

CHAPTER 13

**ADMINISTRATIVE RULES AND REGULATIONS
(NEW JERSEY EDUCATIONAL FACILITIES
AUTHORITY)**

Authority

Unless otherwise expressly noted, all provisions of this Chapter 13 were adopted by the New Jersey Educational Facilities Authority pursuant to authority delegated at N.J.S.A. 18A:72A-5 and were filed and became effective August 21, 1970 as R.1970, d.100 (Exempt. Practice Rule). See: 2 N.J.R. 73(a).

Chapter Expiration Date

Chapter 13, Administrative Rules and Regulations (New Jersey Educational Facilities Authority), expires on July 1, 2006.

CHAPTER TABLE OF CONTENTS

SUBCHAPTER 1. MANUAL FOR ARCHITECTS

- 9:13-1.1 New Jersey Educational Facilities Authority (E.F.A.)
- 9:13-1.2 Construction agency
- 9:13-1.3 Participating college
- 9:13-1.4 Division of Building and Construction
- 9:13-1.5 Project
- 9:13-1.6 Definitions

ARCHITECTS

- 9:13-1.7 General provisions
- 9:13-1.8 Contract and insurance
- 9:13-1.9 Responsibility
- 9:13-1.10 Payment for architectural services
- 9:13-1.11 Approval of consultants

PROGRAM REQUIREMENTS

- 9:13-1.12 Program development
- 9:13-1.13 Correspondence
- 9:13-1.14 Delivery of drawings and specifications
- 9:13-1.15 Meetings with Authority and/or participating college
- 9:13-1.16 Approval of documents
- 9:13-1.17 Schedules, estimates and progress reports

PROGRAM CONSIDERATIONS

- 9:13-1.18 General provisions
- 9:13-1.19 Philosophy
- 9:13-1.20 Site requirements
- 9:13-1.21 User requirements
- 9:13-1.22 Environmental considerations
- 9:13-1.23 Student categories
- 9:13-1.24 Dormitories
- 9:13-1.25 Space utilization
- 9:13-1.26 Maintenance
- 9:13-1.27 Expansion

PROGRAM SUBMISSION

- 9:13-1.28 Narrative description
- 9:13-1.29 Space analysis
- 9:13-1.30 Site description
- 9:13-1.31 Regional map
- 9:13-1.32 Site plan—utilities
- 9:13-1.33 Statement of probable cost
- 9:13-1.34 Architectural area of buildings
- 9:13-1.35 Architectural volume of buildings
- 9:13-1.36 Sample forms

SCHEMATIC REQUIREMENTS

- 9:13-1.37 Scope
- 9:13-1.38 Correspondence
- 9:13-1.39 Delivery of drawings and specifications
- 9:13-1.40 Meetings
- 9:13-1.41 Approval of documents
- 9:13-1.42 Schedules, estimates and progress reports
- 9:13-1.43 Site survey
- 9:13-1.44 Borings and/or percolation tests

SCHEMATICS SUBMISSION

- 9:13-1.45 Site plan
- 9:13-1.46 Space analysis
- 9:13-1.47 Space relationship diagram
- 9:13-1.48 Plans, elevations and sections
- 9:13-1.49 Outline specifications
- 9:13-1.50 Current working estimate

PRELIMINARY REQUIREMENTS

- 9:13-1.51 Scope
- 9:13-1.52 Correspondence
- 9:13-1.53 Delivery of drawings and specifications
- 9:13-1.54 Meetings
- 9:13-1.55 Approval of documents
- 9:13-1.56 Schedules, estimates and progress reports
- 9:13-1.57 Regulations, codes, standards
- 9:13-1.58 Mandatory codes
- 9:13-1.59 Recommended codes
- 9:13-1.60 Regulatory organizations

SUBMISSION REQUIREMENTS

- 9:13-1.61 Cover sheet
- 9:13-1.62 Site plans
- 9:13-1.63 Floor plans
- 9:13-1.64 Elevations and sections
- 9:13-1.65 Structural analysis
- 9:13-1.66 Mechanical analysis
- 9:13-1.67 Electrical analysis
- 9:13-1.68 Outline specification and design analysis
- 9:13-1.69 Statement of probable construction cost
- 9:13-1.70 Renderings and/or models
- 9:13-1.71 Miscellaneous

FINAL CONTRACT DOCUMENTS

- 9:13-1.72 Scope
- 9:13-1.73 Correspondence
- 9:13-1.74 Delivery of drawings and specifications
- 9:13-1.75 Meetings
- 9:13-1.76 Approval of documents
- 9:13-1.77 Schedules, estimates and progress reports
- 9:13-1.78 Regulations
- 9:13-1.79 Color and final finish recommendations

SUBMISSION OF FINAL CONTRACT DOCUMENTS

- 9:13-1.80 General provisions

DRAWINGS

- 9:13-1.81 Final working drawings
- 9:13-1.82 Order of drawings
- 9:13-1.83 Sheet sizes
- 9:13-1.84 Title block
- 9:13-1.85 Sheet designations
- 9:13-1.86 Standard practice data sheet
- 9:13-1.87 Dimensioning
- 9:13-1.88 Project sign
- 9:13-1.89 Standard plaques

SPECIFICATIONS

- 9:13-1.90 Specifications of final contract documents
- 9:13-1.91 Format
- 9:13-1.92 Separate contracts
- 9:13-1.93 Proposal form
- 9:13-1.94 Unit prices
- 9:13-1.95 Bulletins

GENERAL CONDITIONS

- 9:13-1.96 Supplementary general conditions
- 9:13-1.97 Temporary facilities

EXCAVATION

- 9:13-1.98 General provisions
- 9:13-1.99 Test borings and soil investigation
- 9:13-1.100 Subsoil conditions: wells, water supply
- 9:13-1.101 Tests

HIGH RISE STEEL CONSTRUCTION

- 9:13-1.102 Labor and industry regulations for high-rise steel construction
- 9:13-1.103 Construction safety code
- 9:13-1.104 Prevailing wage rates
- 9:13-1.105 Discrimination prohibition
- 9:13-1.106 Federal funds
- 9:13-1.107 Progress photographs
- 9:13-1.108 Domestic materials
- 9:13-1.109 Sales tax law
- 9:13-1.110 Prime contractor's work
- 9:13-1.111 New Jersey manufacturers
- 9:13-1.112 Mechanical testing and balancing

BID AND CONTRACT AWARD

- 9:13-1.113 General provisions
- 9:13-1.114 Qualification of bidders
- 9:13-1.115 Bulletins
- 9:13-1.116 Alternate bids
- 9:13-1.117 Opening of bids
- 9:13-1.118 Recommendations for contract award
- 9:13-1.119 Contract award

CONSTRUCTION

- 9:13-1.120 Correspondence (construction phase)
- 9:13-1.121 Job conferences
- 9:13-1.122 Modified drawings

SUBMISSIONS

- 9:13-1.123 Contractors' insurance certificates
- 9:13-1.124 Builders' risk fire insurance
- 9:13-1.125 Unit schedule breakdown approval
- 9:13-1.126 Request for approvals form
- 9:13-1.127 Approval of material samples
- 9:13-1.128 Approval of material requiring laboratory tests
- 9:13-1.129 Shop drawings and catalogue information
- 9:13-1.130 Construction progress charts
- 9:13-1.131 On-site administration
- 9:13-1.132 Approval of change orders

AUTHORITY FORM 8

- 9:13-1.133 Submission
- 9:13-1.134 Description and reason
- 9:13-1.135 Recommendation
- 9:13-1.136 Documentation
- 9:13-1.137 Architect's fee

EFA FORM 9

- 9:13-1.138 General provisions
- 9:13-1.139 Preparation
- 9:13-1.140 Bill of material
- 9:13-1.141 Labor costs; breakdown
- 9:13-1.142 Equipment rental rates
- 9:13-1.143 Work by subcontractors

CHANGE ORDER CHECK LIST

- 9:13-1.144 Return for general preparation
- 9:13-1.145 Preparation of EFA Form 8 by architect
- 9:13-1.146 Preparation of EFA Form 9 by contractor
- 9:13-1.147 Estimates, payments
- 9:13-1.148 Construction photographs
- 9:13-1.149 Color and finish schedules
- 9:13-1.150 As-built drawings
- 9:13-1.151 Construction progress report
- 9:13-1.152 Construction phase check list
- 9:13-1.153 Sample forms

PROJECT CLOSEOUT

- 9:13-1.154 Final inspection
- 9:13-1.155 As-built drawings
- 9:13-1.156 Cost analysis
- 9:13-1.157 Instruction manuals, approvals, guarantees
- 9:13-1.158 Final acceptance
- 9:13-1.159 Project insurance
- 9:13-1.160 Close-out check list
- 9:13-1.161 Sample Forms

PROCEDURE FOR FEDERALLY ASSISTED AUTHORITY PROJECTS

- 9:13-1.162 General Provisions
- 9:13-1.163 Federal government requirements
- 9:13-1.164 Regional office
- 9:13-1.165 Procedures
- 9:13-1.166 Correspondence and documents
- 9:13-1.167 Eligible project costs
- 9:13-1.168 Sequence of processing
- 9:13-1.169 Submission of documents, prior to bidding
- 9:13-1.170 Approval to bid
- 9:13-1.171 Bidding procedure
- 9:13-1.172 Awards—within estimate
- 9:13-1.173 Award—overruns
- 9:13-1.174 Executed construction contract documents
- 9:13-1.175 Pre-award conference
- 9:13-1.176 Construction
- 9:13-1.177 Project close-out
- 9:13-1.178 Abbreviations
- 9:13-1.179 (Reserved)

SUBCHAPTER 2. DEBARMENT, SUSPENSION AND DISQUALIFICATION OF CONTRACTORS

- 9:13-2.1 General provisions
- 9:13-2.2 Definitions
- 9:13-2.3 Causes of debarment
- 9:13-2.4 Conditions of debarment
- 9:13-2.5 Scope of debarment; procedures; period
- 9:13-2.6 Causes of suspension
- 9:13-2.7 Conditions of suspension
- 9:13-2.8 Scope of suspension; procedures; period
- 9:13-2.9 Exceptions
- 9:13-2.10 Notice
- 9:13-2.11 Discretion; contracting
- 9:13-2.12 Effective date

SUBCHAPTER 1. MANUAL FOR ARCHITECTS

9:13-1.1 New Jersey Educational Facilities Authority
(E.F.A.)

(a) The authority was established by the New Jersey Legislature under provisions of chapter 106, Public Laws of 1966, and signed into law by Governor Richard J. Hughes on June 16, 1966. The specific purpose of the Authority's creation is to provide a vehicle for the public and independent institutions of higher education in the State of New Jersey to expand required dormitory and educational facilities and thereby create additional enrollment capacity in these institutions.

(b) For the public institutions of higher education, the Authority is empowered to construct dormitories, dining halls, student centers and parking facilities. At the independent institutions of higher education, the Authority may construct the previously mentioned facilities as well as academic facilities such as classrooms, libraries, science laboratories, administrative buildings and related units.

9:13-1.2 Construction agency

(a) The Authority has several methods of approach to the construction and financing of projects for the different categories of institutions. They are designed to provide options, where possible, for ease of management of the planning and construction processes.

1. The New Jersey Educational Facilities Authority may act as the construction agency and contract issuing body. In this arrangement, the Authority will act on behalf of the participating college in the coordination of activities for planning and construction with the architects and contractors. The architect shall receive all directions from and shall make all transmittals for approval to the EFA in accordance with procedures outlined in latter sections of this manual. The participating colleges under this arrangement will usually be the New Jersey State Colleges. In assuming the responsibility for construction of projects on State College campuses, the Authority will normally use the New Jersey Division of Building and Construction as its agent for the coordination of planning and construction of the particular facility.

2. The Authority may designate a participating college as its agent for the planning and construction of an eligible facility. A public or independent institution of higher education could avail itself of this particular arrangement if it can be demonstrated that a complement of technical staff is available to provide adequate supervision of planning and construction.

3. The Authority may make a loan to a private college for the construction of projects in accordance with the

loan agreement and plans and specifications approved by the Authority. The basic operating procedure as outlined in this manual shall apply.

9:13-1.3 Participating college

An institution of higher education, public or private, that has made application to the Authority for assistance in the construction and financing of an eligible project is considered a participating college.

9:13-1.4 Division of Building and Construction

This office in the Treasury Department of the State of New Jersey is responsible for the coordination of architectural and engineering design planning and construction of all State public institutional building projects. The Division renders professional and technical assistance to all State department agencies in the design and construction of new projects and the renovation of existing facilities. The Division is retained as a consultant to the Authority for projects at the New Jersey State Colleges and the College of Medicine and Dentistry of New Jersey.

9:13-1.5 Project

An assignment involving design of a dormitory or an educational facility or any combination thereof shall be considered a project.

9:13-1.6 Definitions

The following words and terms, when used in this Chapter, shall have the following meanings, unless the context clearly indicates otherwise:

"Dormitory" means a housing unit with necessary and usual attendant and related facilities and equipment;

"Educational facility" means a structure suitable for use as a dormitory, dining hall, student union, administration building, academic building, library, laboratory, research facility, classroom, athletic facility, health care facility, plus parking maintenance, storage or utility facility and other structures or facilities related thereto or required or useful for the instruction of students or the conducting of research or the operation of an institution for higher education, and the necessary and usual attendant and related facilities and equipment, but shall not include any facility used or to be used for sectarian instruction or as a place for religious worship;

"Private college" means an institution for higher education other than a public college, situated within the State and which, by virtue of law or charter, is a nonprofit educational institution empowered to provide a program of education beyond the high school level;

"Public college" means Rutgers, The State University, the State Colleges, the Newark College of Engineering, the College of Medicine and Dentistry of New Jersey, the

county colleges and any other public university or college now or hereafter established or authorized by law.

ARCHITECTS

9:13-1.7 General provisions

(a) Architects are the qualified technical and professional advisors in private practice, registered in the State of New Jersey, who are retained either by the Authority or a participating college to plan, design, and supervise projects.

(b) The particular arrangement under which a loan is being made will determine whether the architect is under contract to the college or the Authority.

9:13-1.8 Contract and insurance

(a) Architects retained by the Authority will be issued a formal contract outlining the services to be performed and the fee to be paid. The architect will also be given a construction budget. The architect shall provide and pay for "errors and omissions insurance" in a form acceptable to the Authority. The policy shall be filed with the Authority at the time of the signing of the contract agreement.

(b) Architects retained by a participating institution shall give evidence of coverage for "errors and omissions insurance" to the Authority.

9:13-1.9 Responsibility

The architect retains full responsibility as described in his contract for all work performed and is not relieved of this responsibility by the approval of the authority of drawings, specifications and other contractual documents or materials.

9:13-1.10 Payment for architectural services

The architect's contract shall establish a schedule for payment of fees according to completion stages of the assignment. The architect shall submit invoices in accordance with this schedule. Additional expenses for authorized changes, extra work, travel, and other expenses shall be itemized and described in full and shall be in accordance with the provisions of the contract. Revisions and change orders necessitated by error of the architect will be charged to architect or applied against his fee if circumstances warrant such action.

9:13-1.11 Approval of consultants

The architect will normally be required to submit the names of consultants for each specialty to the Authority for approval on those projects where the Authority is the owner. This submission is to be made as soon as practicable after the contract has been issued. The Authority reserves the right to request alternate submissions.

PROGRAM REQUIREMENTS

9:13-1.12 Program development

The owner of the project shall have the responsibility for development of the program. The program shall be in sufficient detail to define the scope of the project.

9:13-1.13 Correspondence

All correspondence shall be identified as to project by use of project title and location. A 1½ inch margin is to be provided on left hand side of sheet of all correspondence for Authority use. Correspondence shall be submitted in original and four copies with distribution of copies to be shown at bottom of letters.

9:13-1.14 Delivery of drawings and specifications

When mailing copies of documents to the Authority, these should be insured in favor of the architect at full value against loss or damage. Original tracings should always be hand delivered. All documents prepared by the architect for the Authority shall be and become the property of the Authority.

9:13-1.15 Meetings with Authority and/or participating college

Arrangements for meetings on the design phase of Authority owned projects shall be made through the Authority unless otherwise designated by the Authority. It shall be the responsibility of the Authority to have college personnel and other consultants available as required. The architect shall prepare and distribute minutes of all meetings with copies to all concerned parties. Minutes of all meetings shall be numbered beginning with the first program meeting and carrying through the design stage to the start of construction.

9:13-1.16 Approval of documents

(a) After the submission of documents for approval, the architect will receive written confirmation of decisions made before proceeding with the next phase of work. Approvals will be issued by the Authority or the participating college, depending upon the manner in which the loan is to be made.

(b) For assignments at the New Jersey State Colleges, the Division of Building and Construction will normally be the agent of the Authority for necessary approval.

9:13-1.17 Schedules, estimates and progress reports

(a) In order to effectively regulate and expedite submissions, the Authority, D.B.C. or college must have advance notice of dates for submission.

1. The architect shall perform services required in the preparation of program documents expeditiously. After approval of said documents, the architect shall submit to the Authority for approval a time schedule for the performance of the remaining services required of the architect in order to expedite said services and the construction of the project.

2. Cost estimates shall be included with each submission to provide a gauge against the project budget. Cost estimates shall include cost for all necessary utilities, appurtenances, site improvements, contingencies, architect fees, similar professional fees, land costs, clerk-of-the-works and/or other costs if such costs are to be paid by the Authority, as previously identified. Estimates are continually the responsibility of the architect.

3. Progress reports are to be submitted to the Authority monthly showing percentage of completion of work including a breakdown of architectural, structural, mechanical and electrical drawings and other related material shall show the proposed dates for submission.

PROGRAM CONSIDERATIONS

9:13-1.18 General provisions

The basic items will be considered by the architect in his evaluation of the given program or in the formulation of a program. The architect will find it helpful to list his assumptions and interpretations for a given program. The following list is illustrative of, but does not limit, the areas of consideration in the development of the program.

9:13-1.19 Philosophy

- (a) Philosophy and purpose of facility.
- (b) Noninstitutional atmosphere.
- (c) Attributes of institutional atmosphere:
 1. long double loaded corridors;
 2. large gang bathrooms;
 3. large dining areas;
 4. large lounges;
 5. large classrooms.

(d) *Flexibility, student preferences.* Student ability to change arrangement of living quarters, such as furniture, screens, partitions, use of walls for fastening, tack up.

- (e) Ease of student-faculty contact.

9:13-1.20 Site requirements

(a) Relation of facility to existing campus; circulation; pedestrian, vehicle; utilities: power, water, sewerage.

(b) Relation of future campus (master plan); same items as in subsection (a) of this Section.

(c) Relation to area surrounding campus; highways, mass transportation, bus or train; shopping, dining, cultural, churches, recreation.

9:13-1.21 User requirements

(a) *Dormitories.* Singles, doubles, apartments, high rise, low rise, guests.

(b) *Academic.* Large classrooms, small group areas; formal versus informal.

(c) *Dining.* Large versus small areas; large areas broken up visually.

(d) *Flexibility.* Adaptability to singles, doubles, apartments, study, lounge, recreation, academic; extension of academic by teaching aids, TV—tape—closed circuit TV. Proportion of male to female. Conference use. Supervision.

9:13-1.22 Environmental considerations

(a) *Climate control.* Heating, air conditioning; control by students.

(b) *Lighting.* Natural, artificial; intensity, glare.

(c) *Acoustics.* Absorption of floor, ceiling or wall surfaces. Attenuation between spaces, particularly noisy versus quiet areas.

(d) *Color and texture.* Ability of student to choose or change.

(e) *Wall treatment.* Variety of colors, textures; attachability to wall by students.

(f) *Communication.* House or campus; outside phones.

9:13-1.23 Student categories

- (a) Undergraduate
- (b) Graduate
- (c) Single or married
- (d) Commuter or resident
- (e) Physically handicapped

9:13-1.24 Dormitories

(a) *Single rooms.* With auxiliary spaces for socializing recreation, and so forth.

(b) *Doubles.* Need for privacy; additional facilities, study, recreation, snacks, laundry, and so forth.

(c) *Suites*. Four or more students with common shared space(s).

(d) *Apartments*. Married students; faculty; three or more students sharing.

(e) *Bathrooms*. Individual; paired; shared by three or more students; gang.

(f) *Lounges, recreational*. Several small or one large; noisy versus quiet; formal versus informal.

(g) *Guests*. Rooms or apartments.

(h) *Eating*. Formal, informal dining, central food service; snacks.

(i) *Study*. Seminars, classrooms, assembly, individual, library.

(j) *Recreation*. Small groups; large groups, gymnasium, swimming, bowling, billiards and pool, card games; outdoors, team, small group, informal.

(k) *Storage*. In living area; bulky equipment, trunks, athletic equipment.

(l) *Service*. Laundry; mechanical equipment; custodian; trash disposal; supplies.

9:13-1.25 Space utilization

(a) Optimum size based on economy, student comfort, function, arrangement; reduction of circulation and service areas.

(b) Student unions versus food service; separate facilities for recreation, clubs, and so forth.

(c) Multiple use of academic spaces. Range of sizes or flexibility of dividing and combining spaces.

9:13-1.26 Maintenance

(a) Materials selected both for economy and durability.

(b) Special attention to finish materials in circulation areas, game or recreation rooms, and areas liable to water or water vapor damage, for example showers, toilets, laundries.

9:13-1.27 Expansion

(a) By expansion of designed facility.

(b) By additional separate units.

PROGRAM SUBMISSION

9:13-1.28 Narrative description

A narrative description of project including discussion of relevant items Sections 1.19 through 1.27 of this Chapter. Architect's interpretation and assumptions about program furnished.

9:13-1.29 Space analysis

A tabulation of proposed spaces with square foot areas and a narrative description of function, type of equipment (furniture, storage, and so forth), special finishes in each space.

9:13-1.30 Site description

Diagrammatic functional plan showing relation of proposed facility(ies) to existing facilities and to master plan when available.

9:13-1.31 Regional map

Regional map of area served by campus showing major arterial roads and locations of interchanges, intercity bus routes, rail and air terminals.

9:13-1.32 Site plan—utilities

Existing campus, location of present and future utilities; power, water, gas, sewerage, telephone.

