



Building Replacement / Raze

Analysis and Reports

Don Whitehead, AIA, LEED AP

Safe and Efficient Facilities Design Manager

Mark Weigly, Architect, LEED AP FCP

Educational Facilities Construction Planning Manager







Who / What is Castaldi?

- ◆ Person
- ◆ Process
- ◆ Formula

• Dr. Basil “Doc” Castaldi

- Dean at Bristol Community College
- Assistant to the President - Southeastern Massachusetts Institute of Technology, now known as UMass Dartmouth;
- Dean of Continuing Education - Fisher College
- Authored five textbooks

Process

- ◆ Educational Facilities – Planning, Modernization, and Management
- ◆ Chapter 16 – Modernization of Educational Facilities

Castaldi Formula

$$\frac{(C_e + C_h + C_s)}{(L_m)(I_a)} > \frac{R}{L_r}$$

- ◆ C_e = Cost of educational improvements
- ◆ C_h = Cost of healthfulness improvements
- ◆ C_s = Cost of safety improvements
- ◆ L_m = Life of modernized school
- ◆ I_a = Educational Adequacy
- ◆ R = Replacement cost of new building
- ◆ L_r = Life of new building

Castaldi Formula

$$\frac{\text{Modernization Cost}}{\text{(Remaining Life)(.75)}} > \frac{\text{New Construction Cost}}{50 \text{ years}}$$

Educational Adequacy

- Educational adequacy is the degree to which a school's facilities can adequately support the instructional programs, and mission of a school and/or school district. It is an essential element in preparing aging facilities for a 21st century educational paradigm.
- Educational adequacy addresses what must be done to bring a building up to a standard that meets both the educational and instructional needs of the student.

Timing

- FDOE's review of a request for building replacement/raze is part of the survey validation process (s. 1013.03(10) and s. 1013.31, F.S.)
- When
 - Master plans
 - Survey recommendations
 - Spot survey
- Who
 - Professional Services
 - Own Staff
- DOE Determination
 - Concurrence letter
 - Approved survey recommendation



Office of Educational Facilities
Florida Department of Education

Room Condition Change
Building Replacement/Raze

District/Community College _____ Contact Person _____

_____ Phone _____

Facility/Campus Name _____ Facility Number (school districts only) _____

Building Number(s) _____ Parcel/Site Number(s) _____

This Proposed Project will:

- Change the condition of permanent rooms from satisfactory to unsatisfactory (if yes, go to Section I and complete certification in Section III). (Not applicable to community colleges)
- Change the condition of permanent rooms from unsatisfactory to satisfactory (if yes, go to Section I and complete certification in Section III). (Not applicable to community colleges)
- Raze permanent building(s) (if yes, go to Section II and complete certification in Section III).
- Replace permanent building(s) (if yes, go to Section II and complete certification in Section III).
Major Capital Outlay Funding Source(s) – Original Building _____
Major Capital Outlay Funding Source(s) – Replacement Building _____

This form is not required for razing a single, freestanding structure that is less than 750 NSF and is debt free, or multiple small structures on a single campus whose total area is less than 750 NSF and are debt free. This form must be completed for any structure 750 NSF or greater and any structure, regardless of size, that is not debt free.

A. DISTRICT/COMMUNITY COLLEGE CERTIFICATION

The district/community college must submit this certification document, completed and signed by the appropriate school officials, along with all required or necessary supporting documentation pertaining to the proposed project.

The _____ County District School Board/Community College Board hereby certifies that:

I. CONDITION CHANGE: (Not applicable to community colleges)

1. All room condition changes are consistent with State Requirements for Educational Facilities (SREF) standards and the Florida Fire Prevention Code (FFPC) requirements for the condition of space.

II. RAZE/REPLACE PERMANENT BUILDING(S):

1. All fund sources have been researched and no current indebtedness or outstanding debt exists for the building(s) that will be razed and/or replaced.
2. Funding Source(s):
 - a. Original Building: _____

- b. If Replaced: _____
3. Voters of the district have approved local bonding for the project: Yes/No
 - a. Date of voter approval: _____
4. Imminent danger exists for the building(s) that will be razed and/or replaced.

