges on an urban level; it keeps people on the street level while obstructing sight lines of the city.

*Issues and Resolutions found in scheme 2*



**Figure 19 – Franklin School Adaptive Reuse Design Scheme 2: Plan Drawing, image by author**

While scheme one includes additions to the Franklin School, scheme 2 proposes alterations to the original building only. While this clears up some of the issues found in the addition of scheme one, like scheme one it still does not deal well with the placement of the building's elevators (fig. 19). Due to the lack of an appropriate addition, once again the elevators cut into the learning spaces within the building, despite fitting Cluss's three wing plan.

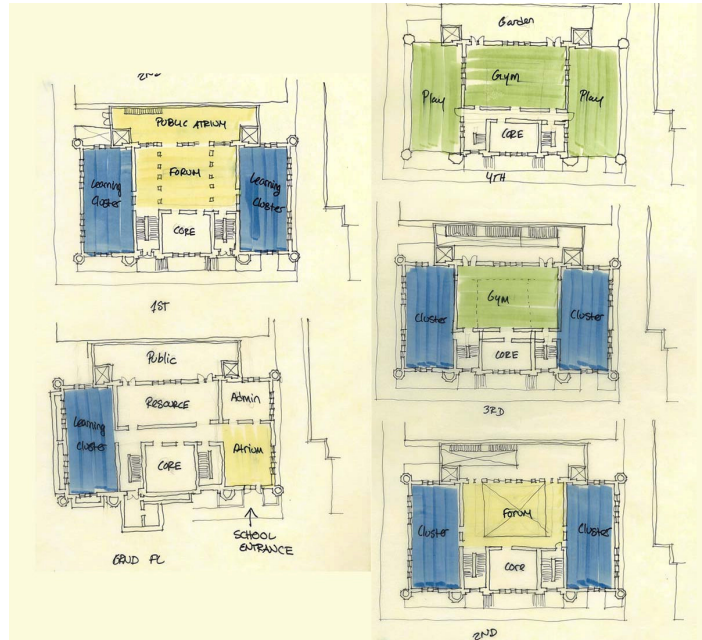


**Figure 20 – Franklin School Adaptive Reuse Design Scheme 2: Section and Perspective Drawings, image by author**

Another issue here is the façade changes that this scheme proposes. The first façade change is connected to the location of the accessible entrance. Here the accessible entry is located along K Street; like in the previous scheme, but since there is no addition, the new entry would create the need for the addition of a door on the K Street façade. (This new entry also poses another problem to the adaptation of the building; the new entry opens into the learning clusters, not a lobby space.) Aside from this new entrance, the other façade change would involve the flues that are located at the four corners and front of the Franklin School. These flues could be clad in a new material to draw attention to their use within the building. This could pose a problem; however, the reason for the change is to draw attention to Cluss’s environmentally conscience design moves. These flues are used in a natural ventilation system Cluss included in his design. While to some this façade change may seem like a conflict with historic preservation, because the purpose is to draw

attention to Cluss's design while addressing the current issue of sustainability it should be allowed.

