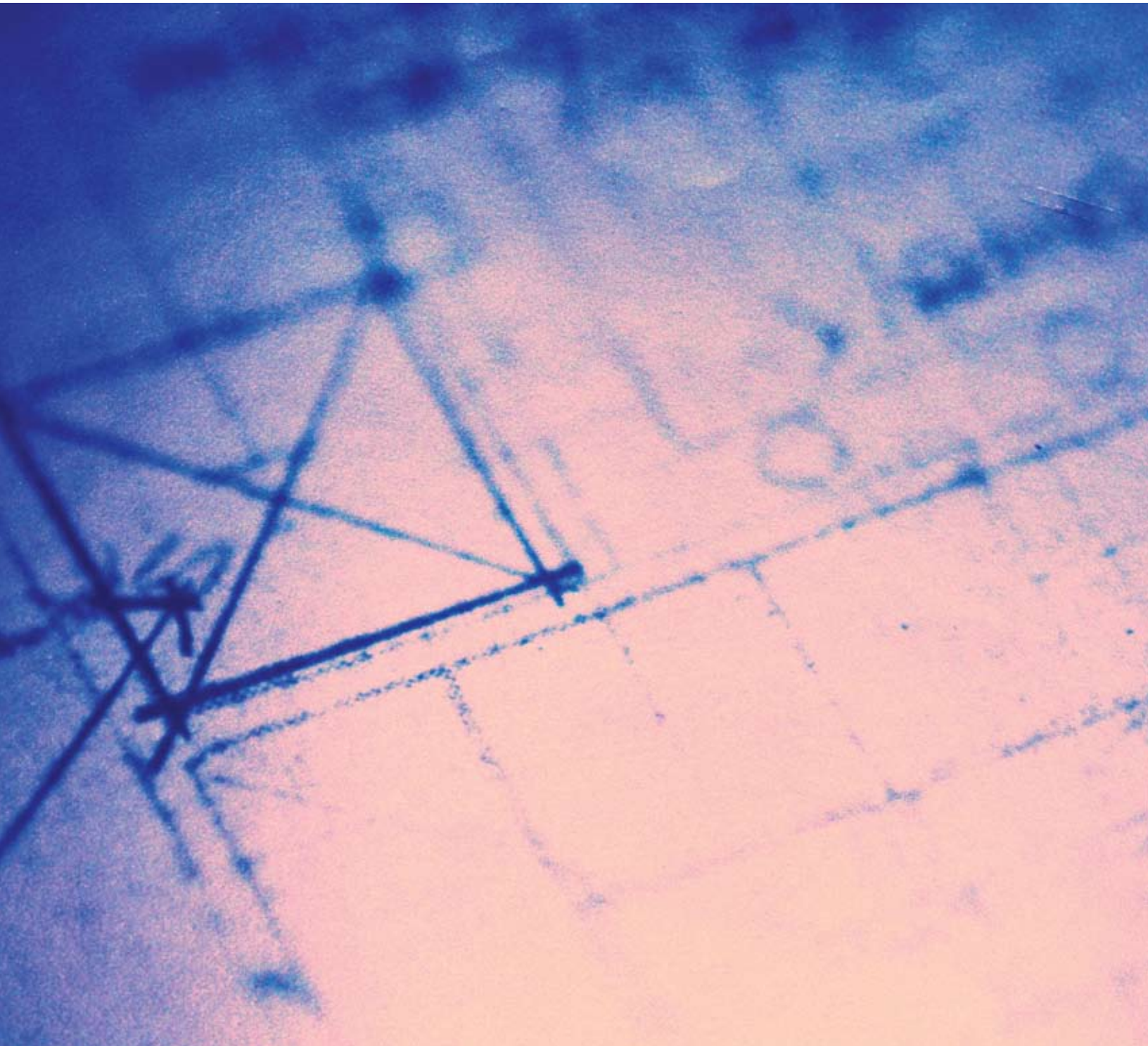
Construction Management

TASK FORCE



Construction Management

TASK FORCE

The construction and modernization of school facilities is an essential component of the educational program in all districts and county offices of education. CSBA created a Construction Management Task Force to meet the need for board members to understand their role in construction management. The task force was charged with creating resources that provide assistance to school districts in the area of school facilities, keeping in mind the board's overarching role to ensure that facilities adequately and safely house the students, enhance the instructional program, and help achieve its vision for educating the community's students.