III. CERTIFICATION SIGNATURES:

Director of Facilities Planning Date _____

Superintendent/President Date _____

Board Chair Date _____

NOTE: Certification is required by the Superintendent and Director of Facilities Planning for room condition changes. Certification is required by the Superintendent/President and Board Chair to raze or replace permanent buildings.

**II.2 Funding Source(s)
Original Building
If Replaced**

Submit signed form and supporting documents to:
Office of Educational Facilities, Room 1054
Florida Department of Education
325 West Gaines Street
Tallahassee, Florida 32399-0400

• Funding Sources

Responsive

- PECO
- CO & DS
- COPS
- Discretionary millage
- Classrooms for Kids
- Impact fees
- Local bond
- Sales tax bond
- Donations

Non Responsive

- Blank answer
- District work plan
- Local Funds
- School Tax

B. Procedures and Processes Instructions

any major systems (include date, if applicable) that have been replaced HVAC, fire alarm, roof, plumbing, drainage, etc. Provide a general bus remodeling, renovation, and addition, and year completed.

- condition of spaces).
 - i. In order to change the space condition from satisfactory to unsatisfactory the district must certify that the space is no longer physically safe or suitable for occupancy:
 - 1. Unsatisfactory space is typically designated as such due to compromising effects on the structural integrity, safety, or excessive physical deterioration of a building.
 - 2. Typically, space condition should be the same, either satisfactory or unsatisfactory, for all rooms in a permanent building.
 - 3. Space that has been determined to be unsatisfactory should not be occupied.
 - 4. Application of a facility replacement formula, such as the Castaldi generalized formula for modernization or other similar facilities study, does not necessarily mean that the condition of the identified spaces is unsatisfactory. The condition code cannot be changed simply due to the results of a planned replacement unless the integrity of the space meets the criteria identified to classify the space as unsatisfactory.
 - ii. In order to change the space condition from unsatisfactory to satisfactory the district must certify that the space has been successfully reconditioned to meet all applicable regulations regarding occupancy requirements.
- 2. OEF Review:
 - i. Site visit by OEF staff, when necessary.
 - ii. Concur with district rationale, data, and analyses:
 - 1. Building(s) approved as unsatisfactory; OEF will make the room condition code changes in FISH.
 - 2. Building(s) approved as satisfactory; OEF will make the room condition code changes in FISH.
 - iii. Disagree with district rationale, data, and analyses:
 - 1. Building(s) not approved as unsatisfactory.
 - 2. Building(s) not approved as satisfactory.
- 3. OEF Notify District of Findings and Decision:
 - i. OEF staff will analyze the district's data along with all supporting documentation, coordinate any further reviews with the district, make a final decision regarding the proposed room condition

- 2. COST ANALYSIS (Building by Building):
 - i. Castaldi Analysis (or other cost analysis formula to support the proposed project).
 - ii. The following five questions must be addressed:
 - 1. How many years will modernization extend the useful life of the modernized building(s)?
 - 2. Does the existing building(s) lend itself to improvement, alteration, remodeling, and expansion? If no, explain why not.
 - 3. Explain how a modernized and a replacement building(s) fits into a well-conceived long-range plan of the district/community college?
 - 4. What is the percentage derived by dividing the cost for modernization by the cost for a replacement building?
 - 5. A committee of district officials and independent citizens from outside the school attendance zone has determined that the replacement of the building(s) is financially justified and no other alternative is feasible? (Not applicable to community colleges)
 - iii. Detailed scope of work for modernization of the existing building(s).
 - iv. FISH building plan and/or schematic drawings of the existing building with FISH room numbers.
- 3. OEF Review:
 - i. Site visit by OEF staff, when necessary.
 - ii. Educational adequacy review.
 - iii. Concur with district/community college rationale, data, and analyses:
 - 2. Recommend replacement of building(s).
 - 3. Recommend razing building(s).
 - iv. Disagree with district/community college rationale, data, and analyses:
 - 4. Building(s) not approved to be replaced.
 - 5. Building(s) not approved to be razed.
- 4. OEF Notify District/Community College of Findings and Decision:
 - i. OEF staff will analyze the district's/community college's data along with all supporting documentation, coordinate any further reviews with the district, make a final decision regarding the disposition of the proposed project, and provide a timely response either approving or denying the proposed request.

