Bender & Associates

October 1, 2010

The Honorable Mayor Craig Cates
City of Key West
525 Angela Street
Key West, FL 33040

RE: Glynn Archer School
Adaptive Reuse Assessment for us as City of Key West Municipal Offices
Executive Summary

Dear Mayor Cates,

Bender & Associates Architects is pleased to present our findings on the assessment of the historic Glynn Archer School for use as City of Key West Administrative Offices. The detailed analysis that follows focuses on compliance with the Secretary of the Interior's Standards and full compliance with all applicable Codes. The conceptual plan includes a fire sprinkler system, restoration of historic interiors to their 13'-6" ceiling height, including plaster finishes at historic walls and ceilings, new impact resistant windows that replicate the historic units, full ADA compliance and new mechanical, electrical and plumbing systems. Construction costs for the rehabilitation are substantially less than the Tom Pope/Coastal Construction "worst case" cost estimate and is also less costly than the MBI-K2M Angela Street proposal.

It is our opinion that the interests of the City of Key West are best served by acquiring and rehabilitating Glynn Archer as a City Hall. The character of the restored building will present an appropriate face for conducting government business. Restoration is the environmentally responsible approach. (This issue, sustainability of historic buildings, is discussed in detail within the body of the report.) There is an opportunity for joint use with the School District and/or other government entities. The location is convenient to all citizens and the restoration will improve the lifestyle of surrounding properties, most notably the residences along Seminary as our site plan eliminates all current school and future City Hall related traffic from Seminary Street. Most importantly, this restoration will save an important historic resource for future generations.

We will be judged by future generations on how we treat our historic built environment. These resources are the legacy that we leave to future generations. A proper rehabilitation will also

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meet the criteria required for historic preservation grant funds. State of Florida grant funding has been included in the current State budget, most notably, special category grants which are typically $300,000 to $500,000. While the rehabilitation of Glynn Archer is financially viable without grant funds, it should be noted that preservation grant funds may be available under this proposal that will not be available to either of the others.

I look forward to discussing this issue with the Commission on October 5th.

Sincerely,

Bert L. Bender
Bender & Associates Architects, P.A.

BLB/ddk

GLYNN ARCHER ASSESSMENT

BACKGROUND

Glynn Archer Elementary School is a significant historic resource, currently being considered for rehabilitation as Key West's City Hall. This analysis is being undertaken at the request of the City of Key West and will focus on compliance with the Secretary of the Interior's Standards for Rehabilitation. The previous report, prepared by Thomas E. Pope, dated August 12, 2010, includes cost estimates prepared by Coastal Construction; structural engineering reports prepared by Paul Semmes of Sea Tech, dated May 5, 2010 and April 30, 2010; an environmental assessment prepared by MACTEC and dated August 16, 2010 (only the preliminary phase 2 finding dated August 2, 2010 was referenced by Tom Pope) and MBI-K2M Architecture and consultant documents by the Angela Street City Hall:

Reprogramming	March 11, 2009
Project Design Summary	May 14, 2010
Summary of LEED	May 14, 2010
TKW Constructing Engineers Structural	May 14, 2010
TLC Engineering	May 17, 2010

All of the above documents are appended to this report by reference, and were reviewed by incorporation as appropriate.

Under the worst case scenario established in the Tom Pope analysis, only the exterior walls would be retained (Item 3 Assumptions). This assumption was made because "... there are no designs or drawings for the Glynn Archer conversion and most all the technical data is preliminary in nature..." The report goes on to list design criteria items that purportedly cannot be accomplished through a Glynn Archer renovation. However this assumption is inaccurate and misleading.

- Deep Overhangs
- Open Office Plan
- Central atrium sky lighting
- Energy use of lighting

Of these items, only deep overhangs cannot be achieved, assuming that the architectural features of the exterior façade will be retained. Logically, if all of the interior floors, walls and roof structure are to be demolished and replaced with a new structural system there should be no reason that: Open Office Plan / Central atrium/ and energy use of lighting cannot be achieved. In fact, the report states: "This will create a new building within the existing exterior walls of Glynn Archer." Additionally, an adaptive reuse renovation/rehabilitation meeting the Secretary of the Interior's Standards using the existing interior structure would most definitely allow for open office plans, central atrium and energy use of lighting as well.

The cost estimate includes the A & B wings and the auditorium. However, the cost estimate assumptions are that all interior walls, floors and roof structure will be demolished. If that is in

fact the case, then all costs for the auditorium should be removed from the "apples to apples" comparison since the Angela Street facility does not include an auditorium.

In fact, when analyzing alternate sites for any use, when one is a historic site and the other(s) will be new construction, an "apples to apples" comparison is not possible. The following will address the issues as they relate to restoration of Glynn Archer for a City Hall vs. construction of a new facility at 525 Angela Street.

HISTORIC PRESERVATION CONSIDERATIONS:

Glynn Archer is a significant historic resource that is considered a local historic landmark. Constructed in 1926, the Depression Era structure includes elements that are irreplaceable, most notably the WPA murals within the auditorium. Historic interiors of public spaces are protected under HARC Guidelines and the Secretary of the Interior's Standards. Schools, municipal facilities, historic hotel lobbies and similar interior spaces are all protected as historic spaces open to the public. The Tom Pope cost projection does not consider this requirement of the Secretary's Standards as incorporated in the HARC Guidelines and the 2007 Florida Building Code, Existing Buildings. Our review of the structural report indicates that the structure, including interior walls, floor systems and roof structure are in good condition. There was a notation of some floor girders with rot and pest damage, but these are repairable. The Secretary of the Interior's Standards as they apply to the Glynn Archer rehabilitation are:

1. *Every reasonable effort shall be made to provide a compatible use for a property that requires minimal alteration of the building structure, or site and its environment, or to use a property for its originally intended purpose.*

   The proposed city Hall office functions are appropriate to an adaptive reuse of Glynn Archer Elementary School. Specifically, the existing double loaded corridor circulation works well for office functions as well as for school functions. The exterior walls of the building and the corridor walls are load bearing, but demising walls between classrooms are not. This provides sufficient flexibility for planning the City offices, including open office plans within individual departments.

2. *The distinguishing original qualities or character of a building, structure, or site and its environment shall not be destroyed.* ***The removal or alteration of any historic material or distinctive architectural features should be avoided*** *when possible. (emphasis added)*

   The worst case cost estimate prepared by Tom Pope proposes complete demolition of Glynn Archer within the exterior walls. This approach is not justified by the data contained in the SEATECH Engineering Report and is a direct violation of Standard No. 2 above. Glynn Archer Elementary School was constructed in 1926, during the Depression, and utilized WPA funds. One of the most significant elements of the building, the auditorium, contains direct evidence of this Depression Era program: the WPA murals. This historic fabric is evidence of one of the bleakest times in American history and is justification for

preservation of these interiors. Even more compelling is the parallel drawn between our current economic recession and the Great Depression. Preservation of these interior murals, finishes and details provides an opportunity for a long term teaching tool, as well as protection of a valuable historic resource.

3. *All buildings, structures, and sites shall be recognized as products of their own time. Alterations which have no historical basis and which seek to create an earlier appearance shall be discouraged.*

   We are fortunate that Glynn Archer has been utilized as a school continuously for 84 years. Future alterations should be respectful of the historic context.

4. *Changes which have taken place in the course of time are evidence of the history and development of a building, structure, or site and its environment. These changes may have acquired significance in their own right, and this significance shall be recognized and respected.*

   This Standard, as it relates to Glynn Archer, applies to the gymnasium, a later addition to the site that exhibits its own unique stylistic features. Other elements of the site may be significant in their own right, but additional research beyond the scope of this report will be required to make that determination.

5. *Distinctive architectural features or examples of skilled craftsmanship which characterize a building, structure, or site shall be treated with sensitivity.*

   Clearly, the exterior façade exhibits distinctive architectural features. In addition to the WPA murals, interior finishes and details are significant and should be treated with sensitivity.

6. *Deteriorated architectural features shall be repaired rather than replaced wherever possible. In the event replacement is necessary, the new material should match the material being replaced in composition, design, color, texture, and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplications of features, substantiated by historic, physical, or pictorial evidence rather than on conjectural designs or the availability of different architectural elements from other buildings or structures.*

   Based on the SEATECH Structural Report, some first floor girders, concrete around window openings and some miscellaneous spalling at corners requires attention. Standard 6 would apply to these items. Additionally, this standard applies to missing features, such as replacement units of original windows.

7. *The surface cleaning of structures shall be undertaken with the gentlest means possible.*

Sandblasting and other cleaning methods that will damage the historic building materials shall not be undertaken.

This standard is self explanatory.

8. *Every reasonable effort shall be made to protect and preserve archeological resources affected by, or adjacent to, any acquisition, stabilization, preservation, rehabilitation, restoration, or reconstruction project.*

   This standard is self explanatory.

9. *Contemporary design for alterations and additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant historic, architectural, or cultural material and such design is compatible with the size, scale, color, material, and character of the property, neighborhood, or environment.*

   This standard is of particular significance to the adaptive reuse to City offices. The City of Key West is in need of a modern, technologically up to date facility to conduct City business. This contemporary requirement can easily be accommodated. Spatially non-load bearing walls can be relocated to accommodate space needs. Electronic power and cables can be fed from the crawl space for the first floor and the attic for the second floor. The key to success and compliance is "*when such alterations and additions do not destroy significant historic, architectural, or cultural material...*"

10. *Whenever possible, new additions or alterations to structures shall be done in such a manner that if such additions or alterations were to be removed in the future, the essential form and integrity of the structure would be unimpaired.*

    This Standard recognizes the need for change over time. It also recognizes the social importance of historic buildings and the potential for recovering historic details and fabric during future renovations or changes in adaptive reuse needs. This Standard requires sensitivity and proper planning during design to protect the resource.

LEED CERTIFICATION AND ENVIRONMENTAL CONSIDERATIONS

We are fortunate to be living during an era of heightened public awareness of environmental issues and the sustainability of our built environments. Much of the credit for this awareness is due to the U.S. Green Building Council's Leadership in Energy and Environmental Design program, commonly referred to as LEED. LEED certification is a point based system with four levels of certification: certified, silver, gold and platinum. LEED actually encourages preservation by awarding points for building reuse and existing materials reuse of both exterior

and interior elements, points which are not available to new construction. In fact, there are huge amounts of energy embodied in existing buildings for the manufacture of materials and construction of the original building which cannot be recovered if the existing building is demolished. When considering overall environmental impact, demolition for new construction is less sustainable than rehabilitation. The Tom Pope report addresses LEED certification as a comparison between the new Angela Street facility and a renovation of Glynn Archer, but incorrectly lists features and points available to the new building that not available at Glynn Archer, such as an open office plan. Our review of the program shows that most departments are small, from less than 1,000 s.f. to 3,110 s.f. for the Building/Licensing Department. Given this fact, open office space planning should be achievable within Glynn Archer. The points available for preservation activities, such as building reuse were not addressed. Clearly, an "apples to apples" comparison is not possible.

Bender & Associates Architects, has experience with LEED certification of historic buildings. We are currently working on the historic Gainesville Railroad Depot, dating from 1860. The project is LEED registered and projected to achieve a LEED Platinum rating, the first historic structure in Florida to obtain this highest level of certification.

We have also prepared, in association with Green Building Services, a report for the State of Florida Department of State, Division of Historical Resources on the application of LEED to historic resources. That report, "*SUSTAINABLE STEWARDSHIP, The Environmental Benefits of Historic Preservation in Florida*" addresses application of LEED to historic resources in full compliance with the Secretary of the Interior's Standards for Rehabilitation. Those sustainable issues are summarized in the introduction to that report, included herein. We will provide the full report upon request.

[The following section is excerpted from *"SUSTAINABLE STEWARDSHIP, The Environmental Benefits of Historic Preservation in Florida"* produced for the State of Florida Department of Historical Resources.]

SECTION 1: INTRODUCTION

This report is the first phase of a two-phase project that will result in a publication that will demonstrate the environmental benefits of historic preservation, and present analysis and specific recommendations to further align the goals and practices of the green building movement (as currently represented by the LEED rating system) and the goals and practices of our nation's historic preservation movement. This Phase I report will lay the groundwork for further analysis and research leading to a publication that will identify the synergies between historic preservation and sustainable design, providing an understanding of the sustainable and environmental benefits of historic preservation. The document will provide guidance that will result in preservation projects that fully comply with the Secretary's Standards and provide additional environmental benefits during the construction process and over the following decades of operation and maintenance. A properly designed, environmentally sensitive rehabilitation of a historic building will further the goals of the preservationist by increasing the life of the historic building: accomplished using historically appropriate materials and energy efficient mechanical systems designed to protect the historic fabric through controlling humidity while minimizing energy use. A properly designed historic rehabilitation project that complies with the Secretary of the Interior's Standards and Guidelines will further the goals of environmentalists by reducing the negative environmental impacts associated with demolition and reuse of building and materials.

The concepts contained within the Secretary of the Interior's Standards and LEED are compatible as expressed in their respective mottos:

Identify, Retain and Preserve
"The guidance that is basic to the treatment of all historic buildings – **identifying, retaining, and preserving** the form and detailing of those architectural materials and features that are important in defining the historic character..." This statement is the central principle behind a successful historic rehabilitation, as promoted by the Secretary of the Interior's Guidelines for Rehabilitating Historic Structures.

Reduce, Reuse, and Recycle
The guidance that is basic to all aspects of the sustainable movement and as related to preservation, **reducing** energy use and waste, **reusing** buildings and materials, and **recycling** construction waste or demolished fabric. The guiding principles that are central to historic preservation are central to the sustainable movement in general and LEED in particular: Both encourage preservation of the historic building, both encourage reuse of materials, both encourage removal of non-compatible and/or hazardous materials (including non-compatible

materials as used in the context of the Secretary's Standards); both reduce the need for energy use; and both have a goal of improving the environmental qualities of the natural and built environment.