9:13-1.33 Statement of probable cost

Based on square foot areas given in Section 1.29 (Space analysis) of this Chapter.

9:13-1.34 Architectural area of buildings

The architectural area of a building is the sum of the areas of the several floors of the building, including basements, mezzanine and intermediate floored tiers and penthouses of headroom height, measured from the exterior faces of exterior walls or from the center line of walls separating buildings. Covered walkways, open roofed over areas that are paved, porches and similar spaces shall have the architectural area multiplied by an area factor of 0.50. The architectural area does not include such features as pipe trenches, exterior terraces or steps, chimneys, roof overhangs, and the like.

9:13-1.35 Architectural volume of buildings

The architectural volume (cube or cubage) of a building is the product of the total areas defined above and the height from the under side of the lowest floor construction system to the average height of the surface of the finished roof above, for the various parts of the building.

9:13-1.36 Sample forms

(a) Space requirements

(b) Architect's current working estimate (C.W.E.)

SCHEMATIC REQUIREMENTS

9:13-1.37 Scope

Schematic documents shall expand on the program to the degree necessary to make an understandable presentation incorporating scope of the architectural, structural, mechanical and electrical aspects of the project. The architect shall state all assumptions made and list all questions necessary for the development of the design.

9:13-1.38 Correspondence

All correspondence shall be identified as to project by use of project title and location. A 1¼ inch margin is to be provided on left hand side of sheet of all correspondence for Authority use. Correspondence shall be submitted in original and four copies with distribution of copies to be shown at bottom of letters.

9:13-1.39 Delivery of drawings and specifications

When mailing copies of documents to the Authority, they should be insured in favor of the architect at full value against loss or damage. Original tracings should always be hand delivered. All documents prepared by the architect for the Authority shall be and become the property of the Authority.

9:13-1.40 Meetings

Meetings required in the design phase of the project shall be made through the Authority unless otherwise designated by the Authority. The Authority will make the necessary arrangements to have all interested parties present at the meeting. The architect shall prepare and submit minutes of all meetings to all interested parties.

9:13-1.41 Approval of documents

(a) After the submission of documents for approval, the architect will receive written confirmation of decisions made before proceeding with the next phase of work. Approvals will be issued by the Authority or the participating college, depending upon the manner in which the loan is to be made.

(b) For assignments at the New Jersey State Colleges, the Division of Building and Construction will normally be the agent of the Authority for necessary approval.

9:13-1.42 Schedules, estimates and progress reports

(a) In order to effectively regulate and expedite submissions, the Authority D.B.C. or the college must have advance notice of dates for submission.

1. The architect shall expeditiously perform services required in the preparation of schematic documents. After approval of said documents, the architect shall submit

a time schedule for the performance of the remaining services required of the architect to the Authority for approval in order to expedite said services and the construction of the project.

2. Cost estimates shall be included with each submission in order to control the project budget. Cost estimates shall include cost of all necessary utilities, appurtenances, site improvements, contingencies, architect fees, similar professional fees, land costs, clerk-of-the works and/or other costs if such costs are to be paid by the Authority, as previously identified. Estimates are continually the architect's responsibility. Estimates for program and schematic phase shall be based on current area, volume or other unit costs.

3. Submitted to the Authority once a month showing percentage of completion of work including a breakdown of architectural, structural, mechanical and electrical drawings and other related material and shall show the proposed dates for submission.

9:13-1.43 Site survey

The Authority or the participating college will provide a site survey showing boundaries, location of existing adjacent buildings and preliminary contours. Detailed site information including location of existing utilities will be provided when design and location of buildings becomes more definite. In any case this information will be available for the preliminary design phase.

9:13-1.44 Borings and/or percolation tests

These will be handled similarly to site survey. If some general information is needed in the schematic phase a small number of borings and/or percolation tests can be made. Later when building size and location are more definite detailed information will be obtained. Standard specifications which may be adapted to the particular project may be obtained from the D.B.C. The architect shall prepare a layout and specifications for borings and test holes.

SCHEMATICS SUBMISSION

9:13-1.45 Site plan

- (a) Recommended location of facility.
- (b) Relation to existing and future buildings.
- (c) Proposed pedestrian and vehicle circulation and their relation to existing.
- (d) Parking.
- (e) Relation to existing utilities, for example, water, sewer, gas, electric.

9:13-1.46 Space analysis

A space analysis is required only if different from program documents.

9:13-1.47 Space relationship diagram

A space relationship diagram is a required part of the schematic submission. A sample of this type of diagram is available from the New Jersey State Department of Higher Education.

9:13-1.48 Plans, elevations and sections

Schematic plans, elevations and sections of facility at a minimum scale of $\frac{1}{8}$ inch = 1 foot 0 inches, but preferably at $\frac{1}{4}$ inch = 1 foot 0 inches. Include provision for future expansion if requested.

9:13-1.49 Outline specifications

Brief listing and description of materials and methods. Follow Construction Specifications Institute format.

9:13-1.50 Current working estimate

Break down into main contracts. It is the architect's responsibility to progress through the design, material and finish selection, development of working drawings, details and specifications and complete his work in such a manner that the project can be constructed within the cost limitation. If, at any stage of the work, cost breakdowns indicate that the project as programmed will exceed the allocated funds, then this fact shall be reported to the Authority and instructions requested before proceeding further.

PRELIMINARY REQUIREMENTS**9:13-1.51 Scope**

This submission shall include the development and amplification of the approved schematic documents to completely satisfy the scope and intent of the project. This phase shall be of such refinement that more detailed technical development will not force any radical revision of functional concepts.

9:13-1.52 Correspondence

All correspondence shall be identified as to project by use of project title and location. A $\frac{1}{4}$ inch margin is to be provided on left hand side of sheet of all correspondence for Authority use. Correspondence shall be submitted in original and four copies with distribution of copies to be shown at bottom of letters.

9:13-1.53 Delivery of drawings and specifications

When mailing copies of documents to the Authority, they should be insured in favor of the architect at full value against loss or damage. Original tracings should always be hand delivered. All documents prepared by the architect for Authority work shall be and become the property of the Authority.

9:13-1.54 Meetings

Meetings required in the design phase of the project shall be made through the Authority unless otherwise designated by the Authority. The Authority will make the necessary arrangements to have all interested parties present at the meeting. The architect shall prepare and submit minutes of all meetings to all interested parties.

9:13-1.55 Approval of documents

(a) After the submission of documents for approval, the architect will receive written confirmation of decisions made before proceeding with the next phase of work. Approvals will be issued by the Authority or the participating college, depending upon the manner in which the loan is to be made.

(b) For assignments at the New Jersey State Colleges, the Division of Building and Construction will normally be the agent of the Authority for necessary approval.

9:13-1.56 Schedules, estimates and progress reports

(a) In order to effectively regulate the expedite submissions, the Authority, or the college must have advance notice of dates for submission.

1. The architect shall perform services required in the preparation of preliminary documents in an expeditious manner. After approval of preliminary drawings, the architect shall submit the time schedule for the performance of the remaining services required of the architect for Authority approval. This is intended to expedite the remaining services and the construction of the project.

2. Prior to completion of preliminary phase the architect shall work with CPM consultant to set up a schedule for completion of the job. CPM shall submit the program to the architect for review and approval.

3. Cost estimates shall be included with each submission for use as a guide in adhering to the project budget. Cost estimates shall include cost for all necessary utilities, appurtenances, site improvements, contingencies, architect fees, similar professional fees, land costs, clerk-of-the-works and/or other costs if such costs are to be paid by the Authority, as previously identified. Estimates are continually the responsibility of the architect.

4. Estimates for program and schematic phase shall be based on current area, volume or other unit costs.

5. Progress reports are to be submitted to the Authority on a monthly basis stating the percentage of completion of the work and including a breakdown of architectural, structural, mechanical and electrical drawings and other related material and shall show the proposed dates for submission.

6. Break down into main contracts. It is the architect's responsibility to progress through the design, material and finish selection, development of working drawings, details and specifications and complete his work in such a manner that the project can be constructed within the cost limitation. If, at any stage of the work, cost breakdowns indicate that the project as programmed will exceed the allocated funds, then this fact shall be reported to the Authority and instructions requested before proceeding further.

7. Estimates for preliminary phase shall be itemized according to Sections of the Specifications.

9:13-1.57 Regulations, codes, standards

In all analysis and design the architect shall abide by the provisions and recommendations of the latest edition of applicable regulations, codes, practices, and standards as enumerated in Sections 1.58 through 1.60 of this Chapter.

9:13-1.58 Mandatory codes

(a) State Department of Labor and Industry Construction Safety Code

(b) National Building Code (American Insurance Association)

(c) ACI (American Concrete Institute)

(d) CRSI (Concrete Reinforcing Steel Institute)

(e) AISC (American Institute of Steel Construction)

(f) AWS (American Welding Society Code)

(g) SJI (Steel Joist Institute)

(h) NEC (National Electrical Code)

9:13-1.59 Recommended codes

(a) NEMA (National Electrical Manufacturers Association)

(b) AIEE (American Institute of Electrical Engineers)

(c) IES (Illuminating Engineering Society)

(d) IEEE (Institute of Electrical Electronics Engineers, Inc.)

(e) IPCEA (Insulated Power Cable Engineers Association)

(f) NESC (National Electrical Safety Code)

(g) Practices of the utility companies

(h) AISI (American Iron and Steel Institute)

(i) ASA (American Standards Association)

(j) NLMA (National Lumber Manufacturers' Association)

(k) NBS (National Bureau of Standards)

(l) FS (Federal Specifications)

(m) SPR (Simplified Practice Recommendation)

(n) UL (Underwriters' Laboratories, Inc.)

(o) NFPA (National Fire Protection Association)

(p) AAMA (Architectural Aluminum Manufacturers' Association)

(q) ASME (American Society of Mechanical Engineers)

(r) ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineer's Guide)

(s) ASTM (American Society for Testing Materials)

(t) AWI (Architectural Woodwork Institute)

Note: The architect will be notified if local building code provisions are to prevail.

9:13-1.60 Regulatory organizations

(a) New construction, alterations for projects accomplished under the direction of the Authority must at times conform to certain regulations established and recommended by other responsible agencies or departments of the State or other organizations. In order to insure compliance with same, the architect shall obtain approvals generally in the preliminary and final stages before submitting bidding documents. Generally, the organizations that may have to be consulted are as follows:

1. *State of New Jersey.* Department of Labor and Industry; Department of Health; Fire Marshall; Department of Law and Public Safety; Bureau of Housing Inspection, Division of Housing and Urban Renewal.

2. *Federal.* Office of Civil Defense (Regional Office).

3. *Private.* Fire Insurance Rating Organization.

SUBMISSION REQUIREMENTS

9:13-1.61 Cover sheet

Cover Sheet may be combined with Section 1.62 (Site plans) of this Chapter.

9:13-1.62 Site plans

Site plans, showing new and existing contours, controlling grades, drainage, floor elevations of buildings, the relation of buildings to each other, and the relation of building(s) to

existing or proposed roads, walks, service areas, parking, utilities.

9:13-1.63 Floor plans

Floor plans will show dimensions and functional arrangement of all areas, including corridors, exits, stairs, and utility spaces. Individual treatment will be given to special designs or special items.

9:13-1.64 Elevations and sections

Elevations and sections shall show story heights, fenestration, suspended ceilings (if any), partitions, and site adaptation to finish grades. Typical exterior wall sections shall be provided at a minimum scale of $\frac{3}{4}$ of an inch to one foot. They shall show materials, thicknesses, methods of attachment, and relation of fenestration to supporting columns or walls.

9:13-1.65 Structural analysis

The framing systems shall indicate columns, type of framing, and layout of framing members. Framing plans shall indicate design loads and allowable material stresses used. Structural details shall include subsoil investigation data, type of foundations, their approximate elevations and detail of wall construction. Copies of calculations shall be submitted.

9:13-1.66 Mechanical analysis

Single line layout, and riser diagrams of pipes, ducts, controls, and so forth, will be shown. However, sizes and/or capacities need not be given. Location, capacity and space requirements of all major equipment items will be indicated, and special features, such as elevators, hoists, and equipment, such as kitchen equipment, and so forth, will also be included. Submit copies of calculations.

9:13-1.67 Electrical analysis

Include lighting, power, communications, and electronic features. All conduits, including conduit to be wired by others, will be shown. Lighting features will indicate typical lighting arrangements, type of fixtures proposed, and light intensities. Power, communications, and electronic features will be provided in sufficient detail to identify requirements clearly and to indicate the means of satisfying the requirements. Risers diagram, showing service equipment, feeders, and panels other than branch circuits, will be shown. However, wire sizes, current demand factors and switch and panelboard descriptions need not be given. Location, capacity, and space requirements of all major items of equipment including interior substations, service equipment and panels, will be shown.

9:13-1.68 Outline specification and design analysis

Outline specification and design analysis will provide, in written form, a description of the facility, design assumption, design factors used, type and character of materials and contractor's option (if any) to be employed, and any other data not indicated on the preliminary plans but required for preliminary engineering and architectural analysis.

9:13-1.69 Statement of probable construction cost

Statement of probable construction cost sufficient to support design according to the budgeted allowances sufficiently broken down so as to permit evaluation.

9:13-1.70 Renderings and/or models

A scale model, if not voluntarily furnished, may be required, with cost thereof reimbursed to the architect.

9:13-1.71 Miscellaneous

The architect shall list any further unanswered questions necessary for the finalization of the project. Test borings, if required, will be obtained by the Authority upon approval of preliminary submission.

FINAL CONTRACT DOCUMENTS

9:13-1.72 Scope

The final working drawings, specifications and allied contractual documents shall be prepared from the approved preliminary submission upon the receipt of written authorization from the Authority.

9:13-1.73 Correspondence

All correspondence shall be identified as to project by use of project title and location. A $\frac{1}{4}$ -inch margin is to be provided on the left-hand side of the sheet of all correspondence for Authority use. Correspondence shall be submitted in original and four copies with distribution of copies to be shown at bottom of letters.

9:13-1.74 Delivery of drawings and specifications

When mailing copies of documents to the Authority, they should be insured in favor of the architect at full value against loss or damage. Original tracings should always be hand delivered. All documents prepared by the architect for Authority work shall be and become the property of the Authority.

9:13-1.75 Meetings

Meetings required in the design phase of the project shall be made through the Authority unless otherwise designated by the Authority. The Authority will make the necessary arrangements to have all interested parties present at the meeting. The architect shall prepare and submit minutes of all meetings to all interested parties.

9:13-1.76 Approval of documents

(a) After submission of documents for approval, the architect will receive written confirmation of decisions made before proceeding with the next phase of work. Approvals will be issued by the Authority or the participating college, depending upon the manner in which the loan is to be made.

(b) For assignments at the New Jersey State Colleges, the Division of Building and Construction will normally be the agent of the Authority for necessary approval.

9:13-1.77 Schedules, estimates and progress reports

(a) In order to effectively regulate and expedite submissions, the Authority, D.B.C. or the college must have advance notice of dates for submission.

1. The architect shall perform services required in the preparation of final contract documents in an expeditious manner. After approval of said documents, the architect shall submit the time schedule for the performance of the remaining services required of the architect for Authority approval. This is intended to expedite the remaining services and the construction of the project.

2. At this stage, architect shall review CPM schedule with consultant to make any adjustments required and arrive at a projected schedule for the remainder of the work. The CPM consultant shall receive a set of the final plans and specifications at the time they are submitted to the Authority.

3. Cost estimates shall be included with each submission for use as a guide in adhering to the project budget. Cost estimates shall include cost for all necessary utilities, appurtenances, site improvements, contingencies, architect fees, similar professional fees, land costs, clerk-of-the-works and/or other costs if such costs are to be paid by the Authority, as previously identified. Estimates are continually the responsibility of the architect.

4. Progress reports are to be submitted to the Authority on a monthly basis stating the percentage of completion of the work and including a breakdown of architectural, structural, mechanical and electrical drawings and other related material and shall show the proposed dates for submission.

9:13-1.78 Regulations

All applicable regulations established by the local and State codes and agencies shall have been complied with before submission of bidding documents to the Authority.

9:13-1.79 Color and final finish recommendations

(a) Color and finish schedules and boards shall be prepared by the architect and submitted at the earliest possible moment because of the approval required by the Authority as well as the institution.

(b) Color and finish schedules shall be on 8½-inch by 11-inch sheets, reproducible by blueprint or black and white print. Minimum size of color chips shall be two inches in the least dimension.

(c) A meeting may be proposed by the architect in order to facilitate color approval.

SUBMISSION OF FINAL CONTRACT DOCUMENTS

9:13-1.80 General provisions

(a) Submission should be complete, setting forth in detail the work as required for the architectural; structural; plumbing; heating, ventilating and air conditioning; electrical; service-connected equipment, and elevators; the necessary bidding information.

(b) Site development plans

(c) Working drawings and specifications

(d) Design analysis, revised to provide complete information on design (calculations, and so forth).

(e) Construction cost estimate in sufficient detail to support design.

(f) Revised rendering(s) together with narrative suitable for publicity release. Include the following:

1. Cost estimate, total and breakdown for separate trades; rendering(s); 12 eight-inch by ten-inch glossy prints of each rendering; description of the building(s), including material, accommodations, any special features, and so forth for use in preparing copy.

2. Where three or more buildings are involved, the architect shall furnish an additional rendering showing a bird's-eye perspective of the complex. Photographs (12) of each rendering on eight-inch by ten-inch glossy prints shall be provided at no additional cost.

(g) A scale model, if not voluntarily furnished, may be required with cost thereof reimbursed to the architect.

DRAWINGS

9:13-1.81 Final working drawings

The final working drawings shall be originals on linen or plastic sheets and prepared in accordance with sound drafting practice as outlined hereinafter in this manual and shall be suitable for completely legible reproductions. Final tracings shall be signed by the architect before delivery to the Educational Facilities Authority.

9:13-1.82 Order of drawings

(a) Complete working drawings for a project shall be bound in a set with the unnumbered "Cover Title Sheet" as the first sheet of the set. The other drawings shall be bound in the following order with all the drawings within each group arranged in numerical sequence in the order shown in the following list:

1. Index and legends;
2. Site plans and grading;

3. Architectural plans;
4. Architectural elevations and sections;
5. Architectural schedules and details;
6. Structural drawings, schedules and details;
7. Plumbing;
8. Heating, ventilating and air conditioning;
9. Electrical;
10. Mechanical and/or other equipment drawings for contracts other than enumerated in this subsection.

9:13-1.83 Sheet sizes

All final working drawings including architectural, structural, mechanical and electrical shall be uniform in size. Sheet size shall be 30 inches by 42 inches or 24 inches by 36 inches except for small work, alterations, and so forth, when 8½-inch x 11-inch sheets may be used if approved by the Authority. Dimensions for binding, and borders are shown on Standard Practice Data Sheet No. DS-1. When necessary to avoid cutting a plan, 36-inch by 45-inch sheets may be used.

9:13-1.84 Title block

The standard drawing block is shown on Standard Practice Data Sheet No. DS-2. An example for indicating as-built revisions is described on Standard Practice Data Sheet No. DS-3.

9:13-1.85 Sheet designations

Prefix designations used with a number to determine the category of each sheet shall be as follows:

- | | |
|---------|---|
| 1. A | Architectural |
| 2. S | Structural |
| 3. P | Plumbing |
| 4. HV | Heating and ventilating |
| 5. HVAC | Heating, ventilating and air conditioning |
| 6. E | Electrical |

9:13-1.86 Standard practice data sheet

(a) The following list of data sheets bound Section 1.112(o) (Mechanical testing and balancing) of this Chapter are recommended standards with the intent of obtaining uniformity of presentation:

Item	Dwg. No.
1. Standard drawing sizes	DS-1
2. Title block	DS-2
3. As-built revisions	DS-3
4. Architectural drafting	DS-4A, DS-4B
5. Dimensioning	DS-5
6. Door symbols	DS-6A
7. Window symbols	DS-6B
8. Site and grading symbols	DS-6C
9. Material symbols	DS-6D
10. Project sign	DS-7

9:13-1.87 Dimensioning

The variables existing in architecture preclude the establishment of inflexible rules for dimensioning that would fit all problems; however, the experience and good judgment of the draftsman shall be used, insuring in all cases that sufficient and accurate information is supplied on drawing to permit the contractor to function without error. An illustration of dimensioning is shown in Standard Practice Data Sheet No. DS-5.

9:13-1.88 Project sign

Required for all new and substantial construction projects as designated by the Authority. Construction sign shall include the names of the prime contractors, the architect and such Authority or State personnel as directed. See sample format on Standard Practice Data Sheet No. DS-7. It will be necessary to have a separate construction sign for those projects in which the Federal government will be a financing participant.

9:13-1.89 Standard plaques

A building plaque shall be incorporated as a standard for all college buildings as determined by the Authority according to size and cost of the project.

SPECIFICATIONS

9:13-1.90 Specifications of final contract documents

The specifications shall set forth clearly and in detail the requirements for all materials and workmanship. The architect shall provide a minimum of 20 copies of specifications per each contractual phase of construction and three loose proposal forms and noncollusion affidavits for each copy of the specifications for bidding and/or construction. The number of required specifications shall be checked with the Authority.

9:13-1.91 Format

(a) *Combined cover and title page.* Contact the authority for information to appear on cover of specific project;

(b) *Index (table of contents).* List entire specifications including all contracts;

(c) *Form required.* Use New Jersey Educational Facilities Authority form 101, General Conditions and Instructions to Bidders, as amended. For those projects that may have the Federal government as a participant, it will be necessary to adjust general conditions as required by the Department of Housing and Urban Development.

9:13-1.92 Separate contracts

(a) On projects where separate contracts are required include under supplementary general conditions a paragraph listing separate contracts as follows:

- 1. Contract 1 General construction
- 2. Contract 2 Structural steel and miscellaneous metal (if in excess of \$2,000)
- 3. Contract 3 Plumbing work (if in excess of \$2,000)
- 4. Contract 4 Heating, ventilating and air conditioning (if in excess of \$2,000)
- 5. Contract 5 Electrical work (if in excess of \$2,000)

(b) Each separate contract specification shall be printed on colored paper as follows:

- 1. White Supplementary general conditions, instructions to bidders, general construction
- 2. Green Structural steel and miscellaneous metal
- 3. Pink Plumbing work
- 4. Blue Heating and ventilating and air conditioning
- 5. Yellow Electrical work

(c) See NJEFA—101 for procedure on alternate single contract bid for State projects.