### *Issues and Resolutions found in scheme 3*

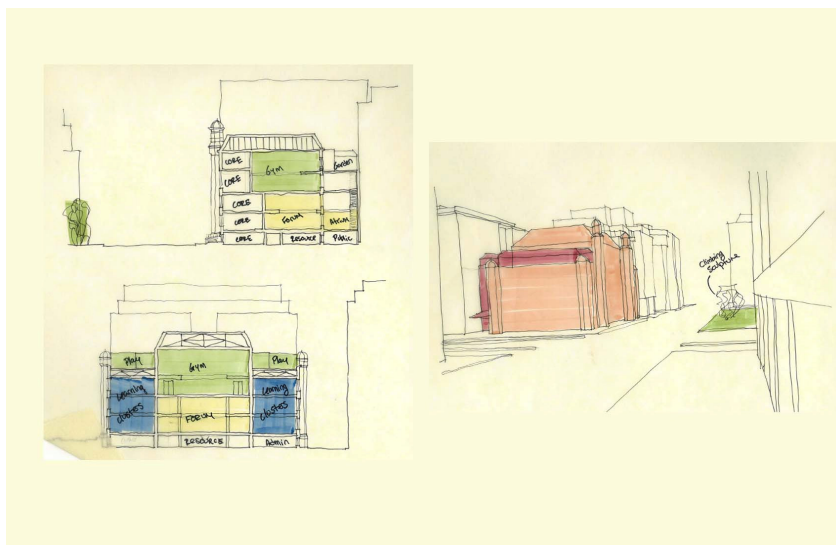


**Figure 21 – Franklin School Adaptive Reuse Design Scheme 3: Plan Drawing, image by author**

The last scheme builds upon the two previous schemes by resolving some of their issues, while proposing some new ones as well. In this scheme there is an addition in the rear as well as on the roof. This addition is used, like in scheme one, as a public entrance into the building, connecting the new wing with the central public spaces, while keeping the private spaces of the Franklin School secure. This addition also houses the building's elevators. Since the addition is the full height of the historic building, the elevators can be accessed on all levels of the building through this addition. (This resolves the previous issues of the elevators cutting through important building spaces.) Another preservation issue solved with this addition is the need for a set back, since this addition does not run the entire length of the rear façade (fig. 21). This, along with the use of a contrasting material and

structural system will create an obvious distinction between the new and historic elements of the building. A second addition is located on the roof of the building. This addition, like the one proposed in scheme one, maintains the symmetry established by Adolf Cluss, and will be constructed using the same materials as the rear addition to contrast to the historic building as well.

The proposed plan for the interior of the building has some significant modifications to the historic building, however. Due to the desire to connect the central, public spaces located in the historic portion of the building, to the new publicly accessed addition, the historic staircases have been moved to the front of the building. While they are no longer located in their original location, all original materials, can be reused for the new stairs so that they complement the original building design. However, probably the most problematic issue here is that along with the change in stairwell location, comes the need to change the placement of the great hall, the single most important interior space (figures 21 and 22).



**Figure 22 – Franklin School Adaptive Reuse Design Scheme 3: Section and Perspective Drawings, image by author**

The final interior change takes place through the creation of the forum. This is to be a double height space, like the one proposed in scheme one. While this is a major intervention, it is not taking place within any of the historically significant spaces, and works with the original structural system of the building. Since the original structural system uses a bearing wall structure with wood beams spanning north-south, all beams located between those bearing walls can easily be removed with little structural intervention. In this way, the new forum space creates a clear contrast to the historic building, by opening up the space to two floors, while working with the historic structure at the same time.

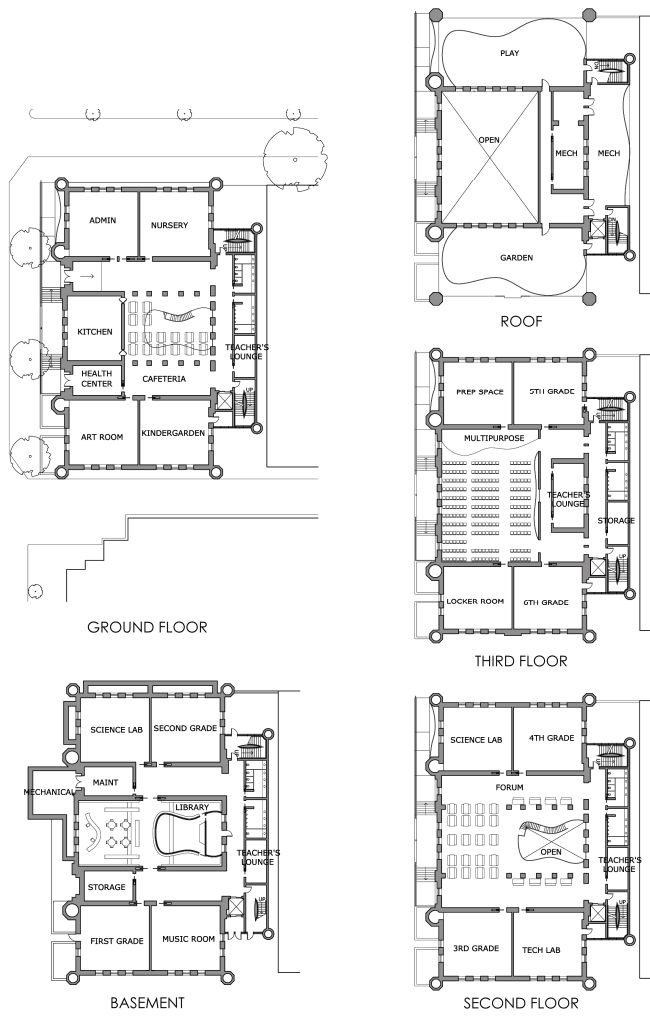
Despite the numerous interior changes to the building, many of Cluss's key design ideas still remain intact in this scheme. There are no façade changes, thus the complex exterior detailing is maintained, and the "three wing" plan that Cluss established remains. Even though the staircases and great hall have been moved, there are two new additions to the building, and a double height space has been cut in the building's interior, this has been done in a way to allow for handicap accessibility, while working within the tri-winged planning system set up by Cluss.

