

The image shows the exterior of a school building. A prominent feature is a red granite panel with the school's name engraved in gold. Above the panel is a row of windows, and below it is a row of doors with mesh screens. The building is constructed with brick and light-colored stone or concrete.

CHARLES RICHARD DREW
PUBLIC SCHOOL

A PRESERVATION PLAN FOR
CHARLES R. DREW ELEMENTARY
UNIVERSITY OF PENNSYLVANIA
HISTORIC PRESERVATION STUDIO
FALL 2012

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Statement of Significance

The Charles R. Drew Elementary School is significant for its cultural importance to the community, its architectural quality, its unique status in the Dagit and Sons portfolio, and for its position as a community anchor.

Charles R. Drew was an African-American doctor and blood plasma researcher. He championed against racial segregation pointing to his research in blood science to demonstrate the similarities in biological makeup of human beings, regardless of race. The school's naming after an African-American in an African-American neighborhood is culturally significant. It marks a time in Philadelphia's social history where the school board was striving to create school environments that stressed the relationship of the student to learning.

Constructed in 1951, the Charles R. Drew Elementary School is significant as an example of school architecture. From 1911 – 1931 there were over 100 remarkably similar school buildings, based on standardized plans, constructed in Philadelphia. When school construction boomed in the post war era, the Drew School was one of the first to be built outside the bounds of the previously relied upon standardized plans. As such, the construction of the Drew School demonstrates an important time when school architecture began to focus more intently on the relationship of the student to the learning environment. As a result, the school's layout and form is emblematic of a time of reverence as well as experimentation in school architecture. Today, the Drew School's excellent physical condition can be credited directly to its design. (Figures 1, 1a)

The Drew School is also significant in that it is one of the few public school buildings designed by Henry D. Dagit & Sons. Mainly responsible for liturgical buildings, the Dagit family has been in practice for almost 120 years and has become a noted name in Philadelphia architectural history. The firm of Henry D. Dagit & Sons (fl. 1922-1959) designed 178 buildings total, five of them being public school buildings in both Philadelphia and Haverford Township. In design, form and use, Drew Elementary School is a significant and distinctive in the Dagit's repertoire.

The Charles R. Drew Elementary School is a symbol of victory in the struggle with urban renewal. The interests of urban renewal devoured the neighborhood around 38th and Lancaster in the 1950s and 1960s. Though the community suffered great housing and commercial losses, the survival of the Drew School as an institution solidified its role in the community as a vital establishment to the citizens.



Figure 1. Rectified photograph of Drew School Elementary's auditorium entrance.

Executive Summary

This report presents a preservation plan for Charles Drew Elementary School in West Philadelphia. The school was designed by the prolific Philadelphia firm of Henry D. Dagit and Sons. It is located at the corner of 38th Street, Lancaster Avenue, and Powelton Avenue.

The goal of this project was to consider the preservation of the school within the context of recent school closures across Philadelphia. This project considers the possible reuse of the school building and the future development of the school site. This report is a culmination of the studio's findings.

The report opens with an assessment of the stakeholder interest in the site as well as demographic information of the neighborhood. The sections on the physical description, methodology, and site history enlighten how the studio began to focus its initial ideas.

In order to understand the value of the work of this studio and the development of the preservation approach the issue of school closings is analyzed. Following the context development through the discussion of current issues, a comprehensive analysis of the strengths, weaknesses, opportunities, and threats (SWOT) are presented. This work, along with the statement of values, informs the preservation approach developed. Then, a catalog of school reuse comparables from around the country are presented to inform how the studio's preservation approach informed several projects. These projects looked at the Dagit legacy in Philadelphia, the role of the Drew School in modernist design, the needs of a 21st century school, and the likely development and financial situations that will affect the site's future.

We present our report in hopes that it will illuminate how the vacancy of this type of building in Philadelphia can be reimagined for future use.



Figure 1a. Perspective photograph of Drew School Elementary. 2012.

Stakeholders

Located within a single, large ‘superblock’ in the heart of a growing region of West Philadelphia, the Charles Drew School and the land around it faces immense development pressure. While the location serves as valuable real estate for any private developer, the organizations that are most likely to influence the site’s growth are all prominent institutions that directly border the block: Drexel University lies to the east, the University City Science Center to the south, and Penn Presbyterian Medical Center—an extension of the University of Pennsylvania—to the west (this is visually represented through the wealth of institutional land (See *Figure 2*). Finally, a number of community organization representing Powelton Village, West Powelton, Mantua and other nearby neighborhoods have also laid out their ideas for the school superblock and will have an important role in any proposed changes. In developing an informed preservation plan for the Drew School and the surrounding block it is essential to consider each of these stakeholders and the benefits and/or threats they may create.

Drexel University: Drexel University’s current and 2007 master plans do not specifically address the superblock (the area of study ends just east of the block).¹ Despite this, however, Drexel is by several accounts nonetheless very interested in the site.² The neighborhoods surrounding the block are home to large numbers of Drexel student living off-campus, the section of

Lancaster Avenue to the north acts as a popular retail/food/nightlife area for all Drexel students, and the block provides an ample amount of land for the University to meet its academic or athletic facility needs. Were Drexel to gain ownership of the property it could prove beneficial or detrimental to the School and the block. Development of the mostly vacant, unused land would better serve the communities and aid in making the Drew School a viable site once again. Depending on how this growth occurred, however, it could result in the demolition of the School, a change of use, or changes to the surrounding site that are detrimental to the structure. A severe reduction of light that goes into the school is perhaps most prominent among these possible detrimental effects. Regardless of whether or not the University comes to own the property, its presence affects the preservation plan. The plan’s proposals for the future of the superblock must take into consideration and are in some way shaped by the Drexel students residing in the area as well as the community-wide socio-economic growth of the region that is in part spurred by the University.

University City Science Center: The nation’s largest urban research park, the Science Center has developed most all of Market Street from 36th through 38th Street per their 2005 master plan.³ Having broken ground on a new high rise at the northeast corner of 38th and Market (which will largely be leased by Penn Medicine), should the Science Center

1. Goody Clancy, *Transforming The Modern Urban University*, 2012,

2. Burt, Hill, *Drexel University 2007 West Philadelphia Master Plan*, 2007, http://www.drexel.edu/facilities/design/masterPlan/~media/Files/facilities/pdf/2007_master_plan.ashx

3. KlingStubbins, *The Science Center Mixed-Use Master Plan*, 2006, http://www.klingstubbins.com/portfolio/planning/the_science_center_masterplan.html.

Stakeholders *continued*

continue to seek expansion it is entirely possible that they will look to the superblock's wealth of empty land. Further, the Science Center's development has reshaped the urbanistic qualities of the area immediately south of the Drew School. Formerly of much smaller scale, this section of Market is now characterized by high rises and institutional use. The preservation plan must reflect both this urban change immediately to the south of the Drew School and the superblock as well as the possible future intentions of the Science Center, another institution that is growing rapidly and possesses sizeable financial resources.

Penn Presbyterian Medical Center:

Occupying several city blocks to the immediate west of the school superblock, Penn Presbyterian will soon begin a large-scale renovation project on its campus in efforts to update and expand their facilities. While there are no indications that Presbyterian has notions of expanding across 38th Street, the presence of the active, well-funded hospital informs the preservation plan in terms of the scale and types of structures to be proposed on-site as well as the user base of the proposed development. Though the Medical Center is owned by the University of Pennsylvania, it largely operates independently. Indeed the current renovation plans were developed by the Medical Center and at least in part ignore suggestions from the University Architect.

School District of Philadelphia: The current owners of the Drew School as well as the entire superblock, the School District of Philadelphia is currently involved in an ongoing process of closing down and attempting to sell schools all over the city.

Though Drew is no longer opened, there was no mention of shutting down University City High School until the middle of December when information was released indicating that UCHS will close in June 2013.⁴ Because this information was released so late in the process, plans do not include any redevelopment of the area of the block on which University City High School sits. The School District has also not yet set a sale price on the Drew School or stated intent to sell. William Fox, the Director of Real Property for the School District has stated that the current hope is to retain ownership of the Drew School and 'work something out' with Drexel in regards to the school and broader site's future program. One such possibility is developing a partnership with Drexel in which the school acts as a Penn Alexander of the area: a successful, in-demand school with a close relationship to a neighboring university.

University of Pennsylvania: Outside of the Presbyterian Medical Center and the structure soon to be erected at 38th and Market, the University has no presence in the superblock's immediate area. Other than the aforementioned medical facilities it also has no intent to expand its presence in the area, but University officials do take the superblock into consideration in campus planning and consider it part of the University's sphere. As University Architect David Hollenberg put it: "It's on our radar."

⁴ Graham, Kristin A. "Hite to announce plans to close 37 more schools," Philadelphia Inquirer, December 13, 2012, <http://mobile.philly.com/news/?wss=/philly/news&id=183276341&viewAll=y#more>.

Stakeholders *continued*

Philadelphia City Planning Commission:

The Planning Commission's influence lies in its recommendations for the area's growth and, in conjunction with the Zoning Board of Adjustments, the zoning applied to the superblock. Though the entire block is currently zoned as Residential Multi-Family One, it is included in one of the districts currently being mapped out for the Philadelphia 2035 master plan. Per Andrew Meloney, this current, outdated zoning is sure to change once these district's plans are finalized.

Powelton Village Civic Association, People's Emergency Center, other local community organizations,

community members in general: The interests of community organization and members invested in the school superblock was determined through an examination of relevant plans developed for and in part by these organizations as well as a number of interviews with individuals. This research indicated that the surrounding neighborhoods view education as a top priority for the community while also feeling that the poorly utilized superblock is underserving the area. Indeed the 2011 Powelton Village Directions plan includes a proposal for the development of the site that retains the Drew School while building up the vacant land with mixed-use residential/retail uses.⁵ The addition of groceries, pharmacies, and hardware stores to the area was another need identified by the communities. While West Powelton and Mantua have a few small locations for groceries scattered around

the neighborhood, it possesses a number of food oases.⁶ Powelton Village completely lacks grocery options and is also without a hardware store or pharmacy. These types of retailers are the most desired by community members and are something that must be considered in planning for the area's growth.

5. Brown and Keener Urban Design, Urban Partners, and Ortho-Rodgers and Associates, Powelton Village Directions, 2011, http://poweltonvillage.org/PVCA-Master_Plan_2011/pdf/PVCA-Master_Plan-hires.pdf.

6. Interface Studio LLC and V Lamar Wilson Associates, Make Your Mark! Lower Lancaster Revitalization Plan, 2012, http://www.interface-studio.com/isftp/PEC/MYM_6_28.pdf.

Descriptive Analysis & Structural Evaluation

Located within a single, large 'superblock' in the heart of a growing region of West Philadelphia, the Charles Drew School and the land around it faces immense development pressure. While the location serves as valuable real estate for any private developer, the organizations that are most likely to influence the site's growth are all prominent institutions that directly border the block: Drexel University lies to the east, the University City Science Center to the south, and Penn Presbyterian Medical Center—an extension of the University of Pennsylvania—to the west. Finally, a number of community organization representing Powelton Village, West Powelton, Mantua and other nearby neighborhoods have also laid out their ideas for the school superblock and will have an important role in any proposed changes. In developing an informed preservation plan for the Drew School and the surrounding block it is essential to consider each of these stakeholders and the benefits and/or threats they may create. (Figure 3)

Charles Drew Elementary School is primarily a three-story structure. The massing of the primary building is essentially a capital "L" (Figure 4). The long three-story block, oriented on an east/west axis, contains all of the classrooms and office space. Each floor is split lengthwise down the middle by a hallway that runs the length of the wing, with the classrooms located on both sides, and staircases at the east and west ends. This special organization system is known as a double loaded hallway plan. The HVAC systems, as well as the cafeteria, are located on the basement level. There is a tall, now unused exhaust stack attached to the south-east corner of this main classroom bank. The shorter leg of the "L," contains both the large, character defining auditorium on the first story, and gymnasium on the second. The auditorium entrance is located directly on Warren Street. In 1960, a concrete and steel library was erected as an addition off the south-east corner of the Drew School. (Figure 5) This rectangular, single story addition is connected to the school via a



Figure 7a.. Photograph of Drew School Elementary west elevation. 2012.



Figure 8. Photograph of Drew School Elementary west elevation. 2012.

Descriptive Analysis & Structural Evaluation

continued

short hallway. The library structure is experiencing corrosion issues as well as other pathological problems, and will likely not contribute to any long-term reuse of the structure and site.

Exterior

The exterior the Charles Drew School is a brick veneer. Large banks of double hung, wood sash windows run along the north and south faces of the classroom wing, surrounded by a continuous rectangle of limestone trim. The wing that houses the auditorium and gymnasium have similar limestone encased window banks that provide natural light to the spaces at the clerestory level. Similarly, the major entrances to the school are accented with limestone trim, and in the case of the auditorium entrance, marble as well. A thin limestone strip runs along the top of the entire structure, and the parapet wall is capped with limestone coping. (Figures 6- 7a)

Structure

The Drew School is structurally supported by a poured concrete foundation. This foundation supports the above ground structure, which consists of reinforced poured concrete columns, girders, and floor slabs. The floors themselves also consist of poured concrete. Concrete blocks fill the spaces between the columns to form the interior walls. The brick envelope of the structure is two wyths thick, with the interior wyth tying into the structural concrete girders at each level. There an approximately four inch thick cavity between the interior concrete wall and exterior hung brick veneer. (Figure 8-10)



Figure 9. Photograph of Drew School Elementary east elevation. 2012.



Figure 10. Photograph of Drew School Elementary south elevation. 2012.

Descriptive Analysis & Structural Evaluation

continued

Charles Drew Elementary School is in excellent condition structurally. There are no serious pathological problems evident on the exterior or interior of the structure. The slightly sloped roof is also in excellent condition and was resealed and flashed in 1991 and has aged exceptionally well. The HVAC systems have undergone multiple campaigns of modernization, and are still in good repair.

The library addition though, is in much worse condition. Never meant to be a permanent structure, the library's roof is in advanced stages of corrosion, and many the reinforced concrete columns have also begun to corrode and spall. This building is not currently suitable for occupancy, or other uses besides possibly storage. It is not a contributing structure and will probably need to be demolished in the near future. (Figure 11-13)



Figure 11. Photograph of Drew School Elementary library addition looking north. 2012.



Figure 12. Photograph of Drew School Elementary library south facade. 2012.



Figure 13. Photograph of Drew School Elementary library west elevation. 2012.

Methodology

To develop our preservation methodology we followed the principles set out in the Burra Charter. This, along with a values based approach led us to a three-part process.

We first focused on identification and description, then synthesis and analysis, and finally response.

To begin to understand the site, we obtained building plans and visited the site to assess the accuracy of the plans. We were struck by the excellent condition of the building. We documented the condition of the building through photography and measured drawings of the spaces that we did not have original plans for.

Because we had the original plans from the Philadelphia School Board, we were able to easily identify the architect. We then researched the architects' portfolio by consulting primary documents at the Athenaeum. We were then able to recognize where this building fit in their repertoire.

At this time, we began researching neighborhood history and site history. We referenced surveys and maps from the Free Library of Philadelphia to evaluate how the site grew and changed over time. We also studied the archives at the School District of Philadelphia to develop a sense of school building design from the Drew School Era.

Once we developed a building and site history, we began to look outward at the neighborhood to appreciate this site in context. We conducted interviews with residents, interested institutional

leaders, community leaders, and preservation professionals. To the development pressure surrounding the Drew School site, we talked to David Hollenberg, the University of Pennsylvania architect and Andrew Maloney from the Philadelphia City Planning Commission. We reviewed city organization plans including Drexel University's "Annual Report," Powelton Village "Directions Master Plan," and the Lower Lancaster Revitalization Plan "Make Your Mark!"

We visited the Temple Urban Archives to collect primary documentation about the neighborhood demographics and the School District of Philadelphia's internal memos regarding the Drew School. The collection of this information allowed us to begin synthesizing the history, conditions, and status to inform a statement of significance and develop a response framework for the future of this building.

The information collected from the above studies informed the tolerance for change for the building and site of the Charles R. Drew School. With the preservation approach and tolerances developed, each member of the team took on an individual project. Our individual projects added value to the preservation approach by developing a comprehensive understanding of the Dagit family's work, the evolution of mid-century school design, the influence of modern teaching techniques on school building reuse, future neighborhood and site development.

Current Issue: The School District of Philadelphia Closings

Despite the fact that the Drew School is in great condition, it was closed due to low enrollment this past May. With a capacity of 616 students, only 241 students were enrolled at the end of the 2011-12 school year, leaving the Drew School at only 39% capacity. Officials estimate that the school district spends more than \$30 million annually on “empty seats,” totaling upwards of 70,000.⁷ ⁸Young Drew students have been rerouted to other nearby public schools with ample space. The community’s demographics have experienced a dramatic shift in recent years, as University City development has crept up on this West Powelton neighborhood, pushing families out as students move in.

In a Philadelphia Preservation Alliance Meeting, Bill Fox stated that 85% capacity is the ideal capacity for a public school to function optimally. Within the last 6 years, the school district has sold 7 school buildings for \$26 million. However, to date, the Drew School is being “held onto,” and is not on the market. It seems that district’s reuse priorities will be keeping the Drew School in their portfolio for sometime to come.⁹

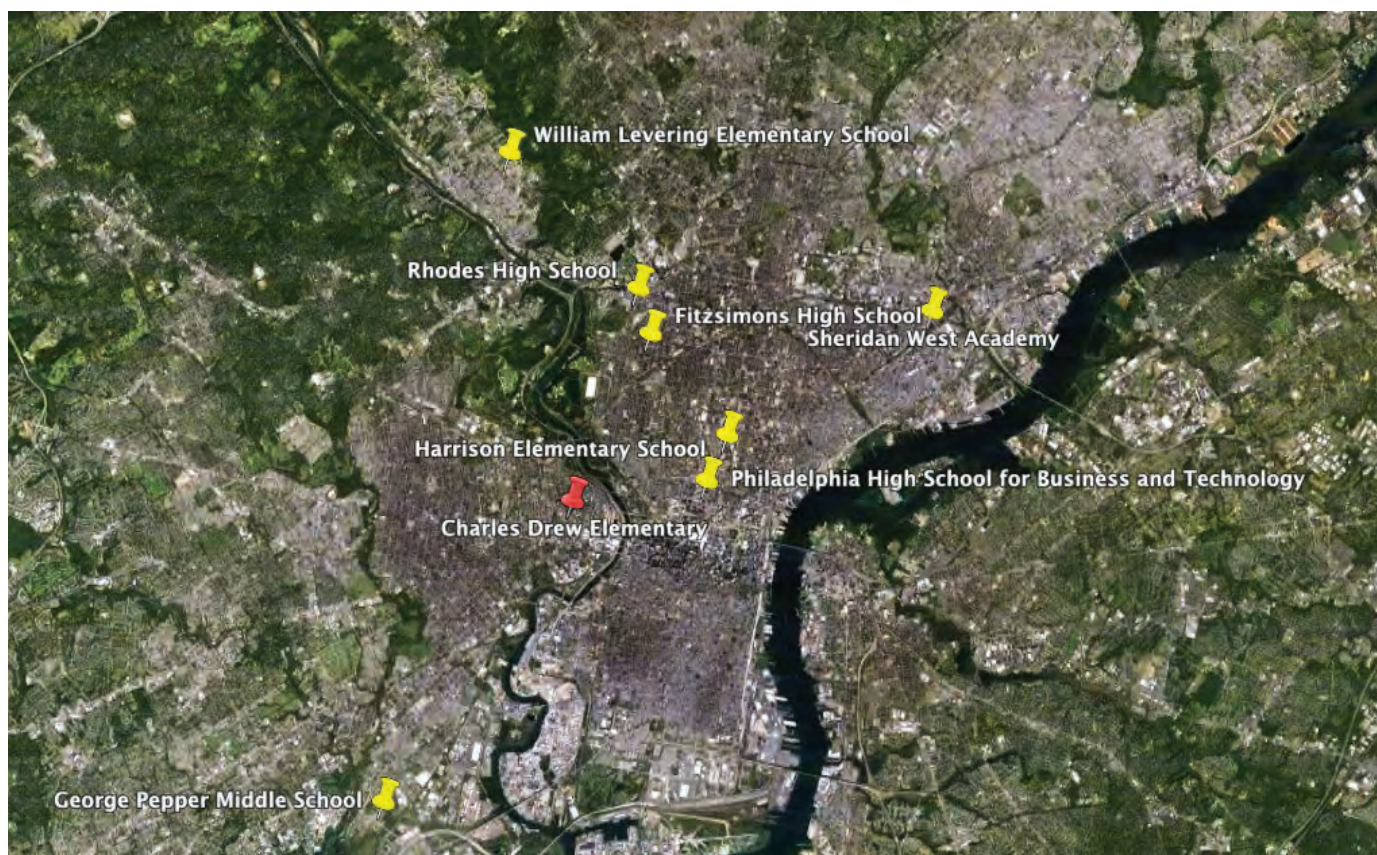


Figure 14. Map. School District of Philadelphia closings for the 2011-12 school year. J. Murphy. 2012

7. Graham, Kristen A. “Philly district seeks input on which schools to close.” Philly.com. 27 September 2012. Web. 23 October 2012.

8. Murphy, Frank. “70,000 Vacant Seats: A convenient truth?” Philadelphia Public School Notebook. 02 February, 2011. Web. 05 November 2012.