9:13-1.93 Proposal form

(a) All proposals shall be submitted on a form as shown on the sample at the end of this Section. The form as set up in the sample may be expanded or modified to suit a specific project. Three loose copies of the proposal form shall be inserted for each contract bid, one retained by the bidder and two submitted to the Authority at the time of bidding. Architect may bind into specifications a fourth copy of proposal at his option.

(b) List all contract divisions on the right side of the form as shown on sample. Cross out any that are not applicable.

(c) Determine the number of working days to complete the project; and type in the number of days or completion date on form opposite "Working Days".

(d) On separate numbered pages, list all alternates of all contracts; identify them as to building, contract and subject. See sample proposal form. All alternates and unit prices shall have been approved by the participating college and the Authority before submitting documents for bidding.

(e) Where alternate bids are used, additive and deductive bids shall not be mixed, but bidding shall provide for either all additive or all deductive alternate bids to the base bid.

(f) Should the base bids exceed the amount of the approved construction budget, the alternate deductive bids shall then be accepted in the order in which they are listed, to the extent necessary to make a contract award within funds available, allowing a reasonable fund reserve for construction contingencies. Award of a contract under the deductive bid procedure shall be made to that bidder submitting the lowest responsible aggregate bid consisting of the base bid plus the accepted alternate deductive bids.

(g) Alternate additive bids shall be accepted in the order in which they are listed and only where they do not represent unbalanced bid amounts when compared with similar bids submitted by other bidders as well as other factors that might be considered and to no greater extent than that which will retain a reasonable reserve for construction contingencies. Award of a contract under the alternate additive bidding procedure shall be made to that bidder submitting the lowest responsible aggregate bid, consisting of the base bid plus accepted alternate additive bids.

9:13-1.94 Unit prices

On separate numbered pages list all unit prices.

9:13-1.95 Bulletins

List bulletins on separate page.

GENERAL CONDITIONS

9:13-1.96 Supplementary general conditions

The following provisions of the Section 1.97 (Temporary facilities) of this Chapter are not intended to be a complete set of supplemental conditions, but specific provisions have been included herein to clarify requirements of the various conditional phases of the work. The architect shall add such other standard provisions as examination of site, scope of work, and so forth as he may see fit. Add modifications and/or new instructions and conditions to suit specific request.

9:13-1.97 Temporary facilities

(a) In general, for temporary facilities, architect shall provide the following:

- 1. Temporary water, power, lighting;
- 2. Plumbing, electrical or general contractors shall make application for water meter and electric service and shall pay for water and electric current unless specific arrangements are made with the participating college for payment by the college;
- 3. Plumbing contractor and electrical contractor shall provide temporary facilities, maintain, and remove when no longer required;
- 4. Protect from freezing;
- 5. Install temporary electric and water service in accordance with NBFU requirements and utility regulations;
- 6. Prime contractors shall at their own expense extend temporary lines and service as required for their various subcontractors, and shall remove such extended lines when no longer required. Any additional services required shall be paid for by contractors requiring same;
- 7. Architect shall describe characteristics of the temporary service in appropriate detail to suit the project. Provide for lamp and fuse replacement; and

8. See NJEFA—101 for provisions regarding temporary heat.

EXCAVATION

9:13-1.98 General provisions

Contracts shall include all necessary excavation to complete the project on an "unclassified" basis including rock. The cost of such excavation shall be included in contractors' lump sum bids and materials of every description shall be excavated at no additional cost.

9:13-1.99 Test borings and soil investigation

The architect shall prepare a plan showing the location and depth of borings required for the project. He shall also prepare a specification and proposal form and assist in the obtaining of bids for this work. Where site conditions, scope of project, and so forth indicate the necessity, a soils consultant may be retained by the Authority. In this event the soils consultant will confer with the Authority and the architect with regard to the proper preparation of plans and specifications and will also supervise drilling work on the site. He will also conduct tests and prepare reports for the use of the architect in the design of foundations.

9:13-1.100 Subsoil conditions: wells, water supply

Each project shall be evaluated and tailored in accordance with known data and anticipated conditions.

9:13-1.101 Tests

Concrete cylinder tests, concrete quality control tests and steel testing shall be excluded from the general construction and structural steel contracts and will be conducted and paid for by the Authority under a separate contract. Architect shall prepare 30 copies of testing specifications and submit specifications to the Authority with other contract documents. At the option of the architect, testing specifications may be bound in with the other contract specifications and included in the proposal form as an additional separate contract entitled Concrete and Steel Testing. Concrete and steel testing may be combined in one lump sum bid.

HIGH RISE STEEL CONSTRUCTION

9:13-1.102 Labor and industry regulations for high-rise steel construction

Refer to the Department of Labor and Industry Safety Code for Workers in the Construction Industry. Include temporary flooring as required under Article 13 of the above Code.

9:13-1.103 Construction safety code

All work shall be conducted in accordance with the State of New Jersey, Department of Labor and Industry Construction Safety Code, effective November 15, 1963, as promulgated by the Commissioner of Labor and Industry under the authority of the Construction Safety Act, P.L. 1962, Chapter 45, N.J.S.A. 34:5-166 to 34:5-181. Particular emphasis is placed upon compliance with all requirements on pages 7 and 8, Articles 3.14 and 3.15 of the Code wherein the general contractor shall be responsible for safety inspections and project protection.

9:13-1.104 Prevailing wage rates

(a) The architect will note that each prime contractor or any subcontractor shall comply with the New Jersey Prevailing Wage Act, Laws of 1963, Chapter 150, and all amendments thereto.

(b) This Act will be made a part of every specification and contract entered into except those contracts which are not within the contemplation of the Act.

(c) The wage rates can be obtained from the Director of the Wages and Hours Bureau, Labor and Industry Building, John Fitch Plaza, Trenton, New Jersey, for each specific project for the county in which it will be constructed. The rates shall be the latest available at the time of bidding, to be inserted in the supplementary general conditions of the specifications.

9:13-1.105 Discrimination prohibition

New Jersey State Statutes (N.J.S.A. 10:2-1 through 10:2-4 with all amendments, memorandum of instructions, and rules and regulations) shall become a part of all contracts.

9:13-1.106 Federal funds

In instances where Federal funds participate in projects, the architect shall comply with regulations included by the Federal agency as directed by the Authority. Should certain regulations pertain to the contractor during the construction phase, these regulations shall be inserted in the bidding documents to be made part of the contract documents.

9:13-1.107 Progress photographs

Specify progress photographs in duplicate; provide number of views to suit project, generally two views. Submit at first of the month with each requisition for payment. Size: eight-inch by ten-inch mounted on muslin with name of project, date, contractor's name, identification of view printed on back of each photograph.

9:13-1.108 Domestic materials

Domestic materials should be used and specified in preference to foreign make, unless specified or intended domestic articles and materials are not mined, produced or manufactured in the United States in commercial quantities, of a satisfactory quality and a reasonable cost. Domestic materials are defined as those materials of which 50 per cent of the cost is domestic.

9:13-1.109 Sales tax law

The State of New Jersey and its agencies and instrumentalities are exempt under Section 9A of Sales Tax Law No. A-751. Under Section 8W of the Act this includes:

“Sales made to contractors, subcontractors or repairmen of materials, supplies or services for exclusive use in erecting structures, or building on, or otherwise improving, altering or repairing real property of organizations described in subsections (a) and (b) of Section 9 of this Act, provided any person seeking to qualify for this exemption shall do so pursuant to such rules and regulations and upon such forms as shall be prescribed by the Director of Taxation”.

9:13-1.110 Prime contractor's work

On State work the State required that each prime contractor perform a minimum of 35 per cent of the contract by his own plant and forces.

9:13-1.111 New Jersey manufacturers

It is important that the architect specify several manufacturers, two of which should be New Jersey manufacturers. Preference should be given to New Jersey manufacturers unless undue hardship is caused to the contractor because of unavailability or exorbitant costs or the product or article is not manufactured in New Jersey.

9:13-1.112 Mechanical testing and balancing

(a) The specification in this Section shall be included under heating and ventilating and/or air conditioning for all jobs costing \$100,000 or more for heating, ventilating and/or air conditioning.

(b) This contractor shall furnish all labor, tools, gauges, instruments, equipment, and the like necessary to balance completely the heating, ventilating and/or air conditioning system as specified in this Section.

(c) All tests shall be performed with recently calibrated instruments suitable for the test. In case of conflict, testing procedures as outlined in applicable test specifications or codes shall govern.

(d) This contractor shall provide the services of an independent and separate specialty subcontractor who specializes in and who shall be solely responsible for the testing, adjusting and balancing of air handling systems and water heating and cooling elements. All said testing and balancing by the specialty subcontractor shall be performed under the direct supervision of the design engineer who shall be a qualified air conditioning, heating and ventilation engineer.

(e) The specialty subcontractor shall be approved by and acceptable to the design engineer and the Authority and shall not be replaced, without the written approval and comment of the design engineer.

(f) The installation of dampers, and the like, required due to omission or deficiency of the air conditioning contractor, or the furnishing and installation of belts, pulleys or drives required to secure proper fan operation or correction of other defects in the system shall be the responsibility of the contractor responsible for that portion of the work or equipment.

(g) Air distribution system balance—with the air handling systems set to operate on minimum fresh air, the aforesaid specialty subcontractor shall perform the following tests, and compile the following information:

1. CFM supply air;
2. Static pressure;
3. Motor h.p.;
4. CFM fresh air;
5. Fan r.p.m.;
6. Fan motor brake horsepower.

(h) Water system balance shall include chilled water, hot water and condenser water systems. The contractor's attention is directed to the fact that metering devices in the form of orifice plates or venturi tubes and taps for pressure observations and recording have been provided in the specifications under the respective sections. The specialty subcontractor shall perform the following tests, complete data and submit reports:

1. Design data of pumps, (heating, chilled water and condenser water):
 - i. GPM, head;
 - ii. RPM, BHP;
2. Installed pumps equipment;
 - i. Manufacturer, size;
 - ii. Type drive;
 - iii. Motor hp, volts, cycles and phase;
 - iv. Full load amperes;
3. Field test of pumps;
 - i. Discharge pressure: full flow and no flow;
 - ii. Suction pressures: full flow and no flow;
 - iii. Operating head and GPM;
 - iv. No load amperes (where possible);
 - v. Full flow amperes, no flow amperes;
 - vi. Calculated BHP;
4. Design data of heating and cooling elements:
 - i. MBH specified, GPM specified;
 - ii. Entering water temperature (E.W.T.);

- iii. Entering air temperature (E.A.T.);
 - iv. Water temperature drop (W.T.D.);
 - v. Element type specified;
5. Installed heating and cooling equipment:
- i. Manufacturer;
 - ii. Size;
 - iii. Arrangement, discharge, class;
 - iv. Motor h.p., voltage, phase, cycle, full load amperes;
6. Field test of heating and cooling elements:
- i. Fan speed;
 - ii. Number of velocity readings taken;
 - iii. Duct average velocity;
 - iv. Total C.F.M.;
 - v. Outside air C.F.M.;
 - vi. Return air C.F.M.;
7. Individual outlets (diffusers, registers and/or grilles):
- i. Identify each outlet as to location and area;
 - ii. Outlet, manufacturer and type;
 - iii. Outlet size;
 - iv. Outlet free area, core area or neck area;
 - v. Outlet factor;
 - vi. Required F.P.M. and test velocity found for each outlet;
 - vii. Required C.F.M. and test results for each outlet.
- (i) After completion of tests, adjustments and balancing under minimum fresh air conditions, set the system for 100 per cent fresh air (economizer cycle). Repeat the total CFM tests to check field versus design conditions. The results under 100 per cent fresh air cycle shall agree with conditions found under "minimum fresh air operation" before the system is considered to be in balance. Adjustments of the proper dampers shall be made to achieve balance.

(j) Testing and adjusting of individual outlets shall be performed under procedures recommended by the various manufacturers of the outlets. All outlets shall be set for air pattern required and all main supply air and return air dampers to be adjusted and set for design CFM indicated. Any required changes in air pattern, settings, or whatever, necessary for achieving correct air balance shall be provided by this contractor, and at no additional cost to the State. Total CFM of all outlets shall agree with total CFM of all branches and the grand total shall agree with the air volume for the fans.

(k) Field test shall be as follows:

1. Identify each element as to location;
2. Required water temperature drop corrected for Item (3);
3. Actual entering air and water conditions (temperature and GPM); and
4. Adjust element until required temperature drop is obtained.

(l) When testing and balancing with water cooling or heating coils, ascertain that the proper volume of air is passing over the coils while the balancing is in process. Determine the entering and leaving wet and dry bulb temperatures where balancing chilled water coils in conjunction with water volumes. A minimum of three sets of readings shall be taken when balancing such elements, allowing sufficient time in between readings for the system to settle out. Upon final balance, the pumps shall be rechecked for total water volume and findings to be reported on the pump report form.

(m) *Check and rebalance.* All previously specified tests, adjustments and balancing of both air distribution system and water systems shall be subject to spot-checking by the engineer. In the event that deviations, discrepancies, and so forth from the design or reported conditions are found, the entire systems shall be subject to rebalancing by the specialty subcontractor until the systems meet the requirements of the project plans and specifications.

(n) *Reports.* The contractor shall record all information herein specified and shall forward four copies of the report to the engineer for study, evaluation and approval. In addition, the contractor shall report any violations, omissions and/or deviations from the plans and specifications which will adversely affect the balancing, operation and/or maintenance of the air conditioning systems.

(o) Standard practice data sheets are as follows:

1. Standard drawing sizes—DS-1

DS-1

SEE DS-3 FOR BLOW-UP SHOWING COORDINATE SYSTEM

STANDARD DRAWING BORDER

DRAWING SHEET SIZES	
ONE DIMENSION	OTHER DIMENSION
24"	36"
30"	42"
* 36"	* 48"

* MAXIMUM SIZE ALLOWED, IF REQUIRED

ALL FINAL DRAWINGS INCLUDING ARCHITECTURAL, STRUCTURAL, PLUMBING, HEATING, VENTILATING & AIR CONDITIONING, & ELECTRICAL SHALL BE UNIFORM IN SIZE.

EDUCATIONAL FACILITIES AUTHORITY	STANDARD DRAWING SIZES	DATE 8-69	STANDARD PRACTICE DATA SHEET	DS 1
----------------------------------	-------------------------------	--------------	------------------------------	---------

10/15/69

4-2-69		PARTITIONS THICKENED			
3-15-69		DOOR RELOCATED			
1-30-69		SERVICE SINK ADDED			
NO.	DATE	DESCRIPTION			
REVISIONS					
CLASSROOM BUILDING STATE COLLEGE AT N. J.					
FIRST FLOOR PLAN					EFA- ACCT NO.
NAME OF ARCHITECTURAL FIRM					SHEET NO.
ADDRESS					
NAME NAME ARCHITECT (S) C-					
SCALE	DRAWN BY	DATE	CHECKED BY	JOB NO.	GP Dwg. NO.
ARCHITECT DATE CERT C-					

10/15/68

9.3.2

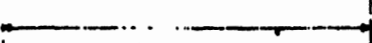
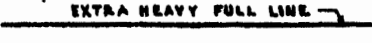
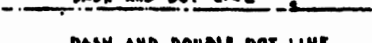


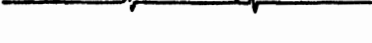

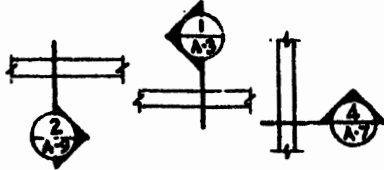
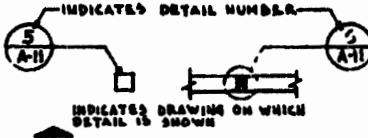

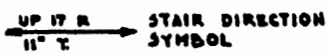
DRAWING TITLE BLOCK

DATE JAN '69	STANDARD PRACTICE DATA SHEET
-----------------	------------------------------------

DS 2

4. Architectural drafting—DS-4A

6.5.2

 <p>THIN FULL LINE</p>  <p>HEAVY FULL LINE</p>  <p>EXTRA HEAVY FULL LINE</p>  <p>DASH AND DOT LINE</p>  <p>DASH AND DOUBLE DOT LINE</p>  <p>DOTTED LINE</p>  <p>BREAK LINE</p>	<p>DIMENSION LINES</p> <p>PROJECTED DIMENSION LINES</p> <p>GENERAL DRAWING LINES</p> <p>OUTLINES, SILHOUETTES, BORDER LINES</p> <p>CENTER LINES, FLOOR ELEVATION LINES, PROJECTED LINES</p> <p>PROPERTY LINES, BOUNDARY LINES, CONTRACT LIMIT LINES</p> <p>WORK BELOW, ABOVE OR BEYOND; EXISTING WORK TO BE REMOVED</p> <p>TO BREAK OFF PARTS OF DRAWINGS</p>
<p>INDICATES SECTION NUMBER</p>  <p>INDICATES DRAWING ON WHICH SECTION IS SHOWN</p> 	<p>SECTION LINES AND REFERENCES</p> <p>ELEVATION NUMBER</p> <p>DRAWING NUMBER</p> <p>INTERIOR ELEVATION REFERENCE</p>
<p>INDICATES DETAIL NUMBER</p>  <p>INDICATES DRAWING ON WHICH DETAIL IS SHOWN</p>  <p>NORTH POINT TO BE PLACED ON EACH FLOOR PLAN, KEY PLAN AND SITE PLAN</p>  <p>STAIR DIRECTION SYMBOL</p>	<p>DETAIL REFERENCES</p> <p>ENTRANCE SYMBOL SCHEMATICS/PRELIMINARY DRAWINGS ONLY</p> <p>NOTE</p> <p>NOTE</p> <p>NOTE</p> <p>INDICATION ARROWS DRAWN WITH STRAIGHT LINES (NOT CURVED); MUST TOUCH OBJECT</p>

EDUCATIONAL FACILITIES AUTHORITY

ARCHITECTURAL DRAFTING

DATE 6-69 STANDARD DS PRACTICE DATA SHEET 4A

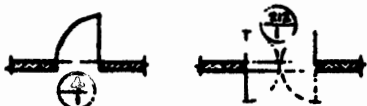
10/15/85

5. Architectural drafting—DS-4B


0.8.2

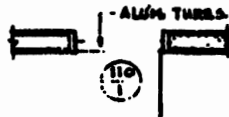
DOOR SYMBOL

TO BE PLACED AT EVERY DOOR OR FRAMED OPENING SHOWN IN PLAN, ELEVATION OR SECTION.

EXAMPLES 

DRAW DOOR SWINGS AT 90°. WHERE INTERFERENCE OCCURS, DRAW SWINGS AT 45°. INDICATE SWINGS GREATER THAN 90° AS SHOWN ABOVE. INDICATE THRESHOLDS & DIVISION STRIPS. INDICATE SILLS AT EXTERIOR DOORS.

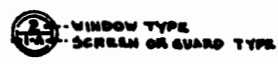
 - SPACE NO.
- DOOR NO.

 - ALUM. THRESH.
110"

SCALE: 1/8"=1'-0"

WINDOW SYMBOL

TO BE PLACED AT EVERY WINDOW OR GROUP OF WINDOWS SHOWN IN PLAN, ELEVATION OR SECTION.

EXAMPLE  - WINDOW TYPE
- SCREEN OR GUARD TYPE


SPACE OR ROOM TITLE

EXAMPLE CORRIDOR

SPACE NO. - 109


COLUMN NUMBERS

FOLLOW STRUCTURAL LAYOUT FOR EXTERIOR COLUMNING. NUMBER INTERIOR COLUMNS WHERE COORDINATE SYSTEM IS NOT USED.

 12



FURRING & PLASTER LINES


ALWAYS DRAW FURRING LINES AT EXTERIOR WALLS, WHEREVER APPLICABLE. DO NOT DRAW PLASTER LINES AT INTERIOR PARTITIONS AT 1/8" SCALE. INDICATE PLASTER LINES AT 1/4" & LARGER SCALES.

 - FURRING LINE



EXAMPLE
SCALE: 1/8"=1'-0"

ELEVATORS, HATCHWAYS, DUCTS, OPENINGS IN FLOOR, ETC.