## Chapter 3: Conclusion: A Potential Approach to the Adaptive Reuse of the Franklin School

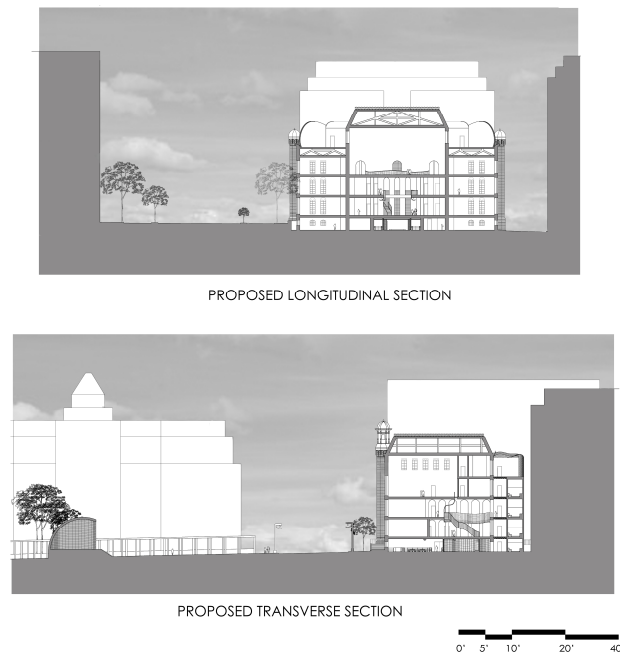
### *Design Strategies for the Franklin School*

The initial schemes and precedent studies of how to approach the adaptation of the Franklin School revealed the need to highlight the ideas of contrast and compatibility. This should be done through materiality, tectonics, and form. Like in the precedent examples, new interventions into the building will use materials, forms and tectonics to contrast with the historic building, while modifications to the historic building will pick up on the original design ideas of Cluss to compliment the existing structure.

The final scheme picks up on many of the design moves of the third scheme, while integrating these ideas of contrast and compatibility. Like in scheme three, this plan incorporates a similar addition on the rear and roof of the building. This addition is meant to support the original building, so spaces like egress stairs and restrooms are located in the addition. The rear addition also uses contrasting materials of glass, metal and steel, along with a column-beam structural grid to contrast with historic building. As a way to create a harmonious contrast, however, the rear addition picks up on Cluss's use of an exterior flue system to ventilate the building. Here the new HVAC system will be revealed at the rear corners of the addition in the same way the flues are revealed on the historic building (figures 23 and 24). The form of the roof addition further promotes this idea of contrast through form; the form of the roof addition is organic (fig. 23) in contrast to the rectilinear forms of the Franklin School.