9. Fox, Bill. “Preservation Alliance Meeting.” Philadelphia, 2012.

Current Issue: The School District of Philadelphia Closings

In this, the State of the School District is alarming. In 2012, 2 schools have been phased out and 6 schools have closed completely, a trend which is expected to continue, as the District plans on closing 64 total schools within the next 5 years.¹⁰ (Figure 14)

However, in December of 2012, just before Philadelphia public schools went on their winter break, it was announced that 37 school buildings would be closed permanently at the end of the 2012-13 school year, signaling that more than half of the predicted school closings from the 5 year plan would be closed in one year alone. Parent advocacy groups are dismayed, having stated that private interests, unaffiliated with the school system, including consulting groups, are to blame.¹¹ In low-income areas such as West Philadelphia, local public schools are crucial to the future of young residents.

10. Molland, Judy. "Philadelphia Closing 64 Public Schools in Radical Restructuring." Care2. 26 April, 2012. Web. 23 October 2012.

11. "Chapter 1: Pre-History to 1854," West Philadelphia Community History Center, University of Pennsylvania. Accessed 10/13/2012, <http://www.archives.upenn.edu/histy/features/wphila/history/history1.html>

Site History

The Charles Drew Elementary School is located in West Philadelphia at the southeast end of the neighborhood known as Powelton Village. To the west of the school is neighborhood of West Powelton, and to the south is University City. It is important to consider how this area developed over time in order to better understand the context of the Drew School.

Around the turn of the 19th century, the Powelton Village area was nearly exclusively agricultural, and very sparsely settled. Much of the land was used as pasture for cattle, horses, and sheep. Some small livestock processing facilities dotted the landscape. Some country seats for Philadelphia's most elite residents were also located in the area.¹² Transportation in the immediate vicinity was centered around the Lancaster Turnpike (present day Lancaster Avenue), which led merchants and settlers into western Pennsylvania. Some small transportation-centered stores were located on the Turnpike. (Figure 15, below)



Figure 15. Plan of the City of Philadelphia and its Environs. Surveyed and Published by Jon Hills. Philadelphia. 1808. Historical Society of Frankfurt.

12. "Chapter 1: Pre-History to 1854," West Philadelphia Community History Center, University of Pennsylvania. Accessed 10/13/2012, <http://www.archives.upenn.edu/histy/features/wphila/history/history1.html>

Organized real estate development was sluggish in the neighborhood until the second quarter of the 19th century, when some suburban development began to slowly commence. By the mid 19th century, the neighborhoods of Powelton Village (and Mantua to the north) had been laid out for development and improvement. Early Philadelphians who relocated to the area were generally elite merchants from Philadelphia proper who could afford the daily business trips into the

city. Looming technological and political changes though, would jumpstart settlement in West Philadelphia. In 1854, the Consolidation Act redrew the borders of the city of Philadelphia to include present day West Philadelphia. This act ensured that modern municipal amenities like gas lighting, street grading, and landscape regularization would continue west of the Schuylkill.

Soon public transportation (first omnibuses but later trolleys) made the trip from Center City Philadelphia to West Philadelphia a much faster and less expensive endeavor. Permanent bridges were established at Spring Garden Street and other streets further south. Residential development in West Philadelphia grew exponentially after these improvements. By the arrival of the 20th century, Powelton Village, as well as most of the land in West Philadelphia had been subdivided and developed. The neighborhoods surrounding the Drew School became very dense, more closely resembling center city than the bucolic suburb. The area became less elite and more diverse and working class.

The blocks surrounding the Drew School, particularly to the west, developed a

Site History *continues*

cluster of institutional buildings starting in the mid 1850s and continuing into the 20th Century. As the center of Philadelphia became increasingly crowded, municipal and private organizations took advantage of the large tracts of cheap undeveloped fringe land and ongoing infrastructural improvements and built large hospitals, psychiatric wards, orphanages and schools.¹³

The Warren School

Opened in December of 1873, the Warren School was the first school building on the Drew School site. (Figures 16, 17) It was one of eighty-two Philadelphia public schools attributed to Lewis H. Esler, a registered architect and the Inspector and Superintendent of the Construction of Public Schools from 1869 to 1883.¹⁴ Since Esler held this title, it is possible he did not design the buildings, but simply oversaw the construction.¹⁵ The actual building was described as a 'Three Story Brown-stone Building. Wood Construction. [with] Tin Roof, Brick Yard and Sidewalk Paving. Detached Unheated Toilets.' The school held 18 classrooms and cost approximately \$32,000.00 to build.¹⁶ The Warren school co-existed with the campus of institutions that surrounded it, which reflects a 19th century social

revolution of civic reform in education, morals, and health care that prompted private and public entities to create these new benevolent institutions. It served the needs of the Powelton community until 1905, when the Minnie Murdock Kendrick School replaced it.



Figure 16. Map. Bromley Atlas. 1895.



Figure 17. Photograph of the Warren School. c. 1890

13. "Chapter 2: A Streetcar Suburb in the City: 1854-1907," West Philadelphia Community History Center, University of Pennsylvania. Accessed 10/13/2012.

14. Franklin Davenport Edmunds, *The Public Schools of the City of Philadelphia from 1868 to 1874*, (Philadelphia: School District of Philadelphia, 1925), p. 117.

15. Roger Moss, Lewis H. Esler. "Philadelphia Buildings and Architects Database," (Philadelphia: Athenaeum of Philadelphia), www.philadelphiabuildings.org, Accessed 10/17/12.

16. Edmunds, 1868 to 1874, 117.

Site History *continued*

Minnie M. Kendrick School

The second school to inhabit the property opened in 1906 and was fittingly named for Powelton civic leader Minnie Murdoch Kendrick shortly after her death. Minnie Kendrick (1849-1903) was a lifelong advocate of the arts and education, especially for girls.¹⁷ The Kendrick School was approximately 100,000 cubic feet larger than the Warren School but only held twelve classrooms. James Gaw, architect for the Philadelphia Board of Public Education from 1887 to 1919, designed Kendrick and a number of other school buildings in the city at the turn of the century.¹⁸ The actual structure did not vary too much from the Warren School in terms of design except for being constructed of brick and granite instead of brownstone and heavy timber. For forty-five years the Kendrick School functioned as one of the primary schools for the Powelton neighborhood. The school also had two annexes for the last decades of its existence, the Octavius Catto School at 42nd Street and Ludlow Street, which became its own school in 1960 and the Caesar Rodney School at 35th Street and Haverford Street.¹⁹ (Figures 18,19)



Figure 18. Map. Bromley Atlas. 1910.



Figure 19. Photograph of the Minnie M. Kendrick School. c. 1905

17. In Memoriam, Minnie Murdock Kendrick 1849-1903, (Philadelphia: Allen, Lane & Scott, 1903. p. 17.

18. Sandra Tatman, James Gaw, "Philadelphia Buildings and Architects Database." (Philadelphia: Athenaeum of Philadelphia), www.philadelphia-buildings.org, Accessed 10/17/12.

19. The Bulletin Almanac and Year Book: Years 1949 through 1960. Philadelphia: Bulletin Company.

Site History *continues*

Charles R. Drew Elementary & the End of Minnie M. Kendrick

On June 29th, 1950 Henry D. Dagit & Sons placed a bid to the School District of Philadelphia for an annex to the Minnie M. Kendrick School. Unlike the two schools before it, this building was not designed by an appointed school district architect but rather a private firm. The structure was to be 'reinforced concrete construction, exterior walls [to be] buff colored and brick with limestone trim and aluminum or steel windows and sash' for a cost of \$600,000.²⁰ It appears that the 1905

structure was originally intended to remain as the main building while the new building was to be an addition to the site. As late as June 1951, the new school continued to be referred to as the Minnie M. Kendrick School. It is unclear as to why, but between 1951 and 1953 the school was renamed the Charles R. Drew Elementary School. The Dagit building became the main building and the original Minnie M. Kendrick School turned into an annex. The school officially opened in February of 1953 and was dedicated later that year with the family of Charles R. Drew in attendance including his son Charles R. Drew, Jr., who laid the cornerstone.²¹

The Catto School continued to function as an annex of the Drew School until 1958 and the Kendrick School remained an annex until it was demolished in 1965. Only two years after the demolition of the Kendrick School, the site gained another building in the form of 'temporary

demountable classrooms,' which became

20. "Minnie M. Kendrick Public School Annex," Art Jury/Art Commission Records, Philadelphia City Archives, Philadelphia.

21. "Name Philadelphia School After Dr. Charles Drew," *Jet Magazine*, May 14, 1953, p. 15.

the library. In 1968 the school acquired yet another annex, The Walnut Street Center at 3938 Walnut Street then at 37th Street and Lancaster Street. The school saw staggering populations above 1000 between 1955 and 1965, the highest being 1403 in 1960.²² Numbers dropped almost in half between 1965 and 1966 and continued to decline throughout the remainder of the 20th century. At only 38% capacity, the Charles R. Drew Elementary School closed in May of 2012 as one of the first six out of fifty public schools to scheduled to close over the next five years. (Figures 20, 21)

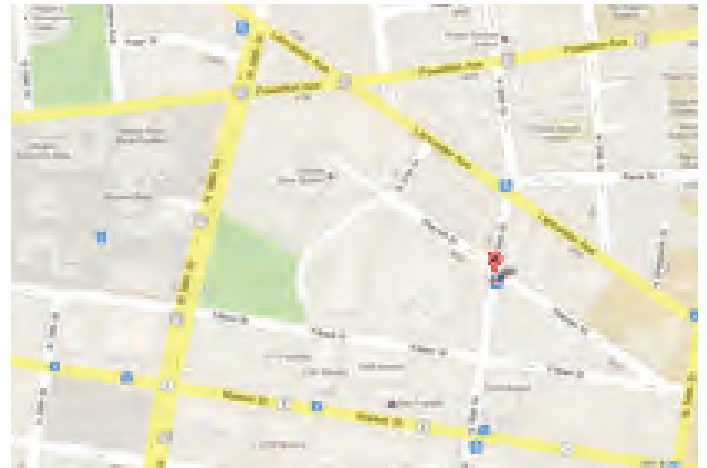


Figure 20. Map. Google. 2012.



Figure 21. Photograph of the Drew School. 2012.

22. *The Bulletin and Almanac Year Books*.

Site History *continues*

Charles R. Drew

The Drew Elementary School was named in honor of the African American scientist and physician Charles Richard Drew. Charles Drew was born in Washington D.C. in 1904 to a middle class family. A talented student and athlete, Drew attended Amherst College, and later McGill University and Columbia, where he earned his Doctor of Medical Science degree. Over the course of his productive career, Charles Drew revolutionized the blood donation and blood storage system in the United States, and brought the technology to Europe during World War Two. He was also instrumental in integrating the blood bank system, which previously had prevented Caucasians and African Americans from receiving the others blood during transfusions. (Figure 22) Charles Drew died tragically in an automobile accident in North Carolina in 1950. Dr. Drew's contributions and achievements made him an important figure in African American and civil rights history, as well as the history of Medicine. A controversial rumor emerged shortly after the accident. It was believed by many that Drew's passing could have been prevented, but he had received inadequate care (or was refused care entirely) due to his race upon his arrival to the hospital. Although this rumor has largely been debunked, it still plays a role in Charles Drew's legacy, and instances of fatalities due to refusal of care to African Americans were common at the time. Upon Drew's death, a number of medical and educational institutions were named for him around the country. The Charles R. Drew Elementary School in Philadelphia was one of, if not the first school to do so.

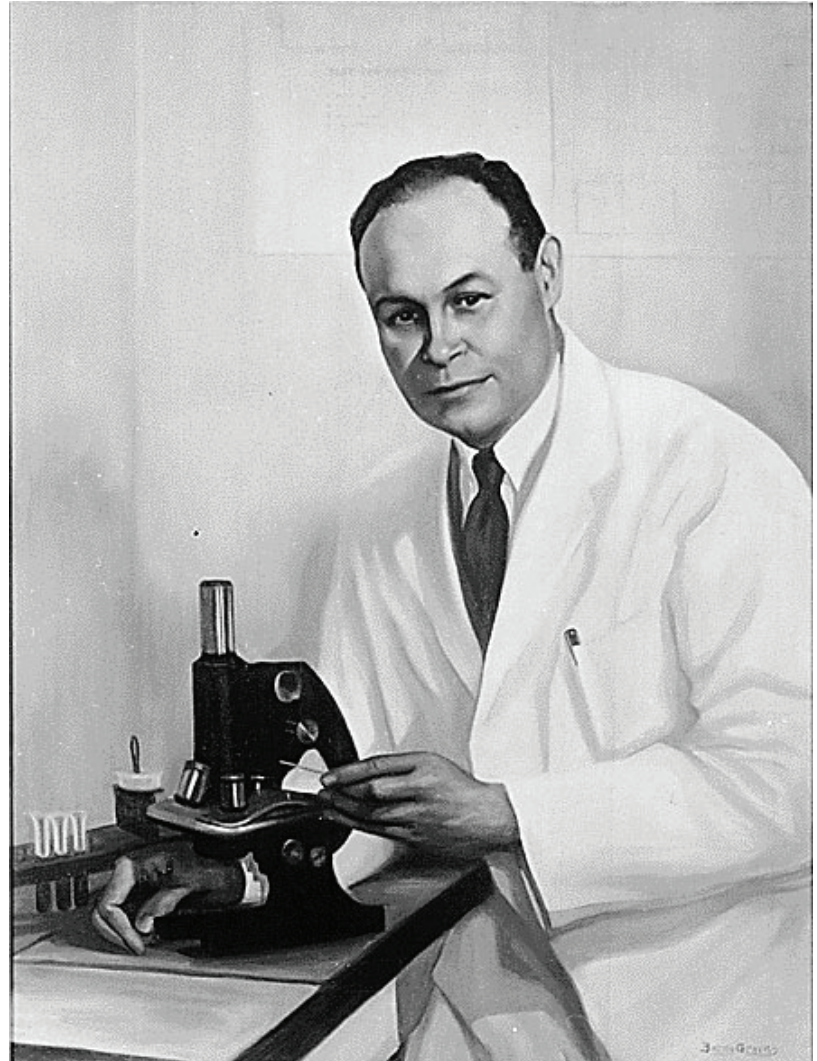
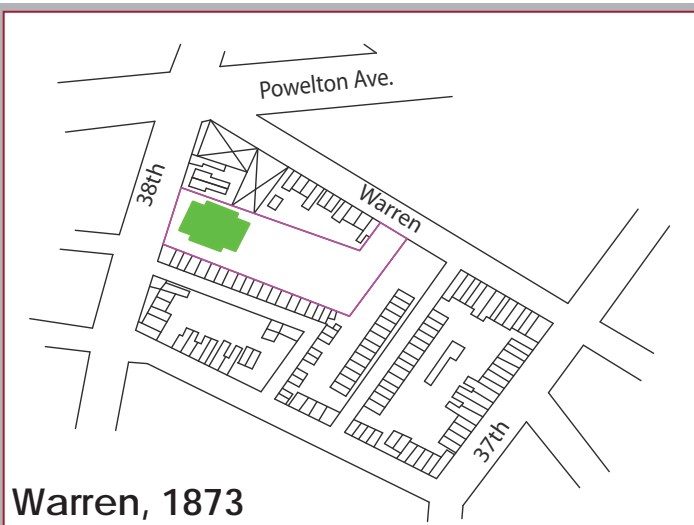


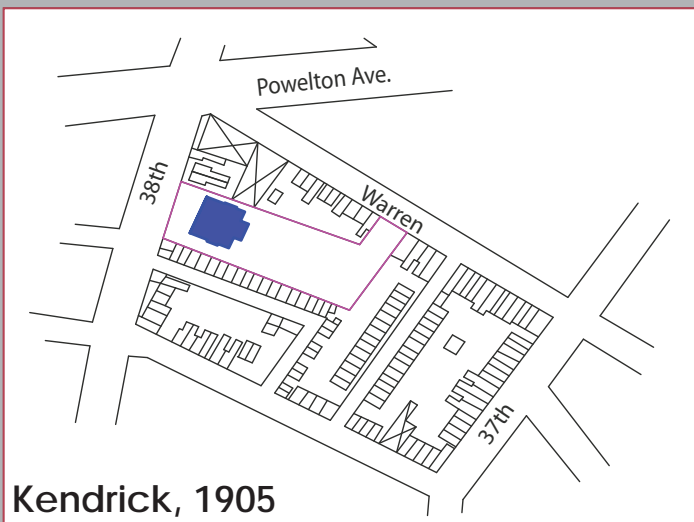
Figure 22. Painting of Dr. Charles R. Drew. c. 1940

Site History *continues*

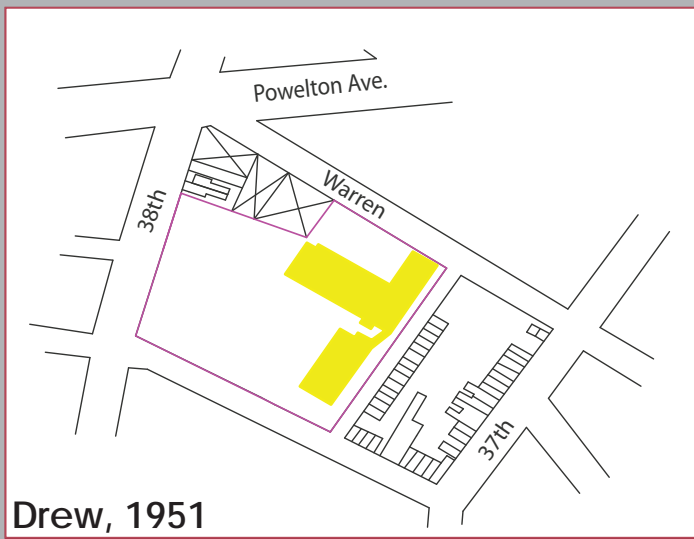
Site Evolution



Warren, 1873



Kendrick, 1905



Drew, 1951

Site Timeline

- 1854: Consolidation Act of 1854
- 1873: Warren School constructed
- 1905: Warren School demolished
- 1905-6: Kendrick School constructed
- 1950: Henry D. Dagit & Sons contracted to design Minnie M. Kendrick School Annex
- 1950: Charles R. Drew dies
- 1952-3: School's name changes to Charles R. Drew Elementary School
- 1954: Drew School dedicated with Drew's family in attendance
- 1958: Cato Annex deaccessioned
- 1960: Library wing added as 'temporary demountable classrooms'
- 1965: Kendrick School demolished
- 2012: Drew Elementary School closes due to low occupancy (38%)

Evolution of School Design

Variations in school designs over time reflect shifts in positions that education has held in society.²³ School design changes as educational emphases are readdressed and improved.

In the United States, early schools were one-room schoolhouses. The design of these schools emphasized the role of the teacher as being the vessel to directly transfer knowledge to the student. Early design emphasized this by having the teacher's desk on a slight platform at the front of the classroom much like church altar. The student's desks and chairs were bolted in place, making any student collaboration impossible.

As population grew, the need to expand schools and their role in society was made evident. The latter part of the 19th century brought revolutionary changes in schoolhouse design. The introduction of steel for supporting members, the increased use of brick bearing walls, central heating, and advances in architectural design established a new era in school construction. Perhaps the most important advance of this era was the use of detailed plans for each building, a deviation from the earlier practice of using standard plans with limited specifications for contractors to adhere to.

Changes in school architecture can be credited to three major factors: (1) the added responsibilities of schools, (2) the development of new materials and methods of construction and (3) the changing recognition of the role of school in the community.²⁴

23. Engelhardt, N.L., "Trends in Architecture and Design," *Review of Educational Research*, Vol. 12, No. 2 (April 1942): 171 – 177.

24. *Ibid.*

This cycle tends to repeat itself in United States history. School construction in the Progressive Era (1890 – 1945) began to incorporate the need for supplementary space, like administration, health clinics, and gymnasiums.²⁵ Building forms were simple, so that vertical and horizontal additions could be made. Progressive era concepts also emphasized grade level zoning, which prescribed grade level classrooms, specialized the size of furniture for students, and incorporated access to the outdoors.²⁶ (*Figure 23*)

The construction industry stalled during the Great Depression and into World War II. However, once the war was over the increasing birthrate, the decentralization of urban populations, and rehabilitated economy required school construction to continue at an increasing tempo.²⁷ The transformations in school design begun in the Progressive Era were more widely incorporated in post-war school design, as democratic concepts on human relationships were more heavily emphasized. A new distinctly American type of school emerged that was grounded on the advances made in the study of child development and the efforts to make schools less forbidding institutions.

Post-war school design stressed community, collaboration, and exploration. New school design included flexible spaces, so that instruction could be more relaxed than in previous years.

25. Lippman, Peter C., *Evidence-Based Design of Elementary and Secondary Schools*, (New Jersey: Wiley & Sons Inc: 2010).

26. *Ibid.*

27. Sherer, Francis R., "Planning Elementary School Buildings," *Review of Educational Research*, Vol. 12, No. 2 (April 1953): 178 – 181.

Evolution of School Design *continues*

Standards for playrooms, gymnasiums, and multipurpose rooms emerged.

The Drew School, constructed in 1951 is neither the typical Progressive Era school nor post-war school. Because of its urban site, the post-war emphasis on a relation to the outdoors is not as evident as in suburban elementary school sites of this era. Instead, the school is laid out much like a Progressive Era school with grade zoning classrooms, including student size furniture. However, it also has some of the flexible spaces that were being emphasized in post-war school design. The original plan includes a library, a gymnasium, a home economics room, and a playroom. (*Figure 24*)

Evolution of School Design *continues*



Figure 23. This image shows the evolution of school design from the one room school house (upper left) through the Progressive Era.