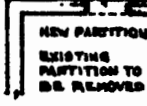

46" x 22" SLAB OPNG.  CLOSE UP EXISTING OPENING 


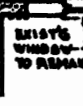
NEW DOOR IN EXIST'G WALL 

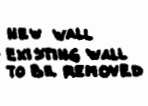

COUNTERS, RAILS AND GATES

COUNTER  - RAIL GATE 

ALTERATIONS

NEW PARTITION  EXISTING PARTITION TO BE REMOVED 

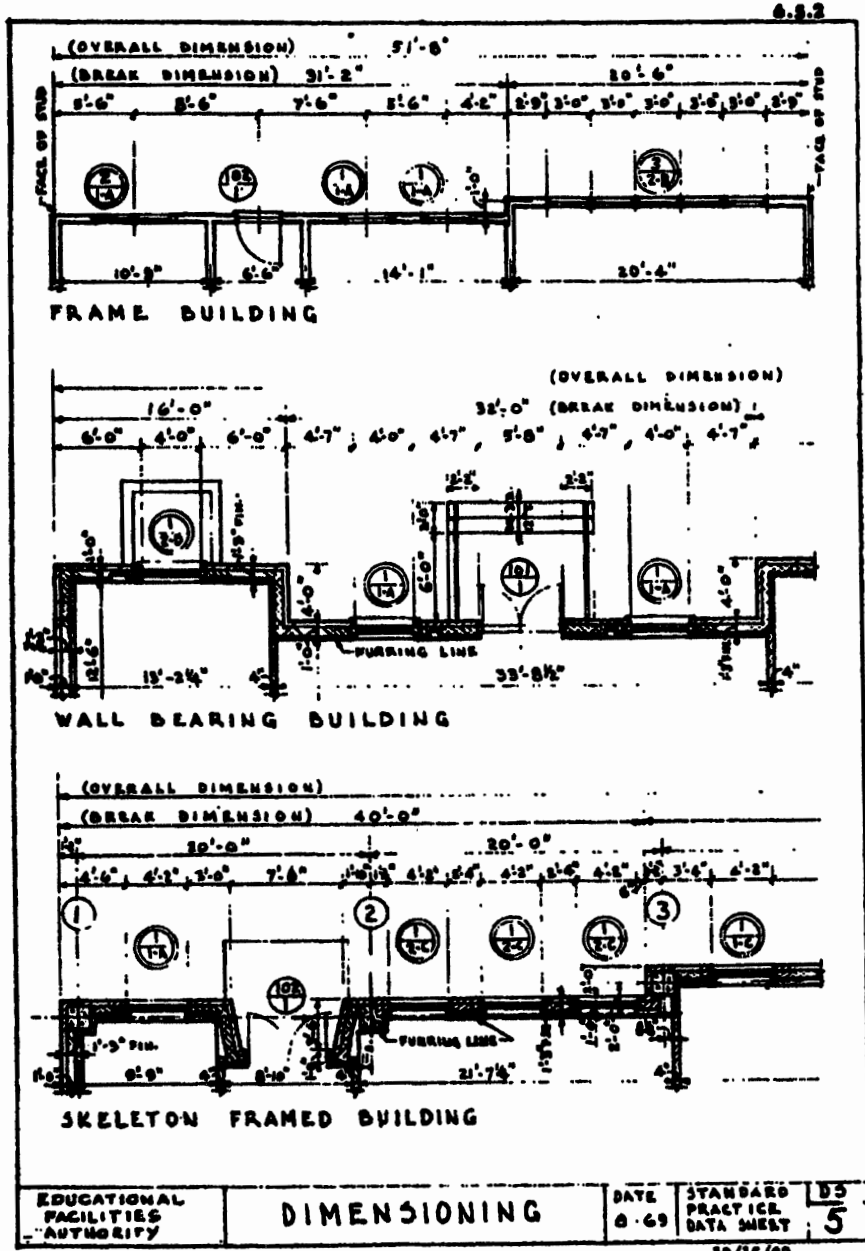
NEW DOOR IN EXIST'G WALL  EXIST'G WINDOW TO REMAIN 

NEW WALL  EXISTING WALL TO BE REMOVED 

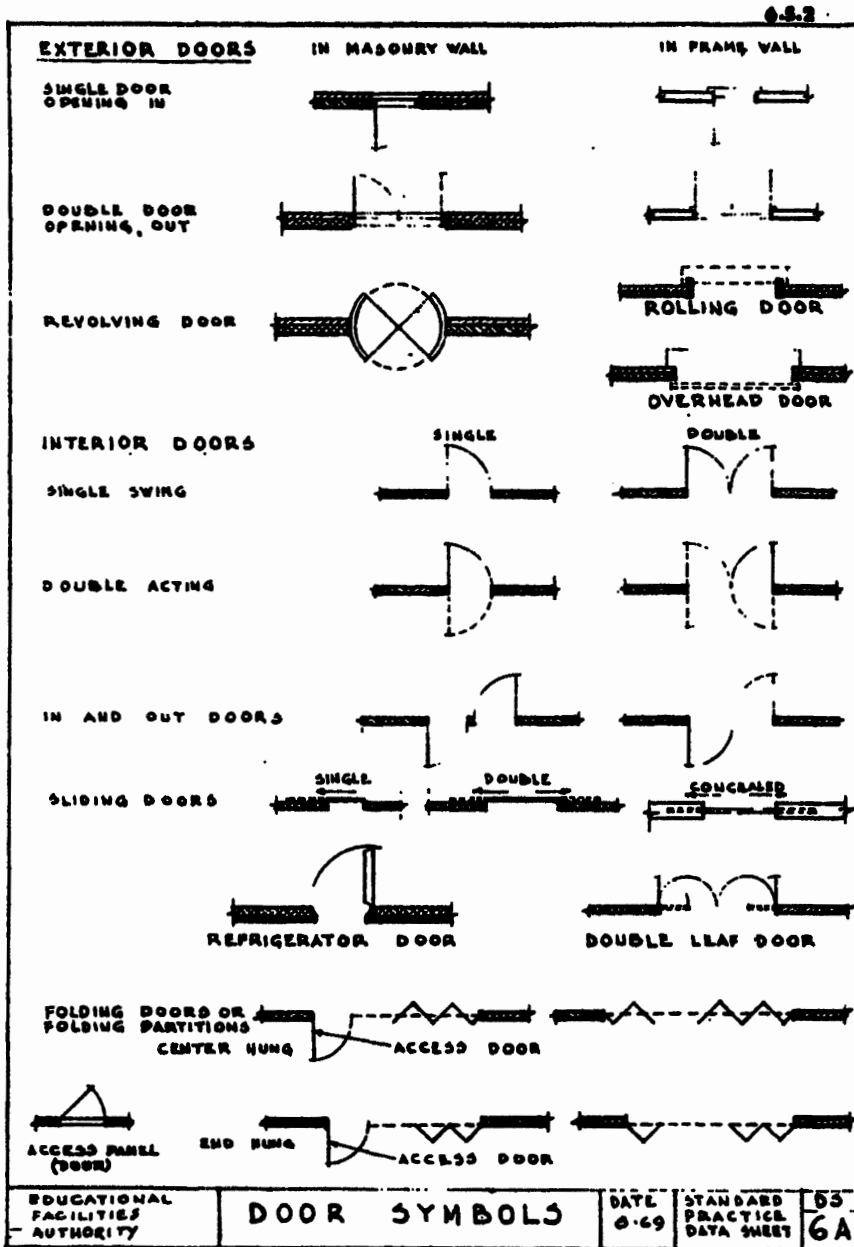
EDUCATIONAL FACILITIES AUTHORITY	ARCHITECTURAL DRAFTING	DATE 8-69	STANDARD PRACTICE DATA SHEET	DS 4B
----------------------------------	------------------------	--------------	------------------------------	----------

10/15/69

6. Dimensioning—DS-5

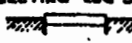
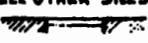









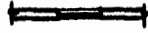





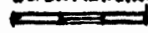
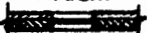
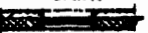








7. Door symbols—DS-6A



8. Window symbols—DS-6B

6.2.2

<u>SILL INDICATIONS</u>	PROJECTING LUG SILL 	ALL OTHER SILLS 	
<u>WINDOWS IN PLAN</u>			
	WOOD OR METAL SASH IN FRAME WALL	METAL SASH IN MASONRY WALL	WOOD SASH IN MASONRY WALL
<u>DOUBLE HUNG</u>			
<u>HORIZONTAL SLIDING</u>			
LEFT SASH OVER RIGHT			
RIGHT SASH OVER LEFT			
<u>PROJECTED OR CASEMENTS</u>			
	(INDICATE VENTING ON ELEVATION)		
<u>VERTICAL PIVOTED</u>			
<u>LOUVERED OPENING</u>	WD OR MET. LVR. 	MET. LVR. 	WD. LVR. 
<u>VENTING OF WINDOWS IN ELEVATION</u>			
MAKE NOTE: IF EVERY WINDOW IS NOT MARKED, VENTING IS TYPICAL.			
TOP HINGED PROJECTED OUT		BOTTOM HINGED PROJECTED IN	
HORIZONTAL PIVOT		VERTICAL PIVOT	
CASEMENTS - RIGHT OR LEFT			
EDUCATIONAL FACILITIES AUTHORITY	WINDOW SYMBOLS	DATE 8-69	STANDARD PRACTICE DATA SHEET 10/25/69
			DS 6B

9. Site and grading symbols—DS-6C

	EXISTING CONSTRUCTION (NOTE BLD'G NO, NAME, BSMT. & FLOOR EL.)				
	PROPOSED CONSTRUCTION (NOTE BLD'G NO, NAME, BSMT. & FLOOR EL.)				
	FUTURE CONSTRUCTION (NOTE BLD'G NO & NAME)				
	CONSTRUCTION TO BE REMOVED (NOTE BLD'G NO, NAME, BSMT. & FLOOR EL.)				
	PAVING				
	EXISTING CONTOUR				
	FINISHED CONTOUR				
	FINISHED GRADE, SPOT ELEVATION				
	TUNNEL (NOTE FLOOR EL.)				
	UNDERGROUND STEAM CONDUIT				
	SANITARY SEWER (NOTE SIZE OF PIPE)				
	STORM SEWER (NOTE SIZE OF PIPE)				
	WATER LINE (NOTE SIZE OF PIPE)				
	CURBING (NOTE TOP & BOTTOM CURB EL.)				
	POWER AND/OR TELEPHONE LINE				
	GAS LINE				
	PROPERTY LINE AND/OR LIMIT OF CONTRACT				
	FENCE LINE				
	BENCH MARK (WITH DESCRIPTION)				
	MANHOLE (NOTE TOP & INVERT EL.)				
	CATCH BASIN (NOTE TOP & INVERT EL.)				
	TEST HOLE (NOTE BORING NUMBER)				
	HYDRANT				
	VALVE				
	LIGHT STANDARD				
	POWER AND/OR TELEPHONE LINE POLE				
	TREE (NOTE DIAMETER & SPECIES.)				
	SHRUBS/ GROWTH OF TREES UNDER 6" CALIPER				
<p>ALL UTILITIES, SERVICES, ROADS, ETC. ARE TO BE NOTED AS BEING NEW, EXISTING OR EXISTING TO BE REMOVED - AS APPLICABLE.</p> <p>NEW UTILITIES, SERVICES, ETC. ARE TO BE SHOWN WITH A BOLDER INDICATION THAN THAT USED FOR EXISTING.</p>					
EDUCATIONAL FACILITIES AUTHORITY	<table border="1"> <tr> <td>SITE & GRADING SYMBOLS</td> <td>DATE 8-69</td> <td>STANDARD PRACTICE DATA SHEET</td> <td>DS 6C</td> </tr> </table>	SITE & GRADING SYMBOLS	DATE 8-69	STANDARD PRACTICE DATA SHEET	DS 6C
SITE & GRADING SYMBOLS	DATE 8-69	STANDARD PRACTICE DATA SHEET	DS 6C		

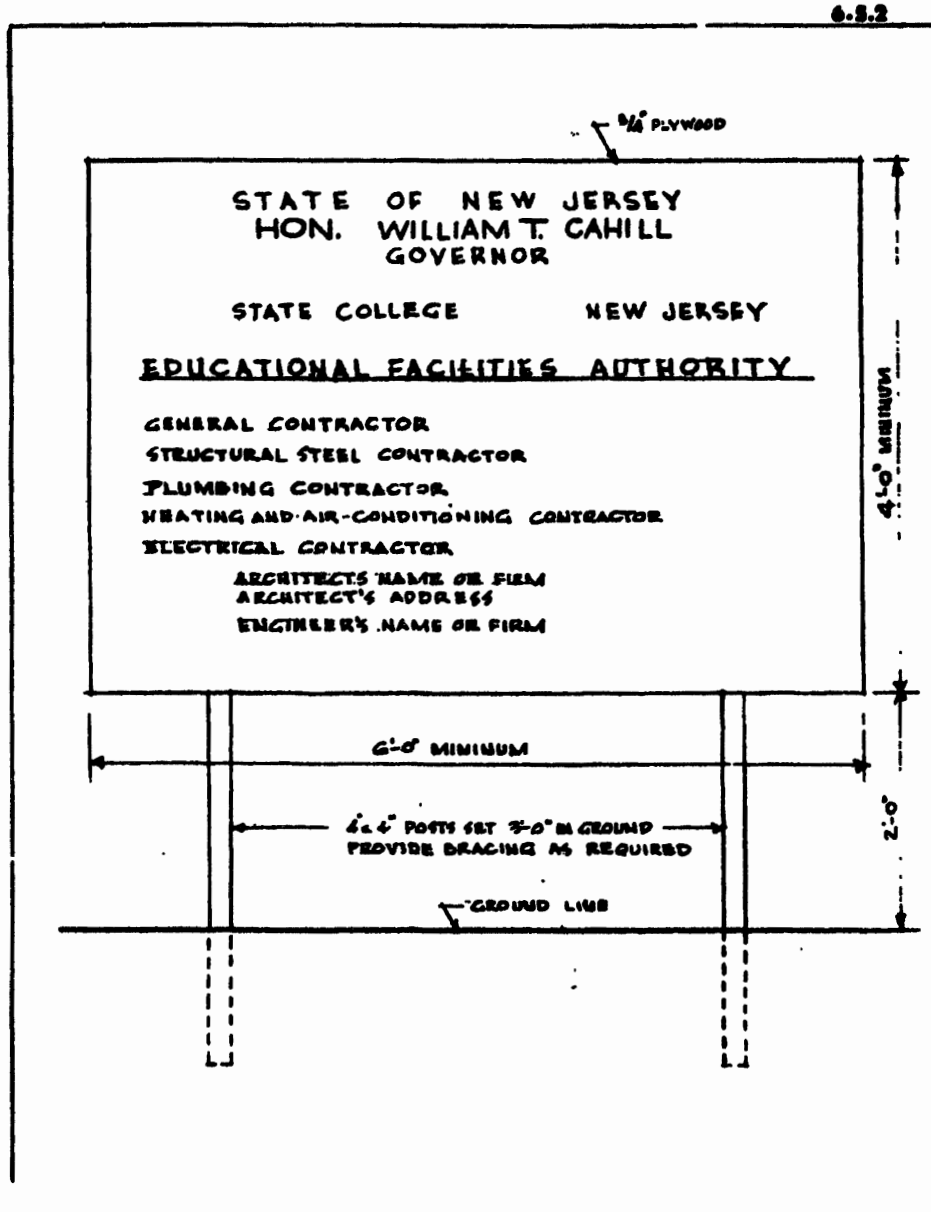
10/15/69

10. Material symbols—DS-6D

6-2.2

BRICK							
CONCRETE							
EARTH ETC.							
GYPSUM							
GLASS							
INSULATION							
MARBLE		SLATE, BLUESTONE, SOAPSTONE					
METALS							
STONE							
HOLLOW TILE & TERRA COTTA					INDICATE GLAZED SIDE AT LARGE SCALE ONLY		
CERAMIC TILE							
WOOD					WATERPROOF MEMBRANE		
EXTERIOR WALL EXAMPLES							
	COM. BRK.	HOLLOW TILE	C.M.U.	COM. BRK.	STONE CONC.	C.M.U.	S.P.T.
INTERIOR PARTITION EXAMPLES							
FLOOR FINISH EXAMPLES							
NEW CONSTRUCTION (INDICATE ACTUAL WALL CONSTRUCTION)		EXISTING TO REMAIN		EXISTING TO BE REMOVED		NOTED "ELEVATION"	
ALL SYMBOLS ARE FOR PLANS & SECTIONS UNLESS				NOTED "ELEVATION"			
EDUCATIONAL FACILITIES - AUTHORITY	MATERIAL SYMBOLS			DATE 8-69	STANDARD PRACTICE DATA SHEET	DS 6D	
						10/15/69	

11. Project sign—DS-7



(p) Architect's construction cost estimate (C.C.E.) final construction documents phase

Educational Facilities Authority
225 West State Street
Trenton, New Jersey 08625

6.53
(1 of 8)

Architect's Construction Cost Estimate (C. C. E.)
Final Construction Documents Phase

Project _____ Date _____

Title _____
Location _____
Description _____
Participating College _____

Architect/Engineer

Name _____
Address _____

GENERAL CONSTRUCTION

Division

1. General Requirements
Temporary Facilities _____

Total Division 1 _____

2. Site Work
Clearing _____
Earthwork _____
Roads and Walks _____
Site Improvements _____

Total Division 2 _____

10/15/69

Architect's Construction Cost Estimate (C. C. E.)
Final Construction Documents Phase

6.53
(2 of 8)

Division

3. Concrete

Cast-In Place Concrete _____
Precast Concrete _____
Concrete Decks _____

Total Division 3 _____

4. Masonry

Unit Masonry _____
Stone _____

Total Division 4 _____

5. Metals

Structural _____
Open-Web Joists _____
Decking _____
Miscellaneous Metal _____

Total Division 5 _____

6. Carpentry

Carpentry _____
Millwork _____

Total Division 6 _____

10/15/69

Architect's Construction Cost Estimate (C. C. E.)
Final Construction Documents Phase

6.53
(3 of 8)

Division

- 7. Moisture Control
 - Waterproofing _____
 - Dampproofing _____
 - Insulation _____
 - Roofing _____
 - Sheet Metal Work _____
 - Flashing _____
 - _____
 - _____
 - _____

Total Division 7

- 8. Doors, Windows, Glass
 - Metal Doors & Frames _____
 - Wood Doors _____
 - Windows _____
 - Finish Hardware _____
 - Weatherstripping _____
 - Glass & Glazing _____
 - _____
 - _____
 - _____

Total Division 8

- 9. Finishes
 - Lath & Plaster _____
 - Drywall _____
 - Tile Work _____
 - Terrazzo _____
 - Acoustical Treatment _____
 - Resilient Flooring _____
 - Painting & Coatings _____
 - _____
 - _____
 - _____

Total Division 9

10/15/69

Architect's Construction Cost Estimate (C. C. E.)
Final Construction Documents Phase

6.53
(4 of 6)

Division

- 10. Specialties
 - Chalkboard & Tackboard _____
 - Demountable Partitions _____
 - Flagpoles _____
 - Firefighting Equipment _____
 - Signs _____
 - Lockers _____
 - Toilet & Bath Accessories _____
 - _____
 - _____
 - _____

Total Division 10 _____

- 11. Equipment
 - Educational _____
 - Kitchen _____
 - Gymnasium _____
 - Laboratory _____
 - Laundry _____
 - Medical _____
 - Prison _____
 - Stage _____
 - _____
 - _____
 - _____

Total Division 11 _____

10/16/69

10/18/89

Division	
12. Furnishings	Total Division 12
Blinds & Shades	_____
Cabinets & Fixtures	_____
Carpeting	_____
Furniture	_____
Seating	_____
Total Division 12	
13. Special Construction	Total Division 13
Pedestal Floors	_____
Prefabricated Structures	_____
Swimming Pool	_____
Total Division 13	
14. Conveying Systems	Total Division 14
Dumbwaiters	_____
Elevators	_____
Escalators	_____
Pneumatic Tube	_____
Total Division 14	
Total General Construction	

Architect's Construction Cost Estimate (C.C.E.)
Final Construction Documents Phase

6.53
(5 of 8)

Architect's Construction Cost Estimate (C. C. E.)
Final Construction Documents Phase

6.53
(6 of 8)

MECHANICAL CONSTRUCTION

Division

15A	Plumbing	
	Site Work	_____
	Fire Standpipe System	_____
	Sanitary Systems	_____
	Storm Drainage	_____
	Water Supply	_____
	Fixtures	_____
	Total Plumbing	_____
15B	Heating and Ventilating (Air-Conditioning)	
	A-C Chiller, Pumps, Piping, Cooling Tower, Controls, etc.	_____
	A-C Air-Handling Equipment, Fans	_____
	Coils, Filters, Ducts, Grilles	_____
	Htg. Air-Handling Equipment, Fans	_____
	Ducts, Grilles, etc.	_____
	Htg. Underground Conduit, Site Work	_____
	Htg. Direct Radiation	_____
	Htg. Circulators, Convectors	_____
	Htg. Controls	_____
	Htg. Boilers, Pumps, Piping, etc.	_____
	Exhaust System	_____
	Total Heating and Ventilating (A-C)	_____
	Total Mechanical	_____

10/16/69

Architect's Construction Cost Estimate (C. C. E.)
Final Construction Documents Phase

6.53
(7 of 8)

ELECTRICAL CONSTRUCTION

Division

16. Electrical

- Site Work _____
- Demolition _____
- Temporary Light and Power _____
- Empty Conduit for Future _____
- High Voltage Switch Gear _____
- Emergency System _____
- Fire Alarm System _____
- Public Telephone System _____
- Public Address System _____
- Panels _____
- Branch and Power Work _____
- Fixtures _____

Total Electric _____

10/15/69

(q) Architect's Construction Cost Estimate (C.C.E.) Summary—Final Construction Documents Phase

6.53
(8 of 8)

Architect's Construction Cost Estimate (C. C. E.)
Summary - Final Construction Documents Phase

BUDGET	
1. General Construction	_____
2. Structural, Miscellaneous Steel	_____
3. Plumbing	_____
4. Heating, Ventilating, Air-Conditioning	_____
5. Electrical	_____
6. Total Construction Cost Estimate (C. C. E.)	_____
7. Architect-Engineer Fees	_____
8. Construction-Administration	_____
9. Fixed Equipment	_____
10. Contingency	_____
11. Other Costs	_____
12. Total Current Working Estimate (C. W. E.)	_____
Total Floor Area	_____
Cost Per Square Foot	_____

10/15/69

BID AND CONTRACT AWARD

9:13-1.113 General provisions

Following approval of final drawings and specifications, the required number of specifications and the final tracings are turned over to the Authority and the project is advertised for bids.

9:13-1.114 Qualification of bidders

Bids are generally opened to all qualified bidders and the law requires that the contract be awarded to the lowest responsible bidder. The architect shall refrain from making recommendations prior to the opening of bids. For public college work, the prequalification process of the Division of Building and Construction is applied. For projects at independent colleges, the college is requested to submit the

prospective list of bidders to the Authority prior to the time that bids are received.

9:13-1.115 Bulletins

(a) The architect shall not give any oral interpretation or information to prospective bidders that will affect the bid prices. On questions affecting the bid price the architect shall write revision or clarification bulletins prepared by the architect's office. These bulletins shall be lettered in sequence starting with Bulletin "A" for the first bulletin. Bulletins will be issued no later than one week before the bid opening, unless otherwise required or directed by the Authority.

(b) Telegram bulletins issued later than one week before bid opening shall be at the expense of the architect.

9:13-1.116 Alternate bids

Alternate and separate bids for each phase are sometimes required to offset costs exceeding the allocated funds at the same time not to appreciably change the scope of the project. The number of alternates should be held to a minimum and the amount for each alternate should not be less than five per cent of the base bid unless otherwise directed. Alternates must be approved by the participating college and the Authority before bidding.

