# $HARVARD \circ JOLLY$

Architecture Interior Design Planning Programming Landscape Program Management

BOARD OF DIRECTORS R. John Clees, AIA Jeffrey E. Cobble, AIA Ward J. Friszolowski, AIA Aleiandro F. Gonzalez, AIA Michael K. Hart, AlA William B. Harvard Jr. AIA Steven M. Heiser, AlA Ronald N. Lang, AIA Yvette V. London, AIA James A. Shawhan, AIA Blanchard E. Jolly, Emeritus

#### **DECEMBER 2, 2005**

THE SCHOOL BOARD OF PALM BEACH COUNTY- ROYAL PALM SCHOOL HJ COMM #05087

#### **MEETING DATE: Friday, December 2, 2005**

PURPOSE: Ed Spec and Facility List Review

PARTICIPANTS: Warren Haan Pat Steinkuehler **Richard Jones** Devra Cornman David Swan Nick Piertuszka **Roger Bolling** 

Yvette V. London

Notes by:

#### Review of the original Educational Specification, in relation to the possible 1. school replacement, brought the following conclusions:

The current Ed Spec calls for remodeling and renovatin of the 61,864 Net SF of the Α. existing facility. If the facility will be repalced, the net square footage will be multiplied by a gross square footage factor (consisting of 6% for Mechanical and Electrical spaces plus 27% for walls, overhangs, circulation and covered walks). The gross square footage should be 83,280 Gross SF.

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- **B**. . It was observed that the calculated gross square footage of the actual existing buildings (not including covered walks or portable/concretable classrooms) is slightly larger, approx. 87,884 SF. This could be due to many single loaded corridors which are inefficient. This could be improved in the new design.
- The currently calculated size of the replacement facility is approx. 143,329 Gross C. SF. Although the combined size of the existing campus with the proposed addition is approx. 147,000 Gross SF, the targeted size of the replacement facility should be closer to 143,329 Gross SF. The exact size of each space will be reviewiewed, in details, by Devra and Roger.
- It is understood, that the Pre-K classrooms, although not specifically listed in the Ed D. Spec, are included in the combined total of 50 universal ESE classrooms.
- Review of the proposad location and cost of the portable classrooms required 2. during construction:
  - Per the last project review meeting with the school Principal, we anticipate that 10 Α. additional portable classrooms will be required to relocate students from the area neede for new construction. On site relocation of the existing classrooms is not feasible due to time constraints.
  - Utilization of the existing portable and concreatable classrooms should be re-Β. evaluated to save project funds.

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- C. A separate meeting with the school Principal and other district's departments will be scheduled, prior to the regular project review meeting. This should allow us to find an optimum functional resolution and calculate any additional cost that should be added to the total project cost.
- D. Multiple phases of new construction, to avoid relocation of the existing portables, will not be considered, due to the increased construction cost (approx. 12 months of general conditions plus material cost escalation).
- 3. Advertisement and selection of the CM should start in January.