Evolution of School Design *continues*

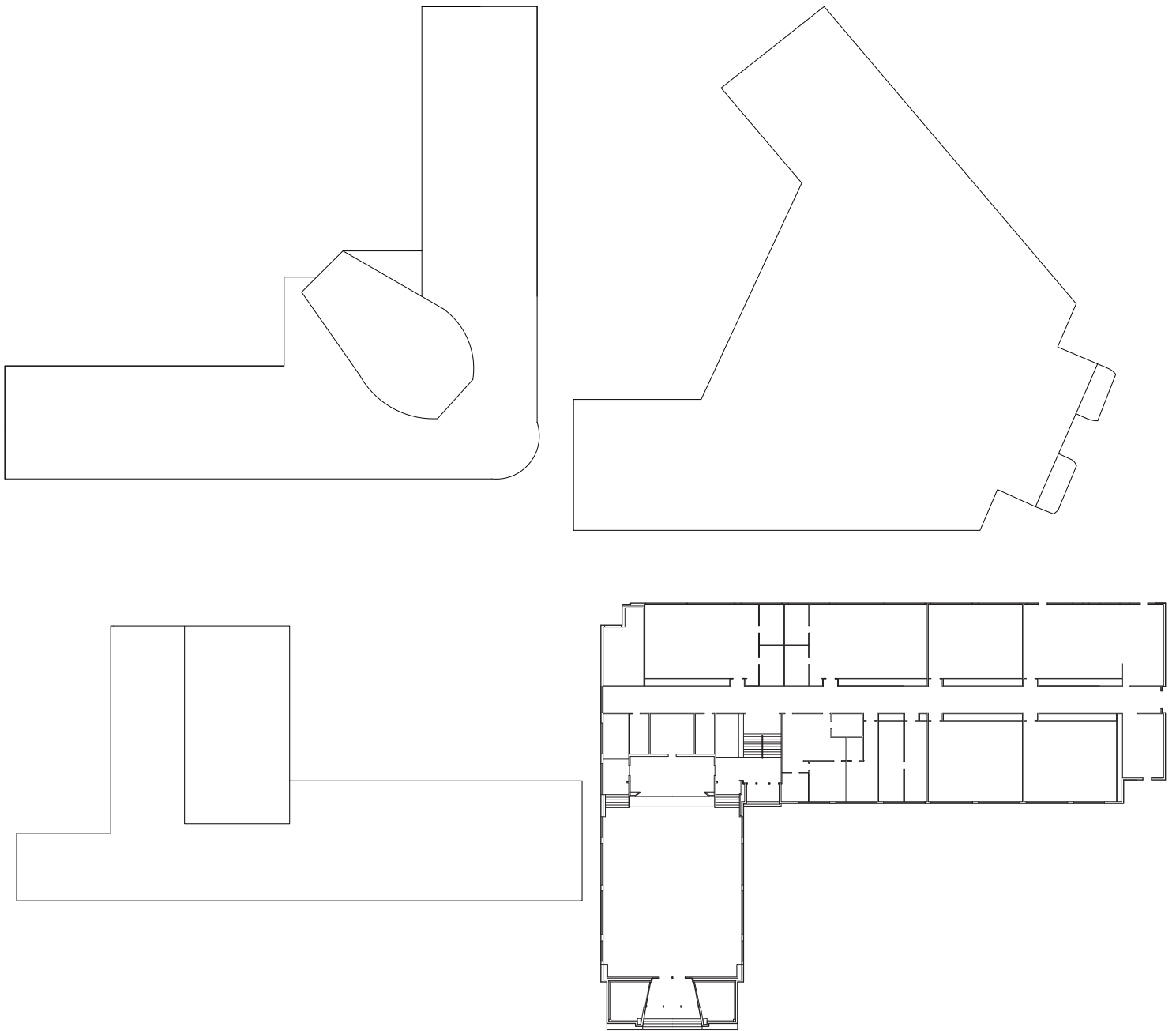


Figure 24. This image shows how modern school design was interpreted in Philadelphia. The images from left clockwise are of Lambertton Elementary (1949), Holme Elementary (1950), Gideon Elementary (1952) and Drew Elementary (1952). These demonstrate the unique form that Drew School is compared to other modern elementary schools being built in Philadelphia at the time. Unlike other Philadelphia schools of the time, Drew is a blend of both Progressive Era and Modern school design ideas. Plans provided by the School District of Philadelphia.

SWOT Analysis

	helpful	harmful
internal	STRENGTHS	OPPORTUNITIES
	<ul style="list-style-type: none"> - Condition of building - Continual use as school - Room for additions and site development - Community investment - Community starting to stabilize and grow economically & socially - School district not planning to sell making it not vulnerable to demolition 	<ul style="list-style-type: none"> - Development interest from several large organizations - Large area of unimproved land allows for a variety of redevelopment possibilities
external	WEAKNESSES	THREATS
	<ul style="list-style-type: none"> - Lack of students in the area to continue use as a school - Relationship to roads - Owner (school district) no longer has a need for it 	<ul style="list-style-type: none"> - Pressure to develop <ul style="list-style-type: none"> - Potential loss of neighborhood character - Uses needed by community are not widely shared - School District deaccessioning momentum elsewhere in the city

<h2>VALUES</h2>		
Social	Historic	Aesthetic
<ul style="list-style-type: none"> - Educated a number of residents - Community anchor - Recreational 	<ul style="list-style-type: none"> - Part of urban renewal program of the 1950's - Association with Charles R. Drew - Work of Dagit & Sons firm 	<ul style="list-style-type: none"> - Example of post-war Modernism in Philadelphia - Murals & mosaics

Character Defining Features

- Auditorium
 - Remains one single space, preferably with the stage continuing to be an integral part of the function. (Figure 25)
- Terrazzo Floors
 - Only in the foyer stairs. Both a minimal obstacle and facet of the building, but aesthetically crucial in the understanding of this era of architecture. (Figure 26)
- Double Loaded Hallways
 - Essential attribute of post-war school design and integral in the building's circulation pattern. Design asset for future use. (Figure 27)
- Auditorium Entrance & Granite Lettering
 - The most profound aspect of the building in both form and materials. Includes the date stone. (Figure 28)
- Large Amount of Light
 - Stressed in the original designs, beneficial for a green approach.



Figure 25. Photograph, stage and house perspective



Figure 26. Photograph, main entrance stairs



Figure 27. Photograph, first floor hallway



Figure 28. Photograph, auditorium exterior granite lettering

Preservation Approach

The overall form and massing of the school, as well as the brick cladding, is typical of the Progressive Era. Though not monumental in style, it is much more adorned than mid-century modern school design. The organization of classrooms and administrative space is typical of schools built in the decade before Drew was built.

Our preservation approach is simple. It is guided by the principle of sustaining Charles Drew Elementary School as an academic institution and a valuable community asset, and to recognize its significance in the history surrounding area, particularly with the urban renewal movement of the mid 20th Century. While the Drew School and its character defining feature should be preserved, we will consider the comprehensive redevelopment of the site and encourage appropriate rehabilitation. This includes possibilities such as, infill of the site, additions to the structure, and reintegrating the site urbanistically with its surrounding community. Currently the space is not activated and it is not a destination for students, community members or area professionals because it is barren, difficult to access, and uninviting. Making the site more welcoming through landscaping and tight street front connections will be beneficial in attracting new parties to become invested in the Drew School and surrounding area.

We believe it is possible and essential to preserve, in some capacity, the site's historic focus on education with the ideal that it could one day revert to its traditional function as a public school. However, in the interim, we encourage other 'non-traditional' educational uses like research facilities, archives, laboratories and supplementary educational programs. The building is structurally sound and its mechanical systems have been upgraded and maintained. Minimal and relatively simple changes can be made to modernize the school for 21st century education. While the exact use may change, the role of the site as a community center and venue will remain paramount. This will serve as a model for the School District of Philadelphia to better approach the other 39 schools that have or will close in the next five years. The de-accession process today relies on basic financial and outdated enrollment numbers, and thus a school's community value, an integral component of successful and cohesive neighborhoods, is not considered. Having a comprehensive de-accessioning program that includes preservation considerations in its philosophy will achieve long-term goals instead of interim solutions.

School Reuse Comparables

The need for innovative reuse of school buildings is ever present as more and more schools are closed and left unused. In this section, research and analysis of comparable sites provides for a better understanding of potential adaptive reuse of the Charles R. Drew Elementary School. It is common for unused schools to be rehabilitated for condos or senior living facilities. The wide hallways, flexible spaces, and outdoor play areas make an easy conversion for apartments and their required amenities. However, we wanted to look at possible reuse solutions that did not rely on the expected solution.



Figure 29. Image of the Burton Theatre in Detroit, MI from <http://www.positivedetroit.net/2011/10/burton-theatre-to-reopen-in-midtown.html>

Burton Theatre – Detroit, MI

Because of budget constraints, the state of Michigan has approved the closing of half of Detroit's schools.²⁸ In an effort to reuse the vacant structures, several creative ideas have been initiated such as the Burton Theatre. The Burton Theatre is housed in the former Burton International

28. Rooney, Ben. "Michigan Approves Plan to Close Half of Detroit Schools," CNN Money, February 22, 2011, http://money.cnn.com/2011/02/22/news/economy/detroit_school_restructuring/index.htm

School. They show independent, foreign and cult movies.²⁹ It also houses spaces for art studios and office spaces.³⁰ (Figure 29)

Denver National Trust for Historic Preservation Field Office – Denver, CO

The Emerson School in Denver, Colorado was donated to the National Trust for Historic Preservation in 2010. The Trust invested green technology to bring the structure into the cutting edge of energy efficiency and sustainability in historic structures. It now houses the National Trust for Historic Preservation's Denver Field Office and the offices of several other local agencies. The Trust hopes to point the 1885 Schoolhouse as a replicable case study for the sustainable reuse of historic buildings.³¹ (Figure 30, below)



Figure 30. Image of Emerson House provided by <http://blog.preservationnation.org/2012/05/30/denvers-emerson-school-building-reopens-after-green-restoration/#.UM-HMXPjimpU>

29. www.burtontheatre.com

30. Schultz, Marissa. "Historic Tags Sought for Dozens of Detroit Schools," July 5, 2010, <http://www.detroit-news.com/article/20100705/SCHOOLS/7050329/Historic-tags-sought-for-dozens-of-Detroit-schools>

31. Lindberg, Jim. "Denver's Emerson School Building Reopens After Green Restoration," National Trust for Historic Preservation, May 30, 2012, <http://blog.preservationnation.org/2012/05/30/denvers-emerson-school-building-reopens-after-green-restoration/#.UMZHepPjimpU>.

School Reuse Comparables *continuec*

Irish American Heritage Center – Chicago, IL

The Irish American Heritage Center is housed in the former Mayfair College, a turn of the century community college building. It encompasses one square block. The Irish American Heritage Center bought the property in 1989 and transformed the building to include several rental spaces for parties and events. It also houses cultural activities like dancing and music lessons. It has an art gallery, library, museum, pub and gift shop. The facility also hosts several other organizations that encourage Irish heritage activities and help the Irish immigrant population.³² (Figure 31, below)

McMenamins – Portland, OR

McMenamins in Portland, Oregon is housed in the former Kennedy Elementary School. The school was built in 1915 and was a neighborhood elementary school. The school was closed in 1975. Community members rallied to save the building and in 1997 Brian and Mike McMenemy presented the idea to transform the school into a multipurpose facility. Today the old school houses lodging facilities, several restaurants and bars, a movie theatre, and event rental space.³³ (Figure 32, below)



Figure 31. Image of Chicago Irish American Cultural Center from <http://irish-american.org/>

Figure 32. Image from McMenamins Kennedy School from <http://www.mcmenamins.com/KennedySchool>

32. <http://irish-american.org/>

33. <http://www.mcmenamins.com/KennedySchool>

Charter Schools

Several historic schools have been modified for use as charter schools. For charter school operators, the reuse of a public school is ideal. It is way that charter schools can find appropriate facilities, often times at a reduced rate. It establishes permanent home for the students and provides an option for neighborhoods to be able to point out a long-term commitment to education.³⁴ Several of Philadelphia's former public schools have been reused as charter schools. However, there are 74 charter schools in Philadelphia, and it is not clear if these are a better option than a traditional public school.

The Belmont Charter School is an example of a charter that was housed in a former public school building. It is in the same zip code as the Charles R. Drew School.³⁵ The school has high occupancy, but is not achieving its academic goals and is in jeopardy of losing its charter.

The goal in looking at these comparable school reuses is to better ascertain how the Drew School could be utilized in the near future. The success of the reuses detailed above is directly related to their community value. The developers of these sites recognized an unmet need in the areas of these projects and filled them. The importance in evaluating other examples of reuse is to understand the possibilities that can be housed in school buildings. All of these examples show how versatile the school as an institutional structure can be. It is, as a building type, suited for a multitude of uses. The lesson from all of these reused sites is to first understand the site situation and the community needs in order to have a successful project.

34. <http://asumag.com/Construction/adaptive-reuse-201005/>

35. <http://cea-philly.org/schools.html#belmont>

The Digits:
Philadelphia's Family of Architects
Kelly Wiles

The legacy of the Dagit family and their place Philadelphia architecture is defined by their years of practice and their large number of contributions to the built environment in not just Philadelphia proper, but throughout Pennsylvania and the eastern seaboard. The family produced eight trained architects and six firms between 1888 and 2007. By studying both the works and professional dynamic of these firms, architectural eras become apparent that this long line of architects has had a significant impact on not just the Philadelphia streetscape, but those who use their buildings.¹

Henry Dandurand Dagit (1865-1929) began his humble practice in 1888 with builder George M. Rowe. Dagit served as the architect for the firm. Though it is not documented, members of the family speculate that he trained under Wilson Eyre. Little is known about this short and early period in this long narrative, but the duo worked together designing a few small projects in center city including buildings on South Street, South 11th Street, Spruce Street and Walnut Street. Their offices were located at 122 2nd Second Street until 1890, when Dagit started his independent practice. Over its thirty-two year existence, the firm of Henry D. Dagit flourished and became known as one of the preeminent architectural practices in Philadelphia. While he mainly designed churches and auxiliary buildings for the Roman Catholic Church such as convents, parish houses, rectories and schools, (he was the architect for the Archdiocese of Trenton), he also designed various warehouses, residences, factories and hotels around central and North Philadelphia, most of which have been long since demolished.

Henry D. Dagit, Sr. created a strong relationship with the Catholic Church that served as the basis for cliental for the family's numerous practices. Dagit was not the official architect for the Archdiocese of Philadelphia like he was for Trenton, but was trusted enough to be one of the primary Philadelphia liturgical architects, rivaling only the renowned Edwin Forrest Durang, who was a essentially a generation earlier. Dagit was responsible for many church auxiliary buildings and noteworthy Ecclesiastical Gothic churches in Philadelphia including St. Columba Church (see fig. 1) and St. Malachy's (sSee fig. 2).



Figure 1. St. Columba's Church, Henry D. Dagit, 1904 Philadelphia <http://www.phillychurchproject>.



Figure 2. St. Malachy's Church, Henry D. Dagit, 1900, www.phillychurchproject.



Figure 3. Holy Cross Church, Henry D. Dagit, 1929 Philadelphia AIA Yearbook, 1929 p. 95

¹ The information not footnoted in this report is based on interviews with Charles E. Dagit, Jr., Peter Saylor and Bill Gregg conducted by the author in December, 2012. Transcripts available upon request.

The Dagit dynasty's most significant achievement was St. Francis de Sales Church, dating from 1907. (see fig. 4) This monumental structure on the corner of 47th Street and Springfield Avenue is in the Romanesque-Byzantine style and modeled after the Hagia Sophia in Istanbul, Turkey. The dome is constructed of Guastavino style and has become a beacon of the Spruce Hill neighborhood. While worthy of landmark status, there has been no designation on any level, the St. Francis has been documented by the Historic American Buildings Survey. This work not only showcases Dagit's extreme talent as an architect but also his breadth of design. This is the only Romanesque structure but also the most recognized structure the Dagits' portfolio and 'is regarded as one of the foremost examples of Romanesque Byzantine architecture in the East.'²



Figure 1. St Francis de Sales, Henry D. Dagit, 1904, Philadelphia, HABS Photograph
www.memory.loc.gov/ammem/collections/habs_haer/

In 1922 at the age of fifty-seven, Henry D. Dagit, Sr. expanded his firm and renamed it Henry D. Dagit & Sons, making his two eldest sons, Henry D., Jr. (1893-1981) and Albert F. (1899-1986), who, along with brother Charles E. (1902-1985) and cousin Frederick F. (1889-1986) received formal training from Henry D., Sr. Three years later Charles E. joined the firm. Throughout the 1920s and until the Great Depression, Henry D. Dagit & Sons continued a prosperous and Catholic-centric practice. This second generation of architects

² Obituary of Henry D. Dagit, Sr., *New York Times* (New York, NY), March 26, 1929.

essentially took over the firm from their father, but traces of Henry D. Dagit, Sr.'s creative and architectural brilliance are apparent in the works the firm created while he was still alive. They continued for the most part in the Ecclesiastical Gothic tradition, designing primarily churches, rectories and Catholic schools during the 1920s. By this time, the Dagit name had become synonymous with Catholic architecture in Philadelphia, thus finding clients of this type was not difficult. The ushering in of the Great Depression and the death of Henry D. Dagit, Sr. in 1929 put a halt to constructing those great, monumental churches but also brought a new approach to architecture and the functions of the firm.



Figure 5. Little Flower Catholic Girls School, Henry D. Dagit & Sons, 1938, Philadelphia
www.littleflowerhighschool.org



Figure 6. Proposed Residence, Henry D. Dagit & Sons, 1930, Wynnewood, PA Athenaeum of Philadelphia Dagit Collection

While there were three brothers who were registered architects working as principles in the Henry D. Dagit & Sons firm, only one of them was actually a legitimate designer. Albert F. Dagit, talented artist and classmate of Lou Kahn, definitely inherited his father's architectural talent. Henry D., Jr. was responsible for the detail work and Charles was the businessman. He graduated from Wharton in 1925 and understood what the firm needed to succeed and sustain a business throughout the Great Depression. The firm worked much like a business where design was only a fraction of the their philosophy. Throughout both the Depression and World War II the Dagits were able to maintain an architectural practice, designing 99 buildings during these two decades. This was possible because they started to recycle forms more often and designing housing developments for the Philadelphia suburbs. (see fig. 6) The fact they designed a number of the same types of buildings allowed them to complete all of these commissions. Working in their niche was beneficial to this type of practice because their client base was so specific and their needs were so similar.

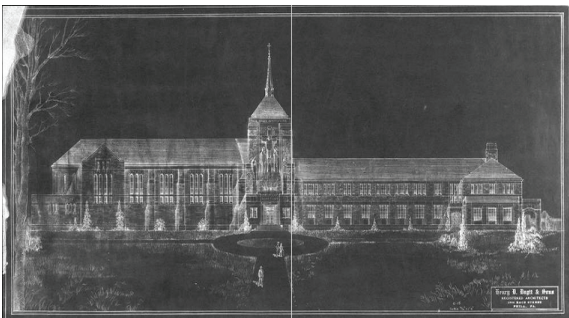


Figure 6. St Mary's Seminary, Henry D. Dagit & Sons, 1934, Treichlers, PA, Athenaeum of Philadelphia Dagit Collection



Figure 7. US Post Office, Henry D. Dagit & Sons, 1936, Chester PA, Athenaeum of Philadelphia Dagit Collection

After Henry D. Dagit, Sr.'s death, the sons continue the practice throughout the 1930s and 1940s but with most of the commissions being outside of the city in the suburbs and other parts of Pennsylvania. Through this period, the firm started to break away slightly from the traditional Beaux Arts training they had received from their father. The buildings, especially churches of the late 1930s and early 1940s are almost hybrids between Henry D. Dagit, Sr.'s earlier more traditional, revival designs and the later more modern works to come from the third generation in the 1950s and 1960s. The transition is apparent through works like the New St. Denis Church in Ardmore from 1945. (see fig. 9) This church retains the traditional form, reusing their father's typical floor plan and also has a rose window that was often found in early Dagit designs. The only difference from the exterior is the massive stone cross gracing the top of the tower. But, by this time they had established themselves as respectable and trustworthy architects in the Catholic community. Many of these commissions during this time were renovations, additions or alterations to their father's earlier works.



Figure 9. St Denis of Ardmore, Henry D. Dagit & Sons, 1945, Ardmore, PA, Athenaeum of Philadelphia Dagit Collection

By the 1950s, Henry D. Dagit & Sons had become comfortable and fluent in popular post-war Modern architecture. Their designs also became much simpler in detail, conservative but still retained complete functionality, a common thread found in all of their buildings. Reflecting on the first seventy-five years of the firm, Henry D. Dagit III wrote in 1964:

“After 75 years it is only natural that Henry D. Dagit & Sons should be ‘typed.’ And we are. People who know our work from New England to Florida, among the eastern seaboard, will probably tell you that our firm is ‘conservative.’ This is true in a very practical sense. It’s a conservatism that has been bred into me and other members of the firm. We’re conservative, for example, with materials used in the buildings we design in that we want proven performance. Regardless of how sincere the promises of manufacturers, we prefer to examine the ‘in use’ records of new materials. Since we seek out maintenance-free materials to specify, it often prevents us from using more glamorous products whose future performance has not been fully ascertained.”³



Figure 10. St Joan of Arc Church, Henry D. Dagit & Sons, 1957, Hershey PA, <http://allenaim.blogspot.com/>



Figure 11. Dougherty Hall, Henry D. Dagit & Sons, 1957, Villanova, PA, AIA Yearbook 1957 p. 87

³ Henry D. Dagit, III, “My Next 25 Years as an Architect,” in *Charette*, Vol. 44 No. 5, (May, 1964).