C. RAZE/REPLACE PERMANENT BUILDING(S)

- C. RAZE/REPLACE PERMANENT BUILDING(S)
 - 1. RATIONALE (provide the following information, as appropriate, to justify razing/replacing permanent buildings):
 - i. Detailed explanation of need for the proposed project and the expected benefit to the district/community college.
 - ii. General scope of the proposed project.
 - iii. Building age and year of construction.
 - iv. Existing capacity of building(s), include the number of student stations, classrooms, and other instructional spaces.
 - v. Current number of students housed and the projected number of students to be housed in the affected building(s).
 - vi. Current educational plant survey recommendations and capacity.
 - vii. What alternatives have been considered besides razing/replacement and why are the alternatives not feasible?
 - viii. School board/community college board approval of the concept of razing/replacing permanent buildings.
 - ix. Building condition/engineer study (optional).
 - x. Impact if the proposed project is not approved.

C. RAZE/REPLACE PERMANENT BUILDING(S)

1. RATIONALE (provide the following information, as appropriate, to justify razing/replacing permanent buildings):
 - i. Detailed explanation of need for the proposed project and the expected benefit to the district/community college.

Need and Benefit

Responsive

- Why is the project needed?
- What is so wrong that each building needs to be replaced?
- What is the return on investment?

Non Responsive

- Raze building for future sale of property.
- Doesn't fit master plan.

C. RAZE/REPLACE PERMANENT BUILDING(S)

1. RATIONALE (provide the following information, as appropriate, to justify razing/replacing permanent buildings):
 - ii. General scope of the proposed project.

Scope

Responsive

- Based on COFTE forecast expanded capacity is needed.
- Building is structurally unsound (show documentation for each building).
- Building has multiple system failures (show documentation for each system in each building).

Non Responsive

- Building is proposed for demolition.
- Meet new master plan

• Florida Building Code – Existing Building

Section 101.2 Scope

- The provisions of the Florida Building Code, Existing Building shall apply to the repair, alteration, change of occupancy, addition to and relocation of existing buildings.
- Exception: For the purpose of public educational facilities and state licensed facilities, see Chapter 4, Special Occupancy, of the Florida Building Code, Building.

C. RAZE/REPLACE PERMANENT BUILDING(S)

- iii. Building age and year of construction.

Age of the different spaces in a building can vary, so describe in detail each portion that has a different age.

C. RAZE/REPLACE PERMANENT BUILDING(S)

- iv. Existing capacity of building(s), include the number of student stations, classrooms, and other instructional spaces.
- v. Current number of students housed and the projected number of students to be housed in the affected building(s).
- FDOE must look at need for capacity on a districtwide basis when validating a survey.

C. RAZE/REPLACE PERMANENT BUILDING(S)

- vii. What alternatives have been considered besides razing/ replacement and why are the alternatives not feasible?

• Alternatives

- Modernization
- Rezoning
- Relocation of building

- Why do the alternatives not work?
 - Provide data
 - Document with specific detail

C. RAZE/REPLACE PERMANENT BUILDING(S)

- viii. School board/community college board approval of the concept of razing/replacing permanent buildings.
- ix. Building condition/engineer study (optional).

• Board Approval of Concept

Responsive

- The board approved the replacement of building 12 during its board meeting of August 21, 2018.

Non Responsive

- No answer

• C. RAZE/REPLACE PERMANENT BUILDING(S)

- x. Impact if the proposed project is not approved.