New construction has a significant impact on the environment which can be partially offset when a historic building is saved. The introduction to the *"LEED Reference Guide for Green Building Design and Construction, 2009 Edition*, published by the U.S. Green Building Council states that:

> "The environmental impact of the building design, construction and operation industry is enormous. Buildings annually consume more than 30% of the total energy and more than 60% of the electricity used in the United States. In 2006, the commercial building sector produced more than 1 billion metric tons of carbon dioxide, an increase of more than 30% over 1990 levels. Each day 5 billion gallons of potable water are used solely to flush toilets. A typical North American commercial building generates about 1.6 pounds of solid waste per employee per day; in a building with 1,500 employees, that can amount to 300 tons of waste per year. Development alters land from natural, biologically-diverse habitats to hardscape that is impervious and devoid of biodiversity. The far reaching influence of the built environment necessitates action to reduce its impact."

As many historic structures were originally designed to provide functional and comfortable accommodations before the emergence of modern conveniences, such as central HVAC and electric lighting, they are inherently positioned to conserve energy through their characteristic passive architectural features. Likewise, as many of these structures predate the development of plastic and other petro-based building materials, they are generally comprised of non-toxic natural materials, often harvested or extracted from regional resources. Clearly evidenced by their longevity, these structures were built to last as a result of their serviceable components and exceptional craftsmanship. This longevity is a testament to their material durability and energy conservation, as the all too common practice of building demolition and replacement is responsible for a significant demand on our valuable non-renewable material, energy and fuel resources, commonly referred to as "embodied energy." In accordance with this integral sustainability, the various LEED Green Building Rating Systems provide a more comprehensive framework for owners, design professionals, construction professionals, management staff, and occupants to make more informed and holistic decisions regarding high performance, healthy, and environmentally responsible building design, renovation, and operational practices. These rating systems are compiled resources of industry best practices which complement the Secretary of Interior's Standards for Rehabilitation when approached in an informed and practical manner.

The Sustainable Preservation movement seeks to identify and leverage the inherently energy efficient elements of historic buildings and sites, as well as sensitively incorporate new elements, materials, systems and equipment in a way in which the historic materials are retained and the character defining features and significant components of the properties are not compromised or destroyed in the process. This approach to preservation and rehabilitation seeks win-win solutions to maintaining and updating the existing built environment.

Green Building Services, (GBS) is a LEED and green building consultant with offices in Portland, OR, Sacramento, CA, Houston, TX and Orlando, FL. A co-author of this report, GBS is a leader in the green building movement with principals who are architects that are deeply involved in historic preservation. They established the following five principles of sustainable preservation as a guide to fostering the mutually beneficial goals of historic preservation and sustainable design.

Green Building Services Five Principles of Sustainable Preservation:
The Sustainable Preservation provides a perspective of the built environment that recognizes the importance existing and historic buildings in achieving balance in the environment, equity in society and economic prosperity in our communities. Through this lens, we can understand the inherent value of existing built environment, as well as approaches to new construction that are compatible with our communities, while integrating proven approaches in design and construction. Through our work in sustainable preservation projects, we have found the following principles of sustainable preservation emerge:

1. **Repair Rather than Replace...at Every Scale.**

   New materials, products and buildings require tremendous investments in resources and energy to extract, transport, manufacture, install and ultimately dispose. A "culture of reuse" seeks to repair rather than replace as the lowest impact to the environment and historic elements. If we think of this approach at every scale, we can envision repairing a door lockset as well as an underutilized industrial district or deserted factory town. Embodied energy is retained and impacts of new construction can be significantly reduced through reuse.

2. **Learn from the Past. Rediscover and Redeploy the Original Green Features.**
   Many historic buildings, developed before technologies such as electric lighting and air conditioning, were designed and built with what we would today consider "green features." Often, these elements have been defeated or removed over the years as a result of renovation or a lack of understanding of their original purpose. Whether it is tall windows in classrooms that brought in daylight that have been closed off to "save energy," awnings that managed solar exposure that were removed because they were in disrepair, or generous operable windows that provide fresh air and natural ventilation, these features can be

redeployed as a means to greening existing buildings and restoring their original green building features.

3. Communication is Key. Review with Regulatory Authorities Early and Often.

As with any good relationship, communication is essential to understanding each other and finding common ground. So it goes with greening historic buildings while maintaining the building in accordance with local, state or federal regulations or policies that have jurisdiction over the project. It is important to first understand which agency has authority over the work that will be undertaken on the project and then engage those authorities early and often throughout the design and construction process to ensure that they understand your goals and approach and that you can find workable solutions that will satisfy their concerns and meet your intent on the project.

4. Incentives and Grants Help Make the Impossible, Possible. Reinvest and Improve Return on Investment with Incentives.

Clearly, sustainable preservation projects require a level of effort that is substantially greater than a typical new construction project. There are many complexities to understanding and rehabilitating existing buildings, especially those that are seeking to be high-performance buildings. The good news is that there are many opportunities to leverage grants, tax credits and development bonuses for such projects that will dramatically enhance the bottom line. Sustainable preservation projects can maximize incentives by applying both green building and historic preservation incentives. One good resource for a listing of energy efficiency and renewable energy incentives is www.dsireusa.org. (Database of State Incentives for Renewable Energy)

5. No Building is an Island. Reinvigorate Communities at a District Scale.

While many advanced green building projects and historic rehabilitation projects stand alone when it comes to project scope and performance, there is a new effort afoot to consider expanding the boundary of a project to include adjacent sites or even entire districts to take advantage of economies of scale and to capitalize on the potential for locating systems and technologies off-site. In the Living Building Challenge (www.cascadiagbc.org), this is known as "scale jumping" and helps support the development of "eco-districts." Examples include tying into a district central utility plant for heating, cooling or power or placing renewable energy systems on an adjacent, non-historic building in order to protect a building's historic character. Rehabilitation of a single building in a historic district can also catalyze numerous other projects and transform a community.

DESIGN CONCEPT

In order to properly analyze the appropriateness of Glynn archer for use as a City Hall, we have produced a schematic design for the 1926 edifice and the site. The design concept complies with the Secretary of the Interior's Standards as discussed earlier under "Historic Preservation Considerations." We used the MBI-K2M program to determine space allocations and relationships. We also referred to the MBI-K2M HARC submittal package dated August 14, 2009 to ensure that the City's needs would be met at Glynn Archer.

Glynn Archer School is symmetrical and formal. Its original spaces were clearly defined around wide double loaded corridors. The historic preservation concerns are best met by retaining these spacial relationships. Coincidentally, the 22 to 24 foot wide classrooms are ideally scaled to allow subdivision into offices or work stations: a 24 foot dimension subdivides to two 12 foot wide or three 8 foot wide spaces, all of which reflect the spaces in the Angela Street plan.

The design intent is to preserve existing historic fabric, restore spaces to their original 13'-6" height and restore plaster ceiling finishes. The following is planned based on our findings:

1. Selective demolition will be limited to interiors with minimal impact to historic fabric and non-historic exterior components such as windows. Friable asbestos will be abated in accordance with the MACTEC report and federal regulations. All existing plumbing, mechanical and electrical components will be removed.

2. The structural report indentifies water damage from plumbing as the source of deterioration of some floor girders. ADA compliance necessitates installation of an elevator. Therefore, our concept includes construction of a new bathroom/elevator core on the south, Seminary Street side. This complies with the Secretary's Standards and HARC Guidelines as this is a secondary elevation (United and White are the primary elevations.) Additionally, this approach removes all major plumbing from the historic building, minimizing maintenance and damage: this is a less costly alternative to modifying the historic building; and finally, it complies with Standard 10:

   "Whenever possible, new additions or alterations to structures shall be done in such a manner that if such additions or alterations were to be removed in the future, the essential form and integrity of the structure would be unimpaired."

3. The auditorium would be modified to accommodate City Commission meetings by removing several rows of seats near the stage. The current seating, approximately 450 seats, will be reduced to somewhere between the 200 seats in the original program (later dropped) to not more than 300. For purposes of this study, we have assumed 250 seats will remain. Since the current auditorium seating is in good condition and reflects the historic school characteristics, their retention is planned. This is the environmentally, historically and fiscally responsible approach.

4. It is assumed that a central chiller will be provided. While initially more costly, there will be substantial savings in utility costs. Additionally, the chiller will be able to serve the rehabilitated gymnasium, which it is assumed will be rehabilitated for use by the School District as office space.

5. Building "C", the later one story addition on the west end of Glynn Archer, will be removed. This will allow sufficient site space for parking, the chiller, recycling separation center, maintenance space, landscaping and potentially a pocket park.

The schematic plans that follow depict this concept graphically. The schematic site plan indicates that development of Glynn Archer can comply with all zoning restrictions without need for variances. Data tables included on the site plan are as follows:

ZONING SITE PLAN DATA	**REQUIRED L.D.R.**	**PROVIDED**
Zoning designation	HPS	
Lot size	5000 s.f.	132,155 s.f./3 acres +/-
Setbacks		
Front	20'	38' (+/-)
Street side	10'	30' (+/-) (5' @ art bldg)
Side	5'	5' @ art building
Rear	20'/15' alley	Over 250'
Maximum F.A.R.	1.0	0.33
Maximum building cover	40% (52,860 s.f.)	21.8% (28,800 s.f.)
Maximum impervious surface (Note: travel lanes are impervious, spaces are 50% impervious)	50% (66,078 s.f.)	49.2% (65,000 s.f. +/-)

PARKING
L.D.R. Req'd.: Office uses: 120/storage maintenance uses: 8/ total 128 cars Auditorium: 40 spaces, however code allows joint use Total if joint use is not recognized is 168 cars Bicycles @ 15% = 64/ or 84
Provided: (Note: Parking may be reduced in favor or additional landscape)

Full size spaces	124
Compact spaces	20
On street, 30 minute time limit	6
Handicap spaces	6
TOTAL	156
Plus (1) loading space @ 12' x 50'	
Bicycles: 130 Linear ft. shown divided by 2' per bike	65

The following is an outline of anticipated specifications broken down by Divisions:

Division 1 General Conditions

Assume Standard General Conditions
Assume the building will be used for your construction office during construction

Division 2 Site Work

02060 Building Demolition

The Building "C" addition on the west end of the 1926 school & miscellaneous sheds will be demolished

02070 Selective Demolition

Assume all acoustic tile ceilings, all "contemporary" sheetrock walls, all plumbing fixtures and toilet finishes, mechanical and electrical systems will be removed. All non-historic windows will be removed and replaced (there are at least 2 historic steel windows that will remain.)

At the Auditorium: the acoustic ceiling will be removed and about half the seats to allow for the dais and staff seating.

Do not remove historic interior walls. These are primarily the corridor walls.

Assume that vinyl tile floors will be removed and wood floors will be refinished. If this is problematic or prohibitively expensive, assume that we will simply cover them.

02210 Site Grading

02221 Trenching, Backfilling and Compacting

02362 Cast-In-Place Concrete Piles

Will be used at the new addition

02513 Asphaltic Concrete Paving

Will be used at travel lanes
Grasscrete pavers will be used at parking spaces, as we did at the Gato Building

02721 Storm Sewage

Assume a French drain as was used at the Gato Building. Break this price out separately, as it is not part of this estimate.

02722 Sanitary Sewer

The existing sanitary sewer runs adjacent to the new addition

Division 3 Concrete

03300 Cast –In-Place Concrete

Likely sidewalks, footings, the first floor slab at the addition and tie beams

Division 4 Masonry

04220 Concrete Unit Masonry

Walls at the new addition, elevator shaft, etc.

Division 5 Metals

Division 6 Wood & Plastics

06100 Rough Carpentry

Assume interior partitions, (substantially less than Gato Building) the second floor and roof of the addition

06200 Finish Carpentry

Assume some miscellaneous historic trim. Assume refinishing of wood floors.

06405 Cabinets and Fixtures

Assume similar to Monroe County spaces at Gato Building

Division 7 Thermal & Moisture Protection

07210 Building Insulation

Assume tapered polyiso at roof decks, R25 average. Walls are not accessible nor should they be insulated.

07511 Reflective Bituminous Roofing

Assume all new modified bituminous roofing will be installed.

07600 Flashing and Sheet Metal

07920 Sealants and Caulking

Division 8 Doors and Windows

08211 Wood Doors

Existing 5 panel wood doors will be refinished. Glass in transoms will be replaced. New interior doors within individual departments will be flush face, natural finish. Assume they will have sidelights, and that they will be similar to the Gato Building as to detail.

08510 Steel Windows

The historic windows were steel. Assume steel impact resistant windows. Hopes has a similar unit that has a Dade N.O.A. or an aluminum unit may work if Hopes are too pricey.

08710 Finish Hardware

Existing knobs will become levers; existing panic bars and the exit doors are fine

Division 9 Finishes

09110 Metal Stud System

Is acceptable for interior partitions

09200 Lath and plaster

Assume 50% of ceilings will require replacement. Plaster walls need no major work - minor patching may be needed.

09310 Ceramic Tile

Will be used at toilet rooms and similar spaces.