After looking at their portfolio, this statement is very true. It is also interesting that the Dagits were cognizant and assured of their place in architecture. They efficiently completed a number of commissions but were concerned more with designing well-made and durable buildings rather than innovative ones. Like the decades before, the firm functioned as more like a business than a creative engine. The baby boom meant the need for more schools, so many of their commissions were Catholic schools and one public school, Charles R. Drew Public School.

The 1950s were also the final years of Henry D. Dagit & Sons working as a harmonious family business. In 1959, Albert, the chief designer, left the firm and started Dagit Associates in King of Prussia. From then on there was a rivalry between the two firms and this becomes apparent by looking at AIA Yearbooks. In 1961, Henry D. Dagit & Sons submitted a design for an ultra-modern 'proposed church', which is completely different than any of their buildings from the years directly before or after. (see fig.13) Though it was actually never built, it does resemble the 'Scandinavian Modern' designs that Dagit Associates actually erected. (see figs. 14 & 15) Henry D. Dagit & Sons had to rely on their past designs because they were without the creative architect that carried the firm through the earlier years. In 1964, Henry D. Dagit III again states that his firm is 'conservative' but also promotes himself as a modern architect and that his "conservatism comes to an end," possibly because he was threatened or losing clients because of his more talented brother. The Dagits' cliental, regardless of firm, still remained liturgical architects, thus clients of the 1940s and 1950s were essentially split and each firm had to compete for the Catholic Church's business.



Figure 13. Proposed Church, Henry D. Dagit & Sons, 1961 AIA Yearbook 1961 p. 129



Figure 14. Wood Catholic HS for Boys, 1966, Dagit Assoc., Warminster Twp., PA AIA Yearbook, 1966 p. 94



Fig 15 Presentation Blessed Virgin Mary Church, Dagit Associates, 1965, Cheltenham Twp., Athenaeum of Philadelphia Dagit Collection



Figure 16. Fire Station, Henry D. Dagit & Sons, 1970, Philadelphia, www.flickr.com

Henry D. Dagit & Sons more or less dissolved after 1970 when Charles left the firm and started Dagit/Saylor with his son Charles E., Jr. and Peter Saylor. Charles Jr. and Saylor graduated with architecture degrees from the University of Pennsylvania, learning from the great architects of the Philadelphia School, Both working for Mitchell/Giurgola upon graduation. Charles Jr. also was student of Lou Kahn and a Stewardson Scholarship recipient; his talent was seen as a threat to his cousins. The advent of Dagit/Saylor also meant more competition between the various firms. Dagit/Saylor ultimately reigned supreme, winning AIA awards in their first few years for the Dagit Residence and the Gymnasium at Penn State University, Jenkintown. (see fig. 17) They wanted to break away from the traditional Catholic buildings and worked to get larger commissions, ultimately finding their niche in collegiate architecture. Charles Dagit, Jr. retired in 2007 but has garnered a number of prestigious awards including the Pennsylvania Gold Medal of Distinction and the Thomas U. Walter Award.



Figure 17. Residence of Mr. & Mrs. Charles E. Dagit, Jr., 1971 Gladwyne, PA, AIA Yearbook 1972, p. 60

Charles E. Dagit, Jr. and his grandfather serve as a talented bookends for this family of architects. While the Dagits produced a number of architects, it is apparent that some were more talented than others. The narrative that accompanies Dagit architecture almost takes the shape of a valley. Henry D. Dagit, Sr. was a brilliant, innovative architect who made a name for him and his family based on his work alone. His sons, who were not as talented, took the firm over and produced adequate work, but inferior to their father's. They found their niche in Catholic auxiliary buildings and schools and rampantly designed them, being more concerned with actually producing work than the innovative quality of the work like their father was. This trend continued through the various splits of the 1960s. This family's story ultimately ends with Charles E. Dagit, Jr., one of the most preeminent architects that Philadelphia has produced. The family has had such a tremendous impact on Philadelphia's built environment through the large number of works (148) they are responsible for. They are an important chapter in the story of Philadelphia architecture because they were in practice for so long.

In the case of the Drew School, it is an excellent contender to be a representative work of the final era of Henry D. Dagit & Sons, as it is one of the last works that the firm did as a cohesive family business. While the school is not one of their finest buildings, it still is a work of an important Philadelphia firm. Regardless of the style, like all Dagit buildings, the Drew School is a well-made, durable building that is still completely functional. Most importantly, it also has a characteristic that most Dagit buildings have: it means something to the community that it was built for. This family is known for designing structures like churches, residences and schools, buildings that inherently come with sentimental value because they are cornerstones of peoples' lives.

Dagit Family Tree

Henry D. Dagit
1865-1929

Henry D. Dagit, Jr.
1893-1981

Albert F. Dagit
1899-1986

Charles E. Dagit
1902-1985

Henry D. Dagit, III
1931-

Albert F. Dagit, Jr.
1925-1988

Charles E. Dagit, Jr.
1943-

Daniel C. Dagit
1934-

Frederick D. Dagit
1889-1954

Firms:

Rowe & Dagit: 1888-1890

Henry D. Dagit & Son & Co: 1890-1919

Henry D. Dagit & Son: 1919-27

Henry D. Dagit & Sons: 1922-59/70

Henry D. Dagit & Son: 1959

Dagit & Associates: 1959-1986

Dagit & Saylor: 1970-2007

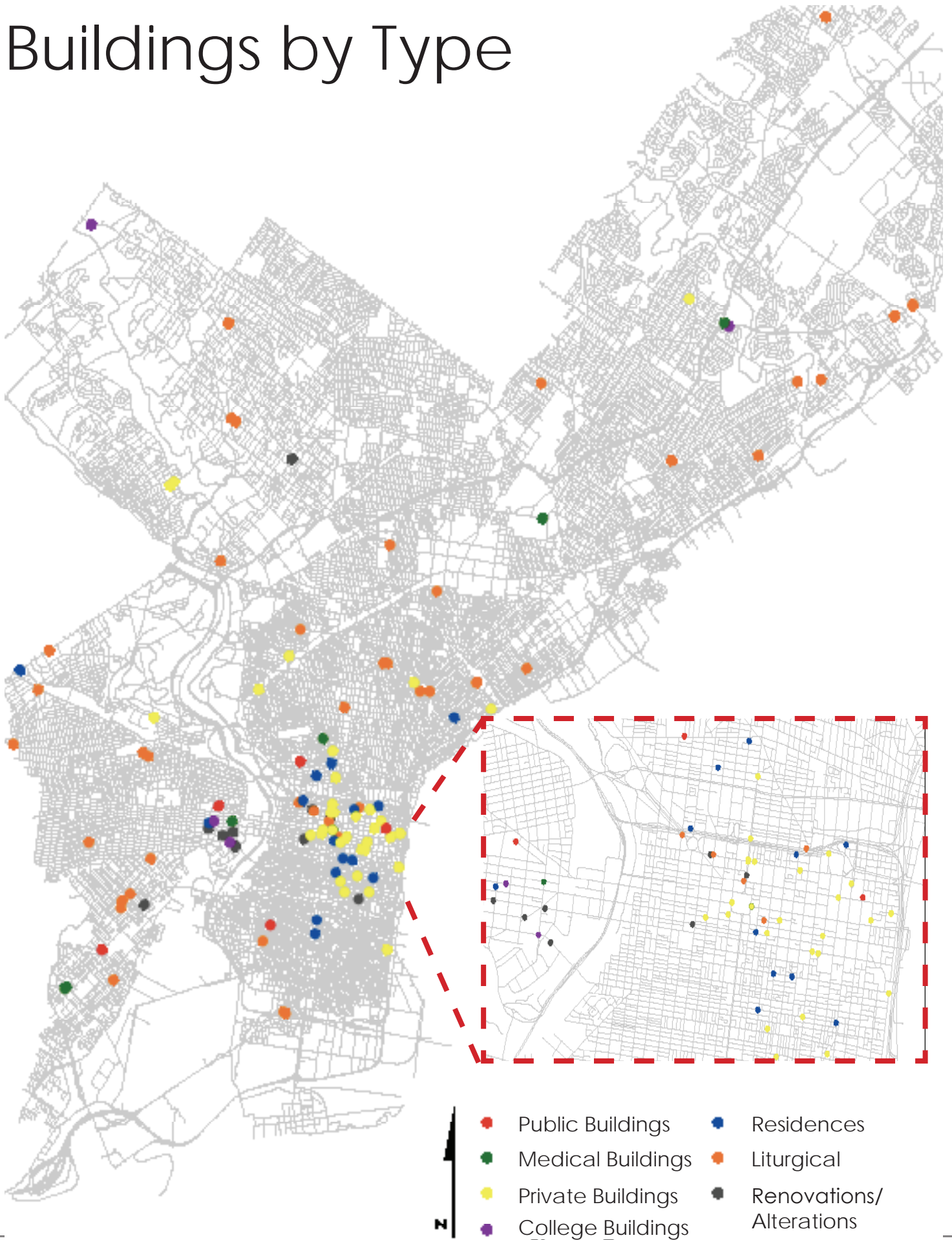
Buildings by Firm



Legend

- Henry D. Dagit & Sons
- Henry D. Dagit & Son
- Henry D. Dagit
- Dagit/Saylor
- Dagit Associates

Buildings by Type



Buildings by Year



Biographical Information

Henry D. Dagit

1865-1929

- Place of Residence: Philadelphia
- Schooling: Philadelphia Schools
- Office Training: W.H. Geissinger, 1881, Possibly Wilson Eyre as well.
- Principal?: Yes
- Associated Firms: Rowe & Dagit (with George M. Rowe) 1888-90, Henry D. Dagit, 1888-1922, Henry D. Dagit & Sons 1922-1929
- Notes: Has works in other parts of Pennsylvania and New Jersey. Appointed architect for the Archdiocese of Trenton, NJ in 1898

Henry D. Dagit, Jr.

1893-1981

- Place of Residence: Philadelphia, Lower Merion
- Schooling: Certificate in Building Construction from Drexel in 1913
- Certificate of Proficiency in Architecture from Penn in 1916
- Office Training: Henry D. Dagit
- Principal?: Yes. Took over HDD & Sons when father died in 1929
- Associated Firms: Henry D. Dagit & Sons 1922-1959, Henry D. Dagit & Son 1959-?
- Notes: Responsible for Drew School

Henry D. Dagit III

1931-

- Place of Residence: Lower Merion
- Schooling: B. Arch UVA 1958
- Office Training: Henry D. Dagit & Sons, Milton L. Grigg
- Principal?: Yes, Henry D. Dagit & Sons, Henry D. Dagit & Son
- Associated Firms: Henry D. Dagit & Sons, Henry D. Dagit & Son
- Notes: Responsible fore Drew School

Albert F. Dagit

1899-1986

- Place of Residence: Lower Merion, Ardmore
- Schooling: W. Philadelphia High School, UPenn 1922
- Office Training: Henry D. Dagit
- Principal?: Yes, Henry D. Dagit & Sons, Dagit Associates
- Associated Firms: Henry D. Dagit & Sons, 1922-1959, Dagit Associates, 1959-1986
- Notes: Changed to HDD & Sons when AFD enter firm. Registered to practice

Albert F. Dagit, Jr.

1925-1988

- Place of Residence: Merion, Narberth
- Schooling: Villanova College, UPenn, Sorbonne
- Office Training: Henry D. Dagit & Sons
- Family Information: Wife: Eileen Children: Albert III, Robert, Eileen, Martha, Judith
- Principal?: Yes, Henry D. Dagit & Sons, Dagit Associates
- Associated Firms: Henry D. Dagit & Sons, Dagit Associates
- Notes: USNR

Charles E. Dagit

1902-1985

- Place of Residence: Philadelphia, PA, Bryn Mawr, PA
- Schooling: West Philadelphia Catholic High School, UPenn 1925, Economics.
- Office Training: Henry D. Dagit & Sons
- Principal?: Yes Henry D. Dagit & Son, (with HDD Jr. & HDD III), Dagit/Saylor (with Charles E. Dagit, Jr. & Peter M. Saylor)
- Associated Firms: Henry D. Dagit & Sons, Dagit/Saylor
- Notes: AIA Gold, 1977

Charles E. Dagit, Jr.

1943-

- Place of Residence: Gladwyne, PA
- Schooling: UPenn B.Arch 1967, UPenn M.Arch 1968
- Office Training: Louis I. Kahn Studio
- Principal?: Yes Dagit/Saylor (1970-2007)
- Associated Firms: Mitchell/Giurgola, Dagit/Saylor
- Notes: 1984: Won National Building Competition for the Cultural Arts Pavilion, Newport News, VA. AIA Gold Medal, Progressive Architecture Design Award

Frederick D. Dagit

1889-1986

- Place of Residence: Philadelphia, Landsdowne
- Schooling: Certificate in building construction from Drexel, 1916, UPenn and T Square Club Atelier in 1917. American School of Fine Arts, Tour, France 1923
- Office Training: T Square Club Atelier 1917, Henry D. Dagit, 1907-1911
- Principal?: Yes, Henry D. Dagit & Sons
- Associated Firms: Henry D. Dagit & Sons, 1921-22. Various firms before and after.
- Notes:

FIRMS:

Rowe & Dagit

1888-1890

- Henry D. Dagit and George M. Rowe, builder
- 122 South 2nd Street

Henry D. Dagit

1890-1922

- Worked alone for over 30 years
- 709 Walnut Street
- Apprenticed Frederick D. Dagit, Henry D. Dagit, Albert F. Dagit

Henry D. Dagit & Sons

1922-1959/70

- Henry D. Dagit (1922-1929)
- Henry D. Dagit, Jr. (1929-c. 1970)
- Albert F. Dagit (1922-1959)
- Frederick D. Dagit (1921-1922)
- Charles E. Dagit (1925-1970)
- 1329 Race Street

Dagit Associates

1959- (at least 1986)

- Albert F. Dagit (1959-1986)
- Albert F. Dagit, Jr. (1959-1988)
- Daniel C. Dagit (1959-?)
- John T. Edwards, Jr. (?-?)
- King of Prussia
- 1700 Race Street
- Started after AFD left HDD & Sons

Dagit/Saylor

1970-2007

- Started by Charles E. Dagit
- Charles E. Dagit (1970-1985)
- Charles E. Dagit, Jr. (1970-2007)
- Peter M. Saylor (1970-2007) Still working as SaylorGregg
- 1133 Arch Street
- 1704 Walnut Street

Building	Year	Location	Firm	Type	Designated?	Still Standing?	Notes
Archbishop's Residence	1935	5700 City Line Avenue	Henry D. Dagit & Sons	Catholic Building	No	Yes	
Bartram's Garden	1980	1650 S. 53rd Street	Dagit/Saylor	Restoration	Local, NHL, NRHP	Yes	HABS/HALS Report
Bear Factory	1897	932 Race Street	Henry D. Dagit	Factory	No	Yes	
Benjamin Bros. Offices & Warehouses	1964	323 N. American Street	Henry D. Dagit & Son	Ware-house	No	No	
Blessed Sacrament Rectory	1907	1750 S. 56th Street	Henry D. Dagit	Rectory	No	Yes	
Building	1898	2502 Dauphin Street	Henry D. Dagit	Store	No	No	
Callaghan Bar Room	1893	150 Cuthbert Street	Henry D. Dagit	Retail	No	Yes	Originally on Chancery Lane and Coombs Alley
Callaghan Store	1893	150 Cuthbert Street	Henry D. Dagit	Retail	No	Yes	Originally on Chancery Lane and Coombs Alley
Carousel	1897	4726 Parkside Avenue	Henry D. Dagit	Carousel	No	No	Originally on Elm Ave. & Belmont Ave
Cathedral Basilica of S.S. Peter & Paul	1914	1713 Race Street	Henry D. Dagit	Renova-tions	Local,NHRP	Yes	
Catholic Philopatrian Literary Institute	1899	1411 Arch Street	Henry D. Dagit	Catholic Building	No	No	Demolished between 1910 and 1942
Charles R. Drew Elementary	1950	3724 Warren Street	Henry D. Dagit & Sons	Public School	No	Yes	
Chestnut Hill College	1924	9601 Germantown Avenue	Henry D. Dagit & Sons	College Campus	No	Yes	
Church of the Transfiguration of Our Lord	1926	5501 Cedar Street	Henry D. Dagit & Sons	Catholic Church	No	No	Demolished 2009, Closed 2000
Convent of the Sisters of Mercy School	1912	1700 North Broad Street	Henry D. Dagit	Catholic School	No	No	Demolished after 1962
Cronin Hotel	1906	302 North Broad Street	Henry D. Dagit	Hotel	No	No	
Cronin Residence	1899	1927 Vine Street	Henry D. Dagit	Residence	No	No	

Building	Year	Location	Firm	Type	Registered?	Still Standing?	Notes
Dagit Residence	1891	678 N. 15th Street	Henry D. Dagit	Residence	No	Yes	
Dagit Residence	1932	1006 Winter Street	Henry D. Dagit & Sons	Residence	No	No	
Delaware River Chemical Works	1895	104 Morris Street	Henry D. Dagit	Factory	No	No	
Delta Tau Delta Fraternity House	1982	3533 Locust Street	Dagit/Saylor	Adaptive Reuse Project	No	Yes	
Dintenfass Market House and Hall	1896	523 S. 4th Street	Henry D. Dagit	Hall	No	Yes	
Doyle Building	1894	14 S. 3rd Street	Henry D. Dagit	Store	No	No	Demolished for INHP
Doyle Residence	1892	1330 South Broad Street	Henry D. Dagit	Residence	No	Yes	
Eisenlohr Residence; Eisenlohr Hall, University of Pennsylvania President's Residence	1979	3812 Walnut Street	Dagit/Saylor	Renovation	No	Yes	
Factory	1895	719-723 Vine Street	Henry D. Dagit	Factory	No	No	Demolished between 1910 and 1942
Fidelity Trust Co.	1965	8200 Castor Avenue	Henry D. Dagit & Sons	Bank	No	Yes	
Fire Station	1967	101 N. 4th Street	Henry D. Dagit & Sons	Public Building	No	Yes	
Fisher-Bennett Hall	2006	3340 Walnut St.	Dagit/Saylor	Renovation	No	Yes	
Fiumara Store and Warehouse	1919	902 S. 10th Street	Henry D. Dagit	Store	No	Yes	
General State Authority/ Eastern State Penitentiary Storehouse Building	1938	2027 Fairmont Avenue	Henry D. Dagit & Sons	Public Building	No	Yes	
Germantown Friends School Loeb Center of Performing Arts	2004	31 W. Coulter Street	Dagit/Saylor	Adaptive Reuse Project	No	Yes	
Gilmore Theatre	1903	1528 Ranstead Street	Henry D. Dagit	Theatre	No	No	

Building	Year	Location	Firm	Type	Designated?	Still Standing?	Notes
Green Apartments	1894	500 S. 7th Street	Henry D. Dagit	Apartments	No	No	
Hallahan Factory	1901	761 Passyunk Ave	Henry D. Dagit	Factory	No	No	
Henry D. Dagit & Sons Office	1925	1329 Race Street	Henry D. Dagit & Sons	Office	No	No	
Holy Cross Church	1919	154 East Mount Airy Avenue	Henry D. Dagit & Sons	Catholic Church	No	Yes	
Holy Cross Church	1929	154 East Mount Airy Avenue	Henry D. Dagit & Sons	Church	No	Yes	
Holy Cross Rectory	1907	154 E. Mount Airy Street	Henry D. Dagit	Rectory	No	Yes	
Holy Family College	1957	9801 Frankford Avenue	Henry D. Dagit & Sons	Catholic School	No	Yes	
Holy Family College Library	1966	9803 Frankford Avenue	Henry D. Dagit & Sons	Catholic School	No	Yes	
Holy Redeemer Chinese Catholic Church & Schools	1941	915 Vine Street	Henry D. Dagit & Sons	Catholic School	No	Yes	HABS Report
Home for Catholic Orphans	1902	291 N. 20th Street	Henry D. Dagit	Orphanage	No	No	Demolished between 1910 and 1942
Hotel	1892	30 S. 11th Street Street	Henry D. Dagit	Hotel	No	No	Demolished between 1910 and 1942
Hotel	1893	202 North Broad Street	Henry D. Dagit	Hotel	No	No	
Housing Development	1891	1500 South Street	Henry D. Dagit	Housing Development	No	Yes	
Housing Development	1922	983 South 59th Street	Henry D. Dagit & Sons	Housing Development	No	Yes	
Hutchinson Bakery	1902	724 S. 11th Street	Henry D. Dagit	Store	No	No	
IS Ravdin Institute	1973	3400 Spruce Street	Dagit Assoc.	University Building	No	Yes	Alterations
James Weldon Johnson Homes	1939	2500 W. Norris Street	Henry D. Dagit & Sons	Residence	No	Yes	Alterations/ Contributing Architects
Jones Residence	1939	6344 City Avenue	Henry D. Dagit & Sons	Residence	No	Yes	