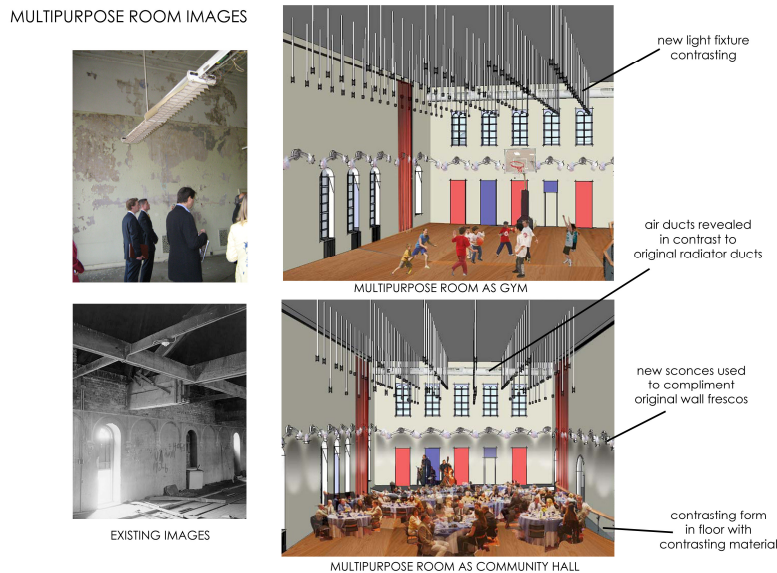
**Figure 23 – Franklin School Proposed Building Plans, image by author**



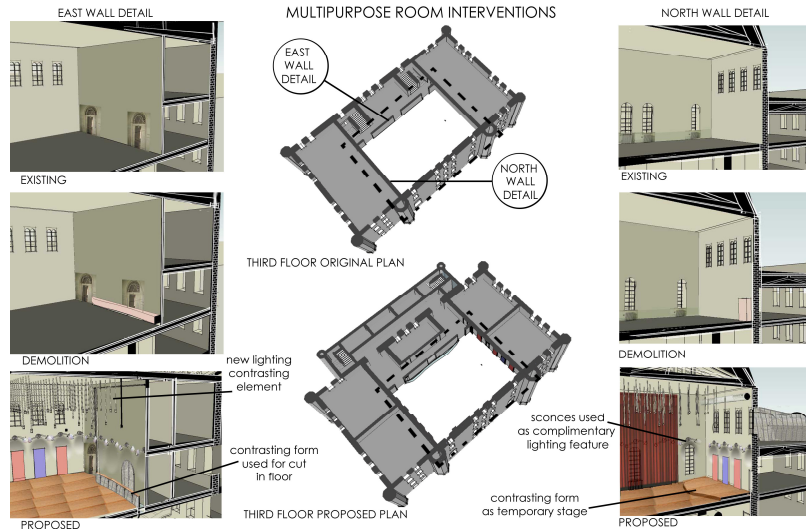
**Figure 24 – Franklin School Proposed Building Sections; image by author**

To further the ideas of contrast and compatibility, the three main central spaces of the Franklin School are designed with these principles. Sometimes, the functions of the space, which can be used by either the public or school, highlight these ideas as well. The multipurpose room, which was originally the great hall, is the first example of these ideas. This room can be used in a number of ways by both the school and community; therefore the design of the room uses contrast and compliment to allow for this. Currently, the room’s ceiling is located under the clerestory windows, a change from Cluss’s original design (fig. 25). In the proposed design, however, the ceiling is brought back to its original height. A lighting system, which contrasts with the original design, has been incorporated into the ceiling to allow for a change in uses and scales of the room. For example, if the school is using the multipurpose room as a gym, the lights can all be illuminated and lifted to the top

of the space, allowing for the room to be used to its maximum height. However, if the space is needed as a banquet hall for the community, the lights can be adjusted to varying heights and levels changing the scale of the room. This room also highlights ideas of compliment in its lighting system through the sconces placed along the walls. In Cluss’s original design, there was a series of arches painted midway along all four walls. While this fresco can no longer be seen, as it has been painted over, it is being complimented through the sconces placed in their original location (fig 26).