Over the course of two years, the Construction Management Task Force developed the materials contained in this compendium. In order to engage stakeholders from all aspects of the construction and modernization process, this task force was comprised of board members, superintendents and district administrators, and representatives from labor organizations. The focus of the work was on governance: the role the board plays in strategic planning, monitoring and oversight, and asking the right questions during the construction process.

This compendium includes information on topics including an overview of the state agencies involved in construction and modernization, facility master planning, apprenticeship programs, site selection and land acquisition, and a glossary of construction management terms. Not only were written policy briefs and fact sheets developed, but other resources, including podcasts and presentation summaries have been made a part of an online resource center at the CSBA Web site available at http://www.csba.org/EducationIssues/EducationIssues/Facilities/ConstructionManagement.aspx. These materials are available anytime, and represent an additional way for you to be informed about critical issues to you as a board member. We hope that these tools and resources will be helpful to you when considering the issues of construction and modernization.

Dr. Kerry Clegg, Chair, Construction Management Task Force

CSBA Past President and NSBA Regional Director

Construction Management

TASK FORCE

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The California School Boards Association's Construction Management Task Force provides districts with policy briefs and fact sheets on construction related issues. District staff and Governing Boards should use this information as a resource when making local decisions. These documents are provided for informational purposes only and are not a substitute for legal advice from school districts legal counsel. Districts should obtain independent legal advice and review when necessary.

If you have any questions, please contact CSBA Policy Services at (800) 266-3382 or via e-mail policy@csba.org

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Overview of Public School Construction Process State Agencies

Background

School construction management is an issue of critical importance to school boards because of the number of classrooms that must be built and modernized and the funds that will be required to do so. In the next five years, 32,470 new classrooms will need to be built, with the state's share of the cost estimated to be over $10 billion. Additionally, 44,492 classrooms will need to be modernized in the next five years, with a price tag of over $4 billion.

The state share of funding, including district financial hardship costs, for approved but unfunded projects and for projects for which eligibility documents have been filed with the Office of Public School Construction as of September 2005 is:

State share	5-year need	Per year
New Construction *(50 percent state share)*	$10.06 billion	$2.01 billion
Modernization *(60 percent state share)*	$ 4.06 billion	$0.81 billion
TOTAL *(Rounded)*	**$14.12 billion**	**$2.82 billion**

Districts in California will have to build 6,494 new classrooms a year (18 new classrooms a day) between 2005 and 2010, and renovate 8,898 classrooms per year, (25 classrooms per day) in order to meet the needs of all students. With these statistics in mind, it is clear that understanding the role the governance team plays in school construction is essential for school board members.

State agency overview

As an overview, boards should be aware of the agencies at the state level that are involved in school construction funding and approval.

- Office of Public School Construction

  The OPSC administers and implements the state school facilities programs for the State Allocation Board. The OPSC is also charged with the responsibility of verifying that all applicant school districts meet specific criteria based on the type of funding which is being requested.

- State Allocation Board

  The SAB is responsible for determining the allocation of state resources including proceeds from general obligation bond issues and other designated state funds used for the new construction and modernization of public school facilities. The SAB is also charged with the responsibility for the administration of the State School Facility Program, the State Relocatable Classroom Program and the Deferred Maintenance Program.

- Division of the State Architect

  The DSA is involved in three phases of school construction projects: plan review and approval, construction oversight and project closing and certification. The Division of the State Architect reviews projects for structural, fire/life safety and accessibility requirements.

- California Department of Education, School Facilities Planning Division

  CDE reviews public school sites and plans to determine if they meet Title 5 standards. The review includes areas such as: standards for school site selection; procedures for site acquisition; standards for the development of plans for the design and construction of school facilities; educational specifications; site layout; playground and field areas; delivery and utility areas; future expansion;

placement of buildings; classrooms; specialized classrooms and areas; laboratories; gymnasium; shower/lockers; auxiliary areas; lighting; acoustical; plumbing; year-round education; Americans with Disabilities Act; and child care.