09680 Carpeting

Minimal

09900 Painting

Complete interior and exterior

Division 10 **Specialties**

10163 Toilet Partitions
Assume marble as at Gato Building

10400 Identifying Devices
At each department door, toilet rooms etc.

10521 Portable Fire Extinguishers

10800 Toilet Room Accessories
(By Owner)

Division 11 **Equipment**

NOT USED

Division 12

12710 Auditorium Seating
Not needed – existing will be re-used

Office furnishings budget
97 employees are programmed for this building. Assume $4,000/ employee for furnishings which will include some open office partition systems similar to Herman Miller's Action Office -2 System.
Budget $385,000

Division 13 **Special Construction**

NOT USED

Division 14 **Conveying Systems**

14212 Hydraulic Passenger Elevators
One elevator, 2 stops

Division 15 **Mechanical**

15400 Plumbing Systems

15500 Fire Sprinkler System

Include at the request of the City.

15600 Heating, Ventilating and Air Conditioning

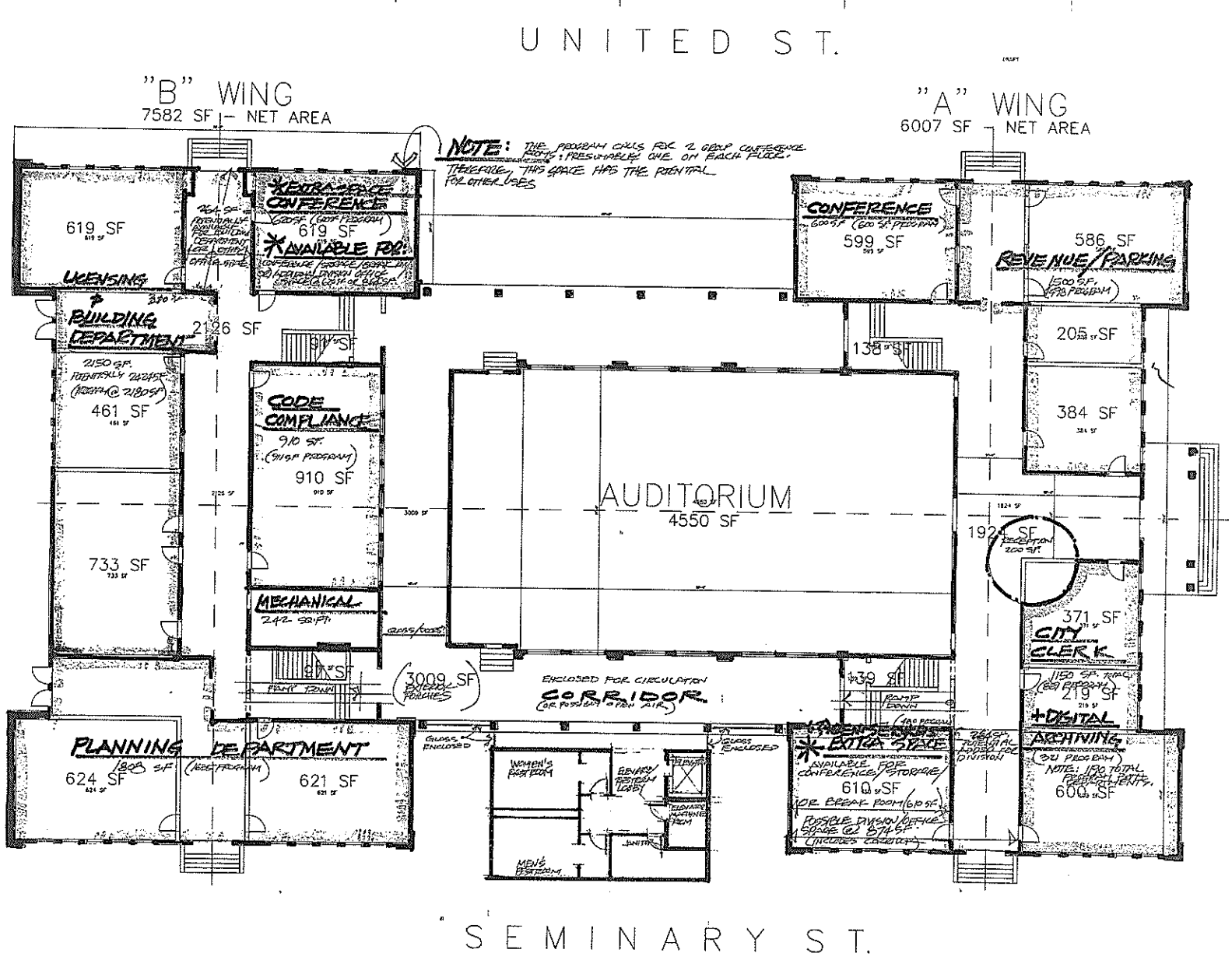
Assume a central water cooled chiller plant. Each floor will have dedicated A.H.U.

Division 16 Electrical

16400 Electrical

Assume efficient lighting, suspended fluorescents, similar to Gato Building. As an alternate, provide pricing for a generator to power the entire building.

16721 Fire Alarm and Detection Systems



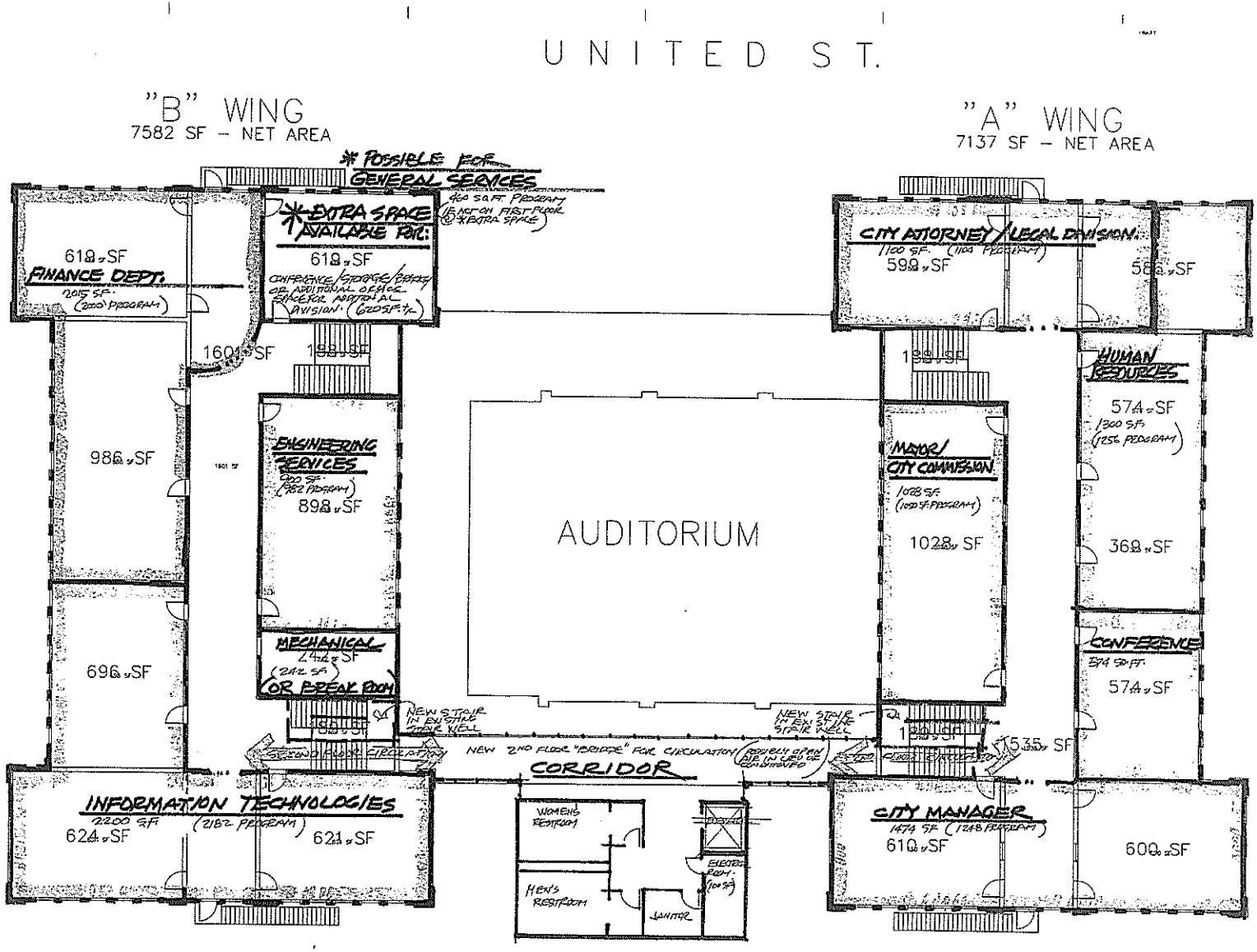
1 A1 FIRST FLOOR PLAN
SCALE: 1/8"=1'-0"

GLYNN ARCHER SCHOOL
WHITE STREET
KEY WEST FLORIDA 33040

410 Angela Street
Key West, Florida 33040
Telephone (305) 296-1317
Facsimile (305) 296-2727
Florida License AR0010822
Bender & Associates ARCHITECTS p.a.

Project No. 0707
FIRST FLOOR PLAN
Date 9/23/10

A1
1 OF 2



1 A2 SECOND FLOOR PLAN
SCALE: 1/8"=1'-0"

GLYNN ARCHER SCHOOL
WHITE STREET
KEY WEST FLORIDA 33040

Border & Associates ARCHITECTS P.A.
310 Angela Street
Key West, Florida 33040
Telephone (305) 296-7227
Facsimile (305) 296-2727
Florida License AA0002922

Project No. 0927
SECOND FLOOR PLAN
Date 9/27/10

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2 OF 2

ZONING SITE PLAN DATA:

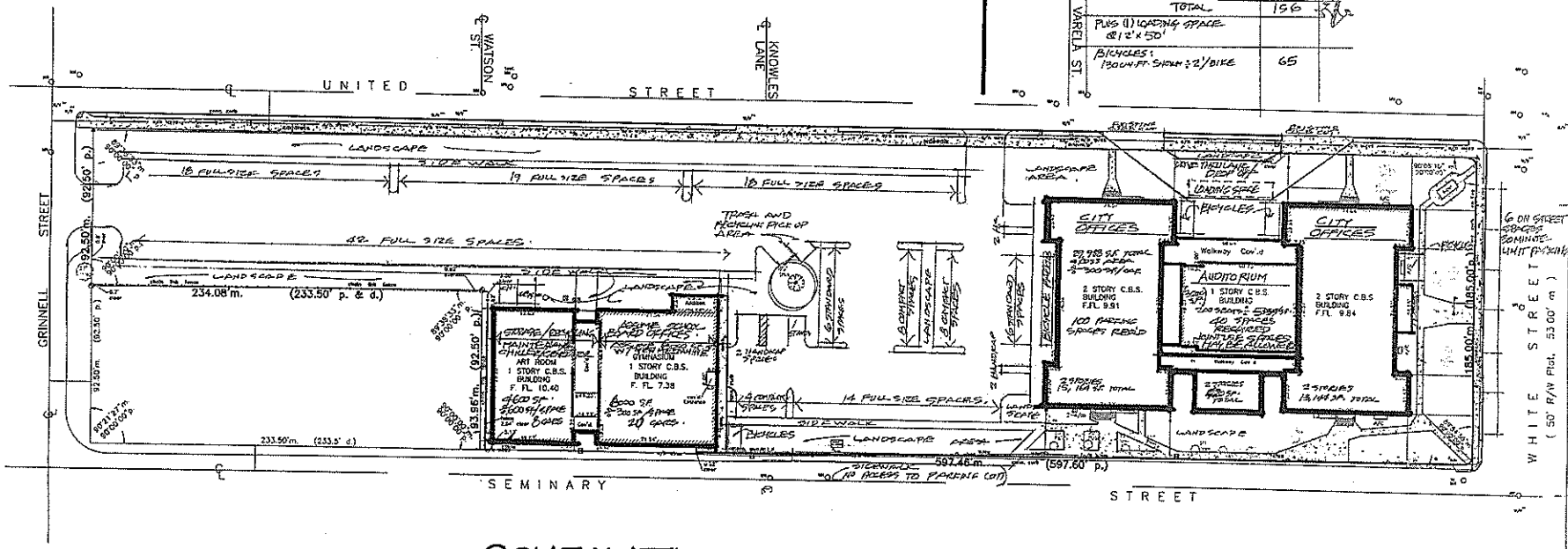
	REQUIRED FOR HPS.	PROVIDED
ZONING DESIGNATION		
LOT SIZE	114 APTS/ROOMS	132,755 SQ FT
SET BACKS		
FRONT	20'	28' (+/-)
STREETSIDE	10'	30' (+/-)
REAR	20'/15' ALLEY	STREET SIDE 20' (+/-) REAR 20' (+/-) ALLEY 15' (+/-)
SIDE	5'	5' (+/-)
MAXIMUM F.A.R.	1.0	0.35
MAXIMUM BUILDING COVER	40% (53,502 SF)	21.8% (28,944 SF)
MAXIMUM IMPERVIOUS SURFACE: (MODEL TRAVEL LANES ARE IMPERVIOUS, SPACES ARE 50% IMPERVIOUS)	50% (66,378 SF)	49.2% (65,300 SF +/-)

PARKING

LDR REQ'D: OFFICE USES: 120 / STORAGE MAINTENANCE USES: 8 / TOTAL 128 CARS
: AUDITORIUM: 40 SPACES, HOWEVER CODE ALLOWS JOINT USE
TOTAL IF JOINT USE IS NOT RECOGNIZED IS 168 CARS
BICYCLES @ 15% = 64 / OR 84

PROVIDED: (NOTE: PARKING MAY BE REDUCED IN FAVOR OF ADDITIONAL LANDSCAPING)

FULL SIZE SPACES	124
COMPACT SPACES	20
ON STREET, 30 MINUTE TIME LIMIT	6
HANDICAP SPACES	6
TOTAL	156
PLUS (1) LOADING SPACE @ 12'x 50'	
BICYCLES: 1 BOUM FT. SHOWN = 2 BIKE	65



SCHEMATIC SITE PLAN — 1" = 30'

GLYNN ARCHER SCHOOL
WHITE STREET
KEY WEST, FLORIDA

410 Angela Street
Key West, Florida 33040
Telephone (305) 296-1317
Facsimile (305) 296-8727
Florida License AR0002032
Bender & Associates ARCHITECTS P.A.