**Figure 25 – Franklin School Multipurpose Room Images, Existing and Proposed; images by author and Library of Congress**

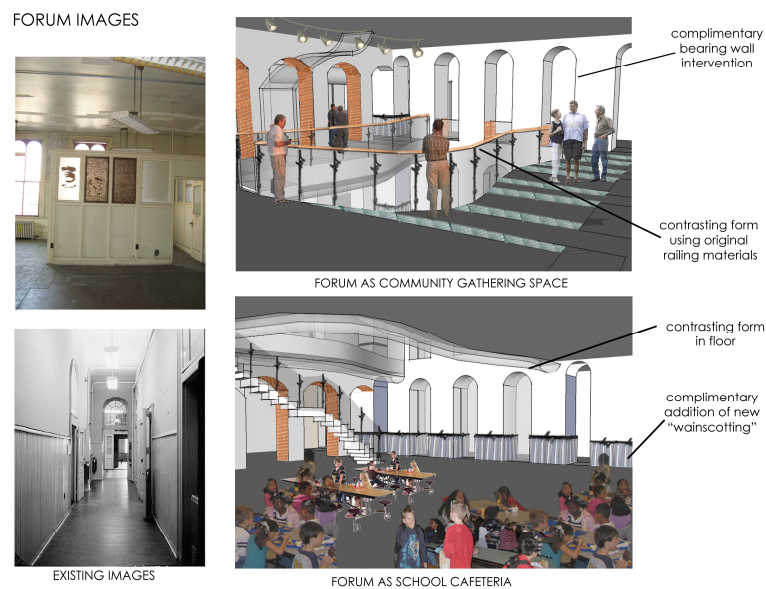


**Figure 26 – Franklin School Multipurpose Room Interventions; image by author**

The other contrasting elements in this room are a cut in the floor along the east wall and the room’s acoustical system. The cut in the floor repeats the organic form and material usage found on the building’s roof addition. The floor then uses a cast glass fill for the floor’s cut so as to maintain the room’s original acoustical properties. However, since the room is to be used in a variety of ways, there needs to be additional acoustical interventions. Therefore, there is the addition of a curtain, which contrasts with the original design, to allow for better acoustical properties when needed (fig. 26).

The forum, too, highlights the ideas of contrast and compliment, especially since it is a double height space. This space creates the need for an opening in the floor, the major area of contrast in this space. The shape of the floor’s cut picks up on the organic form of the roof addition, and uses the mesh material in its new railing. This mesh then continues under the floor to create a new light feature on the first floor. Since the floor does not extend to the bearing wall, like it does in scheme three, a new structural system needs to be added for support. This system is then revealed

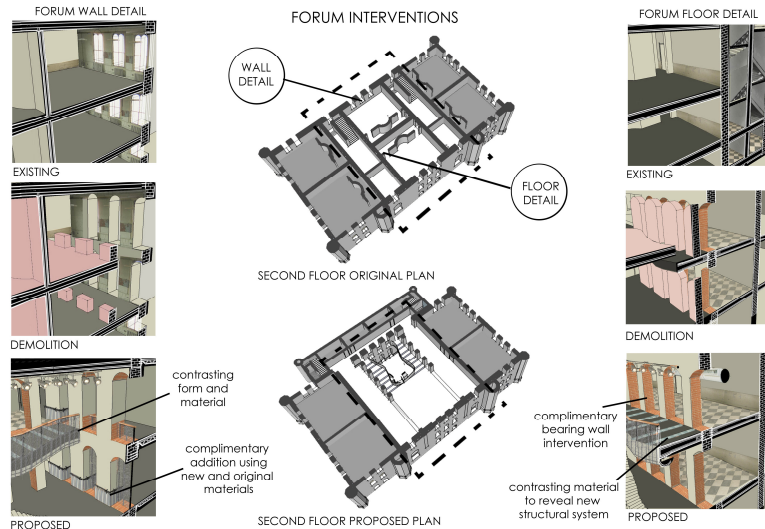
through cast glass in the floor, another contrasting element of the forum (fig. 27). The double height space of the forum also allows for complimentary elements within the space. In order to open the space up to the hallways, the original bearing wall has a series of arches cut into it. These arches not only open up the space, but also pick up on the arched window openings on the building's façade, thereby complimenting Cluss's original design.