9:13-1.117 Opening of bids

The architect shall be present at the opening and reading of the bids in order to tabulate same. Immediately thereafter, a copy of all proposals are given to the architect for review and recommendations. Note that the architect shall prepare bid tabulation sheets for the use of all personnel (including contractors and material men) who may be present at the bid opening.

9:13-1.118 Recommendations for contract award

(a) The architect, after reviewing the proposals and the proposed contractors, is responsible for making recommendations to the Authority for contract awards. The architect shall submit an original and five copies of recommendations. All recommendations are to be addressed to:

Executive Director

New Jersey Educational Facilities Authority

225 West State Street

Trenton, New Jersey 08625

(b) The reference shall include project title, and bid due date.

(c) The recommendations shall include the following:

1. Include complete information for acceptance or rejection of alternates, unit prices and allowances;
2. Be specific and conclusive for each trade including comments on the contractors proposed;
3. Indicate whether the number of working days listed in the proposal is satisfactory;
4. Indicate expiration date of proposals;
5. Comment on any discussions held with contractors; and

6. Review bidding documents to the point of including alternative recommendations if the bid proposals and type of project indicate that it would be feasible to consider such alternatives.

(d) The closing paragraph of the recommendation shall include the following:

1. Trade name and address of each contractor and amount of recommended award;
2. Grand total of all contract awards;
3. Total estimated architect fee;
4. Total project cost;
5. Less architect's fees paid to date;
6. Net amount required to make contract awards.

(e) *Tabulations.*

1. Each copy of the letter of recommendations shall have attached a tabulation of all bid proposals received. Bid tabulation may be a thermofax, ditto, white print, blueprint, or photostat copy. The tabulation sheet shall include the trade name and address of contractor, base bid, alternates, unit prices, calendar days, amount of bid bond or certified check, and date through which pricing will hold good.

2. The architect shall return to the Authority with the letter of recommendation, all copies of bid proposals and other data which were forwarded to him for review.

9:13-1.119 Contract award

(a) The architect will be notified of award date and shall be present at that time. Working days will be figured from award date which is authorization to proceed. Architect shall officially record starting date in the minutes of this meeting. Contractor will receive all forms required at the award meeting, samples of which are inserted herein.

(b) It is the responsibility of the contractor to complete the agreement with the Authority or the participating college and submit it together with the performance bond directly to the Authority. The architect will receive a copy of the agreement after it has been executed by the Authority.

(c) Sample form of bid tabulation sheet

BID TABULATION—GENERAL CONSTRUCTION CONTRACT NO. 1

Project:
Location:

Bid Due Date:

GENERAL CONTRACTOR	Bid Bond or Certified Ck.	Base Bid	ALTERNATES					
			1.	2.	3.	4.	5.	6.

- 1.
- 2.
- 3.

PLUMBING CONTRACTOR

- 1.
- 2.
- 3.

HEATING, VENTILATING & AIR CONDITIONING CONTR.

- 1.
- 2.
- 3.

CONSTRUCTION

9:13-1.120 Correspondence (construction phase)

(a) All correspondence by the contractor is to be addressed to the architect with copies to the following in the Authority:

- | | |
|---------------------------------------|------------|
| 1. Executive director | two copies |
| 2. Field inspector ¹ | one copy |
| 3. Participating college ¹ | one copy |

¹To be mailed directly. Addresses will be issued at the contract award meeting.

(b) All correspondence issued by the architect to contractors must include copies for distribution as noted in subsection (a) of this Section.

(c) All correspondence by the architect to the Authority during the construction phase shall be addressed to:

Executive Director
New Jersey Educational Facilities Authority
225 West State Street
Trenton, New Jersey 08625

(d) Correspondence shall be identified as to project by use of project title. A 1¼-inch margin is to be provided on the left-hand side of the sheet for all correspondence for use of the Authority's distribution stamp.

9:13-1.121 Job conferences

(a) Job conferences will be held periodically with all contractors, field inspectors, personnel from the Authority and participating college. The architect shall set up job meeting dates in coordination with the superintendent and field inspector. The architect shall give all interested parties advance notice of each meeting date. The architect shall have his consultants present at all job meetings.

(b) The architect is responsible for preparing and submitting minutes of all job meetings at which he is present and they shall include the information and conform to the

format listed; outlined in following "Minutes of Job Meeting Form".

(c) The minutes of all meetings shall include the following information and shall conform to the format listed below:

1. Project title	Date
------------------	------

2. Job meeting number, date, time and location of meeting including list of personnel present and name of firm they represent.

3. The first paragraph shall record whether there are to be any corrections to the minutes in record for the previous meeting.

4. The architect shall use the C.P.M. report as an agenda. Progress of each contractor shall be reviewed in the following order:

- i. General construction;
- ii. Structural steel and miscellaneous iron;
- iii. Plumbing;
- iv. Heating, ventilating and air conditioning;
- v. Electrical;
- vi. Other prime contracts.

5. List delays, together with an explanation and plan to place work back on schedule.

6. Supplemental paragraphs shall include specific data on items discussed in relation to the trades involved, including the name of the contractor or subcontractor.

7. The concluding statement of the minutes shall be in the form of a summary including the following information:

- i. Statements of action to be taken by the prime or subcontractors, by the architect, engineer, Authority, or others.

ii. It is particularly important that information be included on any lack of cooperation or coordination between the trades.

iii. Specific information on the physical percentage of completion of construction versus contract completion date (status of C.P.M. if applicable).

iv. Specific information on any of the following items which may be delaying construction progress: progress schedule (C.P.M. or other), approvals for sub-contractors, materials; unit schedule breakdown, change orders, color and finish schedules, shop drawings, door buck and hardware schedules.

v. Final paragraph must include architect's personal comments on cooperation and progress of each prime contractor.

8. The signature of the person preparing the minutes must be included. The lower left hand corner of the final sheet must also include the complete distribution list. The date, time and location of the next job meeting must be included.

9. Minutes are to be on 8½-inch by 11-inch paper; allow 1¼-inch margin on left-hand side of sheet. Use duplicating methods that will produce legible and reproducible copies.

10. Minutes are to be distributed as follows:

- i. One copy to the Authority;
- ii. One copy to the field inspector; and
- iii. One copy to each contractor.

9:13-1.122 Modified drawings

The architect, after contract award, is to issue an addendum to the specifications incorporating all: bulletin information issued after submission of bidding documents and during the bidding period; accepted alternates; and initial contract changes. Transparencies of contract drawings are to be made and filed with the Authority for record purposes, and the working drawings then revised to reflect agreed-on contract modifications such as bulletins, approved alternates, qualifications, and so forth. These revised drawings are to be identified by showing justification in revision box (such as, "Revised in accordance with Bulletin "A" issued during bidding period" and so forth) and issued for construction use within 30 days after contract award.

SUBMISSIONS

9:13-1.123 Contractors' insurance certificates

Minimum limits are set by the general conditions. After receiving and reviewing an original and two copies from the contractor, the architect shall forward the original and one copy to the Authority. Construction shall not begin until certificates have been received by the architect.

9:13-1.124 Builders' risk fire insurance

(a) The Authority or the participating college will provide builders' risk fire insurance. It is the architect's responsibility to complete Form EFA-24 issued by the Authority, immediately after the award. See sample form. An original and two copies shall be submitted to the Authority. This insurance applies only to new construction and will not apply to renovation or alteration work.

(b) Architect please note that excluded items are excavation, foundations, piers or other supports below the under surface of the lowest basement floor or where there is no basement, all foundations, piers or other supports below the surface of the ground. Excluded also are all other underground installations including heating lines, electrical lines, piping of any sort, tunnels, conduits, and so forth.

9:13-1.125 Unit schedule breakdown approval

Form is prepared by the contractor and submitted in original and four copies to the architect within 30 days from date of contract award. The architect retains one copy and submits the original and three copies to the Authority.

9:13-1.126 Request for approvals form

(a) Submitted in six copies by contractor to the architect. The architect retains one copy and submits the original and three copies to the Authority within 30 days from the date of the contract award. The contractor must submit a separate set of forms for approval for each of the following categories:

1. Manufacturer, material, material supplier;
2. Subcontractor;
3. Samples.

(b) The contractor must include and abide by the following information:

1. Heading must be properly completed;
2. Note whether the item is included in the specifications and state the specifications section and paragraph;
3. If a substitute item is being submitted, the contractor must attach data indicating whether the substitution differs from that originally specified;
4. If the Authority should approve the substitute item and the substitute changes the scope of work under other trades from the original specifications, then the contractor offering the substitute item shall be responsible for any added cost involved by reason of the change in the work of other trades;
5. If credit is allowed for the substitution, the breakdown showing the amount of credit must be included;

6. The contractor, when requesting approval of out-of-State subcontractor as material manufacturer or supplier, must attach a statement to the form to the effect that exhaustive effort was made to use New Jersey firms and/or materials, and so forth;

7. Architect please note that specifications must state that preference is to be given to New Jersey manufacturers and firms;

8. Approval of a subcontractor or material supplier does not relieve the contractor or subcontractor of the responsibility of complying with the contract documents;

9. The approval of a subcontractor does not imply approval of material; and

10. Please note that unit schedule breakdown columns are to include item number, quantity, description, lump-sum material breakdown, lump-sum allowances and unit prices, lump-sum labor breakdown, and total amount.

(c) Failure to submit form promptly may be the basis for assessment of penalties provided for in the respective contracts.

(d) The architect's recommendations must be explicit and complete.

(e) If the architect's consultant is recommending approval of the submission, then the architect must attach to the original and each copy of the form the letter of recommendation from the architect's consultant. The architect must attach copies of research data, information on past performances of contractor or subcontractor, information on use of materials, references or other data which will clarify the request noted in form. These forms must be processed before shop drawings can be approved.

(f) After approval by the Authority, distribution by the Authority will be made as follows:

1. Original to contractor;
2. Copy to architect;
3. Copy to field inspector;
4. Copy to Authority file.

(g) If submissions are disapproved or other action must be taken, the architect will be notified by the Authority describing subsequent procedures.

9:13-1.127 Approval of material samples

(a) The contractor shall submit samples of all materials or products required and listed in the specifications, of sufficient size and in quantities required (a minimum of two samples if not otherwise stipulated). Form must be transmitted to the architect as stated previously.

(b) No material shall be shipped to the job, or work performed with such material, until samples are finally approved by the Authority and confirmed in writing.

(c) The architect shall arrange a meeting, if required, at the job site with the contractor, the Authority and participating college to inspect the material samples and report any decisions reached.

9:13-1.128 Approval of material requiring laboratory tests

(a) Poured in place concrete testing, and structural steel testing if required shall be performed by a testing laboratory contracted separately and directly by the Authority. The contractor shall submit samples of materials to be used to the laboratory, in order for them to design the mix and/or verify steel properties, and so forth to meet the specifications. Forms will be required by the contractor as previously outlined. Reports of the independent testing laboratory will be sent directly to the Authority and the architect for subsequent action.

(b) Other material testing shall be tested by a laboratory hired by the contractor and/or manufacturer after the laboratory has been submitted to the architect on form for approval.

(c) Such would be the case for compaction tests, tool-resistant steel, precast and/or prestressed concrete, and so forth. In all cases test reports will be submitted by the contractor to the architect for approval or subsequent action. The architect shall forward copies of such reports to the Authority. Forms will be required by the contractor for all proposed materials.

9:13-1.129 Shop drawings and catalogue information

(a) The contractor shall submit to the architect shop drawings in reproducible transparent form or catalogue cuts with transmittal letter, stating complete identification of the origin of the drawings or cuts. Contractor is to send two copies of transmittal only to the Authority.

(b) The shop drawings shall be checked by the contractor for conformity with the requirements of the contract documents and he shall verify all conditions and dimensions. The contractor shall stamp thereon his approval and sign each sheet prior to submission to the architect. Failure of contractor to note his approval will be reason for the architect to return the submission to the contractor without review. After approval by the architect, the contractor shall furnish the architect with a total of ten sets of shop drawings and/or cuts except that 12 copies are required for hardware. Shop drawings and/or cuts shall be submitted for all prefabricated items and similar items which are not shown in complete detail and/or all items as required by the specifications. Shop drawings must be identified with project title, location, contractor's name, architect's name, date, and be numbered consecutively and securely bound in sets.

(c) Two approved sets must be retained by the architect until job completion at which time they are to be forwarded to the Authority for use by the participating college.

(d) One set must be forwarded directly to the contractor as soon as approved.

(e) One set must be forwarded directly to the Authority as soon as approved with accompanying transmittal form.

(f) One set must be forwarded directly to the field inspector assigned to this project as soon as approved.

(g) Remainder shall be used for distribution.

9:13-1.130 Construction progress charts

(a) The general contractor shall prepare a construction progress schedule and submit 12 copies directly to the architect not later than ten days from date of authorization to proceed (award date). The general contractor shall be responsible for coordinating the schedule of all other prime contractors and translating them into a composite schedule showing all prime contracts.

(b) The architect shall review the proposed schedule and submit two copies to the Authority for review and final approval. The Authority will return an approved copy to the architect who shall prepare and distribute approved copies as follows:

1. All prime contractors, one each;
2. Field inspector, one each;
3. Participating college's central office, two each;
4. Educational Facilities Authority, two each.

(c) On projects of \$500,000 aggregate cost or more, the Authority will provide for a CPM consultant to develop a preliminary arrow network diagram and computerized print-out (see sample at end of this Section) to serve as the master plan and schedule for the construction work to be included in the bidding documents by the architect. After the award, the CPM consultant meets with the contractors, architect, and other personnel involved to develop a detailed computerized diagram. After reviewing this schedule with the contractors and it is approved by the contractor, the architect and the Authority, the final working plan and schedule shall become the Critical Path Network Chart and the construction progress schedule for the project. The CPM consultant will be constantly updating the schedule. Should changes, field conditions, deliveries, and so forth, alter the progress of construction, new computer schedules are to be issued.

(d) A report prepared by the CPM consultant listing recommended alternatives to keep the project on schedule is distributed to all responsible parties.

9:13-1.131 On-site administration

The architect and his consultants shall give the usual site supervision to the construction of the project. The services incident to such site supervision shall include but not be limited to periodic inspections sufficient to verify the quality of construction and the conformity of the construction to the contract documents irrespective of inspections that may be made by the Authority employees and by which supervision the architect and his consultants shall coordinate the work of the various contractors and expedite the construction of the project.

9:13-1.132 Approval of change orders

No change from the contract shall be made without the approval of the Executive Director of the Authority. All requests for approvals for changes are to be directed to the attention of:

Executive Director
New Jersey Educational Facilities Authority
225 West State Street
Trenton, New Jersey 08625

AUTHORITY FORM 8

9:13-1.133 Submission

Indicate that the proposal by the contractor is an original submission or a resubmission. This shall be done by typing the words "First Submission" or "Second Submission" under the ruled block reserved for Authority use in the upper right hand corner. When making a resubmission, insert the change order control number assigned by the Authority after the words Control No. EFA _____ Example: Control No. EFA 4735/2637.

9:13-1.134 Description and reason

(a) The description of the change shall indicate the nature of, and the location of, the work. For example "Changes in accordance with SK-9-68" is no description.

(b) The architect shall give the reason for the change, always remembering that the reason is not a description. In giving the reason for the change reference shall be made to the affected section of the specification and the appropriate details on the contract drawings. Identification of both the specifications and the drawings shall be complete.

9:13-1.135 Recommendation

(a) The architect shall recommend approval (or disapproval) of both the validity and the pricing of the contractor's proposal, either in part or in total. The recommendation shall be of professional quality bearing the signature of the architect or a designated principal. The architect's recommendation shall be supported by documentation from his consultants and/or his staff.

(b) The architect shall describe other alternatives considered and give the reason (or reasons) why the recommended alternative was selected.

9:13-1.136 Documentation

(a) The architect shall ascertain that all the documents that are required to support both his recommendation and the contractor's claim (even if at variance) are included in the submission. The following documentation shall be included with every submission whenever available:

1. Copy of Authority request for a proposal from the contractor;
2. Copy of Authority request to the architect for a study and recommendation;
3. Copy of Authority authorization to proceed;
4. Related correspondence from the Authority or consultants;
5. Minutes of job meetings, conferences or appellate hearings;
6. References to specifications, addenda, contract drawings and revisions to contract drawings;
7. Prints of supplemental drawings, sketches or shop drawings;
8. Copy of any estimates prepared by the architect's staff or consultants; and
9. Copies of other appropriate correspondence or data.

9:13-1.137 Architect's fee

The architect shall compute his fee and indicate both the rate and the amount in the assigned places on both Form 8 and Form 9. Caution: When the architect affixes his signature of certification in the box in the lower left-hand corner of Form 8, he is recommending the contractor's proposal. Insert the amount of the contractor's claim in the line which reads "Approved for \$ _____ as noted on Form EFA 9". Do not include fee in this figure.

EFA FORM 9

9:13-1.138 General provisions

EFA Form 9 is prepared by the contractor and serves to summarize the elements of cost comprising the contractor's proposal. The architect shall ascertain that both the format and the figures are correct, and that all necessary documentation from the contractor is attached. When the architect checks Form 9, he shall bear in mind that the contractor is only entitled to be reimbursed for the net cost of material and labor to which he can add certain specified items of escalation.

9:13-1.139 Preparation

The contractor's estimate shall be based on contract unit prices whenever such unit prices are applicable. The quantities of material furnished or work performed should be supported by sketches and/or computations and must be certified by an architect or engineer licensed to practice in the State of New Jersey or by a representative of the Authority who is authorized to do so. Caution: It shall be noted that contract unit prices are complete. They include all permissible escalation, including overhead, profit and bond. There can be no further escalation of any kind by a subcontractor nor the prime contractor.

9:13-1.140 Bill of material

(a) When contract unit prices are not applicable, the contractor shall prepare a bill of material and a breakdown of labor costs. The bill of material shall include:

1. The name and description of each item of material;
2. Kind of material;
3. Quantity;
4. Unit price. The cost of large and expensive items of equipment should be supported by a copy of a purchase order or a receipted invoice;
5. Size or manufacturer's model number; and
6. All extensions shall be completed. The A/E should check the contractor's arithmetic and attach the tapes.

9:13-1.141 Labor costs; breakdown

(a) The estimated man-hours required to complete the work. An allowance for a foreman is permissible and shall be in the same hour ratio as the manning of the job. No charge for a superintendent will be permitted.

(b) Wage rates shall be as specified in the general conditions of the specification or as required by the union contract.

(c) Fringe benefits will be according to the union contract.

(d) Insurance and taxes should be according to the contractor's actual experience. There are five permissible items of insurance and taxes. They are F.I.C.A. (Social Security), workmen's compensation, temporary disability, New Jersey unemployment insurance, and Federal unemployment insurance. Insurance and taxes are a function or percentage of the basic wage or hourly rate. The percentage usually ranges between 11.15 per cent and 13.5 per cent. If the percentage used by the contractor exceeds 14.5 per cent he must be required to submit his accountant's report showing the cost of each item of insurance and taxes. Any claim for the cost of property damage (P.D.) or personal liability (P.L.) must be deleted. Authority has ruled that P.L. and

P.D. are solely the contractor's responsibility and the cost thereof is his.

9:13-1.142 Equipment rental rates

The contractor's charges for equipment rental shall reflect his actual net cost as stipulated in the specifications. In the event of a dispute, the Authority will determine the permissible daily rental charge by dividing the monthly rental by 22 which is recommended in the latest current "Green Book" compiled and published by the Associated Equipment Distributors.

9:13-1.143 Work by subcontractors

(a) When the work performed by a subcontractor is covered by contract unit prices, such contract unit prices will be used and will be deemed to be all inclusive. No further escalation by the prime contractor for profit and/or bond will be permitted. Such escalation must be deleted from the contractor's proposal.

(b) When any work performed by a subcontractor is not covered by a contract unit price, the subcontractor must prepare a bill-of-material and a breakdown of labor costs on his own stationery over his signature in the same manner and format prescribed for the prime contractor. Any prime contractor's estimate for subcontractor work is unacceptable to the Authority and will be rejected.

CHANGE ORDER CHECK LIST

9:13-1.144 Return for general preparation

General preparation:

- (a) Is not in the specified form.
- (b) Is not documented in accordance with the specifications.

9:13-1.145 Preparation of EFA Form 8 by architect:

- (a) Indicate that submittal is preliminary or resubmission
- (b) Describe change and indicate its nature
- (c) Give location of change
- (d) Indicate on form the appropriate contract drawing and section of specification
- (e) Who initiated change _____ Using Agency Architect _____ Authority
- (f) Give reason for change
- (g) Recommend approval or disapproval
- (h) Other

(i) Furnish appropriate supporting documentation

1. Copy of Authority request for a proposal from the contractor
2. Copy of Authority request to architect for a study and recommendation
3. Copy of Authority authorization to proceed
4. Related correspondence from Authority or consultants
5. Minutes of job meetings, conferences, or appellate hearings
6. References to specifications, bulletins, contract drawings and revisions to contract drawings
7. Prints of supplemental drawings, sketches or shop drawings
8. Copy of any estimates prepared by the architect's staff or consultants
9. Copies of other appropriate correspondence or data

(j) Direct contractor to submit his proposal in specified form

9:13-1.146 Preparation of EFA Form 9 by contractor

EFA Form 9 is prepared by the contractor and summarizes the costs comprising the contractor's proposal. The contractor is only entitled to the net cost of material, labor and equipment rental to which he can add certain specified items of insurance, taxes, overhead and profit.