Date 9/29/10

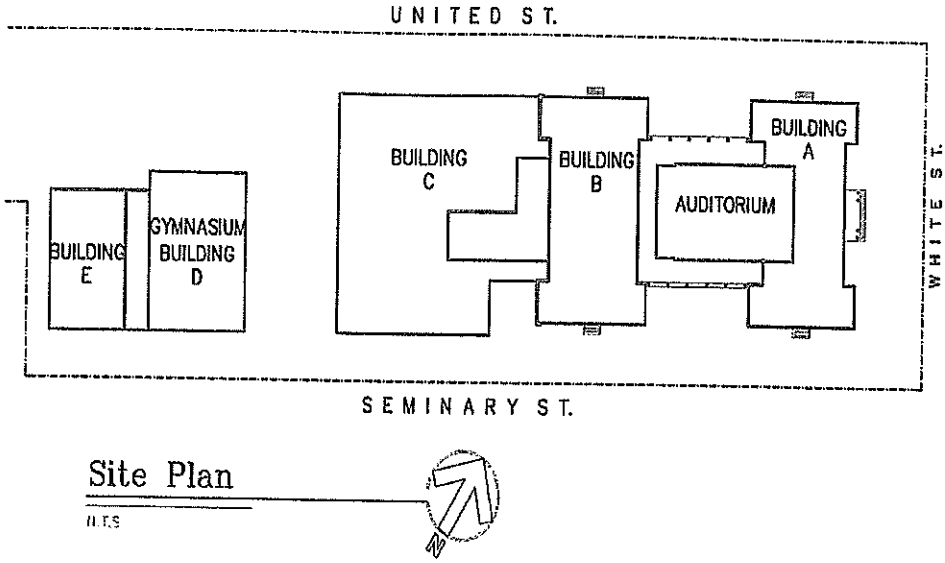
OF 30

ARCHITECTURAL ANALYSIS BY BUILDING ELEMENT

ITEM: **GENERAL DESCRIPTION**
EVALUATION: **Significant, Altered, Deteriorated Elements**

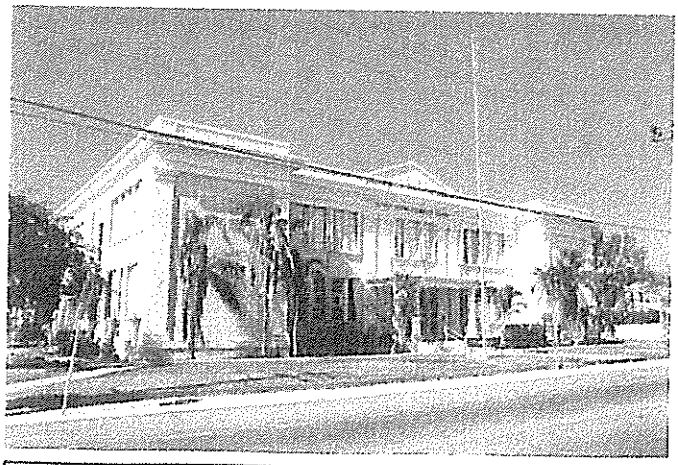
DESCRIPTION OF CURRENT CONDITION:

The Glynn Archer School is a campus of six buildings located on a large lot at the corner of White Street and United Street in Key West. Four of these buildings date from the school's original construction in the 1920's. The remaining buildings were constructed in the 1950's to 1970's. Beginning at the front of the property on White Street, the buildings are described as follows:



Site Plan of Glynn Archer Campus, showing locations of Buildings A through E.

Building A: Influenced by the Mediterranean Revival style popular in Florida during the 1920's, the main building on the Glynn Archer Campus is a handsome, well known local landmark. Building A is a two-story flat-roofed wood and masonry structure measuring approximately 122' x 74'. The building fronts directly onto White Street, and houses classrooms and the front office for the school. The exterior walls of this building are constructed of stucco over a combination of concrete and masonry. The floors and roof are framed in wood. The building is entered through a columned front porch, which leads to a wide central corridor running centrally through the N-S axis of the structure. This columned front porch also serves as the main entry for the school. The building was constructed in the 1920's.



Building A, as seen from White Street.

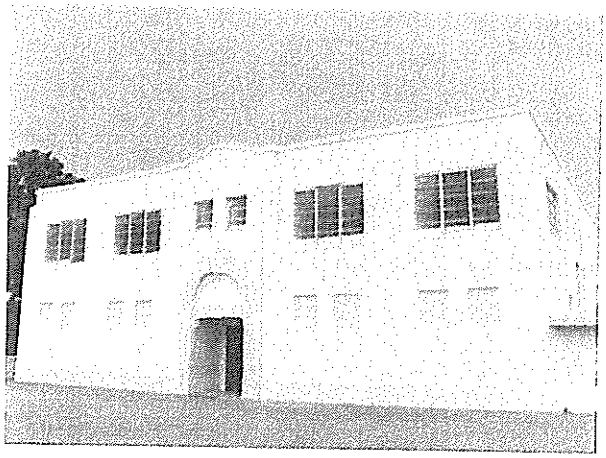
Auditorium: Located directly behind Building A, the Auditorium is a single story building with a sloped wood floor, fixed

seating, and a raised wood stage. The building measures approximately 70' x 52'. Like Building A, the Auditorium is constructed of concrete / masonry walls, wood floors, and a wood framed roof. The Auditorium is entered from the main interior corridor of Building A. A covered exterior walkway runs along the north and south sides of the Auditorium, providing protected access to the rear buildings of the school. This building was also constructed in the 1920's. The Auditorium seats approximately 400 persons.

Building B: Building B is located behind the Auditorium Building, and is connected to Building A by two covered walkways running along the exterior of the Auditorium. The structure is almost identical to Building A in size, configuration and type of construction. This building was also constructed in the 1920's.

Building C: Building C is a one story building located behind Building B, constructed around 1955. It is composed of concrete walls, with a steel bar joist roof, and is connected to Building B by covered exterior walkways. This building will not be further described in this report.

Gymnasium (Building D): The Gymnasium building is a one-story wood and masonry structure located approximately 50 feet west of Building C. The building measures approximately 78' x 71', and is composed of a large interior space with a ceiling height of at least 24 feet. The interior is sized and marked for a basketball court, with a row of wood bleachers at the east side. The exterior walls of the Gym are composed of stucco over a combination of concrete and masonry, similar to Building A. Steel columns and a steel roof truss system are used at the interior, creating a clear span of approximately 40 feet. Both the raised floor system and the roofing over the trusses are framed in wood. The building was constructed in the 1920's.



Exterior view of Gymnasium (Building D)

Building E: Building E is a one story building constructed of concrete walls, a concrete foundation, and precast concrete panel roof system. Constructed in the 1970's, it is in relatively good condition. This building will not be further described in this report.

RECOMMENDATIONS:

Buildings A and B; the Auditorium; and Building D, the Gymnasium (the four oldest buildings at the school), should be restored, for the reasons outlined below:

1. Each of the buildings has a robust structure which can be brought up to current codes

relatively inexpensively. The buildings are all above the flood zone.

2. The buildings already contain many traits found in today's energy efficient buildings, including tall ceilings, large operable windows for cross ventilation and natural daylight, and cisterns for storing rainwater. If the buildings are properly insulated and modern mechanical systems are installed, they would be extremely energy efficient structures, saving the City considerable money.

3. The historic buildings have a character that adds to their historic significance. They are well designed, with functional floor plans that are easily adaptable to modern functions. Each of these buildings has unique architectural characteristics that identify them as symbols of Key West's rich history. The construction of interesting architectural features and details is expensive, and therefore, modern government buildings are devoid of those features. Restoring these characteristics will provide the appropriate character for the City Hall.

4. Restoration of the buildings brings the potential for benefit from historic tax credits, as well as being eligible for preservation grants.

5. The buildings are centrally located within the City of Key West, and contain an Auditorium which could be easily converted to a new City Commission Chamber, potentially saving the expense of maintaining Old City Hall.

6. The current layout of the buildings makes them readily adaptable to use as office space, and easily adaptable to modern communication systems.

7. The large site offers the potential for many uses, including ample parking, an on-site generator, storage facilities for the City, a fire station, play areas, park space, or additionally, there is potential for joint use with other agencies.

It is all of these traits that make these buildings very good candidates for adaptive reuse as a City Hall complex for the City of Key West.

Building C:
While reusable, this building does not possess the same architectural character as the above buildings. Due to the spalling in the buildings, the outdated systems, and the lack of architectural characteristics, it is recommended that this building be removed.

ITEM: **SITE IMPROVEMENTS, EXTERIOR ENVIRONMENT & SITE CONDITIONS**

EVALUATION: **Mature landscaping, Significant and Non-significant.**

DESCRIPTION OF CURRENT CONDITION:

The site consists of just over 3 acres, and is bordered by White Street to the east, United Street to the north, Seminary Street to the south, and Grinnell Street to the west. The primary elevation faces White Street. The property is L-shaped, measuring 831' deep on the north side, and 597' on the south side. There is no appreciable elevation change on the site.

The site appears to have adequate drainage, but has experienced flooding and drainage problems over the years. According to the School Board maintenance department, a French drain was added between the Auditorium and Building B to remove the large volumes of water coming from the roof drains of these two buildings. This French drain alleviated the problem.

The front half of the property is well landscaped, with a combination of large trees, a statue, smaller trees and flower beds, and concrete walkways. The rear half of the property has much less landscaping, and is composed mostly of large asphalt play areas.

A chain link fence surrounds almost the entire property, with the exception of the front of Building A. There are several gates through this fence around the property.

RECOMMENDATIONS:

The front half of the property, around Buildings A and B, should be retained as is, with small concrete walkways and mature landscaping. Concrete walkways and play areas which are no longer needed should be removed. Existing walkways should be repaired or rebuilt to remove cracks and uneven pavement. Air conditioning units, which exist all over the site, should also be removed. New air conditioning equipment should be confined to a single fenced-in area on the site.

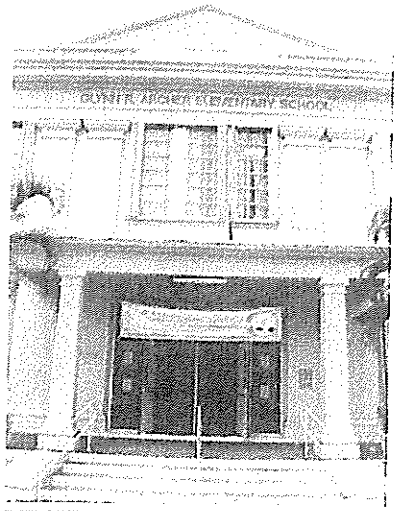
If the buildings are renovated, several of the structures will be demolished, opening up a series of possibilities for the rear of the site. These possibilities include, but are not limited to, parking for City Commission meetings, a pocket park for the neighborhood, a playground, additional office space for other agencies, storage or maintenance facilities for the City, or restoration of the gymnasium as a community gym.

ITEM: **ENTRANCES AND PORCHES**

EVALUATION: **Significant and Non-Significant, Some Elements Deteriorated**

DESCRIPTION OF CURRENT CONDITION:

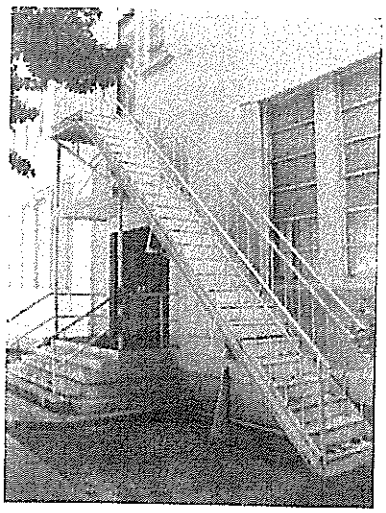
Access to the Glynn Archer school campus occurs on all four sides. The main formal entrance faces White Street.



Main entrance to Building A.

Building A

The main entrance to Building A is a 7'-0" wide door covered by a 4-column stucco portico. The portico measures 10' deep by 27' wide. This entrance faces White Street. The porch floor is concrete, and is located approximately 26" above grade.



Emergency exits are located at the north and south sides of Building A and Building B.

Building A has two secondary entrances, located at the north and south sides of the building. Those entrances are also approximately 7' wide double doors. Metal egress stairs from the second floor exits serve as overhangs for these doors. These stairs lead to a concrete walkway, then to the sidewalk.

There are two rear entrances to Building A. These entrances are located off the main hallway, just adjacent to the interior stairs in the building. The entrances open onto the covered arcade running along the rear of the building. Both of these entrances are 6' wide double doors. These doors are located approximately 4 steps down from the main floor elevation of the building.

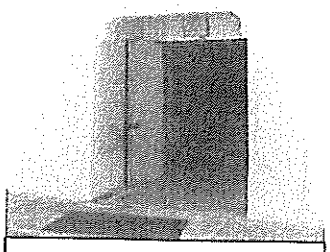
There are also two emergency exits at the second floor of Building A. Located at the north and south ends of the main hallway, these exits open onto a metal stair leading to grade. Both of these stairs are in a deteriorated condition.