# HARVARD IOLI

January 5, 2006

David A. Swan, RA

Arch/lecture

Interior Decian Planing Programming

Landacape	David A. Swan, RA
Program Management	Senior Project Administrator
	3300 Forest Hill Blvd. C-331
	West Palm Beach FL 33406
BOARD OF DIRECTORS	Re- Royal Palm School/Classmon Addition (revised proposal)
R. Join Cleve, AlA	Ourse Dealed # (601.9207
Jeffrey E. Cabble, ArA	Conter Project # Tour-tour
Ward J. Fritzplowski, AlA	Harvard Jolly, Inc. # 05087
Yelliam B. Harvard, Jr. AlA	
Steven M. Heltor, AIA	Dear David,
Ronald N. Long. ALA	
Blandtard E. Joly, Emortus	Pursuant to our last meeting, concerning the Royal Palm School Project, we are providing you
,	and all parties involved, with a summary of our detailed discussion.
	The pumpse of our meeting of November 18, 2005, was to evaluate and summarize basefile
	and draubacks of the multi-phased addition and concertainty are added and summarize benefits.
	and that works of the multiplicased addition and remotesing project, as it was originary
	anticipateo, versus a total school replacement.
	Based on the original project description, and the educational specifications, Harvard Jolly, Inc.
	has prepared a detailed phasing plan of the project, showing strategy of each anticipated phase
	supplemented by a probable construction cost. The task required satisfying of the following
	goals:
	1 Draviding adaptists of cational facility is compliance with Stale and increased
	<ol> <li>Providing adequate educational raciility in compliance with State requirements and the lended District Observational</li> </ol>
	ine latest district Standards.
	<ol><li>Minimum disruption of school activities and learning environment.</li></ol>
	<ol><li>Gonstruction without compromising student and staff safety.</li></ol>
	<ol> <li>Correction of the indoor air quality problem.</li> </ol>
	<ol><li>Removal of physical barriers in existing buildings.</li></ol>
	<ol><li>Providing, as much as possible, facility under one roof.</li></ol>
	<ol><li>Improvement of on site pedestrian and vehicular circulation traffic pattern/</li></ol>
	separation of cars and buses.
	<ol><li>Designating space for future expansion.</li></ol>
	We have considered upplace asking and presented the antenna that askin advect of the
	we have considered various options and presented the scheme that achieved most of the
	goods. (nease telef to the enclosed 7-page Package) The plan anticipated 5 phases of
	construction with a 3 year and 6 months minimum construction time.
	In addition, we have contacted three construction management firms, who we worked with in
	the past and/or are currently involved with similar educational projects. The firms are: Center
	Construction, W.G. Mills and Skanska. They all confirmed the following findings:
	<ol> <li>The most recent new construction prices are approximately \$155 to 165/ sq. foot,</li> </ol>
	depending on the project's size and complexity. Small projects could cost as much as
	\$185/sq. foot.
	<ol><li>Due to the recent hurricanes, increased fuel prices, and shortages of labor and</li></ol>
	construction materials, the experienced and anticipated rise of construction prices
and the Commentation of	ranges from 1% to 1.5% per month (please also refer to the enclosed articles).
Sulle 225	Therefore, in multi-phased projects, the guaranteed maximum price (GMP) would be
Pl. Leuderstate, FL 30309	provided for the first phase of construction only. We would not be able to obtain a total
904485-7510	project cost

3. Historically, the cost of renovation and of a substantial remodeling is very similar to the cost of new construction.

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Considering all these findings, we looked into a possibility of a total school replacement. We have presented various functional schemes; all having the following common features:

- The entire new construction would be constructed "around" the existing buildings, allowing uninterrupted operation of the school during construction time.
- All new construction would be completed within one single phase. The second phase
  would include demolition of the existing facility and converting the vacated area into
  recreational and athletic fields.
- The anticipated duration of the project would be reduced to approximately 16 months and therefore the guaranteed maximum price would include entire project.
- 4. The Indoor Air Quality problem would be eliminated.
- The new campus would be more efficient and meet all current code requirements as well as the school district standards.

The following probable construction cost was used to calculate the two project approaches:

#### Additions/Remodeling/Renovation:

Cost of Additions:	63,745 sf x \$165/ sf	=	\$10,517,925
Cost of Remodeling:	83,280 sf" x \$150/ sf		\$12,492,000***
	Subtotal		\$23,009,925
	Cost of Portables		\$ 750,000**
	Total	=	\$23,759,925

\*Existing 61,864 n.s.f. (per ed spec) multiplied by gross factor of 6% M.E.P. and 27% circulation, walls, overhangs, etc.

ING(		61,864
6% of Net (M.E.P.)		3,711
	Subtotal	65,575
27% of Net (Circulation)		17,705
	Total	83,280 Gross sf

\*\*Average cot of 10 Additional portable classrooms (the cost may vary from a minimum of \$500,000 to a max of \$1,000,000)

\*\*\*This cost does not include the anticipated price increases within the next 3.5 years.

