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**C.A.S.H. WORKSHOP**  
**“Educational Specifications and  
Major Additions to Existing School Sites”**

**Tuesday, August 25, 2009**

9:00 a.m. to 12:00 p.m.

Doubletree Hotel  
2001 Point West Way  
Sacramento, California

**EDUCATIONAL SPECIFICATIONS**

**FRED YEAGER**

California Dept. of Education  
School Facilities Planning Division

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# Educational Specifications

Fred Yeager  
California Department of Education  
School Facilities Planning Division

CALIFORNIA DEPARTMENT OF EDUCATION  
Jack O'Connell, State Superintendent of Public Instruction



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State Superintendent  
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# Educational Specifications

- Goals
  - What is an Educational Specification
  - Why Use Educational Specification
  - How CDE Uses an Educational Specification
  - How to develop an Educational Specification



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## Adding Building to an Existing Site

- Goals
  - Building and program areas to consider
  - CDE process

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## What is an Educational Specification

### Quick Description

“Form follows function”

Or

“Form allows function”

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## When to have an Educational Specification

- Design of a new school—Required by Title 5
- When planning an addition—Recommended  
Referring to the educational specification will ensure that additions are made consistent with program needs
- Modernization—Recommended  
A focused educational specification for modernization will help to target modernization funds

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## Why Use an Educational Specification

- Required by Regulations
  - *California Code of Regulations*, Title 5 14001 (a) and 14030 (a)
  - Plan Summary Effective July 1, 2010—Board Adopted
- District board policy
  - The Superintendent of each LEA “Oversees the preparation of (school construction and modernization) plans from the developed educational specifications”.

(CSBA Board Policy 7100)

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## Why Use an Educational Specification

- Better product
  - School design that supports and enhances the educational program
- Builds Relationships
  - Among district staff
  - Between district and community
- Puts students as the focal point of decision making

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## Why Use an Educational Specification

- Create a dynamic process and document that captures the facility impacts of educational program changes on existing schools

For example:

- Class Size Reduction
- Full day kindergarten
- Conversion from K-6 to K-8

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## How CDE uses an Educational Specification

- Understanding of project
  - Site layout
    - Community Access
    - Building locations and relationship
  - Classroom design
    - Project based
    - Independent study

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## How Does CDE use an Educational Specification?

- **Plan Summary**
  - Used in completing Plan Summary--  
New School
  - As of July 1, 2010—New  
Construction Projects must have a  
board adopted educational  
specification effective July 1, 2010.

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# How to Develop an Educational Specification

*Educational Specifications, Linking Design of School Facilities to Educational program*

*1997 California Department of Education*

- Chapter 1—The Meaning of Educational Specifications
- Chapter 2—The Role of Educational Specifications in Facility Planning
- Chapter 3—Development of Educational Specifications
- Chapter 4—Suggested format for Educational Specifications
- Chapters 5-7—Annotated Outline

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## Chapter 1 Educational Specifications Defined

Educational Specifications are interrelated statements that communicate what educators believe is required to support a **specific** educational program

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# Chapter 1

## Educational Specifications Defined

Educational Specifications serve as the link between the **educational program** and the school facility.

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# Chapter 1

## Educational Specifications Defined

### Educational Program

“The educational program describes the curricula, learning support programs activities, and persons to be served...”

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# Chapter 1 Educational Specifications Defined

## Educational Program (cont.)

“...defines educational requirements; and represents local community consensus on educational priorities...”

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# Chapter 1 Educational Specifications Defined

## Educational Program (cont.)

“...It should be prepared by educators and should not prematurely suggest architectural solutions...”

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## Chapter 1 Educational Specifications Defined

“Educational program” examples:

All students will meet district achievement standards. Instruction will be provided in response to different student learning styles.

Intervention and support services will be provided to students as necessary.

Health, fitness and an understanding of music and art will enhance the instruction in the core academic areas of math and language arts.