Building B

Building B is similar in layout. There are two entrances located at the east side of the building. These entrances are accessed by descending a small stairway from the main floor of the building. The entrances open onto the exterior arcade which runs along the Auditorium. The doors at these entrances are original to the building. They are deteriorated, but serviceable.

Building B also has two secondary entrances on the north and south sides of the building. These entrances are double doors leading from the main hallway, and serve as secondary exit doors. Both of these entrances lead to a small porch located approximately 30" above grade.

There are also two rear doors at Building B. These double doors each open onto a covered walkway leading to Building C.



The main entrance to the Gymnasium

Auditorium: The main entrance to the Auditorium is located off the main corridor at the first floor of Building A. There are also four secondary exits used primarily for fire exits.

Gymnasium Building

The main entrance to the Gymnasium Building is located on the east side. This entrance consists of a recessed set of doors topped

by a decorated stucco arch, and dates to the original construction. There is evidence of spalling along the decorative arch over this entrance. This entrance leads to an interior stairway accessing the wood main floor of the Gym.

RECOMMENDATIONS:

Entrances and porches are significant character defining elements which should be retained on the exterior of the building. The adaptive reuse of Glynn Archer may require incorporation of some corridor space for use as additional office space. If this office space includes an exterior entrance, that door could become a public entrance to that office, or be retained for private use.

ITEM: EXTERIOR OPENINGS/ DOORS & WINDOWS

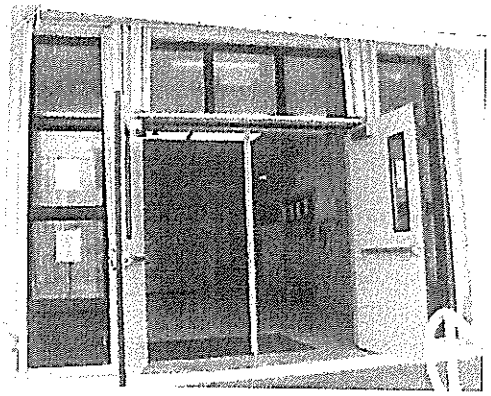
EVALUATION: Significant and Non-Significant, Some Elements Deteriorated

DESCRIPTION OF CURRENT CONDITION:

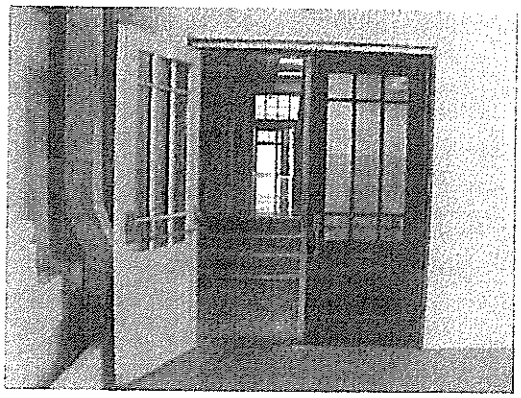
Building A and B Doors:
There are 7 exterior doors at Building A, and 8 at Building B. These doors are a combination of historic doors, and contemporary doors which have been installed in the historic openings.

The main entrance door to the school consists of a pair of contemporary 3'-6" x 7'-0" doors, flanked by a pair of 26" wide wood sidelites. The north and south emergency exits are also contemporary replacements for historic doors, consisting of 3'-6" wide x 6'-8" high solid wood doors with wire glass windows.

There are four doors which date from the building's construction: two at building A, and two at building B. These doors consist of a pair of 3'-0" x 7'-5" glazed doors, with glazed transoms above. Some of these doors have minor termite damage. All of the doors are equipped with emergency egress hardware.



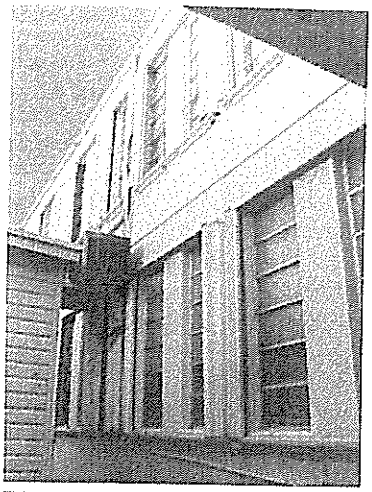
The main entrance doors to the school at the front of Building A. These doors have sidelights and transoms. These doors are contemporary replacements; the original main doors had the configuration of the doors in the photo below.



This pair glazed doors at Building A dates from the original construction of the building.

Building A and B windows:
The windows at Buildings A and B consist of 36" wide x 8'-6" tall aluminum 6-lite awning-style windows at the first and second floors. The windows are putty-glazed, and many are deteriorated and non-functional. They are over 30 years old, and are replacements for the original metal windows. All of the windows are covered with accordion style hurricane shutter systems bolted to the exterior of the building, giving the building a haphazard appearance.

According to historic photographs, the original metal windows consisted of an operable 3-lite awning window at the top of the 8'-6" high opening, a fixed 3-lite window at the center, and another operable 3-lite window at the bottom of each opening.



Typical aluminum awning-style windows at Buildings A and B. The windows should be removed and replaced with new impact resistant units replicating the originals.

Auditorium Doors and Windows:
The main entrance doors to the Auditorium are painted wood 5 panel double doors. The secondary exit doors for the Auditorium consist of 36" wide x 7 foot high painted wood 5-panel doors, similar to the classroom doors. Many of these doors are show signs of termite damage.
The Auditorium windows consist of 8-lite aluminum single hung units. All of the units measure 36" wide x 8'-6" high.

Gymnasium Doors and Windows:
The main entrance door to the Gym consists of a large pair of 36" wide x 8'-7" high wood doors. These doors are deteriorated, and, while decades old, the paint marks on the door frames show that they are replacements for older doors. The windows of the Gym are the same aluminum awning-style windows found at buildings A and B. All of the Gym windows are deteriorated and probably no longer functional. Many of the windows have been boarded up or covered with stucco.

Historic photo of front of Building A, taken in 1926 from White Street. The original metal windows were composed of 3 parts: An operable awning at the top, a stationary window at the center, and another operable awning window at the bottom. New impact resistant windows replicating these originals should be installed in the existing openings.

RECOMMENDATIONS:

The windows at Buildings A and B are deteriorated and not repairable. They should be removed and replaced with new impact-resistant window units replicating the original windows of the building. This will allow the hurricane shutters to be removed from the face of the building, restoring the clean appearance of the exterior. Additionally,

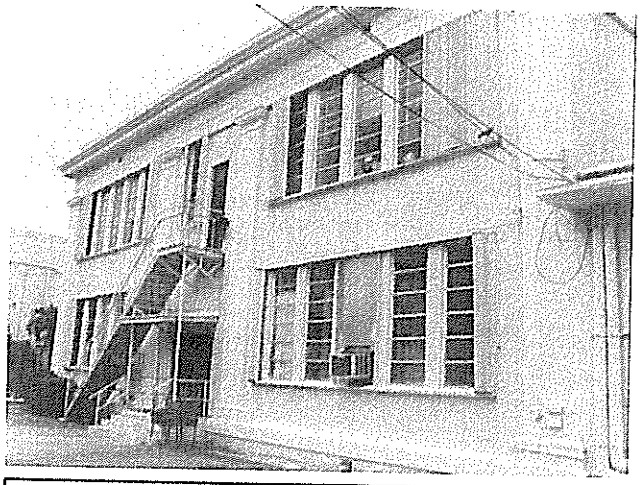
maintenance staff will not be required to install shutters during each storm event. Energy efficient Low-E glass should be installed to reduce the amount of heat transmission into the buildings. Each of the window openings should be inspected for spalling, and any deteriorated concrete should be repaired before new units are installed.

The contemporary doors of Buildings A and B, while serviceable, are not appropriate to the character of the building, and should be replaced by impact-resistant doors replicating the originals. The historic doors at the rear of the buildings are significant character defining elements, and should be accurately restored.

ITEM: **EXTERIOR STRUCTURE/WALLS**

EVALUATION: **Significant, Sound**

DESCRIPTION OF CURRENT CONDITION:



Typical exterior wall at Building A and B. The walls are cluttered by accordion style hurricane shutters, electrical and phone conduit, and air conditioning units.

Building A:

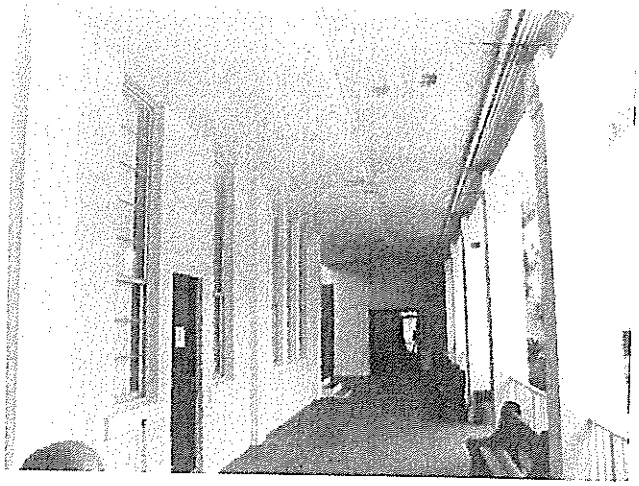
The exterior walls of Building A consist of painted rough stucco over a combination of reinforced concrete columns and beams, and masonry infill. The decorative elements on the exterior of the building, including columns, cornices and decorative patterns, are all smooth stucco. This smooth stucco trim is painted white to delineate it from the rougher tan-colored stucco on the walls. A smooth stucco base runs around the entire perimeter of the building, up to approximately 36" above grade. A decorative cornice also runs along the entire top of the building. This cornice extends approximately 24" from the walls of the building.

Electrical conduit and A/C condenser lines are run haphazardly over all sides of the building. In addition, accordion shutter systems are bolted to the exterior of most of the windows, giving a messy appearance to the building. There are metal fire exit stairs at the north and south sides of the building.

Some peeling paint was found at the exterior of the building, but there are no major signs of spalling concrete. Minor spalling was found around the perimeters of many of the exterior windows, and at the building cornice. There are no signs of settlement or major cracks.

Building B:
The exterior structure of building B is very similar in description and condition to Building A.

Auditorium:
The exterior walls of the Auditorium consist of the same rough-textured stucco as Building A. The walls are less weathered due to the covered walkways running along the north and south sides of the building. The walls are also covered with electrical conduit, air conditioning, and plumbing lines.



Covered arcade at the north side of the Auditorium. The north wall of the Auditorium wall is at left.

Gymnasium:
The exterior walls of the Gymnasium consist of the same rough-textured stucco as Buildings A and B. The only embellishment on the building is a decorated plaster arch at the main entry, and a smooth stucco band around the base of the building, up to approximately 36" above grade. A few cracks were found at the exterior of the building, indicating possible spalling. There is also evidence of numerous stucco patches and repair at many areas of the exterior, including many of the windows. This may indicate spalling which was repaired, or windows that were infilled. Both are likely. There is more evidence of spalling at the interior of the building, where the concrete columns and masonry infill walls are exposed. Spalling was found at the reinforced concrete columns which make up the structure of the walls. The interior steel columns and trusses are rusted and deteriorated.

RECOMMENDATIONS:

The exterior penetrations consisting of conduit, wires, panel boards, condensing lines, air conditioning units attached to walls, and accordion shutter systems must be removed to facilitate the exterior envelope restoration. These items are addressed in detail in the applicable sections that follow.

Alterations to the envelope which require restoration include: repair of wall penetrations from shutters, stairs and other objects mounted on the buildings, and repair of minor spalling at the cornices at the top of the walls, and at the window openings.

The spalling at the Gymnasium should be repaired. The reinforced concrete columns which make up the wall structure at the gym are accessible from the inside, and should be inspected and repaired. The steel columns and trusses at the Gym should be sandblasted, and the steel should be primed with an inorganic zinc primer, and repainted.

ITEM: **FOUNDATION AND FLOOR STRUCTURE**

EVALUATION: **Sound, Some Deterioration**

DESCRIPTION OF CURRENT CONDITION:

Building A:

The foundations of Building A are composed of a continuous reinforced concrete foundation along the perimeter of the building, with reinforced concrete piers at the interior. The wood floor framing rests on large wood girders supported by these concrete piers. There was no sign of cracking, settling, spalling or damage to the concrete perimeter footing or the interior concrete piers. According to the Engineering Report by Seatech dated May 5, 2010, the wood floor framing was in good condition, with the exception of some areas "underneath plumbed spaces where rotted wood was observed, but the general condition of the floor joists and sheathing was good"

Typical interior foundations at Building A. The wood framing, seen at top, bears on girders, which in turn bear on concrete pier footings. All debris under the building should be removed, and damaged girders and framing should be sistered with new material, or replaced.

Additionally, the Report stated that the "floor girders were in poor condition. The floor girders were rotted underneath plumbed spaces and there was pest damage throughout. There were damaged floor girders that require immediate replacement".

There are also concrete structures under the building which appear to be cisterns. This is a common occurrence in Key West buildings of this era.

The second floor framing consists of wood joists and sheathing. The framing appears to be in good condition, with no significant damage noted.

Building B:

The foundations of Building B are very similar to Building A. The wood floor sheathing is supported by wood framing over wood girders. The girders are supported by concrete piers at the interior of the building, and a continuous concrete footing at the perimeter.

According to the Seatech report cited above, the floor girders in this building are rotted under the plumbing spaces and pest damaged throughout. The wood sheathing and joists at the front of the building are also rotted and deteriorated, with some of the wood requiring immediate replacement.