#### New Construction/School Replacement:

139,049 sf x \$165/ st	= \$22,943,085
Demolition	\$ 500,000
Subtotal	\$23,443,085
Cost of Portables	\$ 750,000*
Total	= \$24,193,085

"Average cost of 10 additional portable classrooms (the cost may vary from a minimum of \$500,000 to a max of \$1,000,000)

Based on the above described reason and calculations we recommend the total school replacement.

Our current contract is based on the original request for proposal with the construction budget of \$15,350,000, which included construction cost of the remedial air quality project. The MEP and structural design of the indoor air quality project was completed and therefore the MEP fee in the amount of \$209,563 was deducted from our contract. Based on the new scope of work and the increase of construction budget by approximately \$8,843,085, we request an additional service fee in the amount of \$558,000 plus the \$209,563 for the previously deducted MEP services which are now included in our scope of work. (the total fee should be a sum of the original contract amount of \$759,437 + \$558,000 + \$209,563 = \$1,527,000). This lump sum would be adjusted pro rata if the scope of the project or, construction cost changes from our current understanding of it.

We look forward to continuing progress of the project.

Please call us if you need any additional information.

Sincerely, . V. Loudoa ulle

Vette V. London, AIA Vice President Harvard Jolly, Inc.

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# HARVARD • JOLLY

Architecture Interior Design Planning Programming Landscape Program Management

January 5, 2006

David A. Swan, RA Senior Project Administrator 3300 Forest Hill Blvd., C-331 West Palm Beach, FL 33406

BOARD OF DIRECTORS R. John Clees, AlA Jeffrey E, Cobbie, AlA Valed J. Friszcikowski, AlA Alojandro F, Gorzalez, AlA Milliam B, Hanvard, Jr., AlA Steven M, Heiser, AlA Ronakl N, Lang, AlA Yvetik V, London, AlA James A, Shawhan, AlA Blanchard E, Jolly, Emertus Re: Royal Palm School - Probable Construction Cost - Additional Information Harvard Jolly Project # 05087

Dear David,

As requested, we are providing you with this supplemental list of reasons why, in our opinion, the anticipated cost of remodeling and renovation of the existing facility may cost as much as \$150.00/ square foot. The reasons are based on our understanding of the anticipated upgrade of the existing school, not only to accommodate the new and expanded function, but also to comply with the current State and Palm Beach County School District's Educational Facility Standards.

- To address the indoor air quality problem, the entire facility will have all finishes and all HVAC systems replaced. Consequently, the electrical systems will be upgraded and a new lighting system will be provided. There will be new suspended ceilings dropped to conceal the mechanical and electrical equipment. At the same time, to bring the facility to the most current Code and District Requirements, new fire protection, fire alarm, and communication systems will be installed.
- It is our understanding that, in many areas, the existing restroom facilities need to be substantially upgraded to assure a better, barrier-free accessibility.
- The exterior openings such as doors and windows should be replaced with impact and wind resistant assemblies. Although such upgrade is not mandated by Code, it would be highly recommended. The entire building envelope would be evaluated for compliance with current Code and energy efficiency.
- 4. Relocation and expansion of functions including but not limited to administration, student services, media center, dining and kitchen within the existing facility, will require relocation of walls and doors. Roofing and climate control of the open courtyards is also considered in order to eliminate the interior circulation barriers.
- 5. Relocation of the existing greenhouse (60' away from other buildings) is included.
- 6. This multi-phased remodeling would require many temporary arrangements and protection for the relocated students, as well as additional construction barriers and work beyond standard construction hours. In addition, in today's construction market, the multi-phase project price cannot be guaranteed beyond duration of the first phase.

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www.HarvardJoity.com AAC000119 Please call if you need additional information.