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## Chapter 1 Educational Specifications Defined

“Use words to allow the architect to visualize the educational activity to be conducted.”

Example for an elementary school

“Classroom instruction will use project based activities to reinforce lecture. Internet resources will be used to supplement teacher provided instruction”

To an architect this may mean:

- Space for computers
- Space for project work and storage

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# Chapter 1

## Educational Specifications Defined

The educational program does not presume nor describe an architectural solution

–For example:

–“The district’s hardship funding is limited, and classrooms will be 960 square foot portables”.

–“In order to maintain equity with other district schools, facilities will be comparable sized to the existing schools”.

–“The project will reuse plans from a previous design. Teachers and administrators have expressed satisfaction with the design”.

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# Chapter 1

## Educational Specifications Defined

Example from a real high school

“The school will be organized around the concept of small learning communities (SLC) to ensure that students have a sense of belonging and are known by teachers and administrators who are capable of offering personalized academic and emotional support. SLC will maximize opportunities for team teaching and integrated content learning experiences”.

“Elective course will be organized in broad centers that integrate academics with postsecondary learning and employment opportunities”.

FOR AN ARCHITECT THIS MAY MEAN:

- Campus lay out to create distinction between SLC
- Separate administrative spaces in each SLC
- Academic support and counseling spaces in each SLC
- Flexible spaces for team teaching

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## Chapter 1 Educational Specifications Not Defined

Educational Specifications are not:

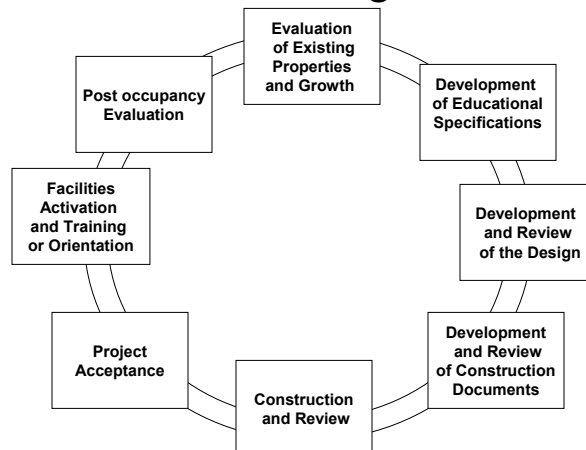
- A design charrette
- A construction design
- A construction specification
- A facility master plan

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## Chapter 2 The Role of Educational Specifications in Facility Planning



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## Chapter 3 Development of Educational Specifications

### High Level Leadership

- Support of superintendent and governing board is crucial!
  - Community Relations
  - Intradistrict muscle

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## Chapter 3 Development of Educational Specifications

- Created By Committee:
  - Selected by Superintendent? By Board?
  - Membership? Varies by community but consider at least:
    - » Administrators
    - » Teachers
    - » Students
    - » Parents
    - » City staff (parks, health, library etc)
    - » Community members
    - » Architect

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## Chapter 3 Development of Educational Specifications

### Program Director

- Has overall responsibility of developing Educational Specification
- May be district employee or consultant
- Ability to coordinate, communicate and mediate

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## Chapter 3 Development of Educational Specifications

### Program Director

- Identifies resources needed to complete process
  - Educational planner
  - Clerical support
  - Budget
  - Time
- **Must have an understanding of educational issues and trends**

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## Chapter 3 Speaking of Educational Trends.....

### Some trends

1. Consolidation
2. Distance learning
3. Linked with other services
4. Span Schools
5. Choice
6. Smaller schools
7. Technology
8. Green
9. Preschool

How does your community and district  
see education in the future?