**Figure 27 – Franklin School Forum Images, Existing and Proposed; images by author and Library of Congress**

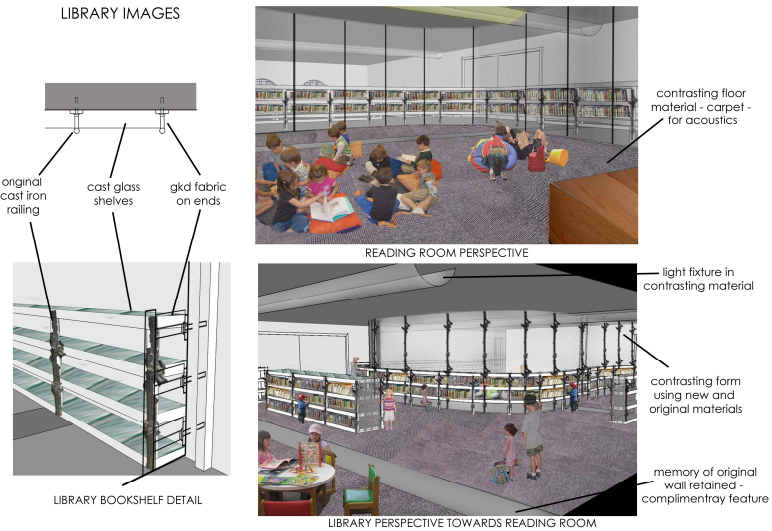
This space also reveals the removal of the historic staircases. While this can be problematic, the floor material and railings are reused within the space, to compliment the historic building. The cast iron and wood railings are reused in the new railing around the cut in the floor. The cast iron is also used in another complimentary element of the space; the new wainscoting along the original rear wall of the Franklin School. In order to open the space up, the portion of wall beneath the windows has been removed. The “wainscoting” made of metal paneling and the cast iron railing, demarcates the location of the original window sill. This is a

complimentary feature in that it picks up on a historic idea, but carries it out in a new way (fig 28).

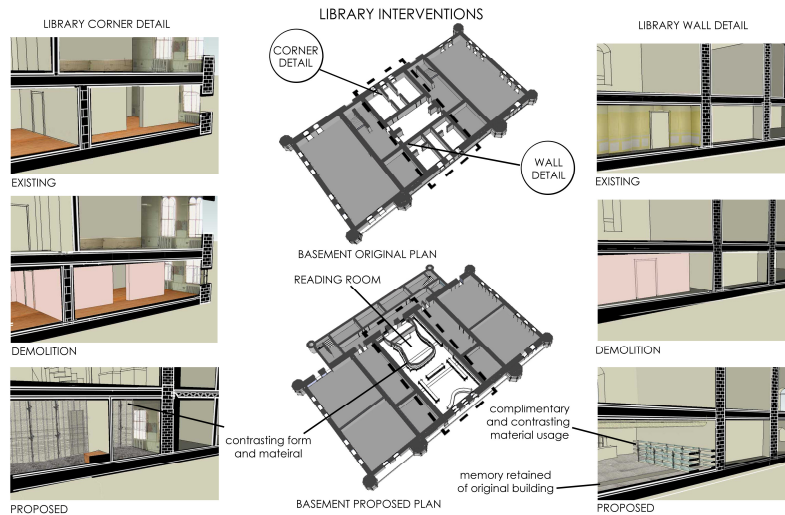


**Figure 28 – Franklin School Forum Interventions; image by author**

The final space, the library, is located in the basement level of the Franklin School. This space, while primarily for the school, uses the ideas of contrast and compliment in both the overall design of the room and its details. The first place this can be seen in is the library’s reading room. This room uses the form of the forum as a solid, rather than a void, continuing the idea of contrast through form and materiality. However, since this space was originally a number of rooms, with a hallway running between them, the memory of the original hallway walls has been preserved through a change in floor material. While most of the library floor is covered in carpet, for acoustical purposes, the floor material changes to concrete at the location of those walls, so as to compliment the memory of the original space. This idea is reinforced in the ceiling through light fixtures designed with the mesh material (fig. 29 and 30)



**Figure 29 – Franklin School Library Images and Bookcase Detail; image by author**



**Figure 30 – Franklin School Library Interventions; image by author**

Contrast and compliment is also carried out through the library bookcases.