- (a) Use appropriate contract unit prices for ___excavation ___concrete ___other
- (b) Delete all labor, material and equipment covered by contract unit prices
- (c) Furnish bill of materials which includes:
 1. The name and description of each item of material
 2. Kind and quantity of material
 3. Unit price. The cost of large and expensive items of equipment should be supported by a copy of a purchase order or a receipted invoice
 4. Size or manufacturers model number
 5. Completed extensions and total net cost
- (d) Furnish breakdown of labor costs which shall include:
 1. The estimated man-hours required to complete the work. An allowance for foreman must be in the same hour ratio as the manning of the job
 2. Delete charge for superintendent

3. () Use wage rates specified in the general conditions and established by the Commissioner of Labor and Industry
 4. () Use fringe benefits established by the union contract
 5. () Use insurance and taxes according to the contractor's actual experience
 6. () Include F.I.C.A. (Social Security), Workmens' Compensation, temporary disability, N.J. unemployment, and Federal unemployment insurance. Insurance and taxes are a percentage of the basic hourly rate.
 7. () Delete P.L. (personal liability) and P.D. (property damage)
 8. () Furnish copy of accountant's breakdown of cost of permissible insurance and taxes
- (e) () Furnish bill of material and breakdown of labor cost from subcontractor
- (f) () Other

9:13-1.147 Estimates, payments

(a) Contractors will receive invoice form at the award meeting. The number of copies required for submission are listed on the form. Architect note that the contractor must attach to the invoice a breakdown with format as shown at end of this Subchapter.

(b) All invoices must be forwarded by the contractor directly to the field inspector assigned to the project not later than the 30th of the month. It is suggested that the contractor check with the field inspector prior to formal submission of the invoice to eliminate delays caused by improper amounts. Please refer to the General Conditions for complete details as to payments for materials delivered to the site and retained percentage, and so forth.

(c) The field inspector after approval will sign and forward directly to the architect. The architect shall verify all amounts and sign the invoice and breakdown after approval and forward directly to the Authority. Architect note that the Authority may withhold or nullify the whole or part of any certificates for payment to protect the Authority from loss for just cause such as:

1. Defective work not remedied;
2. Claims filed or reasonable evidence of probable filing of claims;
3. Failure of the contractor to make payments promptly to subcontractors or for materials or labor;
4. A reasonable doubt that the contract can be completed for the balance unpaid; or

5. Damage to another contractor.

9:13-1.148 Construction photographs

(a) With each monthly application for payment until the exterior is completed, the general contractor shall submit progress photographs of the building(s) in duplicate, giving two views of each building as selected by the architects, taken from the same points each month.

(b) The photographs shall be eight inches by ten inches mounted on muslin, and the negatives shall bear the date of the exposure, the name of the work, contractor and the architect. One copy of each photo shall be forwarded by the architect to the Authority.

9:13-1.149 Color and finish schedules

Architect shall leave color board at the job site in a secure location for reference by all concerned parties. The architect shall transmit approved color schedules to the contractor for applying different colors on large enough area for compliance with the approved color board and for final approval by the architect in order for the contractor to proceed with completion of finishes.

9:13-1.150 As-built drawings**Cross References**

See Section 1.55 (As-built drawings) of this Chapter

9:13-1.151 Construction progress report

Form obtained from the Authority shall be completed by the architect and submitted no later than the 20th of each month to the Authority with one copy to the field inspector assigned to the project. If no answer to information requested on the form is "yes", the architect merely inserts a check mark. If the answer is "no", or other information is required to clearly define the status of the item involved, the architect shall attach the necessary data. See end of this Subchapter for sample form.

9:13-1.152 Construction phase check list

- (a) Modify drawings after contract award
- (b) Obtain contractor's insurance certificates
- (c) Obtain contractor's unit schedule breakdown
- (d) Obtain contractor's submittal of materials
- (e) Obtain contractor's suppliers, subcontractors
- (f) Obtain contractor's shop drawings

- (g) Obtain contractor's progress charts (CPM)
- (h) Process change orders, payments
- (i) Deliver color and finish schedule to job
- (j) Check on as-built drawings
- (k) Construction progress reports

- (d) EFA-10
- (e) EFA-11
- (f) EFA-11-1
- (g) EFA-12
- (h) EFA-12-1
- (i) EFA-13
- (j) EFA-14
- (k) EFA-15
- (l) EFA-15-1
- (m) EFA-16
- (n) EFA-21
- (o) EFA-25

- Change Order Authorization
- Contractors Invoice
- Contractor's Duplicate Invoice Copy
- Approvals—Subcontractor, Material, Unit Schedule Breakdown
- Rejection or Approval—Subcontractor, Material, Unit Schedule Breakdown
- Architect Approval—Subcontractor, Material Equipment
- Construction Notice
- Design Approvals
- Design Approvals
- Shop Drawings Approval
- Construction Progress Report
- Insurance Request

9:13-1.153 Sample forms²

The following forms are to be included:

- (a) EFA-24 Change Order Request
- (b) EFA-8 Change order
- (c) EFA-9

Form EFA-24

6.141

² Forms EFA 101 and EFA 101 Amendment are not available. The Office of Educational Facilities Authority may be consulted regarding the status of these forms.

State of New Jersey
Department of the Treasury

Insurance Request # _____ Dated _____

Name of Building and Location _____

Type (Dorms, Office or Other) _____

Date Contracts Awarded _____ Date Project Started _____

Type of Construction: Number of Stories _____ Excavated Basement? _____

Walls _____ Type Floors _____

Roof Construction _____

Name and Address of Contractor	Contract Sum	Value of Excluded Items	Insurable Value
GENERAL			
STRUCTURAL STEEL			
PLUMBING			
HEATING			
ELECTRIC			

Add: Supervisory Costs:

Architects Fee for Supervision during Construction \$ _____

Clerk of the Works Expenses (OAEK will complete) _____

Total Insurable Value \$ _____

Architect to complete original and 2 copies and return to the Office of Architecture, Engineering and Construction, State House, Trenton, New Jersey 08625.

10/15/69

CHANGE ORDER REQUEST
FORM EFA 9

STATE OF NEW JERSEY

8.143

EDUCATIONAL FACILITIES AUTHORITY
225 W. State Street, P.O. Box 1293
Trenton, N.J. 08645

Application for Authorization
To Issue Change Order

FOR EFA USE
Control No. EFA,
has been assigned to this
application _____
Date received: _____
1. Error by A _____
2. Omission by A, Fee _____
3. Other EFA, Field _____

Project
and
Location

Control No. EFA

Contractor

Contract Dated:

Z. C.

Trade:

Att: Architect: Following must be answered:

1. Furnish specific description of proposed change:
2. Is extension of time required? List other trades affected:
3. List appropriate documents including revised or supplementary drawings, addenda, minutes of meetings or other data as required.
4. This change order was initiated by (Indicate College, Architect or Field Condition).

Approved for \$ _____ as noted on form EFA 9 Approved subject to verification of pricing.

Estimated cost \$ _____

Fee @ \$ \$ _____

Total \$ _____

..... Date..... Date.....
Architect/Engineer Architect/ Other

FOR EFA USE ONLY

Approval Recommended for \$ _____ Extra Credit _____

Executive Director _____ Date _____

Other _____ Date _____

Supervising Architect _____ Date _____

Distribution:

Original: Estimating

cc: Architect
EFA OAEC Project Inspector
File

ORIGINAL AND FOUR COPIES OF THIS
FORM PLUS SUPPORTING DATA TO BE
SUBMITTED TO EFA 10/15/69

S 113

CHANGE ORDER
FORM EFA 9

CHANGE ORDER
REQUEST AND
AUTHORIZATION

For EFA Use
Control No. EFA

STATE OF NEW JERSEY
EDUCATIONAL FACILITIES AUTHORITY

Original Amount-Base Bid \$ _____
Net Alternates _____
Gross Amount of Contracts _____

Project
and
Location

Change Orders
Extras \$ _____
Decreases \$ _____
Plus this Change Order _____
Total Contract _____

Control No. EFA
Contract Dated:
Trade:

Account No. _____

Description of Change:

Item No.	Item	(1) Net	(2) Total
1.	Material (See Bill of Material attached) Plus overhead 10%	\$	\$
2.	Equipment Rental (See breakdown attached) Plus overhead 10%	\$	\$
3.	Labor-Direct Wages (See breakdown attached) Insurance and taxes on direct labor	\$	\$
	Fringe Benefits (See breakdown attached) Plus overhead 10%	\$	\$
4.	Cost for sub-contract work (See breakdown attached)	\$	\$
5.	Other Costs (See breakdown attached) Plus overhead 10%	\$	\$

Contractor agrees that the completion date for construction as contained in the contract agreement shall not be changed by approval of this Change.

Contractor
name and
address

Submitted by _____ Date _____

Official Title

Telephone No.

TOTAL COST Column 2.....\$
ADD 10% for Profit.....\$
Cost for work at Contract Unit
Prices (See breakdown attached \$
TOTAL NET COST.....\$
BOND 1%.....\$
TOTAL COST FOR CHANGE Add...
TOTAL CREDIT FOR CHANGE

Deduct
Add Architect or Engineer Fee @ \$
Total Cost for Change including fee \$
This cost estimate has been examined. This is to certify that we/I have checked material quantities, prices, man hours and insurance and wage rates and recommend that a change be approved and issued in the amount of \$
Do not allow fee.
Date _____
Architect/Engineer

____ EFA
____ Contractor
____ EFA Project Inspector
____ Architect/Engineer

APPROVED - EFA
____ Date _____
____ Date _____
____ Date _____
____ Date _____

Original and 4 copies of this form plus supporting data to be submitted to the Architect.

10/15/69

CHANGE ORDER AUTOMATION
FORM EFA-10

8.144

STATE OF NEW JERSEY

EDUCATIONAL FACILITIES AUTHORITY

Notice of Action Taken on Application for Authorization to Issue Change Order

TO: Architect

S. C.

Control No. EFA
Contract Date:
Trade:

Project
and
Location

Contractor

Description of Change:

- _____ 1. Funds in the amount of \$ have been allocated for this Change Order. Architect is to inform Contractor to proceed with change immediately. Contractor must submit Form EFA 9 to Architect for review and transmittal to Educational Facilities Authority.
- _____ 2. Architect is authorized to inform contractor to proceed on an upset price basis not to exceed \$ Contractor must submit Form EFA 9 to Architect for review and transmittal to Authority.
- _____ 3. Application to issue Change Order is returned herewith for correction. See Remarks.
- _____ 4. Application to issue Change Order is rejected. See Remarks.

REMARKS:

DATE:

cc: Original - Architect
Estimating
EFA Project Inspector

For: Educational Facilities Authority

By:

10/16/89

ORIGINAL INVOICE
CONTRACTOR'S ORIGINAL INVOICE
FORM EFA 11

9.145

EDUCATIONAL FACILITIES AUTHORITY

Name
and
Address

Z. C.

VENDOR'S INVOICE NO.

Project and Location	Control EFA Contract Dated: Payment No. Date:
----------------------------	--

This is to certify that Contractor has completed work in conformity with the requirements of the plans and specifications and is entitled to payment amount to /100 Dollars.

- 1. Original Amount - Base Bid \$.....
- 2. Net Alternates
- 3. Gross amount of Contract \$.....
- Change Orders
- 4. Extras \$.....
- 5. Decreases
- 6. Difference
- 7. NET CONTRACT
- 8. Less previous payments
- 9. Total unliquidated
- 10. Request this Payment.....
- 11. Less 10% retainage
- 12. Amount THIS PAYMENT
- 13. Balance Due

APPROVED FOR.....

EFA

By

Architect

EFA Project Inspector

VENDOR'S DECLARATION

I do solemnly declare that the within bill is correct in all its particulars; that the articles have been furnished or services rendered as stated therein, and that no bonus has been given or received on account of said bill.

Sign
Here.....
Official Position.....
Date.....19.....

FOR EFA USE ONLY

ATT: Contractor. Prepare an original and 3 copies and forward to EFA Project Inspector by the first of the month. Unit Schedule breakdowns must be attached to original and each copy of invoice.

DUPLICATE INVOICE
 CONTRACTOR'S DUPLICATE INVOICE COPY
 FORM EFA 11-1

8.148

EDUCATIONAL FACILITIES AUTHORITY

Name
 and
 Address

Z. C.

VENDOR'S INVOICE NO.

Project	Control EFA
and	Contract Dated:
Location	Payment No.
	Date:

This is to certify that Contractor has completed work in conformity with the requirements of the plans and specifications and is entitled to payment amount to /100 Dollars.

1. Original Amount - Base Bid	\$.....	
2. Net Alternates	.....
3. Gross amount of Contract	\$.....	
Change Orders		
4. Extras	\$.....	
5. Decreases	.....
6. Difference	.....	APPROVED FOR\$.....
7. NET CONTRACT	.....	EFA
8. Less previous payments	.....	By
9. Total unliquidated	.....	Architect
10. Request this Payment	.....	EFA Project Inspector
11. Less 10% retainage	.....
12. Amount THIS PAYMENT	.....
13. Balance Due	.....

FOR EFA USE ONLY

FOR EFA USE ONLY

ATT: Contractor. Prepare an original and 3 copies and forward to EFA Project Inspector by the first of the month. Unit Schedule breakdown must be attached to original and each copy of invoice.

10/18/89

APPROVALS, SUBCONTRACTOR,
MATERIAL, UNIT SCHEDULE STATE OF NEW JERSEY
BREAKDOWN EDUCATIONAL FACILITIES AUTHORITY
FORM EPA-12 (1-68)

8.146

Form No. EPA 12
is to be prepared by
the contractor and
submitted to the
Architect, in an or-
ginal and five (5)
copies.

To: Educational Facilities Authority
225 W. State Street P. O. Box 1293
Trenton, New Jersey 08626

Contractor:

Project:

REQUEST FOR APPROVALS

- Sub-Contractor
 - Material
 - Unit Schedule Breakdown
- Date _____
Control No. EPA _____
Trade: _____ General Constr.
 _____ Structural Bldg.
 _____ Electrical
 _____ Plumbing
 _____ Heating & Vent.

Attention Contractor: When submitting Unit Schedule Breakdown of Contract Award, use following headings:

Item No.	Quantity	Description	Material	Labor	TOTAL AMOUNT
----------	----------	-------------	----------	-------	--------------

Architect's Recommendations: (Must be completed. Attach additional data if necessary.)
Attachments ()

Approved: - Allowances checked ()	Rejected:
Architect or Engineer _____	Architect _____
Date	Date
EFA _____	EFA _____
Date	Date

Original - Contractor
cc: Architect cc: EFA File cc: EFA Project Inspector

10/15/69

**REJECTION OR APPROVAL,
SUBCONTRACTOR, MATERIAL
SCHEDULE BREAKDOWN
FORM EFA 13-1**

STATE OF NEW JERSEY

8.147

EDUCATIONAL FACILITIES AUTHORITY

Date: _____

**Architect
or
Engineer**

Form EFA 12 _____ **Dated** _____

Date Received _____

**Project
and
Contractor**

A. All items noted on above form are rejected. Instruct contractor to submit new set of forms.

B. Following items noted on above form are accepted and approved.

C. Following items listed on above form are not accepted. Contractor to submit new set Form EFA 12.

**Original - Architect
cc: Contractor
EFA - Project Inspector
EFA - (File Copy)**

By _____
Educational Facilities Authority

10/15/69

ARCHITECT APPROVAL, SUBCONTRACTOR, MATERIAL,
EQUIPMENT
FORM EFA 13

8.148

STATE OF NEW JERSEY
EDUCATIONAL FACILITIES AUTHORITY

TO: EDUCATIONAL FACILITIES AUTHORITY
325 W. STATE STREET P. O. BOX 1293
TRENTON, NEW JERSEY 08626

DATE: -----

CONTROL NO. EFA-----

PROJECT

CONTRACTOR

NAME OF APPROVED SUB-CONTRACTOR:-----

Transmitted herewith is the following Shop Drawing/Catalogue Data which has been

_____ APPROVED _____ APPROVED AS NOTED _____ INFORMATION

Drawing No.

Name and Title of Drawing _____

The manufacturer of this Material/Equipment was approved by Educational Facilities Authority

on Form EFA 12 dated _____

Name of Manufacturer: _____

Form EFA 12 was approved by EFA on _____
(Date)

List of applicable Contract Drawing Numbers:

List Specification reference page and paragraph number:

Describe in detail each instance whereby these drawings deviate from the Contract Drawings:

Very truly yours,

Architect

NOTE: This form must be attached to Shop Drawings/Catalogue Data submitted to Educational
Facilities Authority

Attach additional data if required.

10/15/69

CONSTRUCTION NOTICE
FORM EFA 14

STATE OF NEW JERSEY

6.149

EDUCATIONAL FACILITIES AUTHORITY

CONSTRUCTION NOTICE

To: _____ Notice No. _____

Project Location and Architect _____ Date _____

Control No. EFA _____

Trade: _____ General Construction _____ HVAC
 _____ Structural Steel _____
 _____ Electrical _____
 _____ Plumbing _____

You are hereby put on notice as follows:-

Distribution: - _____ Original - Contractor
 _____ EFA File
 _____ EFA Project Inspector

For Educational Facilities Authority

By: _____
 (Name)

 (Title)

10/18/89

DESIGN APPROVALS
FORM EFA 15

STATE OF NEW JERSEY
EDUCATIONAL FACILITIES AUTHORITY

8. 1410

TO: Control No. EFA
 FROM: D. A. No.
 Project: Account No.
 Using Agency Fiscal Year
 Date

The following are submitted for:

_____ Correction	_____ Resubmission	_____ Program Documents	Current Working Estimate (including fees, contingencies, etc.) \$ _____
_____ Information	_____ File	_____ Schematic documents	\$ _____
_____ Review	_____ Approval	_____ Preliminary drawings and specs.	\$ _____
_____ Drawings No.		_____ Final working drawings and specifications.	\$ _____

_____ No reply required.
 _____ Original to be returned to EFA within 30 days with approval and/or comments.

 For Educational Facilities Authority

Original - EFA
 College
 File

10/15/80

DESIGN APPROVAL

CONTROL EFA:

8.1410

EFA 15-1

**PAGE _____ OF _____
SEE PAGE ONE FOR SIGNATURE**

10/15/89

SHOP DRAWINGS APPROVAL
FORM EFA 16

STATE OF NEW JERSEY

8.1411

EDUCATIONAL FACILITIES AUTHORITY
225 W. STATE STREET, P. O. BOX 1283
TRENTON, N. J. 08625

TO:

PROJECT
AND
LOCATION

CONTROL NO.

DATE _____

TRADE

We transmit herewith the following:

- _____ APPROVED SHOP DRAWINGS.
- _____ SHOP DRAWINGS FOR CORRECTION AND RESUBMISSION.
- _____ SHOP DRAWINGS APPROVED AS NOTED.

REMARKS:

CC:

- CONTRACTOR -1
- EFA PROJECT INSPECTOR -1
- COLLEGE -2
- OFFICE COPY -1

10/15/69

Form EFA 21

8.1412

CONSTRUCTION PROGRESS REPORT
EDUCATIONAL FACILITIES AUTHORITY

Report No. _____

Week Ending _____

Month Ending _____

Control EFA _____

PROJECT

Architect

Contract Agreement Dated _____ Contract Completion Date _____

Working Days per Contract _____ Calendar Days per Contract _____

1. Revised completion date - a. Approved by extension of time to _____ (Date)
b. Estimated but not approved _____ (Date)
2. Project Physical Completion ____%. Basic Contracts ____% time elapsed. Financial Comp. ____%.
3. Has Project Construction Schedule been approved, filed & distributed? yes ____ no ____
Is it up to date? yes ____ no ____ Estimated revised completion date _____
4. Are following approved?
Form EFA12 Materials-yes ____ no ____ b. Form EFA12Sub-Contractors-yes ____ no ____
5. Have required Shop Drawings been submitted and approved? yes ____ no ____
If not, explain and list on separate sheet.
6. Are Insurance Certificates on file? yes ____ no ____.
7. Are any Form EFA14 or three day notices required? Yes ____ no ____
Have any termination dates expired on three day notices during this period yes ____ no ____.
8. Are Testing Laboratories performing satisfactorily? yes ____ no ____.
9. Are Sub-Contractors performing satisfactorily? yes ____ no ____.
10. Is the project properly manned? yes ____ no ____.
11. List on separate sheet, present status of allowances in specification against which expenditures have been made.
12. List on separate sheet, action required on any Change Orders or any item delaying construction.

Att: - Architect and Field Inspector

In instances where answer is "no" or supporting data is required in accordance with the above, please explain fully by attaching necessary data to this form.

Architect or Field Inspector

(Date)

Architect - Submit 1 copy to Educational Facilities Authority
1 to Project Inspector

10/15/59

Form EFA 25

8.1413

STATE OF NEW JERSEY
EDUCATIONAL FACILITIES AUTHORITY

INSURANCE REQUEST# _____ DATE _____

NAME OF BUILDING AND LOCATION _____

TYPE (DORM, OFFICE, OR OTHER) _____

DATE CONTRACTS AWARDED _____ DATE PROJECT STARTED _____

TYPE OF CONSTRUCTION: NUMBER OF STORIES _____ EXCAVATED BASEMENT? _____

WALLS _____ TYPE OF FLOORS _____

ROOF CONSTRUCTION _____

TOTAL CONSTRUCTION COST: (Complete separate form for each building.)
\$ _____

DEDUCTIONS: (Uninsurable Values)

Landscaping \$ _____

Site Improvements \$ _____

General Excavation \$ _____

Drainage \$ _____

Tunnel Excavation \$ _____

Rough Grading and Back Fill \$ _____

Footings \$ _____

Foundations and Piping Below
level of ground or lowest
basement floor \$ _____

Total Deductions \$ _____

BALANCE-INSURABLE VALUE-BUILDING \$ _____

TO BE COMPLETED BY COLLEGE

Add:

INSURABLE VALUES-CONTENTS \$ _____

TOTAL INSURABLE VALUES \$ _____

REMARKS: _____

Architect to complete original and 2 copies and return to Educational Facilities Authority,
225 W. State Street, P. O. Box 1293, Trenton, New Jersey 08625.

10/15/69

PROJECT CLOSEOUT

9:13-1.154 Final inspection

Final inspection shall be made by the architect with the following present: architect, engineer, representative of the Authority, field inspector. Notice of final inspection shall be sent to Authority ten days in advance.

9:13-1.155 As-built drawings

(a) Each contractor shall submit the transparencies of all contract drawings whether altered or not to the architect with contractor's certification as to the accuracy of the information prior to final payment. All as-built drawings shall be entitled "AS-BUILT" above the title block and dated. This information shall be checked, edited and certified by the architect who shall then transpose such information to the original drawings and certify that such drawings reflect as-built status.