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## Chapter 4 Suggested Format for Educational Specifications

### PART I Project Description

- Enrollment
  - Number of students?
- Grade levels
  - K-5, K-6, K-8?
- Board policies
  - Bussing
- Community expectations

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# Chapter 4

## Suggested Format for Educational Specifications

### PART II Project Design Factors

- Building Design Concepts
  - Open or Closed Campus
  - Multitrack
  - Joint use
- Building systems
  - High Performance Standards
  - Day lighting
  - Superior Indoor Air Quality
- Site Considerations
  - Security
  - Features that can enhance program
    - » A creek or wetland
    - » Unique geological feature

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# Chapter 4

## Suggested Format for Educational Specifications

### PART III Activity Area Requirements

- A. Name of Activity Area
- B. Program Philosophy, Goals and Outcomes
- C. Curriculum and anticipated use
- D. Trends
- E. General Requirements, Grouping and Adjacency
- F. Space requirements
- G. Individual space Description—"micro environment"

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# Chapter 4

## Suggested Format for Educational Specifications

### PART III Classroom Requirements

#### A. NAME: ELEMENTARY CLASSROOM (grades 4-6)

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# Chapter 4

## Suggested Format for Educational Specifications

### PART III Classroom Requirements

#### B. PROGRAM PHILOSOPHY, GOALS AND OUTCOMES

The classroom is the basic instruction area where all curriculum will be delivered. It must be flexible to allow small group instruction, project areas, and video and audio instruction.

It must be inviting and familiar and support students' needs for safety and security.

Sixth grades students will begin the transition to a middle school environment with a modified block schedule.

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# Chapter 4

## Suggested Format for Educational Specifications

### PART III Classroom Requirements

#### C. CURRICULUM ANTICIPATED

Instruction in all subject areas of the district's adopted curriculum will occur in the classrooms. Opportunities for team teaching and small group instruction will be used to accommodate multiple learning styles.

In room aids will assist teacher with individual and small group instruction.

The 6<sup>th</sup> grade students will be transitioned into middle school curriculum by having two teachers with students moving between adjacent classrooms. Classrooms will need to support the science and art programs used in the district's middle schools.

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# Chapter 4

## Suggested Format for Educational Specifications

### PART III Classroom Requirements

#### D. TRENDS

Research on how students learn and the continued increasing role of technology requires classrooms to be large enough to allow flexibility in response to future needs.

Parental involvement is shown to improve student attendance and achievement. Space in each classroom is to be provided as a parent work space.

An increased focus on health requires multiple sinks to allow students to wash hands frequently.

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# Chapter 4

## Suggested Format for Educational Specifications

### PART III Classroom Requirements

#### E. GENERAL REQUIREMENTS, GROUPING AND ADJACENCY.

Classrooms shall be grouped in grade level pods and have areas for small group instruction, large group instruction, and project work.

Classroom buildings should be located away from off-site noise such as traffic.

Lockers will be provided for the sixth graders to further transition the middle school experience and to minimize the space taken up by backpacks in the classroom.

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# Chapter 4

## Suggested Format for Educational Specifications

### PART III Classroom Requirements

#### F. SPACE REQUIREMENTS

Classrooms should be sized designed to accommodate:

- Small group instruction
- The number of students per teacher as defined in contract
- Parents
- Special education students and aides.

Storage for student projects and curriculum material is necessary.

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# Chapter 4

## Suggested Format for Educational Specifications

### PART III Activity Area Requirements

#### G. INDIVIDUAL SPACE DESCRIPTION

Acoustic treatment is necessary to support small group and cooperative learning.

High ceilings are needed to allow clear visual lines of sight and the use of ceiling mounted audio-visual equipment.

Day-lighting is to be maximized by the use of building orientation and solar tubes/skylights

A secure storage area for laptop computers is required.

Tackable wall surfaces are needed to display student work.

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# Chapter 4

## Suggested Format for Educational Specifications

### PART III Activity Area Requirements

A. NAME: HIGH SCHOOL MULTIPURPOSE ROOM

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# Chapter 4

## Suggested Format for Educational Specifications

### PART III Activity Area Requirements

#### B. PROGRAM PHILOSOPHY

The ability of students to gather informally aids in creating student connectivity to school and in developing interpersonal relations. The space should be familiar and inviting.