Gymnasium:
The floor structure of the Gymnasium consists of wood flooring and framing over reinforced concrete spread footings. The perimeter walls are supported on a continuous reinforced concrete footing. According to the Engineering Report by Seatech dated May 5, 2010, the floor joists and girders were in poor condition from pest damage. The steel columns at the interior were rusted, but not enough to impact the structural capacity of the members.

RECOMMENDATIONS:

Deterioration of girders and floor framing is not an uncommon issue in Key West, and local contractors are familiar with the work. The framing should be inspected by a structural engineer who is experienced in working with historic structures. The floor structure is readily accessible, as the floors in the historic buildings are located approximately 36" above grade. Any deteriorated girders and framing should be replaced, or sistered with new pressure treated material. Metal angles and ties should be added to the girders and framing as required to meet current Codes. Girders and wood framing should be isolated from concrete with 15# felt or other waterproof material. Consideration should be given to adding additional framing under the hallways of the building to meet the 100psf load requirement.

Cisterns were an important part of life in Key West in the early 20th century, and can be found in many of the large buildings of Key West, including the Gato Building, and St. Mary's Church. The idea of conserving water was largely forgotten until recently, but it was an important feature in Key West buildings which did not have the benefit of water service from the mainland. Cisterns can be a valuable component of energy efficient design and green architecture. They are recognized in the current LEED standards as a water saving device. Captured and stored water can be used to flush toilets and irrigate landscaping, saving considerable amounts of money over time.

The cisterns are a valuable find. They should be inspected by a structural engineer, and repaired and reactivated to store rainwater from the roof. This reclaimed water can be used for flushing toilets and irrigation. Other options exist for cistern reuse. For example, the cistern inside the Gato Building was converted to storage. These repairs can be undertaken when the building is renovated.

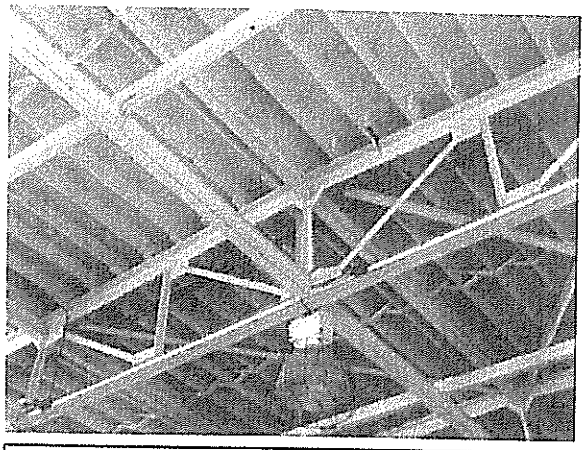
Finally, the building should be tented for termites, and a regular program of pest control should be initiated to prevent further termite damage.

ITEM: ROOF STRUCTURE / ROOF COVERING

EVALUATION: Weathered, Serviceable.

DESCRIPTION OF CURRENT CONDITION:

Buildings A & B:
The roof of building A is composed of low-slope built-up roofing over wood board sheathing. A 24" high masonry parapet runs along the entire perimeter of the building. The roof is framed with wood joists, which appear to be in good condition. The built-up roofing appears to be in fair condition, with no signs of significant leakage, although there are some old water stains at the ceiling above the north stair. (This may indicate past leakage.)
No metal straps or tie-downs were observed in the roof framing. The sheathing also appears to be in good condition, as viewed from the underside.



Interior view of the Gymnasium, showing the internal roof structure. The roof bears on wood framing, which in turn bears on steel trusses spanning the Gym. Deteriorated wood framing members should be replaced or sistered with new material.

Auditorium:
The roof of the Auditorium is composed of built-up roofing over a wood structure. There were no signs of roof leakage.

Gymnasium:
The roofing at the Gym is composed of built-up roofing, with no signs of significant leakage. The roof structure is composed of wood sheathing over wood framing members, which in turn bear on steel trusses spanning the Gym. According to the Engineering Report by Seatech dated May 5, 2010, the roof framing members are in poor condition, with some roof framing members requiring immediate replacement.

RECOMMENDATIONS:

The roof is currently serviceable, as long as regular maintenance is performed on it.

When the building is renovated, the roofing should be replaced with a new built-up roofing system over a secondary waterproofing membrane. Consideration should also be given to installing a tapered insulation system under the new roof, both to provide positive drainage and add additional insulation to the building. Overflow scuppers should also be added to the building if they do not already exist. When the existing roof is removed, sheathing should be nailed in

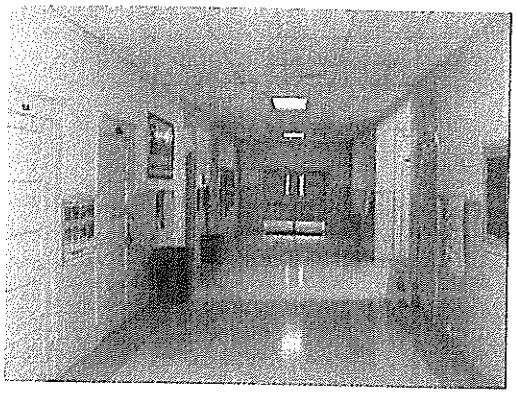
accordance with current codes, and metal hurricane straps and ties should be added to the roof framing. This can be done while the ceiling is undergoing renovation, as the framing will be accessible from the inside of the building. The roof framing members at the Gym should be replaced or sistered as required, and strapped to meet current codes. The steel trusses should be cleaned of all deterioration, primed, and painted.

ITEM: **CEILINGS**

EVALUATION: **Not Significant, Serviceable.**

DESCRIPTION OF CURRENT CONDITION:

Buildings A and B:
The ceilings at Buildings A and B consist mostly of lay-in acoustic tile systems. At the first floors, the lay-in ceilings have been installed between 1 foot and 4 feet below the original ceiling, to accommodate piping and electrical conduit. The original ceilings consisted of plaster over lath, with an original ceiling height of approximately 13'-4". The original ceilings are deteriorated, and much of the plaster has been removed down to the lath. The existing lay-in ceilings are worn but serviceable, with heights that vary in almost every room.

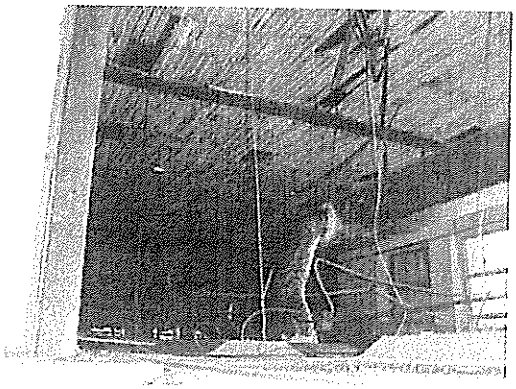


View of interior hallway at Building A, showing typical lay-in acoustic ceiling systems.

The ceilings at the second floor consist of similar lay-in ceiling systems in the classrooms, and aged 12"x12" ceiling tiles in the hallways, dropped approximately 12".

The following is a list of current ceiling heights:
Building A (Building B similar)

First Floor Hall:	9'-4"
First Floor Classrooms:	12'-0" (varies)
Original Ceiling Height:	13'-4"
Second Floor Hall:	11'-11"
Second Floor Classrooms:	11'-7" (varies)



The original ceiling can be seen above the existing lay-in acoustic ceiling. It consisted of plaster over lath, and is at least four feet higher than the current ceiling. The original lath can be seen at the top of the photo. The lay-in ceiling should be removed and the plaster and lath ceiling should be restored.

Auditorium:
The ceilings at the Auditorium also consist of contemporary lay-in acoustic tile systems covering the original plaster and lath ceilings. The lay-in ceiling tile systems are in worn but serviceable condition.

Gymnasium:
There are no ceilings in the gymnasium. The roof

structure, including steel trusses and wood framing members, are all exposed.

RECOMMENDATIONS:

When renovation is undertaken, the existing lay-in ceilings should be removed. Plaster ceiling finishes should be restored to their historic heights. Dropped ceilings or soffits should be minimized and installed only where needed. The final design will be predicated on mechanical systems. Ceiling fans should be added to circulate air.

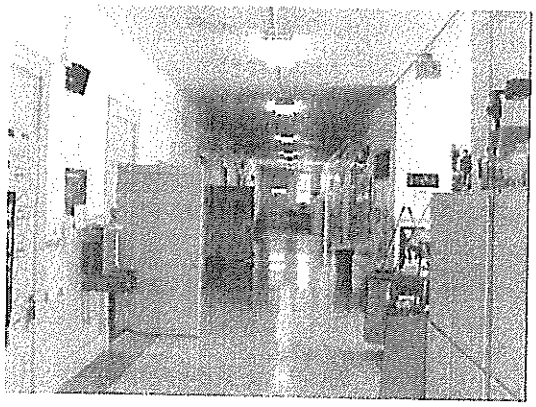
High ceilings were an important component of buildings before air conditioning arrived. Current LEED and energy efficiency standards encourage high ceilings and cross ventilation as a means of keeping an entire building cooler, and thus saving energy costs. Significant energy savings can be realized by using these historic design features.

ITEM: INTERIOR FINISHES

EVALUATION: Significant, Altered, Reusable.

DESCRIPTION OF CURRENT CONDITION:

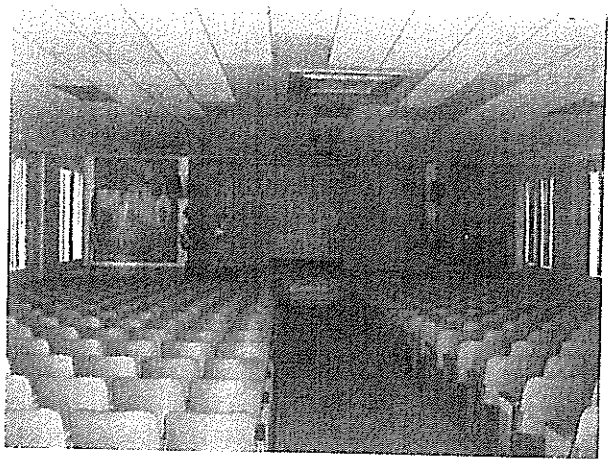
Buildings A and B:
The interior finishes at Buildings A and B are typical of a school building of this age. Floors are primarily composed of 12"x12" vinyl tile, heavily waxed and in good, if aged, condition. There are probably several layers of this floor tile over the original wood flooring. Bathroom flooring consists of ceramic tile.
Walls, where original, are composed of painted stucco over lath. This stucco has been patched in many areas, but is in relatively good condition. Walls which have been rebuilt or moved are composed primarily of painted gypsum board over wood framing. The existing walls are covered with white boards, bulletin boards, and various surface mounted conduits and plumbing lines. Baseboards are painted wood, and the historic walls have a painted wood trim moulding at 5'-0" above the floor, and a picture rail moulding at 10'-8" above the floor.



View of hallway at Building A, showing typical finishes at the school: Vinyl tile flooring, stucco walls covered with bulletin boards, and lay-in acoustic ceilings. The original painted wood 5-panel classroom doors can also be seen. These doors originally had transoms above them for air circulation.

The ceilings are primarily acoustical lay-in tile systems, and are covered in another section of this report.

The interior doors are mostly painted wood 5-panel doors dating from the original construction. These doors are 1-3/4" thick and are mostly 36"w x 7 feet tall. Many of these doors are topped with 22" high open transoms, most of which have been covered. Various other replacement doors in the building are contemporary solid wood doors. Door hardware varies from original to the building's construction to modern locksets. All of the door hardware is worn but serviceable.

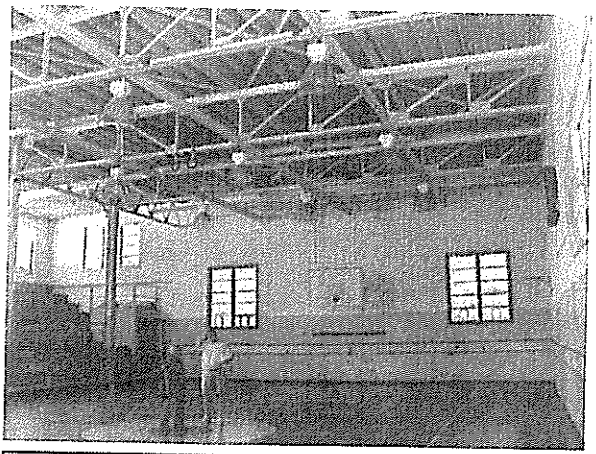


View of interior of Auditorium, showing vinyl tile flooring, stucco walls, and lay-in acoustic ceiling tiles. Also visible are the 1930's WPA murals painted at both sides of the stage.

The hallways and rooms of the building were clearly built for the era before air conditioning. High ceilings allow warm air to rise, and high windows (now blocked) are located in many of the classroom walls to facilitate air circulation and cross ventilation in the building. Many of the doors also contain operable transoms. While designed in the 1920's, these elements of 'green building' are being rediscovered and reused in today's buildings. Strategies such as high ceilings and cross ventilation are an important part of LEED Design, and can result in significant energy savings.

Auditorium:

The finishes in the Auditorium are very similar to Building A, consisting of stucco walls, vinyl tile flooring, and lay-in acoustic ceilings. Of particular note are the WPA murals painted at both sides of the stage. These murals depict the construction of Flagler's Railroad, and are valuable pieces of Key West history.



View of interior of Gymnasium Building, showing wood floors marked for a basketball court, stucco walls, and exposed trusses at ceiling.

Gymnasium:

The finishes at the Gymnasium are much more utilitarian in nature, consisting of polished wood floors for basketball, and ceilings exposed to the structure. The reinforced concrete and masonry structure of the walls is currently exposed. It is likely that there was another finish on these walls, which has been removed or has deteriorated. All of the electrical fixtures in the Gym are covered with wire cages to prevent breakage. Additionally, there are locker rooms and showers in the gym, which are deteriorated.