- Depending upon the location of the school site, other agencies may be required in the plan approval process, such as:
  - Army Corps of Engineers
  - Airport authority
  - Water district
  - CalTrans
  - California Highway Patrol
  - Air Resources Board
  - Santa Monica Mountains Conservancy
  - Historic preservation / historic landmark groups
  - Department of Fish and Game
  - Department of Conservation

Start to finish: State agency involvement in the process

The process is very complex, but the items below are basic milestones to keep in mind as part of the school construction and modernization, with regard to interaction with state agencies. It is important to note that while these milestones appear in chronological order, there is some overlap to the timeline and multiple activities may be occurring simultaneously in order to proceed with the construction project.

- **Facilities needs assessment**
  - Analyze enrollment trends
  - Assess facilities needs
  - Plan for new facilities
  - Board determines means to fund project, identifying resources available such as bonds, certificates of participation, etc.
  - Board sets a budget for the construction project

- **Funding eligibility**
  - Determine district's eligibility for state funds by submitting a funding eligibility application (which is separate from a funding application) before beginning project.

- **Site approval**
  - Potential sites – LEA identifies and evaluates potential sites
  - CDE evaluation – CDE evaluates three or more of the potential sites identified by the district
  - Preferred site – LEA identifies preferred site and prepares requested studies for CDE site approval
  - CDE site approval – CDE reviews project and approves if Title 5 standards are met
  - LEA submits site approval letter from CDE as part of their OPSC funding application

- **Building design plan approval**
  - Educational specifications – LEA develops educational specifications
  - Developing the plans – LEA submits preliminary plans to CDE (design development)
  - Preliminary plans – LEA resolves CDE concerns
  - CDE plan approval – CDE reviews project and approves if Title 5 standards are met
  - District submits plans to DSA for approval
  - LEA submits CDE and DSA approval letter as part of their OPSC funding application

- **Funding application**
  - District submits application for eligibility determination to OPSC
  - OPSC processes eligibility applications for SAB approval
  - SAB approval
  - District submits plans to CDE for approval
  - District submits plans to DSA for approval
  - District submits funding application (including DSA- and CDE-approved plans) to the OPSC
  - OPSC processes funding applications for SAB approval and funding of grant allowance and site
  - SAB approval
  - OPSC releases grant amount upon evidence of district match and construction contract
  - Project construction
  - District submits expenditure reports to the OPSC
  - OPSC performs audits of district expenditures to ensure that state funds were expended in accordance with law

- **Before construction begins**
  - Upon approval by the DSA of all drawings and specifications and written approval of the application, award a contract for project construction.
  - Hire a project inspector (also known as the inspector of record, who must pass DSA administered inspector examinations) and obtain DSA approval of the inspector.
  - The DSA-approved project inspector must be present at the construction site to maintain a personal knowledge of the ongoing work and to verify that construction conforms to approved documents. The project inspector also must inspect all work before it is covered or closed in by other construction work.
- **During construction**
  - Coordinate field reviews
  - Coordinate specialized lab tests and inspections
  - Respond if special circumstances arise
- **Project closure**
  - The DSA can close projects either by issuing the final certification of construction or by closing the project without certification.
  - Without certification, the state will not assume liability for the facility. Your district's school board members remain liable in any construction-related litigation.
- **Follow-up**
  - Within two years of project completion, the OPSC will perform a financial audit of the project expenditures.
  - The Department of Toxic Substances Control may need to monitor long-term operations and maintenance at the school site, if your district was required to prepare a response action for the site.

There are six different types of construction in which school districts may be engaged:

School Facility Program

Funds for the School Facility Program may be from any funding source made available to the SAB. This includes proceeds from the sale of state general obligation bonds and the state general fund. In addition, districts are required to provide a portion of the cost of a project from funds available to the school district. This may include, among other sources, local general obligation bonds, developer fees, general fund, etc.

New Construction Grant

The New Construction Program provides state funds on a 50/50 state and local sharing basis for public school capital facility projects in accordance with statute. Eligibility for state funding is based on a district's need to house pupils and is determined by criteria set in law.