The multipurpose room also serves a a critical link between school and community.

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# Chapter 4

## Suggested Format for Educational Specifications

### PART III Activity Area Requirements

#### C. CURRICULUM ANTICIPATED

The multipurpose room will be used as the main food service venue. Adjacent outdoor covered area will supplement interior area and will visually and functionally be connected to the multipurpose room.

Breakfast and snack service will also be provided.

Activities such a public meetings, class assemblies, and club activities will also occur so extensive secured storage is needed.

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# Chapter 4

## Suggested Format for Educational Specifications

### PART III Activity Area Requirements

#### D. TRENDS

Nutrition and fitness are increasingly being recognized as crucial elements of student success.

Community use helps to create the school-community bond that is essential for academic success. As such, the multipurpose room should be viewed as a community resource that is open on evenings and weekends.

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# Chapter 4

## Suggested Format for Educational Specifications

### PART III Activity Area Requirements

#### E. GENERAL REQUIREMENTS, GROUPING AND ADJACENCY.

The multipurpose room must be located next to the central quad and covered dining area to encourage student access and gathering

It must be able to be secured from the rest of the campus when used for community event and located in an area readily accessible by service vehicles.

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## Chapter 4 Suggested Format for Educational Specifications

### PART III Activity Area Requirements

#### F. SPACE REQUIREMENTS

The multipurpose room must be able to serve 750 students at one time in a "food court" setting.

Must have large open areas with clear lines of sight and flexibility to encourage informal student gathering.

Smaller "warming" kitchens easily secured from the main kitchen are available for snack service and community use.

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## Chapter 4 Suggested Format for Educational Specifications

### PART III Activity Area Requirements

#### G. INDIVIDUAL SPACE DESCRIPTION

Durable and easily maintained floor covering is necessary due to the extensive use of the space

Display cabinets and tackable wall surfaces are necessary to allow for the display of school awards and student work

An audio-visual system is required for school and community events.

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## Rest of the Story

Chapter 5-7 provide annotated  
outlines and more detailed  
guidance

Appendix 2—Remodeling Facilities  
Appendix 4—Selecting the Architect  
Appendix 5—Project Delivery

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## Rest of the Story

Appendix 6—Site Selection  
Appendix 7—Safe Architecture  
Appendix 8—School Disaster  
Preparedness Planning

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## Rest of the Story

- Appendix 9—Facility Activation, Orientation and Post Occupancy Evaluation
- Appendix 10—Facilities Inspection Summary
- Appendix 11—Constructability Reviews

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## Post Occupancy Evaluation

- Evaluates how a concept that was presented in the educational specification translated into a design and how that design worked in delivering the concept.
- Informs future educational specifications
- Continues dialog of all parties

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## How can the use of educational specifications be increased?

- Provide policy makers with an understanding of the important role educational specifications play in the design of a facility that supports student achievement
- Make sure time and money to develop educational specifications is built into project schedule

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## Resources

- **Educational Specifications:**
  - **Educational Specifications: Linking Design of School Facilities to Educational Programs, CDE Press 1997**  
[http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content\\_storage\\_01/0000019b/80/15/e3/fb.pdf](http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/15/e3/fb.pdf)
  - **The Form of Reform. School Facility Design Implications for California Educational Reform, CDE Press 1997**  
[http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content\\_storage\\_01/0000019b/80/15/e3/f3.pdf](http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/15/e3/f3.pdf)
- **Other:**
  - **National Clearinghouse for Educational Facilities**  
<http://www.edfacilities.org/index.cfm>

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## Adding Buildings to an Existing Site

### Adding students

- Growth
- School closure

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## Adding Buildings to an Existing Site

### Changing grade level

- K-6 to K-8

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## Adding Buildings to an Existing Site

### Changing program

#### Magnet—

- no bussing

#### Small Learning Centers

- Shared spaces
- Distinct spaces

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## Adding Buildings to an Existing Site

- Use Plan Summary Addition as tool even if not requesting CDE approval

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## Adding Buildings to an Existing Site

Areas to evaluate include:

### **Parking**

- Is more staff parking needed?
- Parent parking for school wide events?