RECOMMENDATIONS:

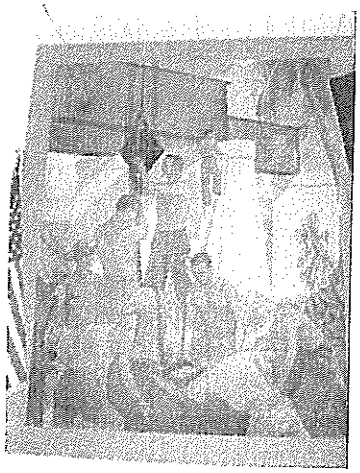
While the flooring is in fair condition, different flooring systems will probably be desired if the building's use is changed. This flooring can either be installed over the existing flooring, or all of the contemporary flooring can be removed and the building's original wood flooring can be restored.

The original interior walls of the building are in good condition. All of the surface-mounted conduit and plumbing lines should be removed when the mechanical, electrical, and plumbing systems are updated. After these elements are removed, the walls can simply be patched and repainted. Painted wood wall mouldings can be patched and painted.

Doors, where original, should be restored and reused with new hardware and new transom glass. If glazed doors are desired for a new use, glazing can be inserted in the top panels of the 5- panel doors. Missing and contemporary doors should be replaced with new 5 panel doors replicating the original doors.

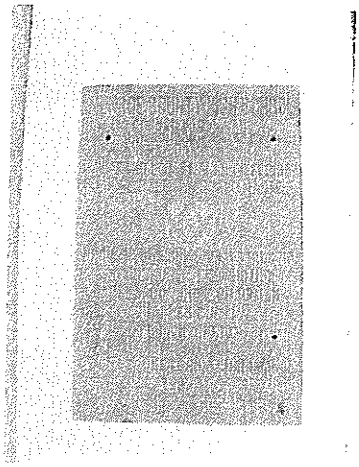
The high window openings in the hallways and classrooms should be restored, as well as the door transoms, to facilitate air circulation through the building. These openings, as well as the high ceilings, are elements of green design, and if used in concert with other systems can result in significant energy savings.

ADDITIONAL CHARACTER DEFINING ELEMENTS:



Close-up photo of WPA mural in Auditorium. The mural depicts the construction of the Flagler Railroad.

Close up of exterior of Building A, showing the columns and cornice line at the top of the wall. Elements such as this are rare in today's buildings, as they are expensive to build.



The original cornerstone of the building, laid in 1923. The stone is located at the NE corner of Building A.

ITEM: **STAIRS**

EVALUATION: **Significant, Altered, Serviceable.**

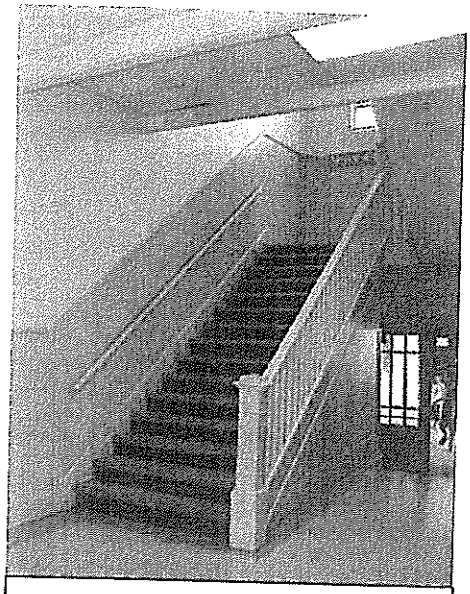
DESCRIPTION OF CURRENT CONDITION:

Building A:
The building's main entrance is accessed by a set of 4 concrete steps leading to a concrete entry porch located 26" above grade. An additional riser is located at the main door. There are many cracks in the concrete steps, but they are otherwise serviceable. There are several sets of metal handrails at this stair, each of which is rusted but serviceable.

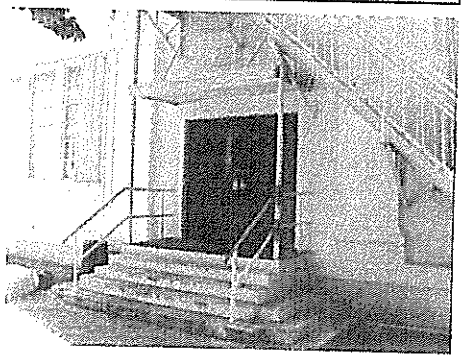
There are two sets of interior stairways located off the main hallway of the building. Each rises 14'-6" in height to connect the first and second floors. Adjacent to the bottom of each stair is another small flight of steps, descending 29" to the rear doors of the Building at grade. Both of these stairways are virtually identical. They are constructed of painted wood, and are composed of two 62" wide runs, with an 51" wide intermediate landing, located 8'-4" above the first floor. All of the wood stair treads are covered in multiple layers of floor tiles, with metal guards at each stair nosing. The wood guardrails are 32" high, and are composed of 1-1/2" x 1-3/4" wood spindles at 5" o.c. The top rails are 3-1/2" wide. These guardrails have a decorated wood newel post at the bottom measuring 6"x6". A wood handrail runs along the wall at the opposite side of each guardrail. Each of these stairways dates from the building's original construction, and is in good condition, though covered with many coats of paint and vinyl tile.

There are two metal emergency exit stairs located at the north and south sides of the building. These stairs connect the exits at the second floor directly to grade. The metal stairs are deteriorated, and probably cannot be repaired.

Finally, there are two sets of concrete steps at the north and south sides of the building connecting the first floor exits to grade, a drop of approximately 34 inches. These stairways are in good condition.



Main stairway at Building A. The stairs have decorated newel posts and wood guardrails, and are important character-defining elements of the building. There are two of these stairways in Building A, and two in Building B.



First floor emergency exit stairway at Building A. There are two of these stairways at Building A, and two at Building B.

Building B:
Building B also has two sets of interior stairs connecting the first and second floors. The stairs are identical in layout and condition to those in Building A. The emergency exit stairs are also identical in layout, located at the north and south sides of the building. These stairs are also too deteriorated for reuse. The concrete stairs at the north and south sides of this building are also identical to Building A in layout, and are in good condition.

Auditorium: There are no stairs in the auditorium, with the exception of the wood stairs to the stage, which are in good condition, and the concrete exit stairs for the building, with are in fair, but serviceable condition.

Gymnasium: The main floor of the gymnasium is connected to the entrance by a small flight of painted wood steps. These steps are deteriorated but repairable.

RECOMMENDATIONS:

Building A:
Each of the concrete stairs at the north, south and east sides of the building is in fair to good condition. Minor cracks in the concrete should be patched, and the stairs should be painted. Consideration should be given to replacing the deteriorated handrails at the main entry stair with rails more appropriate to the main entry of a building.

The interior stairs are in good condition. Consideration should be given to removing the multiple coats of paint and floor tiles, and restoring the original wood finish of the stairs.

The four sets of emergency exit stairs at Buildings A and B are too deteriorated for repair, and should be replaced. Even though there are sufficient second floor exits throughout the building, and these metal units are not needed, they were original to the building and we recommend retaining them as a building element.

ITEM: ELECTRICAL, MECHANICAL, AND PLUMBING SYSTEMS

EVALUATION: Required, Outdated, Serviceable

DESCRIPTION OF CURRENT CONDITION:

Mechanical, plumbing and electrical systems are required for a functional building. The existing systems are a collection of components haphazardly installed over the years as immediate needs dictated. The bathrooms and classroom sinks date from different periods in the building's life, and are serviceable. The building's mechanical systems are outdated, poorly designed and an intrusion on the characteristics of the building, both interior and exterior. There are multiple A/C condenser units scattered around the perimeter of the building, as well as a small chiller plant at the north side of Building C. The classrooms are cooled by a series of small fan coil units and air handlers. Numerous electrical panels, telephone and security components are installed on exterior and interior walls, many simply drilled through the exterior envelope. This installation is inefficient, unsightly and is a source of moisture intrusion into the building, leading to spalling and deterioration.

View of exterior of building A, showing different electrical lines, air conditioners and telephone boxes attached to the building. All of the building exteriors are cluttered with these components, all installed where convenience dictated. Installation of these elements also created multiple penetrations in the building envelope, each of which is a source of water intrusion.

The electrical systems are amalgam of various systems added over the lifespan of the building, with numerous panels, subpanels, and conduit installed as needs dictated. It is outdated and should be replaced.

RECOMMENDATIONS:

A full replacement of the mechanical, plumbing and electrical systems will be required.

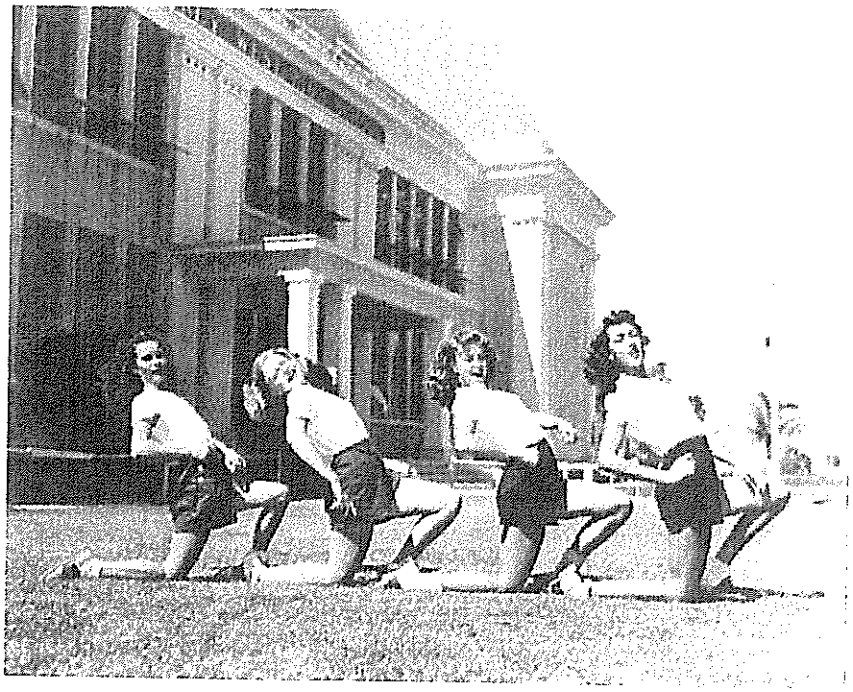
The replacement of outdated MEP systems with modern, energy efficient systems will result in significant operational cost savings.

We recommend removal of all plumbing systems from the historic school buildings and construction of a new core as an addition to the building that will contain all bathrooms and a new ADA compliant elevator.

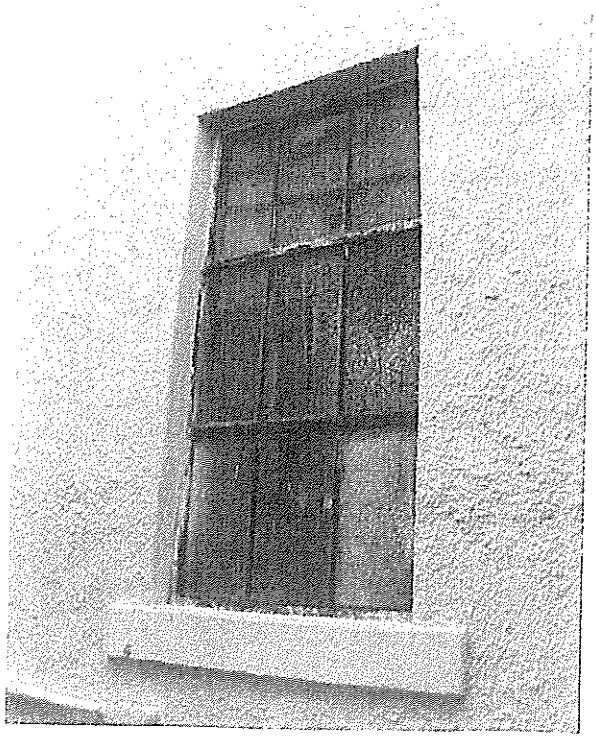
ADDITIONAL GLYNN ARCHER PHOTOS:

Exterior view of Building A, taken in 2006.

The same photo taken in January, 1926, shortly after construction was completed. With the exception of the doors and windows, the front façade of the school has not changed appreciably in 80 years.

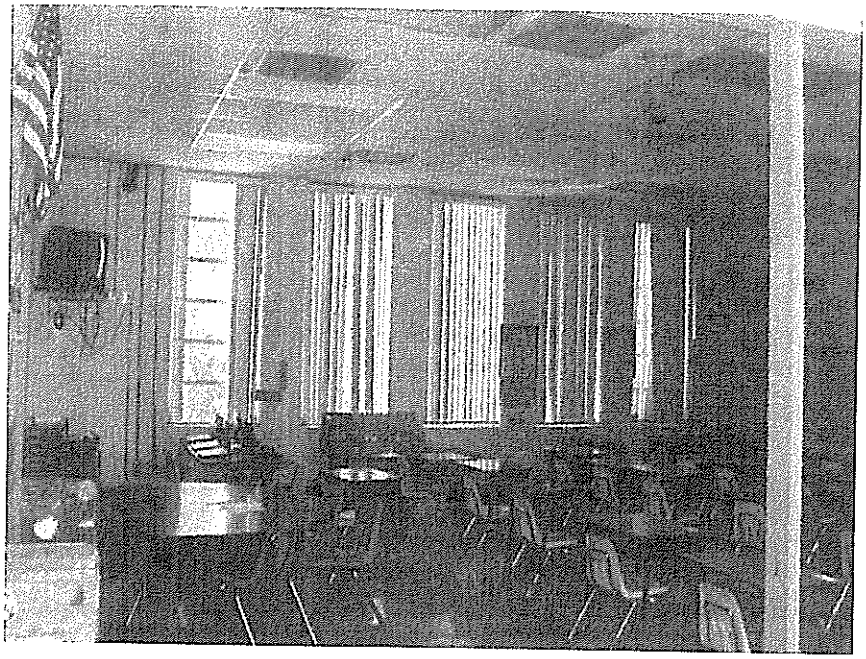


View of exterior of Building A, taken on October 29, 1947. The historic windows are clearly visible. The building served as Key West High School then.