Sincerely,

Yvette V. London, AIA Vice President

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#### EDUCATION SPECIFICATION COMPARISON

	Royal Pa	alm School		
DISTRICT: PA	LM BEACH COUNTY			
LEVEL. FIUN			Ne	w Student Stations: 56
			Prop	osed
Spaces	DESCRIPTION	SREF Square Foot	Square Foot Per Unit	Square Foot Total
	ADMINISTRATIVE (Elementary Prototype)	200		
4	Administrative Office	700	175	7
1	Bookkeeper	125		1
1	Principal's Secretary	158		1
1	General Reception / Secretary	/50		/
1	Computer Area / Data Processor	145		1
	Conference (50 NSF to Principal and 200 NSF to Guidance			
1	Conference)	600		6
1	Clinic (Board approved Middle School prototype)	653		6
1	Records Vault / Student Records	289		
	Restrooms (out of staff restroom allotment)	209		
1	Textbook Storage	337		3
1	Itinerant / Attendance Clerk	125		1
1	School Police / Video Surveillance	175		1
		9,229	1/9	<u>, see a se</u>
	STUDENT SERVICES			
1	Counselor	175		1
4	Itinerant	500	125	5
1	Conference (from Administrative Conference)	200		2
	STUDENT SERVICES SUBTOTAL	8/5	125	8
	ART (Elementary Prototype)			
	Laboratory	1,036		1,03
	Kiln	80		
	Material Storage	155		1
	Restroom, Student (from allotment)	1.00		
	ART SUBTOTAL	1,421	0	1,4:
	SKILLS DEVELOPMENT LABORATORY (1/400 stations per SREF without capacity)			
2	Laboratories and Storage	1,800	900	1,80
-	SKILLS DEVELOPMENT LABORATORY SUBTOTAL	1,800	900	1,8
	CUSTODIAL	· ·		
	Central Receiving, Toilets, Showers, Custodial Closets	1,060		1,0
	Flammable Storage	155		1:
1	Equipment Storage	500		5
1	Golf Cart Storage (from dining)	150	•	1:
	COSTODIAL SUBTOTAL	1,000	<u> </u>	
	EXCEPTIONAL STUDENT EDUCATION			····· ••••
50	Self-Contained Classroom		900	45,0
25	Shared Kitchen		100	2,5
25	Student Restrooms - Male / Female		. 50	2,50
25	Student Restroom and Showers		100	2,50
	SUBTOTAL	0	- 1,190	53,54
2	Material Storage		900	1,80
2	Student Restroom - Male / Female		40	
	SUBTOTAL		1,095	2,11
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				· · · · ·
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DISTRICT: PA	Royal Palm School				
LEVEL: Pre-K			Ne	w Student Stations: 564	
		SBEE Square Foot	Prop	osed Square Foot	
Spaces	DESCRIPTION	Total	Per Unit	Total	
3	Supplementary Instruction		350	1,050	
	SUBTOTAL	0	- 350	1,050	
2	ESE Resource Room	672		1,344	
<u>2</u>	Student Storage	100		310	
<u> </u>	SUBTOTAL	40		00 1.734	
	GOBIOTAL			And Andrewski and And	
1	ESE Changing Room / Restroom	150		150	
1	ESE Department Storage	200		200	
	SUBTOTAL	350		350	
3	ESE Vocational		1,185	3,555	
1	ESE Physical / Occupational Therapy Lab			1,185	
		0	1,185	4,740	
<u> </u>					
	Dising (150 NSE to Custodial Colf Cart Storage) (combine				
1	with Multipurpose)	2 706		2 708	
<u>                                      </u>	Kitchen (including Office and Restroom - prototype)	3,600	·····	3,600	
1	Chair Storage	193		193	
1	Staff Dining / Lounge	700		700	
1	Staff Restrooms (out of allotment)				
1	Student Restrooms (out of allotment)				
	FOOD SERVICE SUBTOTAL	8,199	0	8,199	
	MEDIA CENTER (Elementary Prototype)				
1	Reading Room / Stacks (150 NSF from Tech Processing)	2,517		2,517	
	Brofessional Library / Media Broduction / Conving Poom	402		462	
	Periodical Storage (combined with Reading / Stacks)	193		103	
1	AV Storage / Maintenance and Repair / CCTV Storage	665		665	
1	Library Media Specialist's Office	175		175	
1	CCTV Studio - Production and Control (100 NSF from Stage				
1	Control Booth) (500 NSF for Studio and 275 NSF for Control)	775	· · · · · · · · · · · · · · · · · · ·	775	
	Technical Processing (combined with Library Media				
1	Specialist's Office) (150 NSF to Reading / Stacks)	176		176	
1	Small Group Listening (combined with Reading / Stacks)	96		96	
	Student Restroom (out of allotment)		·····		
		5 739		5.739	
				· · · · · · · · · · · · · · · · · · ·	
	MULTIPURPOSE (Elementary Prototype)				
1	Multipurpose Room (combine with Dining)	1,494		1,494	
	MULTI-PURPOSE SUBTOTAL	1,494	0	1,494	
				·	
	MUSIC (Elementary Prototype)		· · · · · · · · · · · · · · · · · · ·		
	Laboratory Material Starsge / Poference Beem	1,456		1,456	
	Practice Room	255		255	
1	Restroom Student (from allotment)	10		10	
<u> </u>	MUSIC SUBTOTAL	1.781	0	1.781	
			TO PARLY A COMPARISON NUMBER OF STREET		