(b) Transparencies of architect's drawings, if desired for this purpose, may be obtained from the Authority. The contractor shall pay for the cost of reproduction.

(c) The contractors shall keep their prints of the contract drawings up to date at all times by marking on them in colored crayon the final location of any changes in the work, pipes, traps, conduits, ducts, footings, anchors, and so forth. The data shall be transferred regularly to the tracings by the contractor to transparencies furnished by the State and paid for by the contractor.

9:13-1.156 Cost analysis

Upon completion of the work, the architect will prepare and submit 12 copies of the cost analysis of the project. Such an analysis shall identify the specific features of design, cost of each feature, sufficient in detail to form a basis for future cost programming.

9:13-1.157 Instruction manuals, approvals, guarantees

(a) Each contractor shall submit the following to the architect for inclusion in the final acceptance:

1. Instruction manuals;
2. Electrical certificates;
3. Guarantees;
4. Other warranties, roofing bonds or additional data as called for in the specifications; and
5. Air balancing report.

9:13-1.158 Final acceptance

(a) The architect shall prepare the final acceptance form in an original and six copies, sign it, and forward to the contractor for signature. All data supplied by the contractor as outlined above and reviewed by the architect must be transmitted with the form.

(b) The contractor, after signing same, is to transmit the forms and data to the field inspector who will forward same to the Authority after approval. The architect and field inspectors must not clear the final invoice on a project until they receive the approved copy of the final acceptance form which has been approved by the Authority and the participating college.

(c) It is important that the architect specifically state in the "Remarks Section" that the project has been completed satisfactorily in accordance with the contract documents.

9:13-1.159 Project insurance

It is the architect's responsibility to complete insurance form and submit it in an original and two copies to the Authority at the completion of the project. The form is to be obtained from the Authority. (EFA-25)

9:13-1.160 Close-out check list

- (a) As-built drawings
- (b) Cost analysis
- (c) Instruction manuals, approvals, guarantees
- (d) Final acceptance certificate
- (e) Insurance report

9:13-1.161 Sample Forms

- (a) EFA 20 Final Acceptance Certificate
- (b) EFA 20 Permanent Record Transmittal

FINAL ACCEPTANCE CERTIFICATE
EFA 20

9. 81

STATE OF NEW JERSEY
EDUCATIONAL FACILITIES AUTHORITY

Note: Form EFA 20 to be prepared by Architect. Original and (6) six copies. All copies to be legible.

Contract Dated:

Trade: General Constr.
 Structural Sbl.
 Electrical
 Plumbing
 Htg. & Vent.

Project

Contractor

Date

- () All work has been completed in accordance with Contract Documents.
- () All work has been completed in accordance with Contract Documents except for that listed in attached schedule for which a credit has been taken.

Final inspection was made _____ 19____ in the presence of:

Remarks:

This is to certify that the Educational Facilities Authority will not be held responsible for any bills, liens, claims or demands in connection with the above noted project. All workmanship and materials are hereby guaranteed in accordance with stipulations in contract documents.

Contractor
Sign _____
Here _____
Official Position _____
Date _____, 19____.

Contractor must attach the following:

Req'd.	Rec'd.
() Instruction Manuals	()
() Elec. Certificates	()
() As built drawings	()
() Guarantees	()
()	()

(Checked _____ EFA)

Approved:

- Architect _____ Date _____
- EFA Project Inspector _____ Date _____
- EFA _____ Date _____
- College _____ Date _____

• Comments as to performance of Contractor, Architect to be noted on reverse side of EFA copy.

() Contractor () EFA Project Inspector
() Architect () EFA () College

Recommended for approval

Educational Facilities Authority

Guarantee date on this job begins _____ 19____ and expires _____ 19____.

10/15/89

EFA Form 20 Supplemental (1 of 2)

Educational Facilities Authority
 225 West State Street
 Trenton, New Jersey 08625

PERMANENT RECORD TRANSMITTAL

EFA No. _____ Date _____

<p>Project</p> <p>Title _____</p> <p>Location _____</p> <p>Description _____</p> <p>Using Agency _____</p> <p>Architect</p> <p>Name _____</p> <p>Address _____</p>	<p>Trade</p> <p>() General Construction</p> <p>() Structural Steel</p> <p>() Plumbing</p> <p>() Heating, Ventilating, A-C</p> <p>() Electrical</p> <p>() Others</p>
--	--

ITEM	Required (Check)	Date Submitted	Acceptable to Architect
Performance - Payment Bond Insurance - Compensation Insurance - Public Liability Insurance - Property Damage Insurance - Vehicle Liability Insurance - Special Hazards Guarantees - Roofing Flashing Waterproofing Planting and/or Seeding Masonry - Efflorescence Caulking Wood Doors Epoxy Floors _____ _____ _____			10/15/69

PERMANENT RECORD TRANSMITTAL

EFA No.

Date

ITEM	Required (Check)	Date Submitted	Acceptable to Architect
General Guarantee - General Construction General Guarantee - Structural Steel General Guarantee - Plumbing General Guarantee - H. V. and A. C. General Guarantee - Electrical General Guarantee - _____ General Guarantee - _____ General Guarantee - _____			
Underwriters Certificate Air Balancing Report			
Bond, Roofing Bond, Flashing			
Instruction Manuals - General Construction Instruction Manuals - Structural Steel Instruction Manuals - Plumbing Instruction Manuals - H. V. and A. C. Instruction Manuals - Electrical Instruction Manuals - _____			
Valve Charts, Plumbing Valve Charts, H. V. and A. C.			
Boiler Certificate			
Names, Addresses and Phone Numbers of Subcontractors			
Names, Addresses and Phone Numbers of Principal Suppliers			
Maintenance Supply - Resilient Tile Maintenance Supply - Paint Maintenance Supply - Acoustic Tile			

10/16/69

PROCEDURE FOR FEDERALLY ASSISTED AUTHORITY PROJECTS

9:13-1.162 General Provisions

The provisions of the Authority Law are such to permit the participation of the Federal government in college construction programs that are sponsored by the several departments of the United States government. Generally, these will be programs of the Department of Housing and Urban Development for housing projects and the Department of Health, Education and Welfare (Office of Education) for other construction, primarily related to Title I of the Higher Education Act of 1963.

9:13-1.163 Federal government requirements

The requirements of the Federal government can be provided for within the working arrangements that the Authority establishes with individual colleges and universities. However, it is important that early notification be made to all possible participants in order that preliminary requirements of each agency may be satisfied in an efficient manner.

9:13-1.164 Regional office

For the New Jersey institutions, the Regional Office of the Department of Health, Education and Welfare (Office of Education) is located in New York City. This office is a participant for projects other than dormitories and student center buildings. The Regional Office of the Department of Housing and Urban Development is located in Philadelphia and appropriate steps will have to be taken to meet the requirements of that office if a college contemplates applying for an interest grant subsidy for dormitory facilities or a student center building.

9:13-1.165 Procedures

The procedures provided for in Sections 1.166 through 1.177 of this Chapter have been reviewed with the Regional Engineer, Office of Construction Service, Office of Education/DHEW, 26 Federal Plaza, New York, New York 10007. Similar procedures are in effect for projects in which the Department of Housing and Urban Development participates.

9:13-1.166 Correspondence and documents

(a) All correspondence, documents and plans will be identified by both the Federal Project Number and the Authority Control Number.

(b) Prime representatives to whom correspondence should be addressed are as follows:

1. Department of Housing and Urban Development
6th and Walnut Streets
Philadelphia, Pennsylvania 19106
2. Regional Engineer
Office of Construction Service
Office of Education/DHEW
26 Federal Plaza
New York, New York 10007
3. Educational Facilities Authority
Executive Director
New Jersey Educational Facilities Authority
225 West State Street
Trenton, New Jersey 08625
4. Each College
Authorized representative as indicated on the application.

9:13-1.167 Eligible project costs

(a) As outlined in the instructions accompanying the application (Form OE 1031), the following costs are eligible:

1. Surveys and testing (soil, concrete, steel, and so forth);

2. Architectural fees—as included in the Federally approved agreement;

3. Blueprints;

4. Resident engineer—specifically engaged to supervise construction at the Federally-assisted project site (exclusive of construction general supervision services included in the architectural/engineering agreement).

9:13-1.168 Sequence of processing

Immediately following project approval, the Office of Construction Service (OCS) will write to the applicant's authorized representative informing him that the bidding documents can now be prepared. A carbon copy of this letter will be furnished to the Authority.

9:13-1.169 Submission of documents, prior to bidding

(a) The Authority will furnish OCS-New York the following documents:

1. Executed Architect Agreement (two copies);
2. Architect's Certificate (Form OE 8027);
3. Site Certificate (Form OE 8028);
4. Complete plans and specifications including: the standard printed Federal-New Jersey forms; current State and Federal (to be furnished by OCS-New York upon request) wage rates;
5. Statement regarding assignable and gross areas as shown on final plans;
6. Statement regarding compliance with Office of Education Bulletin No. 26 (dated December 21, 1966) "Educational Facilities Accessible To, and Usable By, the Handicapped".

9:13-1.170 Approval to bid

(a) OCS will acknowledge receipt of these plans and specifications.

(b) OCS-New York will formally notify the Authority that the plans and specifications are approved and that bids may now be solicited. A carbon copy of this notification will be furnished the respective college.

(c) The Authority will apprise OCS-New York, by letter, of the proposed advertising date, bid opening date and award date.

9:13-1.171 Bidding procedure

(a) No bids may be solicited without prior written authorization from OCS-New York.

(b) After bids are opened, the Executive Director of the Authority will transmit to OCS-New York a letter of "intent to award" which will include the names of the successful contractors, the amounts of the base bids with accepted

alternates, if any, and the contract prices. This letter (with a copy to the authorized representative of the applicant) will transmit the following:

1. Certified tabulation of bids;
2. Copy of low bidder's proposal and bid bond;
3. Proof of advertising; and
4. Form OE 8017 executed by the low bidder.

9:13-1.172 Awards—within estimate

OCS-New York will send "Approval of Award" letter to applicant's authorized representative with a carbon copy to the Authority.

9:13-1.173 Award—overruns

(a) The Authority will transmit to OCS-New York a letter of "intent to award" plus a revised cost estimate (reflecting the award price), and documentation demonstrating the availability of the additional funds needed, and other documents listed in Section 1.40(b) (Bidding procedure) of this Chapter.

(b) OCS-New York will prepare a Revised Project Summary (documenting the results of the increase) and the "Approval of Award" letter. The originals will be sent to the applicant with carbon copies to the Authority.

9:13-1.174 Executed construction contract documents

(a) Two complete copies of the executed contract documents (including bid proposal, plans and signed forms) are submitted by the Authority to OCS-New York.

(b) Letter by OCS-New York (Form OE 1038) approving the executed documents will be sent to the applicants, (carbon copy to the Authority). The Authority will execute necessary Forms OE 1026 and OE 1027 as applicable. (Refer to Bulletin No. 11, Revision No. 1 for method of requisitioning funds).

9:13-1.175 Pre-award conference

The Authority will notify the OCS District Engineer assigned to the project (approximately ten days prior) of the scheduled pre-award conference date. Where practical, the Authority will coordinate this date with the college, architect, contractor and district engineer. The OCS district engineer assigned to the project will discuss statutory and regulatory requirements, wage rates, equal employment opportunity, payrolls, required reports, and so forth at this conference.

9:13-1.176 Construction

(a) Payrolls are to be maintained at construction site.

(b) Names of the subcontractors must be submitted to the district engineer for approval (use Form OE 8018).

(c) Change orders:

1. After they have been prepared and approved by the Authority, they are submitted to the OCS district engineer for concurrence. Upon receipt of district engineer's concurrence, the Authority will issue a proceed order to the contractor.

2. Change orders which affect the project scope, assignable areas, time of completion, or budget line items, will be referred to OCS-New York by the district engineer.

9:13-1.177 Project close-out

(a) Final inspections will be conducted jointly by the OCS district engineer and the Authority representative. Individuals involved will arrange schedules mutually acceptable. Final inspection procedures are to follow the existing Authority procedure by use of "Final Acceptance Certificate".

(b) In conformance with both Federal and Authority regulations, Punch List items must be cleared before a project can be "closed-out".

(c) The final cost estimate, reflecting contractual costs, is drafted by the Authority and sent to the applicant, who will then submit the final cost estimate to the OCS district engineer.

(d) Final payment to the contractor will not be processed by the Authority until the OCS district engineer has concurred.

9:13-1.178 Abbreviations

abbreviation	ABBR.
above	AB.
above finished floor	A.F.F.
abrasive	ABR.
access door	AD.
access panel	AP.
accordion door	ACCOR.DR.
acoustic	ACOUS.
acoustical plaster	AC.PL.
acoustical tile	ACT.
addition	ADD.
adhesive	ADH.
adjustable	ADJUST.
aggregate	AGG.
air circuit breakers	A.C.B.
air conditioning	A/C
alternating current	A.C.
altitude	ALT.
aluminum	AL.
American Concrete Institute	ACI
American Gas Association	A.G.A.
American Institute of Architects	AIA
American Institute of Steel Construction ...	AISC
American Society of Civil Engineers	ASCE
American Society of Heating Refrigerating and Airconditioning Engineers	ASHRAE
American Society of Mechanical Engineers	ASME
American Society for Testing and Materials	
.....	ASTM
American Standard	AS
American Standards Association	ASA
American Water Works Association	AWWA
American Welding Society	AWS
American Wire Gauge	AWG
amount	AMT.
ampere	AMP.

amperes frame
 amperes trip
 anchor bolt
 angle
 apartment
 approved
 approximate
 architect (ural)
 architectural terra cotta
 area drain
 article
 asbestos
 asbestos board
 asphalt
 asphalt tile
 Association of American Railroads
 at
 atmospheric pressure
 automatic
 automatic temperature control
 avenue
 average
 back water valve
 basement
 bathroom
 bath tub
 beam
 bearing
 bedroom
 bell and flange
 bell and spigot
 bench mark
 bending moment
 between
 beveled
 bituminous
 block
 blocking
 blow-off
 bluestone
 board
 board foot
 board measure
 boiler
 bolt
 bottom
 bottom grille
 bottom register
 boulevard
 boundary
 bracket
 brick
 brine return (pipe)
 brine supply (pipe)
 British thermal units
 bronze
 Brown and Sharpe gauge
 building
 built-up roofing
 bull nose
 bulletin board
 Bureau of Standards
 by (as 6 x 8)
 cabinet
 cadmium
 cadmium plate
 candlepower
 carpenter
 casement
 cast
 cast concrete
 cast iron
 cast steel
 cast stone
 catch basin
 caulking
 ceiling
 ceiling height
 ceiling register
 cement
 cement asbestos
 cement asbestos board
 cement floor
 cement plaster

A.F.
 A.T.
 A.B.
 <
 APT.
 APP.
 APPROX.
 ARCH.
 A.T.C.
 A.D.
 ART.
 ASB.
 ASB.BD.
 ASPH.
 A.T.
 AAR
 @
 ATM.PRES.
 AUTO.
 A.T.C.
 AVE.
 AVG.
 B.W.V.
 BSMT.
 B.R.M.
 B.TUB
 BM.
 BR'G
 BED.RM.
 B. & F.
 B. & S.
 B.M.
 BEND.M.
 BET.
 BEV.
 BIT.
 BLK.
 BLK'G
 B.O.
 BS.
 BD.
 B.F.
 B.M.
 BLR.
 BLT.
 BOT.
 BOT.GR.
 BOT.REG.
 BLVD.
 BNDRY.
 BRKT.
 BRK.
 B.R.P.
 B.S.P.
 Btu
 BR.
 B & S
 BLD'G
 B/U RFG.
 B.N.
 BULL.BD.
 B. of S.
 X
 CAB.
 CAD.
 CAD.PL.
 CP.
 CARP.
 CSM'T
 C
 C.CONC.
 C.I.
 C.STL.
 C.STONE
 C.B.
 CLK'G
 CL'G
 CL'G HT.
 CL'G REG.
 CEM.
 CEM.ASB.
 CEM.ASB.BD.
 CEM.FL.
 CEM.PLAS.

center line
 center to center
 ceramic
 ceramic tile
 chalk board
 chamfer
 channel
 check valve
 chromium plate
 cinder block
 circle
 circuit
 circuit breaker
 circulating chilled water
 circulating water pump
 circumference
 class
 cleanout
 clear(ance)
 clear glass
 clear wire glass
 closet
 coat closet
 coat hook
 coated
 coefficient
 cold rolled steel
 cold water
 column
 combination
 commission
 common
 company
 compartment
 complete
 composition (composite)
 compressed air
 compressed air line
 concrete
 concrete block
 concrete ceiling
 concrete floor
 concrete masonry unit
 conductor
 conduit
 connection
 construction
 continuous or continue
 contract (or)
 control joint
 convector
 convector enclosure
 copper
 cork tile
 corner
 corridor
 corrugated
 counter
 counter flashing
 countertank
 courses
 cover
 cover plate
 cubic feet
 cubic feet per minute
 cubic inch
 cubic yard
 current
 curtain track
 cycle
 cycles per minute
 cycles per second
 cylinder
 dampproofing
 datum
 decibel
 degree
 degree centigrade
 degree Fahrenheit
 department
 detail
 diameter
 diffuser
 dimension

to
 C. TO C.
 CER.
 CER.T.
 CH.BD.
 CHF.
 }
 C.V.
 CHR.PL.
 CIN.BLK.
 CIR.
 CKT.
 CKT.B.
 CIRC.C.W.
 CIRC.W.P.
 CIRC.
 CL.
 C.O.
 CL.
 CL.GL.
 CL.WIRE GL.
 CLO.
 CT.CLO.
 CT.HK.
 CTD.
 COEF.
 C.R.S.
 C.W.
 COL.
 COMB.
 COMM.
 COM.
 CO.
 COMPT.
 COMPL.
 COMP.
 COMP.A.
 COMP.A.L.
 CONC.
 CONC.BLK.
 CONC.CL'G
 CONC. FL.
 C.M.U.
 COND.
 C
 CONN.
 CONST.
 CONTIN.
 CONTR.
 CONT.JT.
 CONV.
 CONV. ENCL.
 COPP.
 CORK T.
 COR.
 CORR.
 CORRUG.
 CTR.
 CTR. FLASH'G
 CSK.
 CS.
 COV.
 COV. PL.
 CU.FT.
 C.F.M.
 CU.IN.
 CU.YD.
 CUR.
 CURT. TR.
 ~
 C.P.M.
 C.P.S.
 CYL.
 DPRF'G
 DAT.
 DB.
 DEG. or °
 °C
 °F
 DEPT.
 DET.
 DIA.
 DIFF.
 DIM.

dining room
 direct current
 disconnect
 distance
 distributed
 ditto
 division
 door
 double acting
 double glass
 double glazed
 double hung
 double hung window
 double strength "A" glass
 double strength "B" glass
 down
 dozen
 drain
 drain board
 drawing
 drinking fountain
 drinking water
 drinking water return
 duplex
 duplicate
 each
 each face
 each way
 east
 east northeast
 eccentric reducer
 electric (al)
 electric panel
 electric panel board
 electric-pneumatic
 electric water cooler
 elevation
 elevator
 emergency
 enclose (ure)
 engineer
 entrance
 equipment
 estimate
 et cetera
 excavate
 exclude (ing)
 executive
 existing
 expansion bolt
 expansion joint
 explosion proof
 exterior
 fabricate
 face brick
 face to face
 fascia and gravel stop
 factory
 Fahrenheit
 fan coil unit
 federal
 federal specifications
 feeder
 feet
 feet board measure
 feet per minute
 figure
 fin radiation
 finish (ed)
 finished floor
 fire alarm
 fire brick
 fire extinguisher
 fire extinguisher cabinet
 fire hose cabinet
 fireplace
 fireproof
 fire riser
 fixture
 flange
 flashing
 floor
 floor cabinet

DIN. RM.
 D. C.
 DISC.
 DIS.
 DIS.
 " "
 DIV.
 DR.
 D.A.
 D. GL.
 D. GL.
 D. H.
 D.H.W.
 D.S.A.
 D.S.B.
 DN.
 DOZ.
 DR.
 DR. BD.
 DWG.
 D. F.
 D. W.
 D. W. RET.
 DUP.
 DUPLIC.
 EA.
 E. F.
 E. W.
 E.
 ENE
 ECC.RED.
 ELECT.
 E. P.
 E.P.B.
 E. P.
 E.W.C.
 EL.
 ELEV.
 EMER.
 ENCL.
 ENGR.
 ENT.
 EQUIP.
 EST.
 ETC.
 EXC.
 EXCL.
 EXCL.
 EXIST'G
 EXP.BLT.
 EXP.JT.
 EX.P.
 EXT.
 FAB.
 F. BR.
 F. TO F.
 FAC/GR.STOP
 FAC'Y
 F
 F. C. U.
 FED.
 FED.SPECS.
 F.
 FT.
 F.B.M.
 F.P.M.
 FIG.
 FIN.RAD.
 FIN.
 FIN.FL.
 F.A.
 F.BRK.
 F. EXT.
 F.E.C.
 F.H.C.
 FP.
 FPRF.
 F.R.
 FIX.
 FLG.
 FLASH'G
 FL.
 FL.CAB.

floor cleanout
 floor drain
 flooring
 fluorescent
 folding partition
 foot
 foot-candle
 foot-Lambert
 footing
 foundation
 fountain
 frame
 french drain
 frequency
 fresh air intake (or inlet)
 front
 full size
 furnish (or furniture)
 furred
 fuse
 gage (gauge)
 gallon
 gallons per hour
 gallons per minute
 gallons per second
 galvanized
 galvanized iron
 galvanized steel
 general contract(or)
 generator
 glass
 glass block
 glazed structural facing tile
 glazed tile
 globe valve
 government
 grade
 grade line
 granite
 grating
 gravity
 gravity relief
 gravity ventilator
 grille
 ground
 guard
 gymnasium
 gypsum
 hand rail
 hard white plaster
 hardware
 hardwood
 head
 heater
 heating and ventilating unit
 height
 hexagonal
 high point
 high pressure steam
 hollow metal
 hollow metal door
 hollow tile
 horsepower
 hose bibb
 hospital
 hot water
 hot water flow
 hot water heater
 hot water return
 hour
 house
 I beam
 illuminated exit sign
 Illuminating Engineering Society
 inch
 include
 inclusive
 incorporated
 indirect wast drain
 information
 inside diameter
 inside pipe size
 instantaneous
 Institute of Electrical and Electronic
 Engineers