Building	Year	Location	Firm	Type	Designated?	Still Standing?	Notes
Juniorate Missionary Servants Most Blessed Trinity Chapel	1953	3501 Solly Ave	Henry D. Dagit & Sons	Catholic School	No	Yes	
Kleinswith Residence	1893	919 Spruce Street	Henry D. Dagit	Residence	Local	Yes	
Knickerbocker Ice Co.	1894	3000 Montgomery Avenue	Henry D. Dagit	Store	No	No	
Lazarus, Schwartz and Lipper Factory	1891	100 Nobel Street	Henry D. Dagit	Factory	No	N/A	
Lee's Store	1890	800 South Street	Henry D. Dagit	Store	No	No	
Little Flower Catholic High School For Girls	1938	1000 W. Lycoming Street	Henry D. Dagit & Sons	Catholic School	No	Yes	
Little Sisters of the Poor Home for the Aged	1936	5300 Chester Avenue	Henry D. Dagit & Sons	Elderly Home	No	Yes	Alternations
Ludwig Building	1894	600 Walnut Street	Henry D. Dagit	Building	No	No	
Marks Apartment House	1909	1707 Green Street	Henry D. Dagit	Apartments	No	No	
McCloskey's Store	1892	100 Spruce Street	Henry D. Dagit	Store	No	No	
McHugh Store	1894	1434 Market Street	Henry D. Dagit	Store	No	No	Demolished after 1962
Mellon Estate Office Building	1912	1700 Chestnut Street	Henry D. Dagit	Office Building	No	Yes	
Most Blessed Sacrament Rectory	1907	5501 Chester Avenue	Henry D. Dagit	Rectory	No	Yes	
Most Blessed Sacrament School	1907	5501 Chester Avenue	Henry D. Dagit	Catholic School	No	Yes	
Mrs. A Goodbright Store	1892	844 N. 15th Street	Henry D. Dagit	Store	No	No	
Murphy Residence and Store	1893	1200 South Street	Henry D. Dagit	Residence	No	No	
Nativity of the Blessed Virgin Mary Church; Nativity BVM Church	1932	2535 E. Allegheny Avenue	Henry D. Dagit & Sons	Church	No	Yes	Additions/ Alterations

Building	Year	Location	Firm	Type	Designated?	Still Standing?	Notes
Nativity of the BVM Rectory	1930	2536 E. Allegheny Avenue	Henry D. Dagit & Sons	Rectory	No	Yes	Additions/ Alterations
Naulty Residence	1901	104 S. 38th Street	Henry D. Dagit	Residence	No	No	
Nazareth Hospital	1954	2601 Holme Avenue	Henry D. Dagit & Sons	Hospital	No	Yes	Alternations 1974
Newman Center	1969	3730 Chestnut Street	Dagit Assoc.	College Building	No	Yes	
Northern Electric Company	1895	213 Susquehanna Avenue	Henry D. Dagit	Company Building	No	Yes	
O' Neill Bros. Store and Residence	1900	2658 Edgemont Street	Henry D. Dagit	Store	No	Yes	
Office Building	1893	700 Walnut Street	Henry D. Dagit	Office Building	No	No	
Office Building	1894	621 Walnut Street	Henry D. Dagit	Office Building	No	No	
Office Building	1895	737 Walnut Street	Henry D. Dagit	Office Building	Local	Yes	
Oliver H. Bair Company; Bair Funeral Home; Peale House II	1891	1818 Sansom Street	Dagit/ Saylor	Renovation	No	Yes	
Our Lady of Lourdes School	1939	1940 N. 63rd Street	Henry D. Dagit & Sons	Catholic School	No	Yes	
Our Mother of Sorrows School	1897	4800 Wyalusing Avenue	Henry D. Dagit	Catholic School	No	Yes	
Parkview Hospital	1971	1331 E. Wyoming Avenue	Henry D. Dagit & Sons	Hospital	No	Yes	
Patterson Residence	1890	1604 South Broad	Henry D. Dagit	Residence	No	Yes	
Penn Museum Expansion	2005	3260 South Street	Dagit/ Saylor	Addition	No	Yes	
Pennsylvania Academy of Fine Arts Hamilton Center	2003	118 North Broad Street	Dagit/ Saylor	Adaptive Reuse Project	No	Yes	
Philadelphia & Billingsport Ferry Company Ferry Houses & Slips	1899	Hog Island	Henry D. Dagit	Houses	No	No	
Philadelphia Veterinary Sanitarium	1892	3400 Ludlow Street	Henry D. Dagit	Medical Building	No	N/A	

Building	Year	Location	Firm	Type	Designated?	Still Standing?	Notes
Playground	1971	6200 Woodland Avenue	Henry D. Dagit & Sons	Play-ground	No	No	
Quinn Residence	1904	110 S. 13th Street	Henry D. Dagit	Residence	No	Yes	
Ravenhill Academy Chapel; Academy of the Assumption Chapel	1938	3840 W. School House Lane	Henry D. Dagit & Sons	Church	No	No	
Rectory, Cathedral of Basilica of Saints Peter & Paul	1912	1701 Race Street	Henry D. Dagit	Rectory	No	Yes	
Redemptorist Fathers Lyceum	1898	100 Diamond Street	Henry D. Dagit	Catholic Building	No	N/A	
Redemptorist Fathers School	1898	100 Diamond Street	Henry D. Dagit	Catholic School	No	N/A	
Reuter Residence	1898	329 N. 6th Street	Henry D. Dagit	Residence	No	No	Demolished for Vine Street Expressway
School of St. Mary Magdelene de Pazzi	1934	710 Montrose Street	Henry D. Dagit & Sons	Alterations/ School	No	Yes	Now known as Mario Lanzo Institute
Schwartz Garage	1911	228 N. 5th Street	Henry D. Dagit	Garage	No	No	
Schwartz Store	1911	112 N. 12th Street	Henry D. Dagit	Store	No	No	
ShIPLEY Store	1895	612 Arch Street	Henry D. Dagit	Store	No	No	
Sisters of the Holy Family of Nazareth-New College Building	1952	2723 Holme Avenue	Henry D. Dagit & Sons	College Building	No	Yes	
South Philadelphia National Bank	1900	601 South Broad Street	Henry D. Dagit	Bank	Maybe on State	Yes	
Spenser Residence	1900	1100 Spruce Street	Henry D. Dagit	Residence	Local	Yes	
St Martha Church	1966	11321 Academy Road	Dagit Assoc.	Church	No	Yes	
St. Alice's Church	1951	150 Hampden Road	Henry D. Dagit & Sons	Church	No	Yes	

Building	Year	Location	Firm	Type	Designated?	Still Standing?	Notes
St. Andrew Church	1924	1901 Wallace Street	Henry D. Dagit & Sons	Church	No	Yes	
St. Anne Church	1929	2328 E. Lehigh Avenue	Henry D. Dagit & Sons	Church	No	Yes	Alterations in 1929 and 1948
St. Barnabus Church Convent	1940	6400 Buist Avenue	Henry D. Dagit & Sons	Convent	No	Yes	
St. Benedict's Church	1910-1942	1940 Cheltenham Avenue	Henry D. Dagit & Sons	Church	No	Yes	
St. Bonafacius School	1908	174 Diamond Street	Henry D. Dagit	Catholic School	No	Yes	
St. Bridget Rectory	1907	3667 Midvale Avenue	Henry D. Dagit	Rectory	No	Yes	
St. Callistus Church	1928	700 N. 68th Street	Henry D. Dagit & Sons	Catholic Church	No	Yes	
St. Christopher School	1990	13305 Proctor Road	Dagit/Saylor	Catholic School	No	Yes	
St. Columba Church	1904	2336 Lehigh Avenue	Henry D. Dagit	Church	No	Yes	Now known as St. Martin de Porres
St. Columba Rectory	1904	2300 W. Lehigh Avenue	Henry D. Dagit	Rectory	No	Yes	Now known as St. Martin de Porres
St. Columba School	1904	2300 W. Lehigh Avenue	Henry D. Dagit	Catholic School	No	Yes	Now known as St. Martin de Porres Catholic School
St. Columba's Convent	1924	2340 West Lehigh Avenue	Henry D. Dagit & Sons	Catholic Church	No	Yes	Now known as Saint Martin de Porres Catholic Church
St. Dominic School	1914	8510 Frankford Avenue	Henry D. Dagit	Catholic School	No	Yes	
St. Edmond Church	1912	2130 S 21st St	Henry D. Dagit & Sons	Church	No	Yes	
St. Edward Church Rectory	1908	700 York Street	Henry D. Dagit	Rectory	No	Yes	Now Highway Temple of Deliverance

Building	Year	Location	Firm	Type	Designated?	Still Standing?	Notes
St. Edward the Confesor Parish House	1908	2401 North 8th Street	Henry D. Dagit	Parish House	No	Yes	
St. Edward the Confessor School	1910	2401 North 8th Street	Henry D. Dagit	Catholic School	No	Yes	
St. Elizabeth School	1901	1825 N. 23rd Street	Henry D. Dagit	Catholic School	No	Yes	
St. Francis De Sales Church	1907	4629 Springfield Avenue	Henry D. Dagit	Church	No	Yes	HABS Report, Charles Biswanger Responsible for Interior
St. Francis De Salles Convent	1926	912 S. 47th Street	Henry D. Dagit & Sons	Convent	No	Yes	
St. Francis De Salles School	1926	917 S. 47th Street	Henry D. Dagit & Sons	Catholic School	No	Yes	
St. Gregory Church	1910	5188 Media Street	Henry D. Dagit & Sons	Church	No	Yes	Now Greater Bibleway Temple
St. Hubert Catholic Schools	1940	7320 Torresdale Avenue	Henry D. Dagit & Sons	Catholic School	No	Yes	
St. Hugh Rectory	1927	145 W. Tioga Street	Henry D. Dagit & Sons	Rectory	No	Yes	
St. John School C. Y. O. Headquarters	1973	1211 Clover Street	Dagit Assoc.	Church Building	No	Yes	
St. Joseph's Hospital	1902	1700 Girard Avenue	Henry D. Dagit	Hospital	No	No	
St. Katherine of Siena Rectory	1967	9700 Frankford Avenue	Henry D. Dagit & Son	Rectory	No	Yes	
St. Madeleine Sophie School	1930	6400 Greene Street	Henry D. Dagit & Sons	Catholic School	No	Yes	Alterations
St. Magdalene Sophia School	1929	6452 Greene Street	Henry D. Dagit & Sons	Catholic School	No	Yes	
St. Malachy Church	1900	1429 N. 11 Street	Henry D. Dagit	Church	No	Yes	Alterations
St. Mary Magdalene de Pazzi Italian Catholic Church	1934	712 Montrose Street	Henry D. Dagit & Sons	Church	Local	Yes	Alterations

Building	Year	Location	Firm	Type	Designated?	Still Standing?	Notes
St. Richard Rectory	1929	3010 South 18th Street	Henry D. Dagit & Sons	Rectory	No	Yes	
St. Richard School	1929	1826 Pollock Street	Henry D. Dagit & Sons	Catholic School	No	Yes	
St. Thomas Aquinas Church	1955	1719 Morris Street	Henry D. Dagit & Sons	Church	No	Yes	Additions
St. Timothy Convent	1959	3001 Levick Street	Henry D. Dagit & Sons	Convent	No	Yes	
St. Vincent Hospital Reception and Isolation Building	1937	7000 Woodland Avenue	Henry D. Dagit & Sons	Hospital Building	No	No	
St. Vincent's Hospital for Women	1937	7020 Woodland Avenue	Henry D. Dagit & Sons	Hospital	No	No	
St. William Church	1963	6201 Rising Sun Avenue	Dagit Associates	Church	No	Yes	
St. Williams Rectory	1966	6200 Rising Sun Avenue	Henry D. Dagit & Sons	Rectory	No	Yes	
State Fencibles Armory Warehouse	1897	201 N. Broad Street	Henry D. Dagit	Warehouse	No	No	
Store	1898	700 Chestnut Street	Henry D. Dagit	Store	No	No	
The Colonial	1891	1100 Spruce Street	Henry D. Dagit	Apartment Building	No	Yes	
TJ Dunn & Co. Factory	1898	Broad and Race Street	Henry D. Dagit	Factory	No	No	
Toomey Hall	1893	2200 Cross Street	Henry D. Dagit	Meeting Hall	No	No	
Transfiguration of Our Lord Church	1931	5541 Cedar Avenue	Henry D. Dagit & Son	Church	No	No	
William Mulharian & Sons Warehouse	1902	1400 N. Front Street	Henry D. Dagit	Warehouse	No	Yes	

On Modernism:
Framing the Drew School in its Context
Alison Garcia Kellar

In recent years, mid-20th century vernacular architecture has begun to receive considerable scholarly attention for its unique contributions to our present day urban fabric. Various degrees of modernist architectural concepts became widely accepted by the American public as they were translated into everyday buildings that emerged during the construction boom following World War II. In particular, Philadelphia experienced urban renewal on a massive scale as city planners and officials considered ameliorating the city's blighted areas with structures erected to promote the welfare of its residents.¹ Sixty years later, the now vacant Charles R. Drew Elementary School serves as a prime relic of this optimistic time past, warranting further investigation of the modernist influences present at its conception. Considering the existing accepted Beaux Arts architectural tradition, early impact of International Modernism and the subsequent development of a regional modernism, I will present the Drew School's design as typified in the context of this emblematic era in Philadelphia.

In the first quarter of the 20th century, Beaux Arts inspired architectural works were prevalent throughout Philadelphia. Notably of this era, 30th Street Station, 30th Street Post Office, Rodin Museum and the Municipal Auditorium and Convention Hall. (Images 1,2) Albert F. Dagit and Frederick D. Dagit, of the 2nd generation of Dagit family architects both trained at the University of Pennsylvania School of Arts and graduated in the early 1930's. (Image 3) Pages from a 1950 Penn undergraduate

1. Rappaport, Nina. Preserving Modern Architecture in the USA, Modern Movement Heritage. New York: DOCOMOMO. 1994.

yearbook depict students working on early modern projects just before the architecture department underwent a dramatic shift in practice and theory in 1951, when George Holmes Perkins was hired from Harvard to revamp the School of Fine Arts. Perkins then hired Lewis Mumford to the head the planning department, and the rest is the Philadelphia School history.²



Image 1. Paul Cret's Rodin Museum, built 1929



Image 2. Municipal Auditorium Building, Philadelphia, PA

2. Klemek, Christopher. Modernist Planning and the Crisis of Urban Liberalism in Europe and North America, 1945-1975. Dissertation, University of Pennsylvania. Philadelphia: ProQuest, 2004. (Publication No. AAI3125847.)



Image 3. A page from the University of Pennsylvania Undergraduate yearbook of 1950

This shift in architectural pedagogy was largely influenced by International Modernism, which started in the 1930's in Europe. The 1932 International Style exhibition at the MOMA served as a catalyst for architects to adopt these Avant-gard architectural expressions, allowing for wide-ranging acknowledgement and acceptance of modernism, which prompted many American interpretations.³ Here in Philadelphia, the Philadelphia Savings Fund Society, built by Howe and Lescaze in 1932, was deemed the “most modern office

3. Rappaport. 1994.

building,” boasting full 24-hour air conditioning and an impressive juxtaposition of form and materiality. (Image 4, below)



Image 4. 1932 advertisement for the PSFS building

Urban renewal campaigns elicited new architecture to serve as a catalyst for the application of enthusiastic ideas of how society and its city should function. Philadelphia experienced this on a massive scale after the Housing Act of 1949, as city planners and officials considered

ameliorating the city's blighted areas with structures erected to promote the welfare of its residents.⁴ A 1950 advertisement for the University of Pennsylvania Development Fund showed the university's plans to acquire more surrounding West Philadelphia land to expand its campus. (Images 5,6) This expansion would entail the creation of many new departmental buildings, rebuild and close off roads in an effort to rebrand the campus as a whole, renaming the Penn portion of West Philadelphia as, "University City."⁵

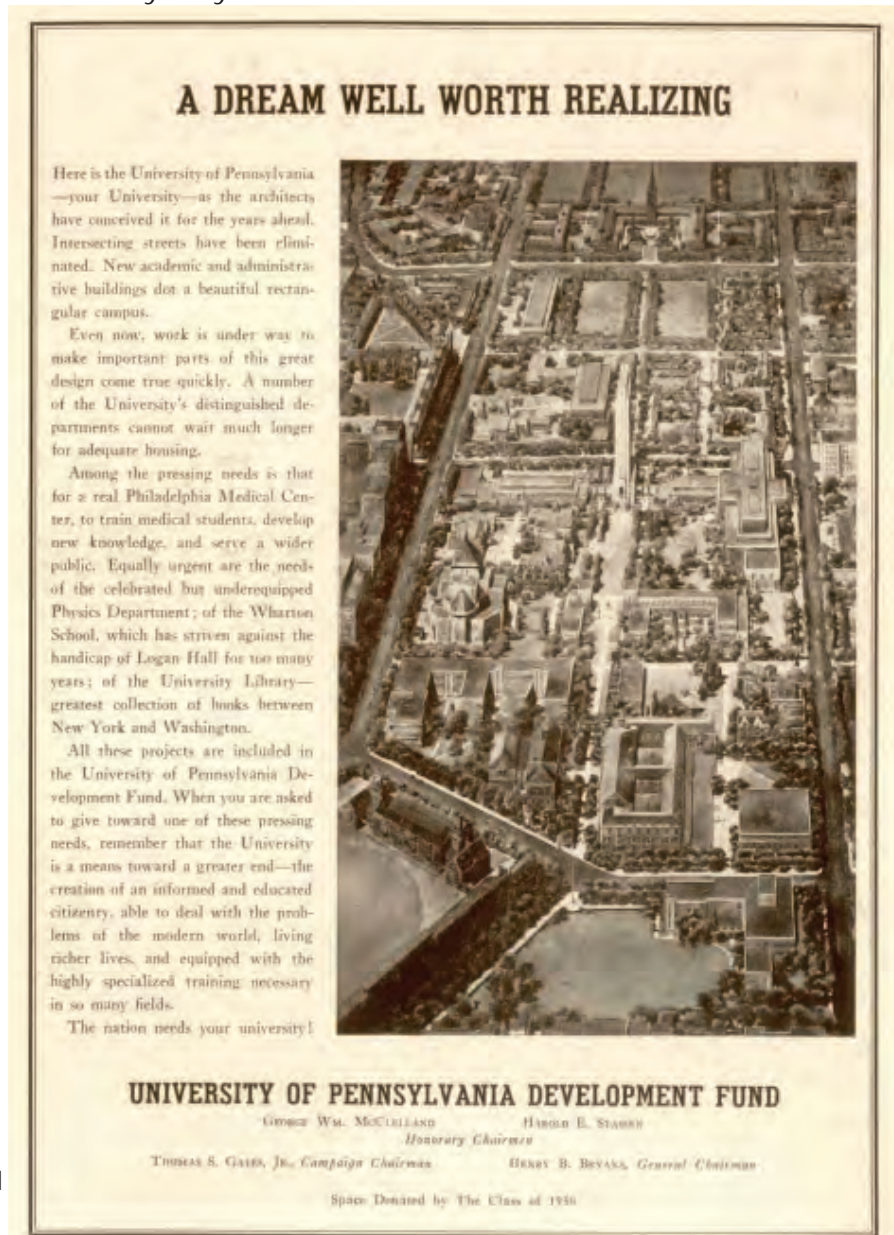


Image 5. University of Pennsylvania Development Fund advertisement

4. Hagar, Kristen. *Toward a New Approach to Evaluating Significance in Recent-Past Preservation Planning with a Case Study of 1960s Properties in Philadelphia County*. Dissertation, University of Pennsylvania. Philadelphia: 2011.

5. Cohen, Scott. *Urban Renewal in West Philadelphia: An Examination of the University of Pennsylvania's Planning, Expansion and Community Role from the Mid-1940's to the Mid 1970's*. Dissertation, University of Pennsylvania. Philadelphia: 1998.



Image 6. Aerial view of West Philadelphia, c. 1942

As the University of Pennsylvania began expanding, considerable city-wide the erection of public and municipal buildings was underway throughout Philadelphia. The country was experiencing an unprecedented construction boom, as a result of the end of World War II in addition to the planning efforts of the urban revival movement. Several streets north of the University of Pennsylvania's massive campus-building-campaign, at 38th Street and Warren Street, were a conglomerate of row homes and the Minnie M. Kendrick School. The area by this time was mostly inhabited by African American residents. A soil test-boring plan preceding the construction of the Drew School shows the ghosts of at least 10 homes that were demolished to build the new school. (Image 7) With this and the demolition of many other residences in the area, in an effort by the city to "cleanse" the neighborhood, residents felt powerless as their homes were torn down and forced to relocate, despite the fact that the school was built to serve the children of the

community. This ill-sentiment is immortalized in an exterior tile mosaic on the University City High School, which, ironically, was built as a product of the intensive demolition and urban revival efforts. (Image 8)

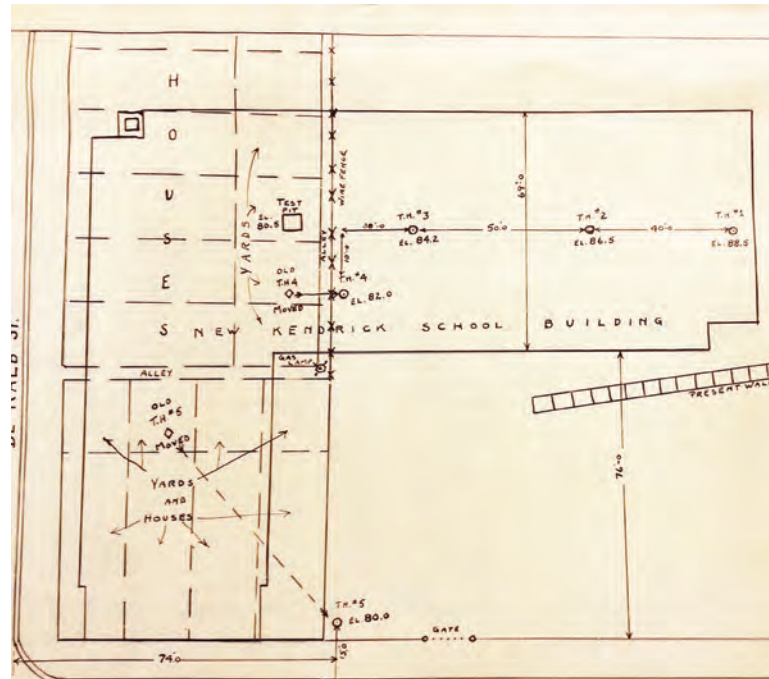


Image 7. Soil-test boring map prior to the construction of the Drew School, c. 1950



Image 8. Mosaic on University City High School, depicting family homes and local residents prior to demolition.