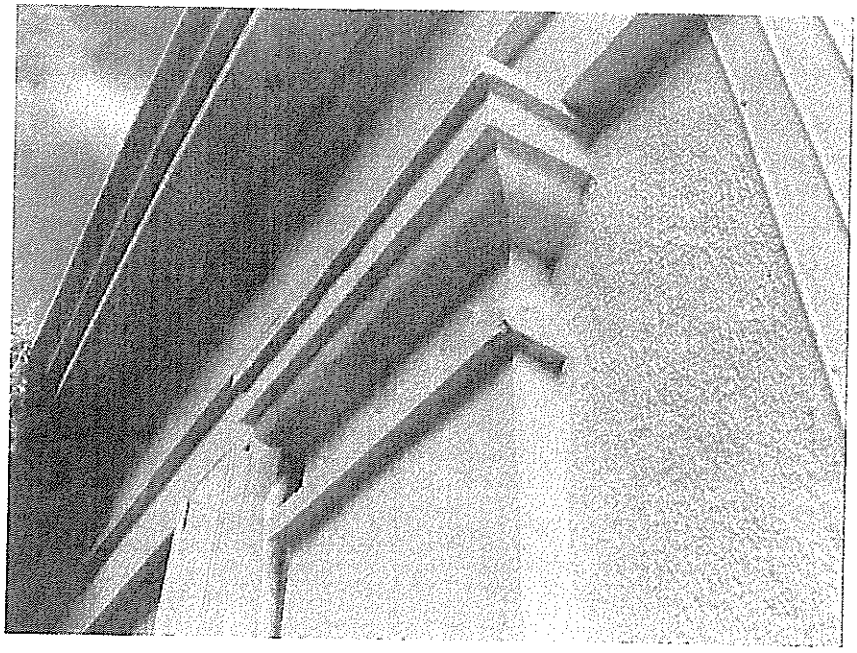


A historic metal window was found at the rear of the Auditorium.

This window can be used as a pattern for the new metal impact resistant windows.

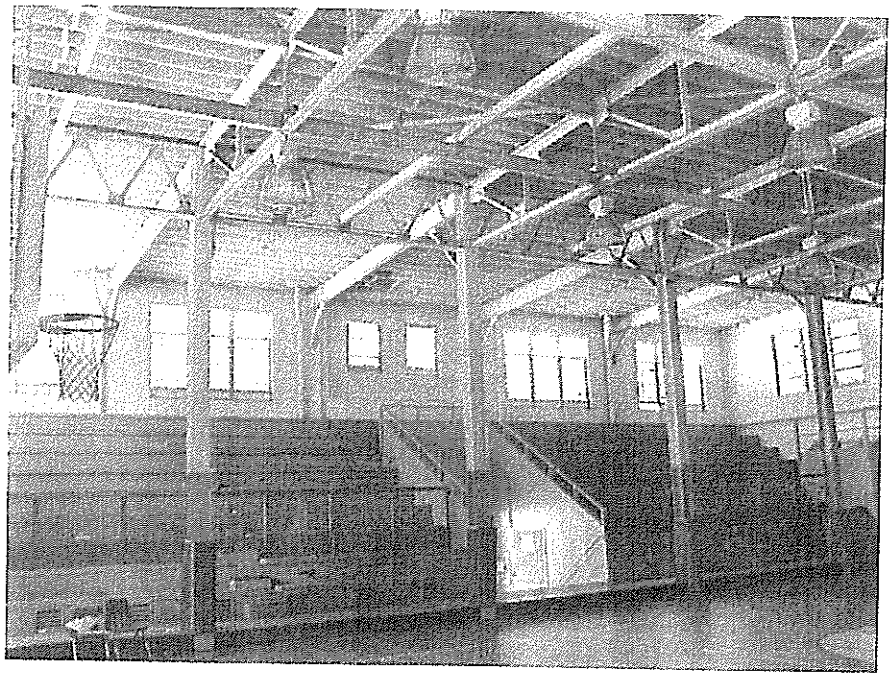


Typical view of a classroom in Building A. The classrooms are large enough to contain entire departments for the City. The high ceilings will be made even higher with the removal of the existing lay-in ceilings. The rooms can be configured with open office plans with moveable partitions.



The exterior of the building contains many rich architectural details. This photo shows the top of a concrete column on the front façade, and part of the large cornice at the top of the façade.

Architectural details such as this are extremely expensive to build. Reusing buildings that already have these details is much more cost effective.



The interior of the Gymnasium building. The ceilings in this building are tall enough to construct an entire second floor mezzanine, effectively doubling the amount of square footage for little cost.

Photo of Building A taken about 1970, when the Building was called Memorial Elementary School. (A 1966 Cadillac sits out front)
The original windows have been removed and replaced with the windows seen today. The front doors of the building are still original.

CONSTRUCTION COSTS

As of this writing, October 1, 2010, detailed cost estimates are being prepared by D.L. Porter Constructors, Inc. However, we have prepared order of magnitude estimates based on similar projects, the criteria contained in the report, the schematic design documents, the outline specifications, and costs included in previous estimates.

The most similar example is the Gato Building. Adjustments can be made to account for inflationary trends since the project was bid in the summer of 1999. The consumer price index calculator shows a 31% increase from 1999 to 2010. There are some differences which impact a direct comparison. The Gato Building was an abandoned building which required much more selective demolition than Glynn Archer. There were no interior finishes at the Gato Building, whereas, Glynn Archer is currently in use as a school with serviceable interiors, much of which can be retained. All of this leads to the conclusion that Glynn Archer rehabilitation would be less expensive than the Gato Building as a percentage of new construction. But for simplicities sake, we will assume a direct relationship. (The gymnasium building is similar to the condition of the pre-restored Gato Building.)

Based on CPI, current costs are 31% higher than when the Gato Building was built. The Gato Building total, including a generator, generator building, and all site improvements, cost $6.6 million for 40,000 square feet, or $165 per square foot. Of this total amount, the selective demolition and asbestos abatement contract was $375,000, or about $490,000 in current dollars. Using the CPI adjustment that cost today would be $215 per square foot. In 1999, new construction in Key West was about $275 to $300 per square foot. Using a CPI increase of 1.31 puts today's construction costs at $360 to $395 per square foot. The new City Hall is estimated at $367 per square foot. Using this criteria and methodology, rehabilitation of the Glynn Archer School for City office use could cost between $200 and $215 per square foot, including selective demolition, a fire sprinkler, system site work and full building emergency generator.

Glynn Archer Rehabilitation and Addition		
30,000 s.f. @ $200/s.f.	$6,000,000	
30,000 s.f. @ $215/s.f.		$6,450,000
Auditorium		
4,500 s.f. @ $200/s.f.	$900,000	
4,500 s.f. @ $215/s.f.		$967,500

To these costs, building "C" demolition can be added at the previous allowable of $60,000. The Gato Building example included extensive asbestos and lead paint abatement as well as much more extensive selective demolition.

Based on this methodology, total costs, including the auditorium, would have an order of magnitude of between $7,000,000 and $7,500,000.

The Tom Pope/Coastal estimate project nearly $12 million dollars ($11,953,590) for Glynn Archer, the Auditorium, demolition and abatement. We would expect an order of magnitude of $7.5 million or $4.5 million less. Even if we assume that abetment will add $500,000 to our estimate, the difference is still $4 million dollars.

A line item comparison follows. In that breakdown, we used our high range estimates for the building renovations and added $490,000 for asbestos abatement, effectively adding about 7% to our estimate.

525 Angela Street
Glynn Archer Renovation

	Angela Street New	Pope/Coastal Glynn Archer Renovation	Bender/Porter Glynn Archer Renovation
Temp Facilities/Relocation	$ 1,000,000	$ 1,000,000 (1)	$ 1,000,000
Demolition:			
Angela Street	$ 150,000	$ 150,000	$ 150,000
Demolition & Hazardous Material Abatement:			
Glynn Archer A & B Wing & Auditorium		$ 456,370	$ 456,370
Demo "Bldg C"		$ 60,000	$ 60,000
City Hall/Auditorium Bldg. & Utilities:			
Angela Street	$ 9,100,000		
Glynn Archer A & B Wing		$ 9,222,056	$6,450,000
Auditorium		$ 2,215,164	$967,500
Fire Station #2	$ 2,100,000	$ 2,600,000	$ 2,600,000
Parking Structure	$ 2,100,000		
Hardscape/Lighting/Landscaping/Drainage Allowance:			
Angela Street Project	$ 400,000		
Glynn Archer A, B C Wings & Auditorium		$ 490,100	$400,000
Angela Street Surface Parking Improvements		$ 400,000	$ 400,000
Furnishings	$ 1,050,000 (2)	$ 550,000	$380,000
Subtotal	**$ 15,900,000**	**$ 17,143,690**	**$12,863,870**
Contingency:		$ -	
Angela Street Project	$ 1,590,000		
Glynn Archer Structural Contingency		$ 1,270,000	$396,693
Glynn Archer Additional Contingency		$ 444,369	$793,387
Design Fees			
Angela Street Project	$ 1,036,780		
Glynn Archer Structural / Utilities and Hardscape/Landscape		$ 1,100,000	$800,000
Angela Street Surface Parking Improvements and Fire Department Redesign		$ 200,000	$ 200,000
Additional Expenses	$ 123,000	$ - $ 123,000	$ 123,000
Subtotal	**$ 2,749,780**	**$ 3,137,369**	**$2,133,080**
Total Project Costs	**$ 18,649,780**	**$ 20,281,059**	**$15,176,950**
Angela Street - Unused Design Fees	$ (250,000)		
Glynn Archer - Angela Street Design "Sunk Costs"		$ 750,000 Paid	$ 750,000
Total Project Costs Adjusted	**$ 18,399,780**	**$ 21,031,059**	**$15,926,950**
Acquisition Costs	$	$	

Assumptions:

(1) Glynn Archer available for construction [illegible]

(2) Includes Moveable Partition System. Glynn Archer includes traditional FF & E.

D.L. Porter Constructors, Inc.
6574 Palmer Park Circle
Sarasota, FL 34238

Glynn Archer School Renovation Budget

10/5/2010

	ITEM		D GLYNN ARCHER COSTS	E GLYNN ARCHER SF COSTS	F PROJECTED SF COSTS	G GATO SF COSTS	H GATO COSTS
	PRICING INDEX	40%					40,000
Div. 1	GENERAL CONDITIONS		$485,371	*$14.07*	$13.98	$9.99	$399,561
Div. 2	DEMOLITION & ABATEMENT		$754,135	*$21.86*	$14.18	$10.13	$405,081
Div. 3	CONCRETE		$299,293	*$8.68*	$17.37	$12.41	$496,309
Div. 4	MASONRY		$5,645	$0.16	$0.16	$0.12	$4,675
Div. 5	STRUCTURAL STEEL & METALS		$127,273	*$3.69*	$1.71	$1.22	$48,880
Div. 6	WOOD & PLASTICS		$178,350	$5.17	$5.17	$3.69	$147,702
Div. 7	ROOFING & INSULATION		$248,208	*$7.19*	$5.89	$4.21	$168,288
Div. 8	DOORS & WINDOWS		$1,132,691	*$32.83*	$50.22	$35.87	$1,434,941
Div. 9	FINISHES		$734,928	$21.30	$21.30	$15.22	$608,636
Div. 10	SPECIALTIES		$81,133	$2.35	$2.35	$1.68	$67,191
Div. 11	EQUIPMENT		$20,757	$0.60	$0.60	$0.43	$17,190
Div. 12	FURNISHINGS		$18,150	$0.53	$0.53	$0.38	$15,031
Div. 13	SPECIAL CONSTRUCTION		$0	$0.00	$0.00	$0.00	$0
Div. 14	CONVEYING SYSTEMS		$38,403	$1.11	$1.11	$0.80	$31,804
Div. 15	MECHANICAL		$1,209,309	$35.05	$35.05	$25.04	$1,001,498
Div. 16	ELECTRICAL		$1,522,197	$44.12	$44.12	$31.52	$1,260,610
	SUBTOTAL		$6,855,843	$199	$214	$152.69	$6,107,406
	OVERHEAD & PROFIT @	5.0%	$342,792	$9.94	$10.23	$7.31	$292,306
	TOTAL		$7,198,636	$209	$224	$159.99	$6,399,712
	Cost of Bond @	1.0%	$71,986	$2.09	$1.79	$1.28	$51,104
	Building Permit		$190,854	$5.53	$4.70	$3.36	$134,400
	BID TOTAL		$7,461,476	$216.27	$230.48	$164.63	$6,585,216

Notes:

1. Column "H" is the Actual Gato Costs.
2. Column "G" is the Resulting Actual SF Gato Costs.
3. Column "F" is the Gato SF Costs Increased by the Pricing Index of 40%.
4. Column "D" is the Glynn Archer Costs Projected by the Column "F" Values, But Modified to Reflect Scope Differences Between Gato & Glynn Archer.
5. Column "E" is Simply the Result of Column "D" Values. Italics in Column "E" Show What Has Changed from Column "F".