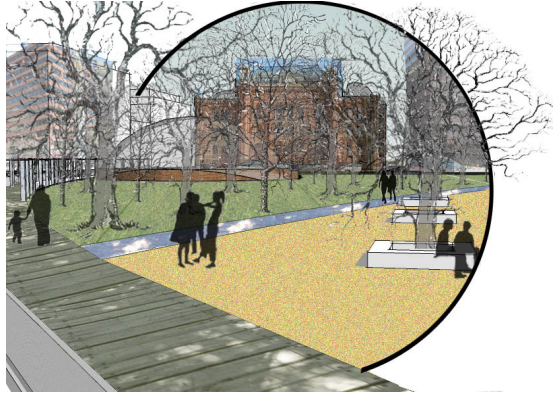
These bookcases are designed by combining new and historic elements used throughout the building. The shelves are made out of cast glass (also used in the floor of the multipurpose room and forum), a new material, while the support system uses the cast iron railings and mesh as “walls” along the ends of the bookshelves. Here the cast glass and mesh continue the idea of contrast, while the cast iron is used as a way to compliment the Franklin School.

## Conclusion

The ideas of contrast and compliment are an ideal way to adapt a historic building. It allows the designer to emphasize areas of change within the building, while at the same time revealing the beauty and history of the building's historic fabric. Current preservation guidelines make this approach to adaptive reuse even more useful. This is because it allows the building to be modernized; something that is typically needed with many historic buildings. There are many vacant historic buildings that, despite being listed on the National Register, are in danger of destruction, usually by neglect. In order to save and reuse these buildings they need to be modernized to work with current trends and needs. However, often preservation guidelines prohibit much of what can be done to those buildings. The solution is to design with the ideas of contrast and compromise. By contrasting new additions and modifications to the historic building, the historic fabric of the original design can easily be perceived thereby maintaining its integrity. This is then a design technique that is acceptable under most preservation guidelines and allows the building to be modernized.

This is especially true in the case of the Franklin School, a building whose history and architect are integral parts of the development of the D.C. area. For years the Franklin School has either been vacant or underused. As one of the last remaining Class buildings, it is a building that needs to be maintained, but as its current condition has proven, is not viable in its current conditions. Therefore, by using the ideas of contrast and compliment to adaptively reuse the Franklin School as a new

D.C. public charter school, Cluss's building and design can be restored to its former glory.



**Figure 31 – Park Perspective towards Franklin School; image by author**

## Bibliography

1. Beauchamp, Tanya. *Franklin School Building, 13<sup>th</sup> and K Streets, NW, Washington, D.C., 20036: Historic structures report, interior restoration/rehabilitation*. Washington, D.C.: National Trust for Historic Preservation, 1994

Beauchamp discusses the original design of Franklin School and the changes that have taken place since. It also contains a report on the current condition of the Franklin School. It was helpful in determining what the structural system of the building is along with some of the history of the building.

2. *Boston Children's Museum*. April 23, 2009. <http://www.bostonkids.org/>

This is the official website for the Boston Children's museum which contains information about the museum's exhibits and building. This museum was used as a precedent in how a building can connect to an exterior plaza or park, a major element of this thesis.

3. *Children's Museum of Pittsburgh*. April 23, 2009. <http://www.pittsburghkids.org/>

This is the official website for the Children's Museum of Pittsburgh which contains information about the adaptation of two historic buildings into the current museum. This was helpful as a precedent study on the adaptive reuse of historic buildings.