Advances in building technology prompted less costly construction, allowing for new expressions of traditional proportion and geometry. Specific to The Drew School was the application of brick veneers, cladded onto the poured concrete structure. Progressive Education efforts dictated the programming of new schools, which became a subject of interest to modern architects.⁶ In the Drew School and also present in its contemporaries, Mayfair Elementary (1949) and Samuel Gompers Elementary School (1952) was the idea of a central entry node, from which two wings sprouted (see Figures 3-6 and Images 9-15). Of these two wings, one was generally dedicated to classrooms, while the other was dedicated to public activities such as an auditorium or playroom. Typical of post-war school typology, these three schools also feature flat roofs, horizontality, layering of planes, large window to wall ratio, asymmetrical facades and a stark lack of ornamental decoration.⁷

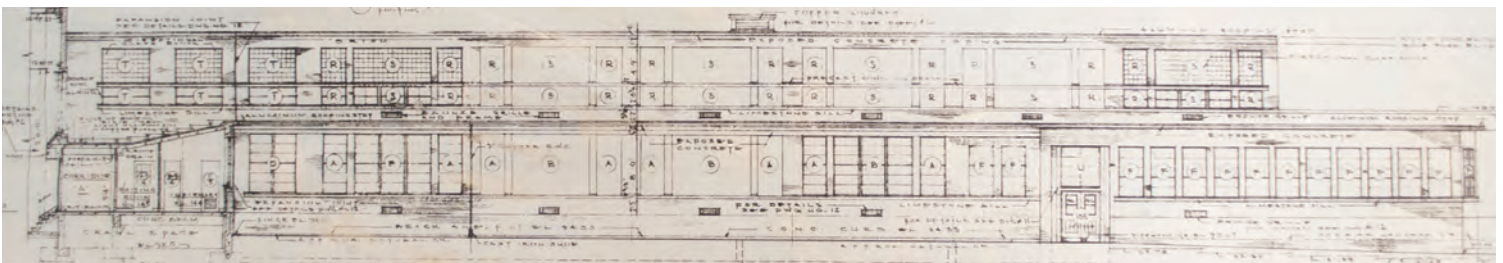


Image 9. Elevation of Mayfair Elementary School, c. 1949

Image 10. (Right) Site plan of Mayfair Elementary School, c. 1949



Image 11. Photograph of Mayfair Elementary School, c. 2000

6. "Improving the Design of the General Classroom in the Elementary School" *The Elementary School Journal*. 1944.

7. Prudon, Theodore H.M. *Preservation of Modern Architecture*. Hoboken: John Wiley & Sons, Inc. 2008.

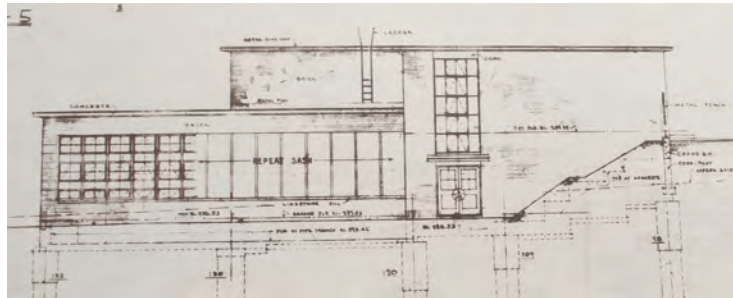


Image 12. Elevation of Gompers Elementary School, c. 1952

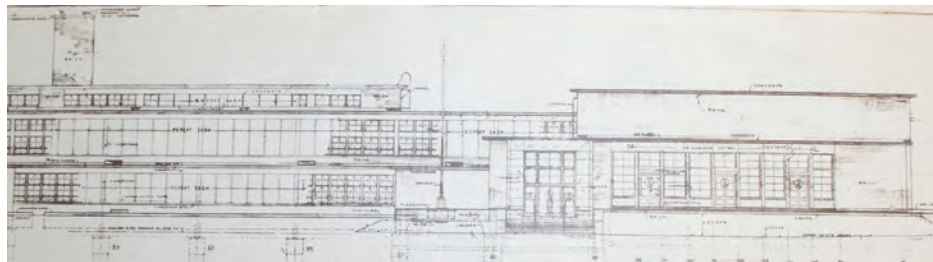


Image 13. Elevation of Gompers Elementary School, c. 1952



Image 14. Site plan of Gompers Elementary School, c. 1952



Image 15. Photograph of Gompers Elementary School, c. 2009

As noted, various degrees of modernist architectural concepts became widely accepted by the American public and were translated into everyday buildings that emerged during the construction boom following World War II. Also built in 1952, and just down the street from the Drew was Dietrich Hall (Images 16, 17, below). Dietrich Hall was the first building of the early Wharton complex and looks strikingly similar to the Drew School, as the idea of a regional modernism began to take hold.



Image 16. The groundbreaking of Dietrich Hall, 1951.



Image 17. Aerial view of Dietrich Hall, c. 1955.

Similar examples of regional Philadelphia modernism from this era include; Stonorov's Carl Mackley Apartments, the Mercantile Library and the Bulletin Building (Images 18-20, below).



Image 18. Carl Mackley Apartments



Image 19. The Bulletin Building, offices



Image 20. The Mercantile Library

In terms of preserving Philadelphia Public schools, a "Philadelphia Public Schools Thematic Resource," was nominated to the National Register of Historic Places. This thematic nomination included public schools built from the late 1880's to 1945, just after World War II finished and just before the Drew School was constructed. Then, in 2009, the Preservation Alliance for Greater Philadelphia developed a "Philadelphia Modernism" 1945-1980 thematic context statement, following up on the previous nomination.⁸ Today, the Preservation Alliance is planning to conduct a survey of Post-War Schools in Philadelphia with hopes to undertake a basic recordation of many mid-century schools and further review the Thematic nomination to allow for National Register listings of these mid-century resources.⁹

Sixty years after its construction, the now vacant Charles R. Drew Elementary School serves as a prime relic of an optimistic time past. The school's connection to early American modernism and its relevance to Philadelphia's urban revival movement prove its physical structure and social history to be worthy of preservation. It is our hope that its preservation and reuse will revive this forward-looking spirit, and continue to serve and inspire generations to come.

8. Clendenin, Malcolm, ed. Cooperman, Emily T. A Complicated Modernity: Philadelphia Architectural Design 1945-1980. Philadelphia: The Preservation Alliance. 2009

9. Kegerise, Cory. "Drew School Elementary." Email to Alison Garcia Kellar. September 14, 2012.

Education and Design:
Bringing the Drew School into the 21st Century
JulieAnn Murphy

As pointed out in the significance statement of this report, the architectural quality of the Drew School is a major advantage of this site. This school and its site have been a staple in the community since the school's opening in 1952. Its continued use as an educational site would benefit the community.

As schools across Philadelphia close down, an opportunity arises to improve this neighborhood school. The school board reached the decision to close schools based on their 3-part equation. The Facility Condition Index (FCI), utilization vs. capacity, and academic rankings were the three main criteria for deciding school closures. The basis for the FCI is the estimated cost to renovate the school vs. the estimated cost to replace the school.¹ The Drew School was found to be low performing, with an FCI over 75 percent and low utilization.²

The Philadelphia School District's school closings have been made under the pretense to save money. However, the money saved in school closings depends on the job reductions related to those closings, beyond those that are directly linked to the structure. Closing a building does not cut many teaching jobs.³

1. "Long Range Facilities Plan," School District of Philadelphia (April 2011): 22, http://webgui.phila.k12.pa.us/uploads/BR/eJ/BR/eJ31iF7hYUtz_qYKriIA/Draft_FMP_Report_April2011.pdf.

2. Lavin, Celeste. "Key Data for School Closings Released," The Notebook, April 14, 2011. <http://the-notebook.org/blog/113589/school-specific-data-will-influence-closing-decisions-released>.

3. "Closing Schools in Philadelphia: Lessons from Six Urban Districts," The Pew Charitable Trust (October 19, 2011): 6, http://www.pewtrusts.org/uploaded-Files/wwwpewtrustsorg/Reports/Philadelphia_Research_Initiative/Closing-Public-Schools-Philadelphia.pdf.

In that case, the equation used for deciding what schools are closing should not be based on the 3-part equation. Instead, the value of schools should be looked at for what they could, with some investment, be to the communities in which they sit. The measure of school survival has to change. Schools have to survive to maintain seats for future use.

As discussed earlier in this report, the Dagitt designed school was one of the first schools built after a moratorium on school construction before World War II. The Dagitt design responded to new ideas about the education of children and included grade level zoning, flexible spaces, and an emphasis on community. Because of the integration of the new ideas about teaching, along with the conscientious design, this building is very well suited to bring the new ideas of education to the next generation of the community's children.

When Charles R. Drew Elementary closed it had 233 students with a reported capacity for 616 students, meaning it was at 38% capacity.⁴ There is 18,317 square feet of dedicated classroom space at Drew School. If the school were at capacity with the school board's recommended numbers, each student would be afforded less than 30 square feet. This demonstrates that the numbers used to determine the capacity of the school are based on old standards of student space requirements. The standard at the time that Drew was built was to provide 35 square feet per

4. "Long Range Facilities Plan," 61.

child for classroom space.⁵ However, that standard was not based on any evidence, and yet was universally adopted. As, the amount of classroom space per child is the single most important environment factor affecting the quality of child care programs and the welfare of child and staff, it should be revisited and adjusted for. Today, the optimum is 50 square feet per child.⁶ (Images 1, 2)

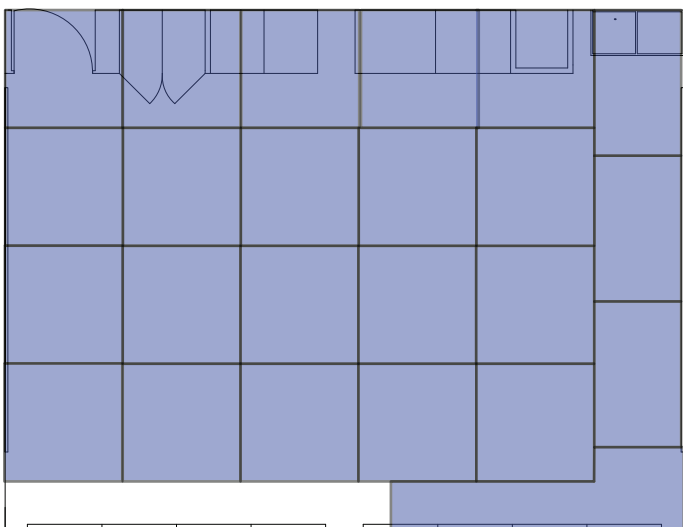


Image 1. This image indicates how approximately 35 square feet per student would look like in a standard Drew Elementary Classroom.

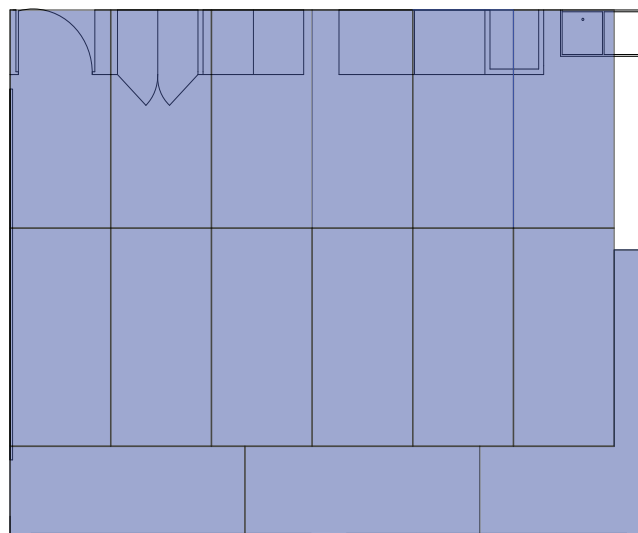


Image 2. This image indicates how approximately 50 square feet per student would look like in a standard Drew Elementary Classroom.

If the school district were to use this standard to evaluate school capacity, Drew school would have been at 64% capacity. This highlights the flaws in the standards used to determine school closings. If, instead, the school district focused on how to make the school better, it could reach capacity and be a successful small neighborhood school.

There is evidence to suggest that small neighborhood schools serve the community the best. There are four primary reasons to have smaller schools: (1) there is a need for intimate learning communities where students are well known and can be encouraged by adults, (2) smaller schools reduce isolation that lead to violence (3) less students reduces the achievement gap and (4) more manageable class sizes encourage teachers to use

5. White, Randy and Vicki Stoecklin, "The Great 35 Square Foot Myth," White Hutchinson Learning and Leisure Group, 2003, <http://www.whitehutchinson.com/children/articles/35footmyth.shtml>.

6. bid.

their talents to help students succeed.⁷ The Charles Drew School with its great condition and usable space, instead of being seen as an

underperforming, low density school can become a small neighborhood state of the art school.

It would take little intervention to make the classroom space perform at the 21st century standard. The school could easily be adapted by using a responsive design approach. This approach not only responds to trends in education, but looks to the history of school design and considers the learner as an active participant in the learning environment and acknowledges the learning environment as active. The successful school designer organizes the physical environment to support the social environment.⁸

The bones of the classrooms as planned by Dagit allow for little intervention to bring these classrooms into the next generation. It is recommended at least 8% of a classroom be made up of windows.⁹ In a standard classroom at Drew Elementary, the classroom is over 13% window. The design in Image 3. demonstrates how few changes could transform the space to be more successful for current teaching trends. The use of drop leaf tables allows for the floor to be cleared for hands on

activities that have been found to be more effective for lessons. (JM 4) The installation of a computer station under the window allows for a portion of the students to be able to work with computers during class time while others work on different assignments. The ability to do several activities in a classroom at once affords the teacher the ability to respond to varying student needs and learning styles. This computer station, along with a teacher's desk, and a more permanent large table in the rear of the classroom create anchor spaces. These spaces allow for some order and orientation to organize student behavior, while the rest of the classroom can remain flexible space.

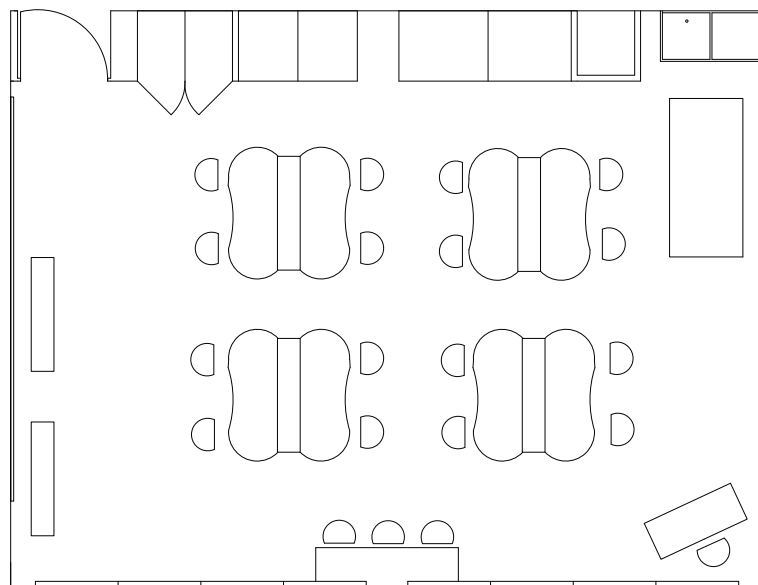


Image 3: This plan shows how a standard classroom at Drew Elementary could be easily transformed for 21st century teaching trends.

7. Duke, Daniel L, Thomas DeRoberto and Sarah Trautvetter, "Reducing the Negative Effects of Large Schools," National Clearinghouse for Educational Facilities, (2009): 4.

8. Lippman, Peter C., Evidence-Based Design of Elementary and Secondary Schools, (New Jersey: Wiley & Sons Inc: 2010), 30.

9. Butin, Dan. "Classrooms," National Clearinghouse for Educational Facilities, (2000): 2.

In modern classroom design, focus has shifted from a formal set up with the teacher at the front of the classroom and students in rows to a more flexible, thoughtful classroom design. The physical environments must be designed as flexible settings so that they can be reorganized routinely to promote opportunities for diverse ways of learning.¹⁰ This, along with the use of fixed fixtures that are designed into the environment, created a positive learning atmosphere.



Image 4: This image is of what the drop leaf tables in the classroom would look like. Image courtesy of Design Share. <http://www.designshare.com/index.php/projects/estrella-mountain-ocotillo-hall/images@4212>

Whatever educational use that may be housed at Drew can easily be attained because of the integrity of the spaces already in place. The work of responsive designers that will be involved in the future use of the school will have to react to the needs of the people using the space. The learning environment, like the community surrounding Drew School is not static, but dynamic. It is shaped by the people who use it. An educational facility is transactional. The designer has to appreciate that places may be shaped to influence learning and that, in turn, learning influences how places are and become shaped.¹¹

10. Lippman, Peter C and C. Gibbs, "Developing a Theoretical Approach for the Design of Learning Environments," ConnectED 2007, International Conference on Design Education, University of New South Wales, Sydney, Australia.

11. Scott – Webber, LS, "In Sync: Environmental Behavior Research and the Design of Learning Spaces," (Ann Arbor, MI: Society for College and University Planning, 2004).

Design Guidelines:
*Options for the Redevelopment and Reuse
of Charles Drew Elementary and
the Surrounding Area*
Benjamin Buckley

DESIGN GUIDELINES FOR THE CHARLES DREW ELEMENTARY SCHOOL

The closing of Charles Drew Elementary School is an all too familiar narrative. In the current political and economic landscape, where government funding for public programs is continually decreasing, and the demand for private or charter schools steadily increasing (particularly in urban areas), public schools are experiencing significant challenges. In 2012 alone, approximately one-sixth of Philadelphia's public schools are being phased out in what is potentially just the initial round of facility closures. As has been noted previously in this report, neighborhood schools are an incredibly important asset to the communities they serve. These institutions serve as more than just learning facilities. They are often neighborhood anchors that create cohesion and stability in the areas they serve. Charles Drew Elementary was one of few remaining neighborhood schools in the Powelton Village-West Powelton-Manuta area in West Philadelphia. This social significance of Charles Drew Elementary is one of many reasons the structure should be retained and reused as an educational facility.

The school is significant in other respects as well. As was noted earlier, the school was drafted by the Dagit Architectural Firm, a design dynasty in the Philadelphia area specializing in educational facilities and Catholic churches. Its design utilizes traditional materials in a relatively contemporarily modern style. The interior of the building also represents a revolution in school design philosophy that revolved around catering to children.

The school is also a physical reminder of the urban renewal campaign that was initiated by Philadelphia city officials in the 1950's and 60's in what was then known as the Black Bottom by neighborhood residents. The demolition of housing and commercial institutions made way for suburban style redevelopment in the form of a sprawling educational campus meant to reduce blight in the area but also destroyed the social fabric of a long standing African American community. The importance of this period will be acknowledged in the preservation and redevelopment plan.

For these reasons, and more that have been outlined earlier in the report, we believe that Charles Drew Elementary should be retained as an educational facility to serve the surrounding neighborhoods and institutions. The other areas affiliated with the school though, are prime properties for redevelopment and could help sustain the Drew School as an educational institution. What follows are design guidelines and recommendations for the future of Charles Drew Elementary and the surrounding area. (Figure 1)

Current Situation

The Drew School is surrounded by underutilized land. A small playing field occupies a large lot directly south of this school. The playing field is used sparingly for gym classes and sports practices by the students of University City High School. (It should be noted that there is a good chance University City High School will close in the near future. These guidelines were developed before that news developed, and will assume that the high school will indeed stay open). This plan has been structured in terms of development zones, which can be seen on figure 1 at the end of the text. This field area constitutes development zone one, with borders on 38th Street and Filbert Street. (*Figure 2*)

Zone two is the large central area on the map. This zone contains both the Charles Drew Elementary School and University City High School. Between these schools is a modest community garden tended by University City High School students and volunteers. Together this zone has the potential to function as an urban academic campus for preschool through high school seniors.

North of Charles Drew Elementary lies development zone three. Bordered by Powelton Avenue, Lancaster Avenue, Warren Street and 38th Street, the site now holds a modest headstart facility known as the Walnut Center. This building currently has a high demand for enrollment from the local community. The rest of this property is vastly underutilized, with a parking filling the area east of the Walnut Center, and an ambiguous and unused paved area to the west that runs from the now closed Warren Street to the edge of the block on Powelton Avenue and 38th. This concrete desert is the main point of entry from the west, and generally creates an uninviting and confusing welcome point to the campus. Figure two shows a rendering of the current landscape.