• Impact if not Approved

Responsive

- Educational answer: document inadequacy
- Physical constraints: document existing needs
- Efficiencies: document savings
- Consolidation: document reductions in operating/maintenance costs

Non Responsive

- Castaldi report proves need to replace building
- A gap analysis between the existing building and the facility list

C. RAZE/REPLACE PERMANENT BUILDING(S)

- xi. Other relevant data; identify any major systems (include date, if applicable) that have been replaced or upgraded, e.g., electrical, HVAC, fire alarm, roof, plumbing, drainage, etc. Provide a general scope of work for any previous remodeling, renovation, and addition, and year completed.

Other Relevant Data

- Have any repairs, replacements or upgrades been made to any of the building systems?
- What is the maintenance and replacement plan for the roof and all of the building systems?
- What is a particular issue and what is the proposed solution?
- What are the lacking technology requirements required by educational specifications?

C. RAZE/REPLACE PERMANENT BUILDING(S)

- 2. COST ANALYSIS (Building by Building or portion of building with the same age):
 - i. Castaldi Analysis (or other cost analysis formula to support the proposed project).

Things to consider

- Capacity need
- Space usage & size
- Maintenance and replacement schedule of the roof
- Door & window operation, maintenance and replacement schedule
- HVAC and lighting systems maintenance and replacement schedules
- Technology needs
- Indoor environmental quality (IEQ)
- Asbestos abatement schedule
- Life safety corrections
- Outstanding maintenance items

C. RAZE/REPLACE PERMANENT BUILDING(S)

- ii. The following five questions must be addressed:
 - 1. How many years will modernization extend the useful life of the modernized building(s)?

• Years Building Life Extended

Responsive

- Life of the building will be extended 10 years because of the improvements that would be made (provide documentation).

Non Responsive

- None

C. RAZE/REPLACE PERMANENT BUILDING(S)

- 2. Does the existing building(s) lend itself to improvement, alteration, remodeling, and expansion? If no, explain why not.

• Building lends itself to improvement

Responsive

- Expansion is limited by site restrictions (provide documentation)
- Structural limitations (document)

Non Responsive

- No
- Cost of modernization is unreasonably high

C. RAZE/REPLACE PERMANENT BUILDING(S)

- 3. Explain how a modernized and a replacement building(s) fits into a well-conceived long-range plan of the district/community college?

• A well-conceived long-range plan

Responsive

- Modernization is limited by site restrictions (provide documentation)
- Replacement planned (document)

Non Responsive

- Modernization of existing buildings does not fit the long-range plan
- The replacement buildings fit better

C. RAZE/REPLACE PERMANENT BUILDING(S)

- 4. What is the percentage derived by dividing the cost for modernization by the cost for a replacement building?
- Show calculations for each building

C. RAZE/REPLACE PERMANENT BUILDING(S)

- 5. A committee of district officials and independent citizens from outside the school attendance zone has determined that the replacement of the building(s) is financially justified and no other alternative is feasible? (Not applicable to community colleges)

• Committee

Responsive

- Provide documentation of meetings

Non Responsive

- No response
- Committee does not exist
- Independent citizens not included

C. RAZE/REPLACE PERMANENT BUILDING(S)

- iii. Detailed scope of work for modernization of the existing building(s).
- What work needs to be performed to bring each building up to current standards for each existing building and today's educational programs?

Scope of Work to Modernize

Responsive

- Kitchen is 6,256 NSF with documentation that it is undersized and detailed cost of remodeling
- Provide pictures of moisture intrusion through windows and detailed cost of replacement.
- Provide pictures of failing plumbing fixtures and detailed cost of replacement.
- Dishwasher no longer used. District uses disposable plates and flatware. Provide documentation and detailed relocation cost and remodeling cost.