Modernization Grant

The Modernization Program provides state funds on a 60/40 state-local basis for improvements to educationally enhance school facilities that are at least 25 years old (relocatable buildings must be at least 20 years old). The modernization grant can be used to fund a large variety of work at an eligible school site. Air conditioning, insulation, plumbing, lighting, electrical system and roof replacement, as well as the purchase of new furniture and equipment are just a few of the eligible expenditures of modernization grants. A district may even use the grants to demolish and replace existing facilities of like kind. However, modernization funding may not be spent for construction of a new facility, except in very limited cases. Site acquisition may not be included in modernization applications.

Charter Schools

This program is intended to provide a charter school with funding to construct new facilities. To qualify for funding a charter must be deemed financially sound by the California School Finance Authority and meet the eligibility criteria outlined in law. The criteria includes SFP new construction eligibility to support the project. A charter, or school district filing on behalf of a charter under this program, may receive a reservation of funding, by submitting a preliminary application, prior to receiving the necessary approvals from other state entities. Once those approvals are received the preliminary apportionment may be converted to a final apportionment and the funds previously set aside by the SAB may be released.

Critically Overcrowded Schools

The Critically Overcrowded Schools program allows school districts with qualifying critically overcrowded school facilities to apply for a preliminary apportionment for new construction projects to relieve overcrowding. The preliminary apportionment serves as a reservation of funds and must be converted within a four-year period to a final apportionment that meets all the SFP New Construction program laws and regulations required for such an apportionment.

Joint-Use Projects

The state and local contribution to a joint-use project is 50/50. The joint-use partner must match a minimum of 25 percent of the eligible project costs. If the district has passed a bond which specifies that the monies are to be used specifically for the purposes of the joint-use project, then the district can opt to pay up to the full 50 percent local share of eligible costs. Anything beyond the eligible project cost are the responsibility of the joint-use partner and/or the district.

Under the SFP a method to fund certain types of joint-use projects has been implemented. There are two types of joint-use projects, both types include specific project eligibility.

- A Type I must be part of an SFP new construction project that will either increase the size, create extra costs, or both beyond that necessary for school use of the multi-purpose room, gymnasium, childcare facility, library, or teacher education.

- A Type II may be part of a modernization or a stand alone project located at a school because it does not have the type of facility or the existing facility is inadequate. The project proposes to reconfigure existing school buildings, construct new school buildings, or both to provide for a multi-purpose room, gymnasium, childcare facility, library, teacher education facility, or pupil academic achievement facility.

Facilities Hardship Replacement or Rehabilitation

While the SFP generally requires the state and school districts to share the cost of facilities, if a school district faces unusual circumstances, it may apply for "hardship" funding from the state to offset its local share of costs. The facility Hardship Replacement or Rehabilitation project funding for classrooms or related facilities (or lack of facilities) where a clear and imminent threat to the health and safety of students can be demonstrated along with an on-going need for those facilities to house pupils. Factors that may be considered include:

- Structural deficiencies that the DSA has deemed a health and safety threat and where the DSA has specifically required that those deficiencies be repaired.
- Environmental health hazards, such as dangerous levels of mold contamination, etc.
- Traffic safety, including remote area pupils where transportation to existing facilities is not possible or it poses a health and safety threat.
- Close proximity to:
- Major freeway
- Electrical facility
- Dam
- Industrial facility
- Airport
- High power transmission lines
- Pipeline
- Adverse air quality emission
- Other health and safety threats

To determine whether a district can qualify for the hardship provision, determine whether:

- There is an imminent health and safety threat to students
- The facilities were not insured and were lost or destroyed as a result of a disaster such as fire, flood or earthquake
- There is a demonstrated on-going need for the facility and no other space to house pupils is available in the district

Facilities Master Planning

Every governing board, regardless of circumstance, size or location will need to conduct a facilities master plan to set the direction for the district's facilities, land-use planning, maintenance and other features. A facilities master plan is the result of a process in which the board of education and district staff collect and analyze data regarding the current and future needs of district facilities. The data collected is used to inform future district facilities planning. An FMP should be conducted or updated by district staff approximately every five to 10 years, or prior to any significant building project. All districts benefit from the process and findings of an FMP – not only growing districts with new construction projects but also those districts with older facilities requiring modernization.