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#### EDUCATION SPECIFICATION COMPARISON

	Royal/PalmSchool			
DISTRICT: P	ALM BEACH COUNTY			
LEVEL: Pre-	K - 12			
- <b>1</b>			Ne Ne	w Student Stations: 564
				losed
		SREF Square Foot	Square Foot	Square Foot
Spaces	DESCRIPTION	Total	Per Unit	Total
	PHYSICAL EDUCATION			
1	Covered Play Area	3,000		3,000
3	PE Storage	315	105	315
	Teacher Planning with Restroom at covered play area (from			
1	allotment)			
1	Restroom, Student at covered play area (from allotment)			
1	Weight Room			1,800
	Other PE Spaces			
1	PE Shower Female			225
1	PE Shower Male		-	225
1	ESE Therapy Pool			1,755
	PHYSICAL EDUCATION SUBTOTAL	3,315	105	7;320
	RESTROOMS (adjust square footage for FACBC and parity			
	requirements)			
	Public Restrooms	193		193
	Student Restrooms	1,446		1,446
	Staff Restrooms (near classrooms and Teacher Planning)	386		386
	RESTROOMS SUBTOTAL	2,025	0	2,025
	·			
	STAGE (Elementary Prototype)			
1	Indoor Stage	990		990
1	Stage Storage	482	Annual Contractor	482
2	Dressing Room (folded into one space)	482		482
1	Control Booth (to CCTV Studio-Production)			
	STAGE SUBTOTAL	1,954		1,954
	TEACHER PLANNING			
1	Physical Education	100		100
2	Teacher Planning Offices		400	800
	TEACHER PLANNING SUBTOTAL	100	400	900
	OTHER SPACES			
1	Green House			1,900
1	Audiology Lab			400
	OTHER SPACES SUBTOTAL	0	· · · · · · · · · · · · · · · · · · ·	2,300
	TOTAL			
L	Mechanical & Electrical (6%)	110,522		106,469
				6,388
	TOTAL NET SQUARE FEET	104,266		112,857
	CIRCULATION & WALL THICKNESS (27%)			30,472
	TOTAL GROSS SQUARE FEET	140,363		143,329

APPROVED FACILITIES LIST

63,745 New GSF 61,864 Existing NSF 125,609

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# CASTALDI ANALYSIS FOR THE SCHOOL DISTRICT OF PALM BEACH COUNTY THE ROYAL PALM SCHOOL

# **NOVEMBER 14, 2005**

# STUDENT POPULATION

The Royal Palm School is a special education center and is part of the School District of Palm Beach County. It serves students from ages three through twenty-one. Students at Royal Palm School have a wide variety of special needs, including mental, physical, behavioral, communication, and sensory disabilities. The unique characteristics and special needs have to be given careful consideration when determining whether to modernize or replace the existing building

# EXISTING FACILITIES

The current campus for the Royal Palm School is located on Lawrence Road in the suburban Lantana area of Palm Beach County. It was built in 1987 as a special needs facility with a current day capacity of 280 student stations.