• Scope of Work to Modernize

Non Responsive

- Existing building will not be modernized
- 5% operable glazing required
- Required to meet EHPA requirements
- Item in good to fair condition but needs to be replaced
- Wood framing not permitted by code.
- Classroom “Pod” design not compatible with current district concept.
- Not compliant with current code or ADA

C. RAZE/REPLACE PERMANENT BUILDING(S)

- iv. FISH building plan and/or schematic drawings of the existing building with FISH room numbers.
- Current and matches FISH inventory
- Aerial site plan with all buildings labeled
- Proposed site plan, if available

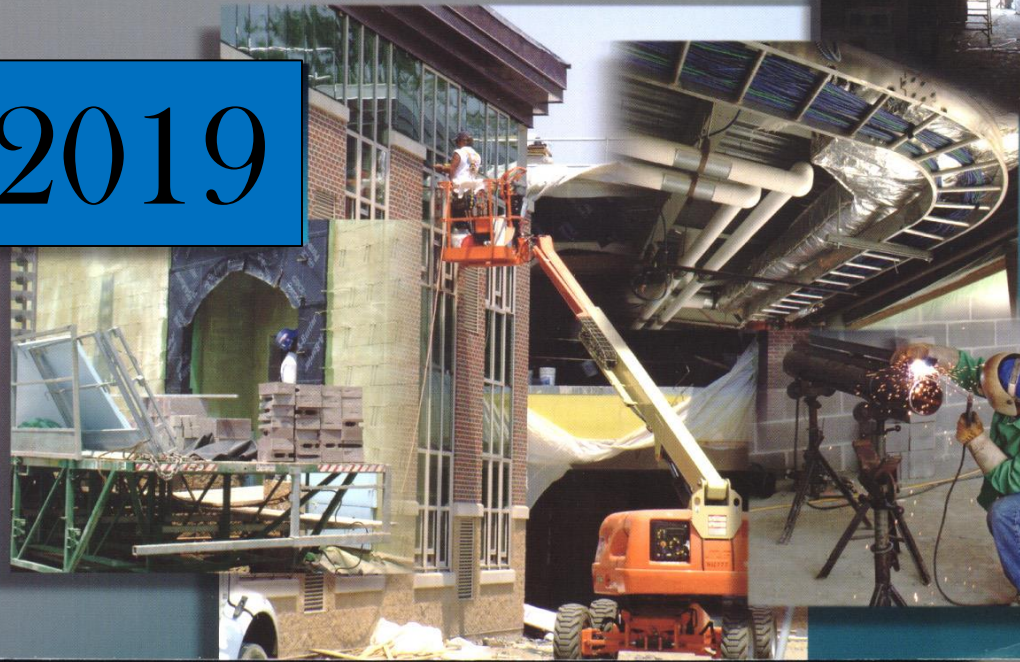
RSMMeans

Facilities Maintenance & Repair Cost Data

16th Annual Edition

- *Corrective Maintenance & Repairs*
- *Preventive Maintenance*
- *General Maintenance*
- *Facilities Audits*

2019



RESOURCES

Cost guidelines

Photographs

• Building Cost Information

- Provide detailed cost estimates with supporting documentation for new construction, remodeling, renovation, repairs and maintenance.
- Use current supporting documentation for all cost estimates.
- Provide relevant data for each building.

Pointers

- 5 pages or 250 pages?
- Do not send:
 - survey recommendations
 - K-12 FISH or college inventory
- Organization per RCC-BRR Form
- Consider tabs for each building or each system within each building
- Timing of building replacement
- Data, data, data – be specific and document

Letter of Concurrence

Our concurrence with the analysis does not:

- result in these buildings being classified as unsatisfactory;
- prevent the district from performing required maintenance, minor renovation or minor remodeling of the buildings to maintain their present use in the future; or
- authorize the razing of these buildings. Under section 1013.28, Florida Statutes, razing a school building requires an approved educational plant survey recommendation. Should the district desire to raze any of these buildings, an approved survey recommendation must first be obtained from the OEF.

• Historical Resources

- Under section 1.5 of the State Requirements for Educational Facilities, when a construction, remodeling or renovation project involves a historical resource, the district must notify the Division of Historical Resources, Department of State, and afford it a reasonable opportunity to comment on the project. Please contact:

Timothy Parsons, Ph.D., RPA
Florida Department of State
Division of Historical Resources
Compliance and Review Section
R. A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250
Phone: 850-245-6333 www.FLDOE.org

**You need to
prove your case.**



Questions



www.FLDOE.org



www.FLDOE.org