Redevelopment Strategies for Charles Drew Elementary and the Surrounding Area

Zone One

Redevelopment zone one is unique in that it currently has no structures or improvements on it. Until the urban renewal campaigns of the 1950's and 1960's, this block featured dense row home and commercial development typical of that seen in the neighborhoods to the west and north. This neighborhood was acquired and razed by the school district during the development of the academic superblock seen today. The playing field that occupies the area now is underutilized and poorly maintained. It is not large enough, nor does it have the infrastructure, to function as a primary athletic field for a middle or high school sports program. Large institutions such as the Science Center along Market Street, and Penn Presbyterian Hospital across 38th Street surround the empty land. University of Pennsylvania Medicine has recently broken ground on a large (11 story) office building located on the north east corner of 38th and Market, with plans for the construction of another large office complex on the south west corner of the same block in the works. Development zone one is stands in the shadows of these high profile institutions and is clearly desirable property for these organizations. While ideally it would be nice to restore the 19th century development schemes of this block to some extent, it the pressure for large scale institutional development, and the profits it brings with it, would be difficult to ignore. Therefore, it is logical for this block to become a sort of edge of institutional development. A medium rise structure shorter than the development on Market Street would be an appropriate form of development. One of the character defining features and assets of Charles Drew Elementary is the amount of natural light that enters the school due to the surrounding open space and the large window banks. An office and commercial structure with a five story height cap could provide enough floor space to be profitable, while having a minimal impact on the natural light in classrooms. An rendering of this configuration is seen in figure three. This structure would function as a border to institutional development, satisfy some development pressure, as well as bring more professionals to the area whose children maybe able to attend school or preschool at Charles Drew depending on what type of educational facility manifests itself on site.

Zone Two

Development Zone Two contains both Charles Drew Elementary and University City High School. As this report shows, Charles Drew is an important institution due for many reasons including its social significance, architectural value, and as physical manifestation of urban renewal (*Figure 1*). With these factors in mind, it is important that the Drew School remains on the site as an educational facility. It is structurally sound, has relatively new and well functioning HVAC systems and a new roof, and is relatively adaptable to modern educational needs.

There are some changes that could be made to make the site more inviting. There is a large amount of paved dead space surrounding the Drew School that could and should be utilized as green space and play space. One possible configuration of the open areas redevelopment can be in figure 3. The open space on the interior of the “L” shaped pattern can be used as a staging area for fire drills, student loading and unloading, and other organizational activities. The temporary library addition is not a contributing factor to the significance of the site, and it in poor structural condition. This building can and should be removed.

While ideally the Charles Drew Elementary should retain its original massing, we must consider alternatives that may be required depending on the eventual re-use of the school. For instance if a charter school purchases the property and is successful in attracting local children back to the school, additions may be necessary. The current location of the library is the logical place for an addition. Historically this was already the location of an addition, and a two-story structure with a slightly larger foot print than the current library would have a minimal effect on the character defining features of the school, including the quality of natural lighting, and would avoid altering the Warren Street view of the facade. Another location permissible for additions (but possibly less desirable than the rear of the school) is the roof. It is structurally possible to add a two story addition to the top of the school (*Figure 4*). The design of this addition would be important, as it has the potential significantly alter the massing of the school. If the Drew School needs additional space to ensure its future existence, then additions in these spaces would be acceptable.

The closing of Warren Street during the urban renewal campaign presents another design decision for the future of the site. While opening up Warren Street could help integrate the site better with the surrounding community and restore the historic traffic patterns, it would also complicate traffic flow at an already busy intersection, and make the crossing more dangerous for pedestrians. Restoring the road though, yet preventing public automobile use via traffic bollards or a small gate, would be an appropriate answer. This would create a more legible entryway to the site and help restore the urban appearance.

Another street that borders the site which could use improvement is 38th Street. This street has become a major thoroughfare in West Philadelphia, connecting the arterial avenues of Baltimore and Woodland in the south, and Lancaster to the north. Automobiles travel at high rate of speed down this road, and the wide lanes leave little room for the introduction of green space. The fast moving cars and trucks, in combination with the extremely wide street, make crossing 38th a pedestrian hazard. It would be advantageous to narrow the lanes a reasonable amount or lower the speed limits to reduce the speed of travel. The large amount of unmitigated pavement (like that the surrounds the Drew School and Walnut Center) also make the area less appealing for foot traffic. The introduction of green space such as increased tree planting on the side walks, and shrub planting in the medians, could help transform 38th street from an urban highway to a pleasant boulevard (*Figure 3*)

The guidelines of development zone two largely calls for the retention of the urban renewal inspired educational campus. This, in conjunction with redesign of the now underdeveloped landscape can help activate the Drew School, and make it a more inviting area for future students and neighborhood residents.

Zone Three

The last development zone, zone three, is the block that is now occupied by the Walnut Center. This space, like zone one, was occupied by traditional row home and commercial development until the mid century urban renewal campaigns, and is also owned by the Philadelphia School District. While zone one has been developed with an institutional focus, zone three will be focused more towards the rehabilitation of the historic built environment and fulfilling neighborhood needs. Although the Walnut Center still enjoys high enrollment today, its functions could be fully consolidated within the much larger Drew School, (which includes a newer playground area). This would allow the school district to sell or develop portions or the entirety of the lot, and shrink its maintenance budget to a more reasonable level. The Walnut school itself is not of particular significance to the site or history of the area. Therefore doing away with the Walnut Center structure, but not the programs, is a very reasonable solution. This would allow for historically appropriate development on Lancaster Avenue and Powelton Avenue that would resemble that of the neighborhoods that surround it to the north and west. A sample solution for this property could take the form of 13 traditional, three story residential row home type structures along Lancaster Avenue, with and additional 8 mixed use, commercial and residential units filling the space on Powelton Avenue. (Figure 2) This would hopefully fill some specific commercial voids in the Powelton Village/West Powelton/Manuta area, as well as provide some housing. Drexel University has been clear that they are trying to expand north and east, and these units could help the University prevent further westward expansion by housing students closer to the central campus. The parking lot on the property should be retained and somewhat expanded for use by both the eventual Drew School reuse and the new development. This surface lot should be buffered by the inclusion of as much green space as possible behind the new lot.

Conclusions

While these are by no means the only options for redevelopment, they represent reasonable and progressive approaches to preservation. For sites whose significance is more local than national, and whose stewards in dire financial straights, non-conventional and realistic approaches to historic preservation may be needed. These measures are meant to preserve the Charles Drew Elementary School as an educational and community asset in a sustainable fashion, proactively protect an underappreciated architectural style, and reestablish the some of the density of an urban neighborhood in an area that now languishes in disuse.



Figure 1. This rendering shows Charles Drew Elementary School and the surrounding area divided into development zones.



Figure 2. This figure shows the Drew School and surrounding area in its current arrangement.



Figure 3. This figure shows the Drew School and surrounding area in its current arrangement.



Figure 4. This rendering shows the Drew School with the proposed massing of possible additions.

The Numbers:
Financing Drew's Development
Jon Vimr

A primary concern relating to the design guidelines and redevelopment proposal for the school superblock is that of cost. It is obvious enough that the amount of new construction envisioned would not be cheap, but to gain a more complete picture of the project, understand the economic viability of the development proposal, and assess the possibility that a developer would ever consider such a project, it is essential to perform evaluative financial analyses.

While these analyses serve as the bulk of the financial study, it is also relevant to determine estimates for the asking price of the Charles Drew School. As previously stated, the School District has indicated that they do not currently wish to sell the Drew School, but having an estimate of a sales price provides an idea both of its financial value as well as what the District might ask for were they to attempt sale. Both seen in Appendix C, two different appraisals were done. The first is an adapted comparative analysis that examines the asking price for all schools that the School District has thus far listed as for sale (those for which a square footage total could not be determined were excluded). Average asking price per square foot of each school was calculated and these were then averaged out to determine an asking price per square foot for the Drew School. This approach is of course fraught with complications as all the schools are in various physical conditions, are more or less marketable based on their location, and are of different ages, but it is nevertheless the most accurate way to estimate what the School District might ask for the Drew School.

More traditional methods like that of the replacement cost approach result in a significantly higher asking price. Replacement cost is determined by calculating the cost of building the given structure in today's time and then subtracting discounts and adding premiums based on percentages of the total replacement cost.¹ The replacement cost approach has value as it determines what a building would be worth in of itself, but other than basic measures such as improving/declining neighborhoods it provides little context for the value of a structure. In evaluating the asking price of the Drew School it cannot be put into a vacuum as the School District, in an effort to get properties out of their control, is selling the structures at a dramatic discount. Because of this discounted price, the comparative analysis is best as it incorporates the degree to which the School District is personally discounting their stock of buildings. In order to calculate a more precise asking price from this method, US Census and American Community Survey data was collected in the various schools census tracts and those surrounding them to determine the socio-economic situation of the neighborhoods in which the various schools are located. This research reveals more accurately whether or not the neighborhoods surrounding these schools are growing or declining and what the real estate market is like in the immediate area. Using a multiplier of one for neighborhoods in a poor socio-economic situation and with little growth as the minimum, Drew School's multiplier of 1.75 is largely the result of the increasingly affluent Powelton Village and the slowly improving communities to the north and west of the Drew School. Thus two asking prices for the Drew School result from the comparative analysis: \$17.4 per square foot and \$31.32 per square foot.

1. Construction costs were calculated via RS Means costworks, an industry standard used by developers and contractors alike, <http://www.rsmeansonline.com/>.

As the School District is selling their property based on an asking price for a building with the surrounding land simply coming with it, the value at which the District is selling land can be seen as equal to the school asking price. Thus the land costs used for the analyses of the development proposal envision two different scenarios: one in which land is being sold at \$18.00 per square foot and the other at \$30.00 (rounding to whole numbers from the costs derived in the comparative analysis).

While there have been no official statements concerning their interest, there is significant reason to suspect that Drexel University will gain control of the superblock. Despite this likely outcome, it has not yet actually happened and therefore will not be assumed as the only possible result. The financial studies are conducted with the intention of being useable for any party that may attempt to purchase the site, from large institutions to a private developer. In total, the development proposal revolves around three types of structures all designed to create rental space:

<i>Type</i>	<i>Site Zone</i>	<i>Number</i>	<i>Material</i>	<i>Area</i>	<i>Construction Cost Per SQFT</i>
3-Story Rental Home (App. B)	3	13	Brick veneer/timber frame	4,020 SQFT	\$188.46
3-Story Retail/Residential (App. C)	3	8	Brick face/steel frame	8,040 SQFT	\$131.05
5-Story Office/Retail (App. D)	1	1	Glass curtains/steel frame	397,000 SQFT (increased FAR 536,000 SQFT)	\$138.67

More specific details such as land cost, total construction cost, and financing measures can be found in Appendix D, E, and F, respectively. The parking spots and costs seen in the office/retail mid-rise development reflect the inclusion of an underground parking lot intended to provide space for the few employees that may have to drive into the city. Brief definitions for some of the lesser-known inputs used are found below:

Capitalization Rate: A rate of return on a real estate investment property based on the expected income that the property will generate. Used to estimate an investor's potential return on their investment. 'Cap Rates' are not set by anyone; rather they are determined in the marketplace as the relationship between sales price and net operating incomes (NOI). Recent sales prices and their corresponding NOIs within a given area are observed and from this information the capitalization rate is calculated.

Effective Loan To Value Ratio: The ratio of the amount of a potential mortgage to the cost of a project's development; used by lenders as means of evaluating the risk of making a given mortgage loan.

Required Debt Coverage Ratio: Calculated by dividing the property's annual net operating income by its annual debt service. Used by lenders as a guide in understanding whether or not a given property will generate sufficient income to service its mortgage debt. A debt coverage ratio of one indicates that just enough is being made to cover debt obligations, but no more.

Supportable Mortgage: Given its annual NOI, the required debt coverage ratio, the term, and the interest rate of the mortgage, the maximum mortgage amount a given property can support. The mortgage used in all scenarios is a fixed-rate loan with a 30-year term and a 6.18% interest rate.

Land Residual Value: Calculated from subtracting total development cost absent the money spent for land acquisition from the market value of a project. The remaining sum is considered the land residual; the raw value of the land based on the project built on it. Land residual value is used by landowners to determine initial asking prices based on the project a developer envisions for the land or by developers to determine the highest and best use for a given plot of land.

Appendix G depicts the total costs and returns of the entire development project in three different scenarios. That which is specifically envisioned in the design guidelines is represented in the middle column as it includes a land price of \$30 (more likely than \$18) and the floor to area ratio (FAR) of the office structure as originally conceived. The right column illustrates a scenario in which the FAR of the mid rise office building is increased to the point that the total project has a loan to value ratio of 85%. Because of the inherent risk such a loan carries, it is unlikely that a bank would ever be willing to grant it, even with the relatively high interest rate of 6.18% that is used. However, this 85% loan to value ratio is the ideal, true 'sweet spot' for developers to hit and a scenario was therefore developed to show how it can become attainable. Even at its lowest of the three scenarios studied the loan to value ratio is a developer-friendly 81.4%.

There is no doubt, nor is it surprising, that the cost of the entire development is high. Even in the scenario that adheres to the original design, the development involves the purchase and remediation of a large plots of land, over a half million square feet of new construction, and all the additional costs that go with the process. Fortunately, the net operating income of the entire project, derived from market rate rental pricing and reasonable vacancy rate expectation/operating expenses, is sufficiently high to allow for a profit of nearly \$2 million (the debt service of the project in its original design occupies \$6,074,703 of the \$7,921,980). Even large institutions such as Drexel would never cover a project carrying \$100 million in development costs out-of-pocket, but the mortgage taken out by such an organization could be far smaller than that employed by a private developer. This would result in greater initial cash investment, but would allow for larger annual profit margins and a lower total cost over the life of the loan.

Regardless of what type of developer gains the property, the proposed development outline is viable. As with anything of this scale it involves risk, but it possesses a sufficient NOI to allow for a large mortgage while returning a significant profit to the owner—one that is sizeable enough to warrant taking the risk. Though its primary intention is to retain the Drew School, the development project accomplishes much more. It continues the institutional use and scale to the south of the Drew School while returning smaller residential/retail row buildings to the northern edge of the site. Further, the project reverts a block that is today vastly underserving its community to one that satisfies community needs, adds activity and vibrancy to the area, preserves a crucial structure in the Drew School, and creates economic development. A union of preservation, new construction, and financial viability, the development is not without risk but has the potential to result in significant gains.

Sources consulted, though not cited:

School District of Philadelphia, Office of Procurement Services. Addendum #1. February 14, 2012. <http://the-notebook.org/sites/default/files/RFQ-property-sale-2012.pdf>.

City of Philadelphia, Office Of The Controller. "Review Of Vacant School District Facilities." December 2011. <http://www.philadelphiacontroller>

Appendix A: maps

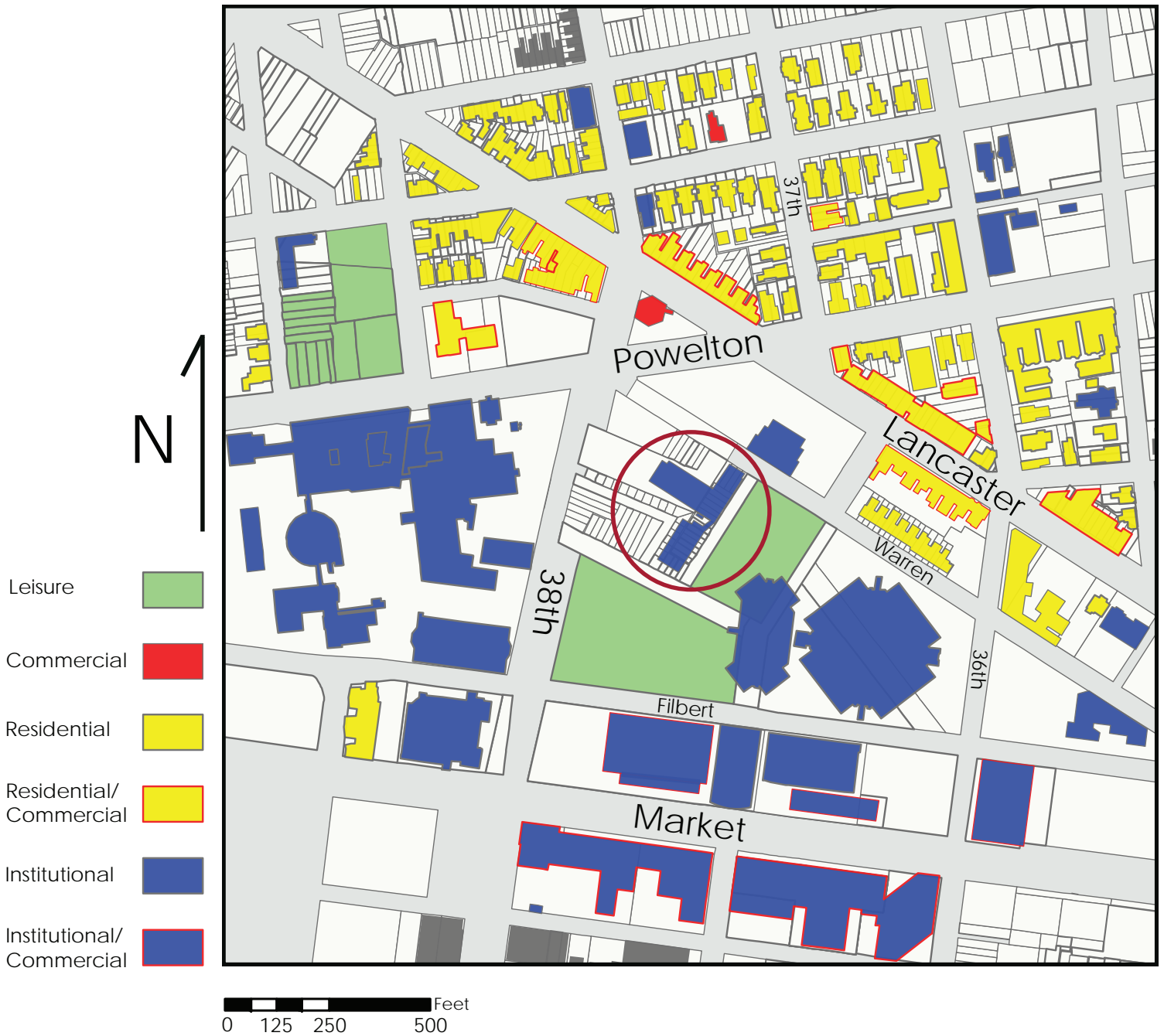


Figure 2. Land Use map. J. Vimr. 2012.

Appendix A: maps



Figure 3. Drew School Elementary site map. J. Vimr. 2012.

Appendix B: original plans

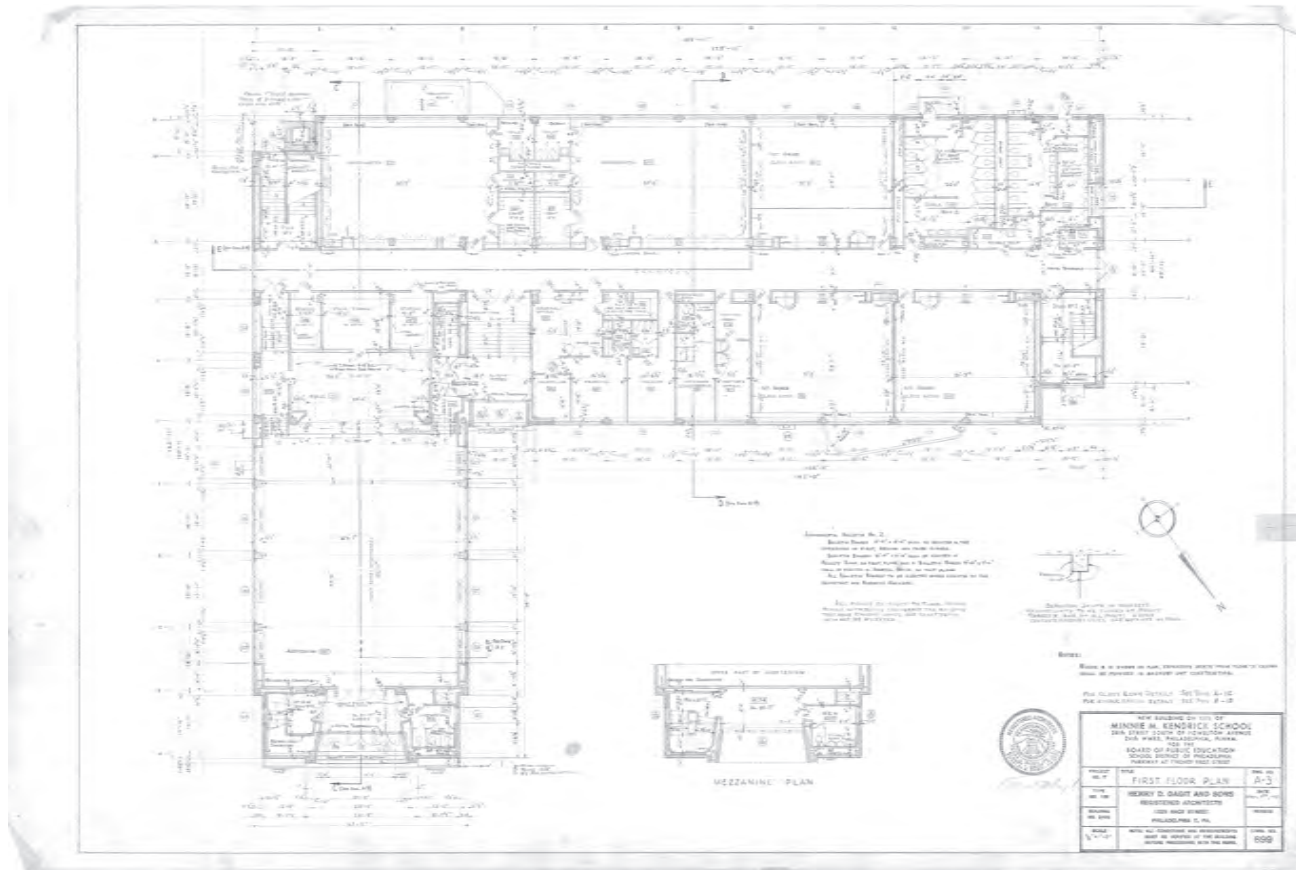


Figure 4. Drew School Elementary first floor plan. 1951.