At present, in order to accommodate the growth of students at the facility, including a substantial amount of prekindergarten students, there are 22 relocate-able classrooms scattered throughout the campus.

## GENERAL CONDITION OF PERMANENT BUILDINGS:

- The Mechanical system requires complete replacement in order to remedy severe indoor air quality issues that have seriously affected the delicate learning environment.
- The structural system of the buildings seriously constrains expansion and/or modifications of the existing spaces
- The lighting in the entire facility is outdated and requires replacement
- Due to the mechanical system replacement all of the ceiling and floor finishes throughout the facility will require to be replaced.



- Life safety issues have to be corrected such as remediation of the fire-rated corridor system.
- Exterior bearing walls show no signs of settlement or movement.
- Most of the roofing membrane and gutter systems are in fairly good condition.
- Condition of exterior brick walls is acceptable.
- Windows and doors are in acceptable condition.

#### GENERAL CONDITIONS OF SITE:

- Re-Locatable Classrooms are scattered throughout the site which are disruptive to the learning environment and creates security issues as well
- Existing parking lot is in good condition but will have to be expanded for the increased capacity.

#### **EXPANSION NEEDS:**

- Educational Specifications have been developed for the school to increase both the core and student station capacity by over 63,000 square feet and 284 students. This more than doubles the current capacity of the facility.
- In order to keep the Staff and Students on campus without relocation, the expansion and remodeling of the facility would require seven phases of construction which would take almost 3 years to complete.
- By contrast, replacement of the facility in compliance with the new educational specifications would require only 16 months to complete, including demolition and sitework.and would not require disruptive relocation of staff and students during the process.

## **RECOMMENDATIONS:**

- A. Capital Outlay Classification: C1; K through 12
- B. Student Transfers: None
- C. Site Expansion: None
- D. Site Development: Create sufficient water retention, and correct site drainage.
- E. Site Improvement: Create bus/parent drop-offs and delivery area. Accommodate new building facilities with appropriate site circulation.
- G. Remodeling: Extensive remodeling required for HVAC replacement and expansion of existing core facilities
- H. Renovations: All classroom areas are required to be renovated
- F. New Construction: See Educational Specifications.
- G. New Student Capacity: 564

MPA Architects. Inc.



1801 Centrepark Drive East, Suite 175 West Palm Beach , FL 33401 (561) 683-7000 Fax (561) 478-3922 www.mpa-pb.com

# CASTALDI FORMULA CALCULATIONS

DOE refers to the Castaldi Generalized Formula for School Modernization when considering the rehabilitation or replacement of a facility.

There are two approaches discussed in the Formula. One approach focuses on actual economic considerations and is noted as Rules of Thumb. The second approach is the Castaldi Generalized Formula, which is a mathematical method to evaluate the economic feasibility of modernization versus replacement.

## RULES OF THUMB:

Rule 1: If the cost of modernization is 40% or more of replacement, then the decision to modernize is questionable.

Rule 2: If any two of the following items are required, modernization should be questioned.

- A. Major replacement of plumbing and air conditioning systems.
- B. Total replacement of electrical wiring.
- C. Basic structural changes involving space arrangements.
- D. Complete replacement of roofing.
- E. Complete revamping of the fenestration pattern.

Both rules of thumb are more related to the expenditures required for modernization. Rule 1 identifies the actual expenditures that may be required, and although Rule 2 does not require a conversion to dollars, it does compare direct costs as a percentage of the total cost involved modernizing a facility.

#### CASTALDI FORMULA:

( Ce + Ch + Cs )	is less than	<u>R</u>

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- Ce Total Cost of Educational Improvements
- Ch Total Cost of Improvement in Healthfulness (physical, psychological, etc.)
- Cs Total Cost for Improvements in Safety
- Ia Estimated Index of Educational Adequacy (0-1)
- Lm Estimated Useful Life of the Modernized School
- R Cost of Replacement of School Considered for Modernization
- Lr Estimated Life of New Building

MPA Architects. Inc.