4. *Concept Plan for Relocation to the Nichols Avenue School*. Washington, D.C.: 21<sup>st</sup> Century School Fund, Dec. 29, 2003. [http://www.21csf.org/csf-home/Documents/TMA/TMA\\_CP.pdf](http://www.21csf.org/csf-home/Documents/TMA/TMA_CP.pdf)

This article discusses the variety of schemes developed for the historic Nichols Avenue School. It also goes into more detail on the final scheme. Since this provided a number of different schemes, it showed the multitude of ways to approach the adaptation of a historic school in Washington, D.C. Added on to this is the fact that it is a charter school, the same program type used in this thesis, and therefore provided information on program spaces and sizes.

5. *Cluss Buildings*. *Adolf Cluss*. April 1, 2009. <http://www.adolf-cluss.org/>

Images and information on Adolf Cluss's buildings, particularly those in Washington, D.C, were found on this website. The information provided allowed the author to make comparisons about similarities found throughout Cluss buildings, thereby pointing to what are his buildings' "precious" elements.

6. *D.C. Office of Planning*. 2009. February 10, 2009. <http://www.planning.dc.gov/planning/site/default.asp>

As the official website for the D.C. Office of Planning, this website contains information on D.C.'s Historic Preservation regulation as well as links to a variety of maps the District, including zoning and land use. The information on the Historic

Preservation regulations was used to discover what the D.C. SHPO's office deems important in historic buildings. The maps on-the-other-hand, were used to study Franklin Square as it is today as well as provide information for the study done by the author on the various neighborhoods in Washington, D.C. By looking at the maps provided on this website, the author was able to create a comparison between the different neighborhoods and discover why some work well while others don't.

7. Educational: Middle/Upper School: Thurgood Marshall Academy. *Bowie Gridley Architects*. August 10, 2009. <http://www.bowie-gridley.com>

This is the official website for the architect of the Thurgood Marshall Academy (the school currently located in the Nichols Avenue School). It contains images of the addition and renovation of the school along with information on the architect's intent for the project's design which gave a better overall picture into the design of the school. The information found here also gave a better insight into the architect's approach to adaptive reuse.

8. Historic Preservation. *Cunningham Quill Architects*. April 26, 2009. <http://www.cunninghamquill.com/>

This is the official website for architect of the Wormley School, one of the precedents used in this thesis. The Wormley School project is also an adaptive reuse of a historic school building so the images and information provided on this website showed another approach to the adaptation of a historic school building, although this one used a completely different program.

9. Hylton, Tom. *Renovate or Replace: The Case for Restoring and Reusing Older School Building*. Save Our Land, Save Our Towns Inc. 2007. <http://www.saveourlandsaveourtowns.org/pdfs/RenovateorReplace/RoRMMASTER.pdf>

Hylton's article discusses why one should restore or adapt an older, and possibly historic, building rather than tearing it down and starting fresh. The article provides a number of case studies of buildings that successfully accomplished this task along with the benefits that come with the restoration. The article even brought in examples of schools that added community services to their program, something this thesis will explore.

10. Lessoff, Alan and Christof Mauch, ed. *Adolf Cluss Architect: From Germany to America*. New York, NY: Berghahn Books, 2005

Contained in this book are a number of articles and photos about Adlof Cluss's life and influence as an architect. Some of the most important articles contained in this book discuss the schools Cluss designed, specifically the Franklin School, and his influence over Washington, D.C. architecture. This was especially helpful in researching the history of the building and its architect, specifically Cluss's influence in D.C.

11. McLeod, Ferrara and Ensign. *The Franklin School Building*. Washington, D.C.: National Trust for Historic Preservation, 1973

Since this book is focused on the Franklin School Building, it contains information on the original design of the building. Included in this discussion is information on the building's history and design, including Cluss's intents for the project. This provided necessary background into the building's history, why it is important, as well as some technical information such as plans and sections.

12. *National Register of Historic Landmarks*. Franklin School Application. 1996

The application contained information about the history of the building and neighborhood, especially in connection to the history of the establishment of the D.C. public school system. This application also included a detailed description of the building's original design and alterations that have taken place over the years, giving the author substantial resources for analyzing why the building was placed on the National Registry of Historic Places and well as Landmarks.