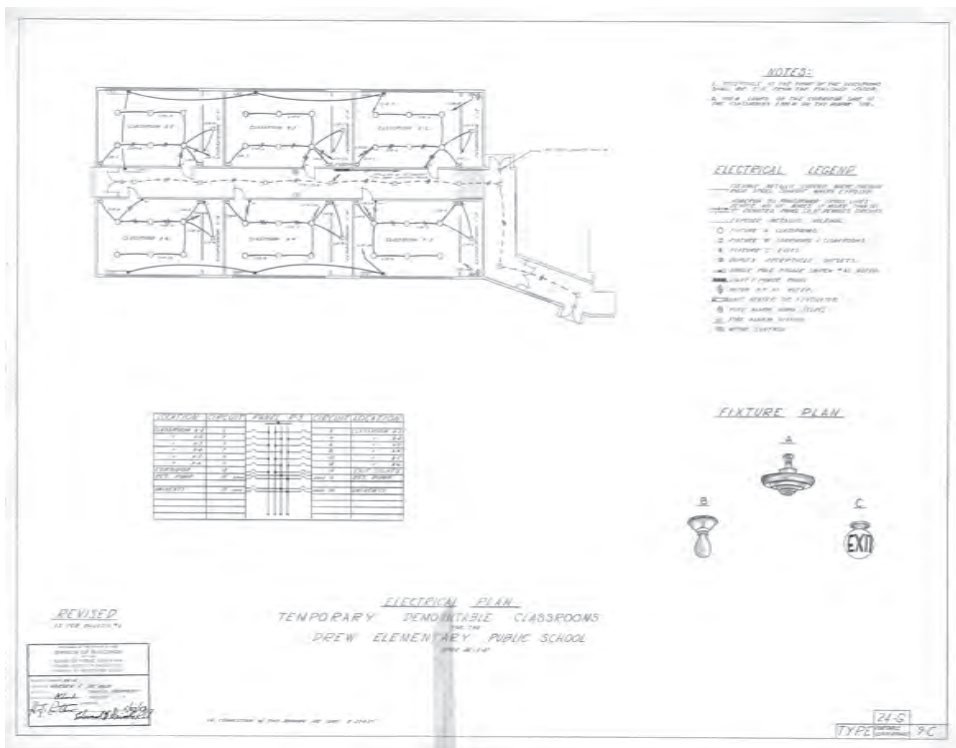


Figure 5. Drew School Elementary library addition, electrical plan. c. 1967

Appendix B: original plans

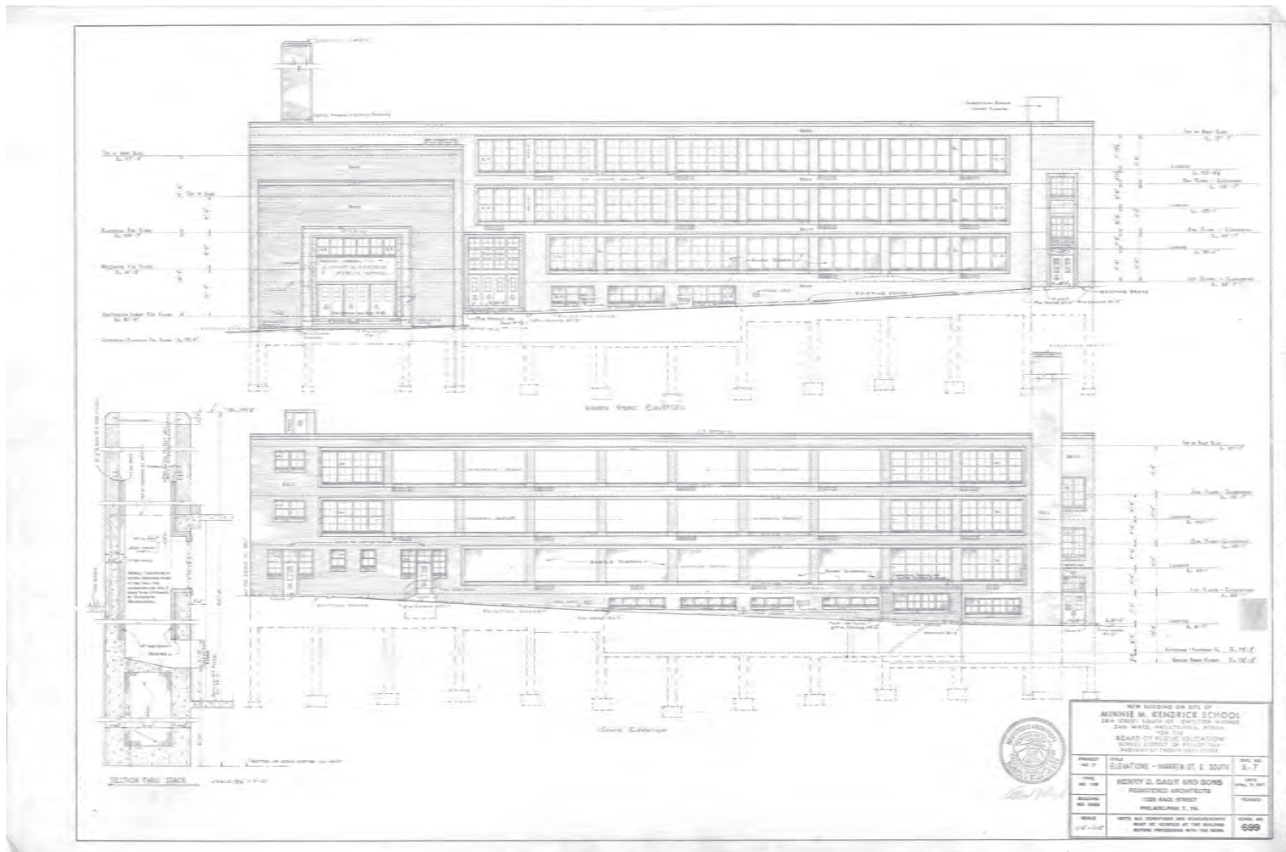


Figure 6. Drew School Elementary north and south elevation drawings. 1951.

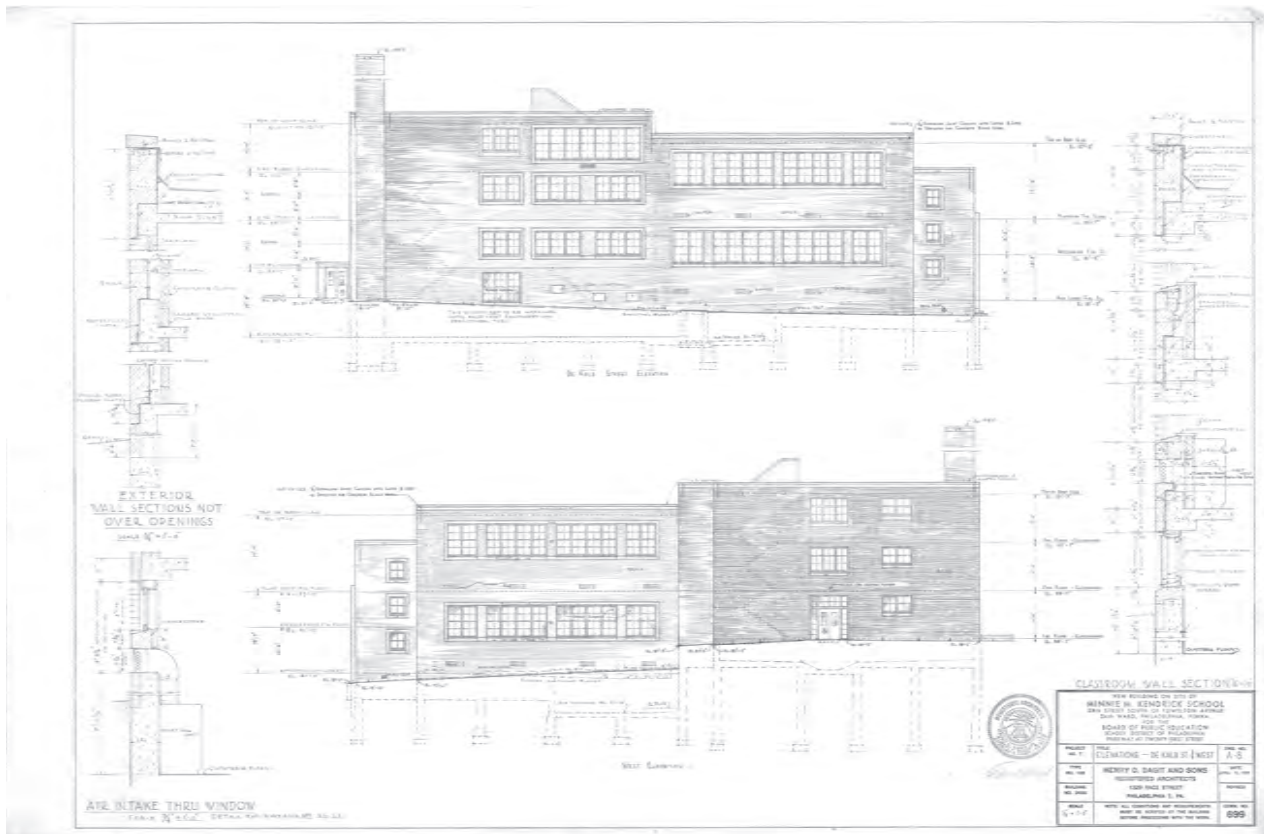


Figure 7. Drew School Elementary east and west elevation drawings. 1951.

Appendix C

School Appraisals

Adapted Comparative Analysis						
School	Address	Asking Price (\$)	Square	Price per SQFT (\$)	Note	Census Tract
(Old) West Philadelphia High	4700 Walnut Street	6,500,000	250,000	26	Fair condition, structurally sound	86.02
Ada Lewis Middle	6199 Ardleigh Street	2,500,000	270,000	9.26	Some minor structural issues, vandalism	389
Gillespie Middle	1801 W. Pike Street	1,350,000	110,204	12.25	In fair condition, large puddle of standing water on property as well as an ad-hoc	202
Childs Elementary	1541 S. 17th	1,250,000	78,163	16	Small structural issues, but largely sound; surrounding property needs work	30.01
Alcorn Annex	1325-1349 S. 33rd	750,000	12,000	62.5	Some vandalism, structurally unsound	33
Walton Elementary	2601-2631 N. 28th	450,000	66,183	6.8	Vandalism, heavy crime activity	169.01
Muhr Elementary	3150 Germantown	360,000	33,673	10.7	Structurally sound, crime activity	199
Beeber Wynnefield Annex	1818 N. 53rd	300,000	22,857	13.13	Needs structural repairs, vandalism	119
John Paul Jones Annex	3250 Amber Street	300,000	17,150	17.49		382
Clemente Middle	3921-3961 N. 5th	250,000	287,350	0.87	Completely dilapidated, structurally unsound, immediate demolition advised	197
SQFT Weighted Average				17.50		
<i>Charles Drew School</i>	3744 Warren Street	835,590 (1,494,419)	47,745	17.4 (31.3 with location multiplier of 1.8)		91

Replacement Cost Approach	
<u>Square Feet</u>	
- Physical Deterioration Discount	670,197
- Layout and Design Discount	335,098
- Operating Cost Discount	335,098
- Safety Discount	0
- Declining Neighborhood Discount	0
Net of Discounts	\$5,361,573
+ Improving Neighborhood Value Premium	335,100
+ Design Premium	0
+ Materials and Craftsmanship Premium	670,200
Net of Premiums	\$6,366,873

Appendix D

Three Story Rental Home Component (13 total)

	Scenario 1	Scenario 2	Sources
Inputs	Baseline	Higher Land Cost	
Project Outline			
Unit Type	3-Story Rental Row-house	3-Story Rental Rowhouse	
Property Size	4,020 sqft	4,020 sqft	Parcel
Average Unit Size	3,900	3,900	Design
Development Cost Structure			
Land Cost/SQFT	\$18.00	\$30.00	Appraisal
Construction Cost/SQFT	\$188.46	\$188.46	RS Means
Soft Cost as % of Construction Costs	20%	20%	RS Means
Financing Structure			
Required Debt Coverage Ratio	1.3	1.3	Lender
Interest Rate (%)	6.18%	6.18%	Lender
Term (years)	30	30	Lender
Cap Rate	0.07	0.07	Reis Reports
Operating Cost Structure			
Expense Ratio (%)	15.00%	15.00%	RS Means
Rent (month/unit)			
Market	\$4,800	\$4,800	Market Study
Development Summary			
Demolition and Remediation Costs	\$800	\$800	RS Means
Land Cost	\$72,360	\$120,600	Calculated
Square Footage	3,900	3,900	Design
Construction Cost	\$735,000	\$735,000	RS Means
Soft Costs	\$147,000	\$147,000	Calculated
Parking Cost	\$0	\$0	Design
Total Development Cost	\$955,160	\$1,003,400	Calculated
Operating Summary			
Gross Scheduled Rent	\$57,600	\$57,600	Calculated
-Expected Expenses	(\$8,640.00)	(\$8,640.00)	Calculated
Net Operating Income	\$48,960.00	\$48,960.00	Calculated
Value Proposition			
Project Cost (from above)	\$955,160.00	\$1,003,400.00	Calculated
Supportable Mortgage	\$508,571.14	\$508,571.14	Calculated
Required Initial Cash (Gap)	\$446,588.86	\$494,828.86	Calculated
Effective Loan to Value	53.24%	50.68%	Calculated
Projected Value from Cap Rate	\$753,230.77	\$753,230.77	Calculated
Total Rental Homes Value Proposition			
Project cost	\$12,417,080.00	\$13,044,200.00	Calculated
Net Operating Income	\$636,480.00	\$636,480.00	Calculated
Supportable Mortgage	6,611,424.84	6,611,424.84	Calculated
Required Initial Cash	\$5,805,655.16	\$6,432,775.16	Calculated
Effective Loan to Value	53.24%	50.68%	Calculated
Projected Value from Cap Rate	\$9,792,000.00	\$9,792,000.00	Calculated

Appendix E

Lower Two Stories Retail/Two Apartments on Third Floor Component (8 total)

	Scenario 1	Scenario 2	Source
Inputs	Baseline	Slightly Higher Rent	
Project Outline			
Unit Type	Retail and Storage/Residential	Retail and Storage/Residential	Design
Parcel Size (90% of full size per zoning)	8,040 sqft	8,040 sqft	Parcel
Retail SQFT	3,120	3,120	Design
Unit Size (sqft)	780	780	Design
Units	2	2	Design
Development Cost Structure			
Land Cost/SQFT	\$18.00	\$30.00	Appraisal
Construction Cost/SQFT (average)	\$131.05	\$131.05	RS Means
Soft Cost as % of Construction Costs	20%	20%	RS Means
Financing Structure			
Required Debt Coverage Ratio	1.3	1.3	Lender
Interest Rate (%)	6.18%	6.18%	Lender
Term (years)	30	30	Lender
Cap Rate	0.07	0.07	Reis Reports
Operating Cost Structure			
Expense Ratio (%)	25.00%	25.00%	RS Means
Rent (month/unit)			
Retail (market)	\$20.00	\$20.00	Market Study
Residential (market)	\$850	\$850	Market Study
Development Summary			
Demolition and Remediation Costs	\$1,600	\$1,600	RS Means
Land Cost	\$144,720	\$241,200	Calculated
Construction Cost	\$1,022,190	\$1,022,190	RS Means
Soft Costs	\$204,438	\$204,438	Calculated
Parking Cost	\$0	\$0	Design
Total Development Cost	\$1,372,948	\$1,469,428	Calculated
Operating Summary			
Gross Scheduled Rent	\$82,800	\$82,800	Calculated
-Expected Expenses	(\$20,700.00)	(\$20,700.00)	Calculated
Net Operating Income	\$62,100.00	\$62,100.00	Calculated
Value Proposition			
Project Cost (from above)	\$1,372,948.00	\$1,469,428.00	Calculated
Supportable Mortgage	\$645,062.66	\$645,062.66	Calculated
Required Initial Cash (Gap)	\$727,885.34	\$824,365.34	Calculated
Effective Loan to Value	46.98%	43.90%	Calculated
Projected Value from Cap Rate	\$955,384.62	\$955,384.62	Calculated
Total Value Proposition			
Project Cost	\$10,983,584.00	\$11,755,424.00	Calculated
Net Operating Income	\$496,800.00	\$496,800.00	Calculated
Supportable Mortgage	\$5,160,501.29	\$5,160,501.29	Calculated
Required Initial Cash (Gap)	\$5,823,082.71	\$6,594,922.71	Calculated
Effective Loan to Value	46.98%	43.90%	Calculated
Project Vaue from Cap Rate	\$7,643,076.92	\$7,643,076.92	Calculated

Appendix F

Street Level Retail/Upper Four Stories Office Space Component

	Scenario 3	Scenario 4	Scenario 5	Source
Inputs	Per Preservation Plan	Higher Land Cost Per Preservation Plan	FAR needed for 85% LtV	
Project Outline				
Unit Type	Street Retail/Office Above	Street Retail/Office Above	Street Retail/Office Above	Design
Parcel Size (sqft)	122,137.50	122,137.50	122,137.50	Parcel
Stories	5	5	5	Design
Leaseable Area (sqft)	377,195	377,195	509,200	Design
Parking Spaces - Structure	50	50	50	Design
Average Floor Size (sqft)	79,400	79,400	101,840	Design
Common Area Percentage	5%	5%	5%	Design
Development Cost Structure				
Land Cost/SQFT	\$18.00	\$30.00	\$30.00	Appraisal
Construction Cost/SQFT	\$138.67	\$138.67	\$138.67	RS Means
Parking Cost/Space	\$15,000	\$15,000	\$15,000	RS Means
Soft Cost as % of Construction Costs	30%	30%	30%	RS Means
Financing Structure				
Required Debt Coverage Ratio	1.3	1.3	1.3	Lender
Interest Rate (%)	6.18%	6.18%	6.18%	Lender
Term (years)	30	30	30	Lender
Cap Rate	0.08	0.08	0.08	Reis Reports
Operating Cost Structure				
Average Vacancy Rate	10%	10%	10%	Reis Reports
Expense Ratio (%)	15.00%	15.00%	15%	RS Means
Rent (sqft/year)				
Retail, Market	\$20	\$20	\$20	Market Study
Office, Market	\$25	\$25	\$25	Market Study
Development Summary				
Remediation Costs	\$15,000	\$15,000	\$15,000	RS Means
Land Cost	\$2,198,475	\$3,664,125	\$3,664,125	Calculated
Floors	5	5	5	Design
Leaseable Square Footage (Office)	301,720	301,720	407,360	Design
Leaseable Square Footage (Retail)	75,430	75,430	101,840	Design
Common Area Square Footage	19,805	19,805	26,800	Design
Total Square Footage	397,000	397,000	536,000	Design
Construction Cost	\$55,051,990.00	\$55,051,990.00	\$74,327,120.00	Calculated
Parking Space	50	50	50	Design
Parking Construction Cost	\$750,000	\$750,000	\$750,000	Calculated
Sofs Costs	\$16,515,597.00	\$16,515,597.00	\$22,298,136.00	Calculated
Total Development Cost	\$74,531,062.00	\$75,996,712.00	\$101,054,381.00	Calculated
Operating Summary				
Gross Scheduled Rent	\$9,051,600	\$9,051,600	\$12,220,800	Calculated
-Vacancies	(905,160)	(905,160)	(1,222,080)	Calculated
-Expected Expenses	(1,357,740)	(1,357,740)	(1,833,120)	Calculated
Net Operating Income	\$6,788,700	\$6,788,700	\$9,165,600	Calculated
Value Proposition				
Total Development Cost	\$74,531,062.00	\$75,996,712.00	\$101,054,381.00	Calculated
Supportable Mortgage	\$70,517,502.26	\$70,517,502.26	\$95,207,509.34	Calculated
Required Initial Cash (Gap)	\$4,013,559.74	\$5,479,209.74	\$5,846,871.66	Calculated
Effective Loan to Value	94.61%	92.79%	94.21%	Calculated
Projected Value from Cap Rate (Market Value)	\$90,516,000.00	\$90,516,000.00	\$130,937,142.86	Calculated

Total Development Summary

Land Cost -
\$18 per SQFT

Land Cost -
\$30 per SQFT

FAR Increase to
meet 85% LtV

Land Area (SQFT)	202,287	202,287	202,287
Total Development Cost	\$97,931,726	\$100,796,336	\$125,854,005
Net Operating Income	\$7,921,980	\$7,921,980	\$10,298,880
Supportable Mortgage	\$82,289,428	\$82,289,428	\$106,979,435
Required Initial Cash (Gap)	\$15,642,298	\$18,506,907	\$18,874,569
Effective Loan to Value	84.03%	81.64%	85.00%
Value from Cap Rate (Market Value)	\$113,171,142	\$113,171,142	\$147,126,857
- Total Development Cost	\$97,931,726	\$100,796,336	\$125,854,005
Residual Land Value	\$15,239,416	\$12,374,806	\$21,272,852
RLV (SQFT)	\$75.34	\$61.17	\$105.16