FL.C.O.
 F.D.
 FL'G
 FLUOR.
 FOLD.PART.
 FT.
 F.C.
 FL.
 FT'G
 FDN.
 FNTN.
 FR.
 FR.DR.
 FREQ.
 F.A.I.
 FR.
 F.S.
 FURN.
 FUR'D
 F.
 GA.
 GAL.
 G.P.H.
 G.P.M.
 G.P.S.
 GALV.
 GALV.I.
 GALV.STL.
 GEN.CONTR.
 GEN.
 GL.
 GL.BLK.
 G.S.F.T.
 G.T.
 G.V.
 GOVT.
 GR.
 G.R.L.
 GRAN.
 GRT'G
 GRAV.
 GRAV.REL.
 GRAV.VENT.
 GR.
 GRND.
 GD.
 GYM.
 GYP.
 H.R.
 H.W.P.
 HDW.
 HDWD.
 HD.
 HTR.
 H.V.U.
 HT.
 HEX.
 H.P.
 H.P.S.
 H.M.
 H.M.DR.
 H.T.
 HP.
 H.B.
 HOSP.
 H.W.
 H.W.F.
 H.W.H.
 H.W.R.
 HR.
 HSE.
 I
 ILLEX.SIGN.
 I.E.S.
 IN.
 INCL.
 INCL.
 INC.
 IND.W.D.
 INFO.
 I.D.
 I.P.S.
 INST.
 I.E.E.E.

insulate
interior
intermediate
invert elevation
janitor's closet
joint
kalamein
kalamein door
keene's cement plaster
key operated
kilocycle
kilowatt
kilowatt-hour
kip (1000 lb)
kitchen
knocked down
laboratory
laminated
laminated wood
landing
lateral
latitude
laundry
lavatory
leaching basin
lead and oil
lead coated copper
lead covered
left-hand
left-hand reverse
length
level
library
light
lighting panel
lightproof
lightproof louver
lightweight concrete
lightweight insulating concrete
limestone
lineal
linear feet
linea closet
linoleum
live load
living room
loading
long
louver
low point
low pressure steam
lumber
machine
main
manhole
manufacture (r)
manufactured
marble
mark
masonry opening
maximum
mean high tide
mean sea level
measurement
mechanic (al)
medical lavatory
medicine cabinet
medium
medium pressure steam
membrane
metal
metal division strip
metal threshold
mezzanine
millimeter
minimum
mirror
miscellaneous
mixing valve
modular
modulus of elasticity
molding (moulding)
monument
mop receptor

INSUL.
INT.
INTERM.
INV. EL.
J.CLO.
JT.
KAL.
KAL.DR.
K.C.PL.
KEY OP.
KC.
KW.
KWHR.
K.
KIT.
K.D.
LAB.
LAM.
LAM.WD.
LND'G
LAT.
L.
LDRY.
LAV.
L.B.
LD. & O.
LD.CTD.COPP.
LD.COV.
L.H.
L.H.R.
LGTH.
LEV.
LIB.
LT.
LT'G P.
LTPF.
LTPF.LVR.
LTWT.CONC.
LTWT.INSUL.CONC.
LS.
LIN.
LIN.FT.
LIN.CLO.
LINO.
LL.
L.RM.
LD'G.
LG.
LVR.
L.P.
L.P.S.
LBR.
MACH.
M.
MH.
MFR.
MFD.
MAR.
MK.
M.O.
MAX.
M.H.T.
M.S.L.
MST.
MECH.
MED.LAV
M.C.
M.
M.P.S.
MEMB.
MET.
M.D.S.
MET.THRES.
MEZZ.
MIL.
MIN.
MIR.
MISC.
M.V.
MOD.
E.
MLD'G
MON.
MOP RECPT

motor
motor generator
mounting
movable partition
mullion
national
National Board of Fire Underwriters
National Electric Code
National Electrical Manufacturers Association
National Fire Protection Association
National Lumber Manufacturers Association
nickel
nickel-silver
natural clay tile
nominal
noncorrosive
nonremovable pin
normal
north
north-northwest
not in contract
number
obscure
obscure glass
octagon
office
on center
one thousand feet board measure
one way vision glass
opening
operating
opposite
ornament
ounce
outside diameter
out to out
overload
page
painted
pair
panel board
parallel
partition
passage
passenger
passenger elevator
pay station
pedestal
per cent
perforated
perimeter
perpendicular
phase
pi
piece
pilot light
pint
plaster
plastic
plate glass
plate (steel) platform
plumbing
plywood
pneumatic-electric
point
point of intersection
point of tangent
polish
polished plate glass
polished wire glass
porcelain enamel
portable
position
pound
pounds per cubic foot
pounds per square foot
pounds per square inch
precast
prefabricated
premolded
pressure reducing valve
pressure relief valve

M.
M.GEN.
MTG
MOV.PART.
MULL.
NATL
NBFU
NEC
NEMA
NFFPA
NLMA
NI
NI-SIL.
NAT.CLT.
NOM.
NC.
NRP.
NOR.
N.
NNW
N.I.C.
NO.
OBS.
OBS.GL.
OCT.
OFF.
O.C.
M.B.M.
I WAY VIS.GL.
OP'G
OPRT'G
OPP.
ORN.
OZ.
O.D.
O. TO O.
OL.
PG.
PTD.
PR.
PNLBD.
//
PART.
PASS.
PASS.
PASS.ELEV.
PAY STA.
PED.
%
PERF.
PERI.
∅
TT
PC.
P.L.T.
PT.
PLAS.
PLAST.
PL.GL.
PLAT.
PLB'G
PLYWD.
P.E.
PT.
P/I
P/T
POL.
P.PL.GL.
P.W.GL.
PORC.EN.
PORT.
POS.
LB.
P.C.F.
P.S.F.
P.S.I.
PCST.
PREFAB.
PREMLD.
P.R.V.
P.REL.V.

private
 property
 pull chain
 pull switch
 push button
 quantity
 quarry tile
 quart
 quartered
 radiator (exposed and recessed)
 radiator recess
 radius
 rainwater conductor
 receptacle
 receptor
 recessed
 recirculate
 rectangular
 reference
 reflective
 refrigerator
 register
 regulator
 reinforce (ing)
 reinforced concrete
 reinforced concrete lintel
 reinforced concrete pipe
 relieving angle
 remote control
 remove
 remove and cap
 remove and relocate
 required
 return
 return air (grille)
 return air register
 revision
 revolutions per minute
 revolutions per second
 right
 road
 rolling steel door
 roof drain
 roofing
 room
 rough opening
 rubber tile
 running trap
 sand finished plaster
 sanitary
 sanitary sewer
 schedule
 second
 section
 select
 semi-vitreous tile
 service
 service sink
 sheet
 shower head
 shower receptor
 signal cabinet
 sleeve
 soundproof
 south
 speaker
 specifications
 sprinkler
 square
 square foot
 square inch
 stainless steel
 stairway
 standard
 station
 steam
 steel
 stone
 storage
 storm sewer
 street
 Structural Clay Research Institute
 structural facing tile
 supply
 supply air (grille)
 supply air register

PRIV.
 PROP.
 P.C.
 P.S.
 P.B.
 QTY.
 Q.T.
 QT.
 QTD.
 RAD.
 RAD.REC.
 R.
 R.W.C.
 RECP.
 RECPTR.
 REC.
 RECIRC.
 RECT.
 REF.
 REFL.
 REFR.
 REG.
 REGLTR.
 REINF.
 REINF.CONC.
 REINF.CONC.LIN.
 REINF.CONC.PIPE
 REL <
 REM.CONT.
 REM.
 REM.&C.
 REM.&R.
 REQ'D
 RET.
 RET.A.G.
 RET.A.R.
 REV.
 R.P.M.
 R.P.S.
 RT.
 RD.
 ROLL.STL.DR.
 RF.D.
 RFG
 RM.
 R.OP'G
 RUB.T.
 R.T.
 SAND.FIN.PLAS.
 SAN.
 SAN.SEW.
 SCHED.
 SEC.
 SECT.
 SEL.
 SEMI-VIT.T.
 SERV.
 S.S.
 SHT.
 SHWR.HD.
 SHWR.RECPTR.
 S.CAB.
 SL.
 SPRF.
 S.
 SPKR.
 SPECS.
 SPRKLR.
 SQ.
 FT.² OR
 IN.²
 ST.STL.
 STRWY.
 STD.
 STA.
 STM.
 STL.
 STN.
 STOR.
 ST. SEW.
 ST.
 SCRI
 S.F.T.
 SUPP.
 SUPP.A.G.
 SUPP.A.R.

surface
 surfaced four sides
 suspend
 suspended ceiling
 switch
 switchboard
 symbol
 system
 tangent
 technical
 tee
 telegraph
 telephone
 telephone cabinet
 temperature
 tempered glass
 terminal
 terrazzo
 terra cotta
 thick or thickness
 thousand
 thousand pounds
 thread
 threshold
 tin clad door
 toilet
 toilet partition
 tongue and groove
 top grille
 top register
 transfer grille
 transom
 tread
 typical
 ultimate
 Underwriters' Laboratories Inc.
 unit heater
 unless otherwise noted
 urinal
 vacuum
 vanishing point
 vapor barrier
 vaporproof
 variable
 velocity
 vent
 vent duct
 vent pipe
 vent shaft
 vent stack
 ventilate (or)
 ventilation
 vertical
 vestibule
 vinyl asbestos tile
 vinyl cover base
 vitreous
 vitrified clay pipe
 volt
 volume
 wainscot
 wall hydrant
 warehouse
 water
 water closet
 water cooler
 water heater
 waterproof (ing)
 water riser
 weatherproof
 weather-stripping
 weight
 west
 white
 white metal
 wide flange (steel)
 width
 window
 wire
 wire glass
 wire mesh
 with
 without
 wood
 wrought
 wrought iron

SURF.
 S. 4S.
 SUSP.
 SUSP. CL'G
 S.
 SWBD.
 SYM.
 SYS.
 TAN.
 TECH.
 "T"
 TLG.
 TEL.
 TEL.CAB.
 TEMP.
 TEMP.GL.
 TERM.
 TERR.
 T.C.
 THK.
 M.
 KIP.
 THRD.
 THRES.
 TIN.CL.DR.
 TOIL.
 TOIL.PART.
 T. & G.
 T.GR.
 T.REG.
 TRANS.GR.
 TRAN.
 T.
 TYP.
 ULT.
 UL.
 U.H.
 U.O.N.
 UR.
 VAC.
 V.P.
 VAP.BARR.
 VAPPRF.
 VAR.
 VEL.
 V.
 V.D.
 V.P.
 V.S.
 V.S.
 VENT.
 VENT.
 VERT.
 VEST.
 V.A.T.
 VINYL T.
 VIT.
 VIT.CLAY PIPE
 V.
 VOL.
 WSCT.
 WALL HYD.
 WHSE.
 W.
 W.C.
 WCR.
 WHTR.
 WPRF.
 W.R.
 WP.
 WS.
 WT.
 W.
 WH.
 WH.MET.
 WF.
 WD.
 WDW.
 W.
 W.GL.
 W.M.
 W/
 W/O
 WD.
 WRT.
 W.I.

wye (connection)	Y.
yard	YD.
year	YR.
zee	"Z"

9:13-1.179 (Reserved)

SUBCHAPTER 2. DEBARMENT, SUSPENSION AND DISQUALIFICATION OF CONTRACTORS

Authority

Unless otherwise expressly noted, all provisions of this subchapter were adopted pursuant to authority of executive order number 34 (1976) and were filed and became effective on October 19, 1976, as R.1976 d.332. See: 8 N.J.R. 514(c).

9:13-2.1 General provisions

Debarment, suspension and disqualification are measures which shall be invoked by the authority to exclude or render ineligible certain persons from participation in contracts and subcontracts with the authority or in projects or contracts performed with the assistance of and subject to the approval of the authority, on the basis of a lack of responsibility. These measures shall be used for the purpose of protecting the interests of the authority and its bondholders and not for punishment. To assure the authority the benefits to be derived from the full and free competition between and among such persons and to maximize the opportunity for honest competition and performance, these measures shall not be invoked for any time longer than deemed necessary to protect the interests of the authority.

9:13-2.2 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"Affiliates" means persons having an overt or covert relationship such that any one of them directly or indirectly controls or has the power to control another.

"Authority" means the New Jersey Educational Facilities Authority.

"Authority contracting" means any arrangement giving rise to an obligation to supply any thing to or perform any service for the authority, other than by virtue of employment, or to supply any thing to or perform any service for a private person where the authority provides substantial fi-

nancial assistance and retains the right to approve or disapprove the nature or quality of the goods or service or the persons who may supply or perform the same.

"Debarment" means an exclusion from authority contracting, on the basis of a lack of responsibility evidenced by an offense, failure, or inadequacy of performance, for a reasonable period of time commensurate with the seriousness of the offense, failure, or inadequacy of performance.

"Disqualification" means a debarment or a suspension which denies or revokes a qualification to bid or otherwise engage in authority contracting which has been granted or applied for pursuant to statute, or rules and regulations.

"Person" means any natural person, company, firm, association, corporation, or other entity.

"Suspension" means an exclusion from authority contracting for a temporary period of time, pending the completion of an investigation or legal proceedings.

9:13-2.3 Causes of debarment

(a) Subject to the conditions hereinafter described, the New Jersey Educational Facilities Authority may debar a person in the public interest for any of the following causes:

1. Commission of a criminal offense as an incident to obtaining or attempting to obtain a public or private contract, or subcontract thereunder, or in the performance of such contract or subcontract;
2. Violation of the Federal Organized Crime Control Act of 1970, or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, perjury, false swearing, receiving stolen property, obstruction of justice, or any other offense indicating a lack of business integrity or honesty;
3. Violation of the Federal or State antitrust statutes, or of the Federal Anti-Kickback Act (18 U.S.C. 874, 40 U.S.C. 276 b, c);
4. Violations of any of the laws governing the conduct of elections of the State of New Jersey or of its political subdivisions;
5. Violation of the Law Against Discrimination (P.L. 1945, c.169, c.10:5-1 et seq., as supplemented by P.L. 1975, c.127), or of the act banning discrimination in public works employment (c.10:2-1 et seq.), or of the "Act prohibiting discrimination by industries engaged in defense work in the employment of persons therein" (c.114, L.1942, c.10:1-10 et seq.);

6. Violations of any laws governing hours of labor, minimum wage standards, prevailing wage standards, discrimination in wages, or child labor;

7. Violations of any laws governing the conduct of occupations or professions or regulated industries;

8. Willful failure to perform in accordance with contract specifications or within contractual time limits;

9. A record of failure to perform or of unsatisfactory performance in accordance with the terms of one or more contracts, provided that such failure or unsatisfactory performance has occurred within a reasonable time preceding the determination to debar and was caused by acts within the control of the person debarred;

10. Violation of contractual or statutory provisions regulating contingent fees;

11. Any other cause affecting responsibility as an authority contractor of such serious and compelling nature as may be determined by the authority to warrant debarment, including such conduct as may be proscribed by the laws or contracts enumerated in this paragraph even if such conduct has not been or may not be prosecuted as violations of such laws or contracts;

12. Debarment by some other department or agency in the executive branch.

9:13-2.4 Conditions of debarment

(a) The rules and regulations concerning debarment shall be as follows:

1. Debarment shall be made only upon approval of the members of the authority by the executive director of the authority, except otherwise provided by law;

2. The existence of any of the causes set forth in section 3 of this subchapter shall not necessarily require that a person be debarred. In each instance, the decision to debar shall be made within the discretion of the members of the authority unless otherwise required by law, and shall be rendered in the best interests of the authority and its bondholders;

3. All mitigating factors shall be considered in determining the seriousness of the offense, failure or inadequacy of performance and in deciding whether debarment is warranted;

4. The existence of a cause set forth in section 3(a)1 through 7 of this subchapter shall be established upon the rendering of a final judgment or conviction by a court of competent jurisdiction or by an administrative agency empowered to render such judgment. In the event an appeal taken from such judgment or conviction results in reversal thereof, the debarment shall be removed upon the request of the debarred person unless other cause for debarment exists;

5. The existence of a cause set forth in section 3(a)8 through 11 of this subchapter shall be established by evidence which the authority determines to be clear and convincing in nature;

6. Debarment for the cause set forth in section 3 of this subchapter shall be proper provided that one of the causes set forth in section 3(a)1 through 11 was the basis for debarment by the original debarring agency. Such debarment may be based entirely on the record of facts obtained by the original debarring agency, or upon a combination of such facts and additional facts.

9:13-2.5 Scope of debarment; procedures; period

(a) The rules and regulations concerning debarment as established by the authority with this subchapter provided as follows regarding procedures, period of debarment and scope of debarment:

1. When the authority seeks to debar a person or his affiliates, it shall furnish such party with a written notice stating that debarment is being considered; setting forth the reasons for the proposed debarment; and indicating that such party will be afforded an opportunity for a hearing if he so requests within a stated period of time. All such hearings shall be conducted in accordance with the provisions of the Administrative Procedures Act. However, where one department or agency of State government imposed debarment upon a party, the authority may also impose a similar debarment without according an opportunity for a hearing, provided that the authority furnishes notice of the proposed similar debarment to that party, and accords that party an opportunity to present information in his behalf to explain why the proposed similar debarment should not be imposed in whole or in part;

2. Debarment shall be for a reasonable, definitely stated period of time which as a general rule shall not exceed five years. Debarment for an additional period shall be permitted provided that notice thereof is furnished and the party is afforded an opportunity to present information in his behalf to explain why the additional period of debarment should not be imposed;

3. Except as otherwise provided by law, a debarment may be removed or the period thereof may be reduced in the discretion of the authority upon the submission of a good faith application under oath, supported by documentary evidence, setting forth substantial and appropriate grounds for the granting of relief, such as newly discovered material evidence, reversal of a conviction or judgment, actual change of ownership, management or control, or the elimination of the causes for which the debarment was imposed;

4. A debarment may include all known affiliates of a person, provided that each decision to include an affiliate is made on a case-by-case basis after giving due regard to all relevant facts and circumstances. The offense, failure or inadequacy of performance of an individual may be imputed to a person with whom he is affiliated, where such conduct was accomplished within the course of his official duty or was affected by him with the knowledge or approval of such person.

9:13-2.6 Causes of suspension

Subject to the conditions hereinafter described, the rules and regulations required by this subchapter shall authorize the authority to suspend a person in the public interest for any cause specified in section 3 of this subchapter, or upon a reasonable suspicion that such cause exists.

9:13-2.7 Conditions of suspension

(a) The rules and regulations concerning suspension required by this subchapter shall include the following conditions:

1. Suspension shall be imposed only upon approval of the members of the authority and upon approval of the Attorney General, except as otherwise provided by law;
2. The existence of any cause for suspension shall not require that a suspension be imposed, and a decision to suspend shall be made at the discretion of the members of the authority and of the Attorney General, and shall be rendered in the best interests of the authority and its bondholders;
3. Suspension shall not be based upon unsupported accusation, but upon adequate evidence that cause exists or upon evidence adequate to create a reasonable suspicion that cause exists;
4. In assessing whether adequate evidence exists, consideration shall be given to the amount of credible evidence which is available, to the existence or absence of corroboration as to important allegations, and to inferences which may properly be drawn from the existence or absence of affirmative facts;
5. Reasonable suspicion of the existence of a cause described in section 3(a)1 through 7 of this subchapter may be established by the rendering of a final judgment or conviction by a court or administrative agency of competent jurisdiction, by grand jury indictment, or by evidence that such violations of civil or criminal law did in fact occur;
6. A suspension invoked by an agency of the State of New Jersey for any of the causes described in section 3(a)1 through 12 of this subchapter may be the basis for the imposition of a concurrent suspension by the authority, which may impose such suspension without the approval of the Attorney General.

9:13-2.8 Scope of suspension; procedures; period

(a) The rules and regulations concerning suspension required by this subchapter shall include the following provisions regarding procedures, period of suspension and scope of suspension:

1. The authority may suspend a person or his affiliates, provided that within ten days after the effective date of the suspension, the authority provides such party with a written notice stating that a suspension has been imposed

and its effective date; setting forth the reasons for the suspension to the extent that the Attorney General determines that such reasons may be properly disclosed; stating that the suspension is for a temporary period pending the completion of an investigation and such legal proceedings as may ensue; and indicating that, if such legal proceedings are not commenced or the suspension removed within 60 days of the date of such notice, the party will be given either a statement of the reasons for the suspension and an opportunity for a hearing if he so requests, or a statement declining to give such reasons and setting forth the agency's position regarding the continuation of the suspension. Where a suspension by an agency of the State of New Jersey has been the basis for suspension by the authority, the authority shall note that fact as a reason for its suspension;

2. A suspension shall not continue beyond 18 months from its effective date unless civil or criminal action regarding the alleged violation shall have been initiated within that period, or unless debarment action has been commenced. Whenever prosecution or debarment action has been initiated, the suspension may continue until the legal proceedings are completed;

3. A suspension may include all known affiliates of a person, provided that each decision to include an affiliate is made on a case-by-case basis after giving due regard to all relevant facts and circumstances. The offense, failure or inadequacy of performance of an individual may be imputed to a person with whom he is affiliated, where such conduct was accomplished within the course of his official duty or was effectuated by him with the knowledge or approval of such person.

9:13-2.9 Exceptions

The rules and regulations established by this subchapter shall be so interpreted to provide that the exclusion from authority contracting by virtue of debarment, suspension or disqualification shall extend to all contracting and subcontracting within the control or jurisdiction of the authority. However, when it is determined essential to the public interest by the authority, and upon filing of a finding thereof with the Attorney General, an exception from total exclusion may be made with respect to a particular authority contract.

9:13-2.10 Notice

Insofar as practicable, prior notice shall be given to the Attorney General and the Treasurer of any proposed debarment or suspension.

9:13-2.11 Discretion; contracting

Nothing required by this subchapter shall be construed to limit the authority to refrain from contracting within the discretion allowed by law.