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## Adding Buildings to an Existing Site

Areas to evaluate include:

### **Food Service**

- Is additional eating area needed?
- Satellite food service?
- More lunch periods?

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## Adding Buildings to an Existing Site

Areas to evaluate include:

### **Administration**

- Is a vice principal needed?
- More counselors?

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## Adding Buildings to an Existing Site

Areas to evaluate include:

### **Physical Education**

- Number of lockers sufficient?
- Physical education teaching stations
  - Especially important if converting to a K-8—recess and physical education scheduling

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## Adding Buildings to an Existing Site

Areas to evaluate include:

### Toilets

- Number
- Location
- Age of users (span)
  - First grade and 8<sup>th</sup> grade using same toilets?

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## Adding Buildings to an Existing Site

Areas to evaluate include:

### Specialized classrooms

- Kindergarten
- Science
- Career Technical Education

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## Adding Buildings to an Existing Site

Areas to evaluate include:

### **Library**

#### **–Size**

- More students
- Separate areas for each grade level (Span)

#### **–Expanded collection**

- Middle school books

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## Adding Buildings to an Existing Site

Areas to evaluate include:

### **Support Services**

#### **– Resources**

#### **– Reading**

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## Adding Buildings to an Existing Site

- CDE Process
  - Plan Summary—Addition
  
  - Define Scope of Project
    - Demolition
    - New buildings
  
  - Project scope not funding source determines process/form to use

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## Adding Buildings to an Existing Site

- CDE Process

Existing Site Certification on SFPD  
4.07/08

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## Site Addition

### Existing Site Certification on SFPD 4.07/08

**California Code of Regulations, Title 5, Section 14010:**

- (c) Powerlines/Electromagnetic fields
- (d) Within 1,500 feet of a railroad
- (e) Traffic noise
- (f) Active fault or fault trace
- (g) Flood or dam inundation area
- (h) Near an above ground water or fuel storage tank or within 1,500 feet of a pipeline, which can pose a safety hazard
- (i) Liquefaction/landslides
- (l) Traffic/pedestrian safety
- (m) Compatible existing and proposed surrounding land uses
- (q) Exposure to adverse light, wind, and air pollution
- (r) Easements restricting access or building placement
- (t) Within 2,000 feet of a significant disposal of hazardous waste

- **Comments:** \_\_\_\_\_  
\_\_\_\_\_

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## Resources—Site Addition

- **Resources**
  - Plan Summary—Addition  
<http://www.cde.ca.gov/ls/fa/sf/documents/plansumadd.doc>
  - Physical Education Guidelines  
For Elementary: <http://www.cde.ca.gov/ls/fa/sf/peguideelement.asp>  
For Middle and High: <http://www.cde.ca.gov/ls/fa/sf/peguidemidhi.asp>
  - Small School Site  
<http://www.cde.ca.gov/ls/fa/sf/documents/smallsitewksht.xls>
  - School Site Selection Approval Guide  
<http://www.cde.ca.gov/ls/fa/sf/schoolsiteguide.asp>
  - Guide to School Site Analysis and Development  
<http://www.cde.ca.gov/ls/fa/sf/documents/schoolsiteanalysis2000.pdf>
  - Educational Specifications  
<http://www.cde.ca.gov/ls/fa/sf/documents/edspecs.pdf>

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State Superintendent  
of Public Instruction

# Contacts

## School Facilities Planning Division

(916) 322-2470

<http://www.cde.ca.gov/re/di/or/division.asp?id=sfpd>

## Fred Yeager, Assistant Director

(916) 327-7148

[fyeagar@cde.ca.gov](mailto:fyeagar@cde.ca.gov)