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## CASTALDI GENERALIZED FORMULA:

The formula considers the initial cost, the expected life of the facility, and the ability of an existing facility to physically and efficiently adapt to new functions. The formulas are based on the rate of depreciation. The fundamental determinate is the annual rate of depreciation as represented by the amount of capital outlay required to provide a school that is adequate in every respect. The formula postulates that the financial feasibility is not based on the initial construction cost but on the rate at which the initial cost is likely to depreciate over a period of years. As a requisite to modernization, the Castaldi Generalized Formula has developed a list of seven questions that must be answered in the affirmative to qualify for modernization.

## **REQUISITE CONDITIONS FOR MODERNIZATION:**

Before modernization can be justified as the best expenditure of public funds in any school district, the answer to every question listed below must be in the affirmative.

1. Is the school building under consideration needed in its present location for at least 75 percent of its remaining useful life after modernization?

**Answer:** This is a policy question for the board and facilities department, we assume yes.

2. Is it impractical to distribute the pupil load of the school considered for modernization among other nearby adequate schools?

**Answer:** This is a policy question for the board and facilities department, we assume yes.

- Does the structure lend itself to improvement, alteration, remodeling and expansion?
   Answer: No.
- Does the modernized building fit into a well conceived long-range plan?
   Answer: No.
- 5. Can the site of the school considered for modernization be expanded to meet minimum standards for the ultimate enrollment envisioned on the site?
   Answer: Yes.
- 6. In accordance with the Castaldi Generalized Formula, is the annual cost of capital outlay for modernization less than it would be for a replacement building?

Answer: No.

7. Has a blue-ribbon committee concluded that educational obsolescence of a given building can be substantially eliminated through the process of modernization?

**Answer:** Obsolescence **cannot** be eliminated for the buildings.



# CASTALDI FORMULA

ltem	Factor	Remarks
Remodelir	ng Costs	
		Low Number - Areas
		like Cafeteria would
Cost of Remodeling per SF	\$70.00	Cost much more
		Calculated 87,884
SF of Remodeling	87,884	w/out covered walks
Sub Total	\$6,151,880.00	
Cost of Additions per SF	\$150.00	
SF of Additions	63,745	
Sub Total	\$9,561,750.00	
		Close to Project
Total	\$15,713,630.00	Budget
New Constru	ction Costs	
Cost of New Construction per SF	\$135.00	Elementary School for 06 start is \$16,000,000 = \$128/SF
SF of New Construction	147,000	Existing 87,000 plus 60,000 new
Total	\$19,845,000.00	
IA = Estimated index of educational adequacy	0.75	
Expected Life of Existing Facility	65	
Age of Existing facility	18	
LM = Estimated useful life of Modernizing	47	
R = Replacement Cost of new Building	\$19,845,000.00	
LR = Useful Life of new Building	65	
Contingency Factor	1.2	DOE uses 1.2
CE + CH + CS	\$15,713,630.00	

Castaldi Formula			
<u>CE + CH + CS &gt; R</u> (LM)(IA) LR	\$534,932.09 > \$305,307.69		
Replacement is Justified			



## **CONCLUSION:**

Overwhelmingly, the Castaldi Formula supports the demolition of the existing buildings. This conclusion is also based on the fact that none of the buildings recommended for demolition are considered historically significant.

## MISCELLANEOUS:

- COST OF RELOCATION OF STUDENTS:
- DEMOLITION COSTS:
- FILL COSTS:
- PHASED CONSTRUCTION COSTS:
- AVERAGE LIFE OF EXIST. BLDGS:
- LIFE EXPECTANCY OF EXIST. BLDGS:
- LIFE EXPECTANCY OF NEW BLDGS:
- No relocation required \$180,000 Included Included 18 yrs. 65 yrs. 65 yrs.

## **End of Report**

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