Most FMPs include needs assessments of individual school sites. In certain circumstances, a needs assessment is required by law; first, when a district wants to levy a developer fee (see Government Code 65995.6) and also as part of the Williams Emergency Repair Account. The steps that follow the completion of an FMP may include, but are not limited to: Site acquisition, project planning, project design, the bidding process and ultimately construction.

Understanding the status of facilities can inform future planning and direction setting for the district. As with every step of the school construction process, the gathering and analyzing of data is a key component. In order to ensure collaboration at the local and state level, school board members should be in constant communication with appropriate government agencies. The board may also wish to assemble an advisory committee to discuss the data and make recommendations to the board for the FMP.

Why conduct a facilities master plan?

Districts should conduct an FMP to ensure the final construction plans will be formulated to meet the long-term needs of students, teachers, administrators, parents and the community.

Who should be involved in the process?

District staff will need to solicit input and expectations from stakeholders and gather statistical information in order to provide the board with the most relevant data to make decisions regarding school facilities.

Potential stakeholders:

- Students
- Parents
- Community members
- Local government
- Parks and recreation
- School district staff
- Business community
- Community-based organizations

Where should the process begin?

Once a board has decided to conduct or update their district's FMP, it must do three things: Set goals and expectations for the plan; allocate resources and set direction for district staff and; assemble an advisory committee. A governing board must prioritize its objectives for the plan and provide oversight to the staff. Flexibility, adequate funds and appropriate timelines will all require direction from the board to district staff. In order to receive community input and engage stakeholders, a board may benefit from assembling an advisory committee of potential stakeholders. The responsibilities of the committee should be outlined by the board. Responsibilities may include the analysis of data and providing recommendations to the board. Regularly scheduled reports to the board on the progress of both the advisory committee and staff work should be added to school board meetings.

What should be addressed in the facilities master plan?

The district will need to collect data in order to assess the condition and adequacy of existing facilities, project future enrollments and align facilities with the district's vision for the instructional program. In projecting student enrollments, the facilities master plan should address economic considerations in the projected attendance area, such as changes in housing costs and availability as well as projections about employment and planned residential or commercial development. Data on the projected school population should also factor in the density of the local neighborhoods, as well as the characteristics of the population, such as age, transience and birth rate. Public records and census data will inform the discussions by providing a common understanding of the historical development of the community and challenges that may be presented by geography or transportation infrastructure. Other factors, such as traffic patterns, transportation and safety should be incorporated into district planning.

Gathering student information will help address the planning needs of future facilities and, the data may also guide board discussions as they evaluate existing structures as a part of the FMP process. For current and planned facilities, a district will need to consider how space is used for teaching and learning. The age of students, class size requirements, level of safety, what is needed to support technology and the availability of flexible space all must be considered when creating a facilities master plan. Any potential code violations will need to be identified and the facilities will need to be examined for compliance of new and existing regulations. This evaluation is most often completed with a facility needs assessment. As noted above, in some cases a needs assessment is required by law. Whether or not they are required, site needs assessments are a vital tool in determining current and future needs of district facilities.

Effective planning also requires general background knowledge of the school facilities system in California, including but not limited to:

- legal requirements, standards and court decisions affecting facilities;
- funding options currently available to districts for new construction, modernization and deferred maintenance;
- local planning processes as they relate cities or counties general plan;
- allowable uses of facilities; and
- a sense of current politics and legislative proposals.

Once all the data is collected, the needs assessment should be used to define the goals and desired outcomes of future construction projects, as well as any potential problems. After considering all data, boards can move to the planning stage of construction, confident that the plans will take into account the future needs of the district, staff and students.

What is the board's role in the facilities master plan?

Completing a thorough FMP is an important part of developing a facilities master plan for the district and ensuring that construction projects comply with complex state requirements. Obtaining and compiling the data are the responsibilities of district staff, but it is the responsibility of the board to ensure that the FMP is conducted and that the results are used in the planning and decision-making process.

A well-informed board can play an important role in setting clear expectations for the oversight and monitoring of construction projects. Board members provide community leadership and serve as advocates for children by working collectively to make decisions that will best serve all the students in the community. Engaging community stakeholders in the process of facilities master planning is one way board members can ensure accountability. Building positive relationships with other civic and community leaders in your district can also be beneficial when other projects arise, such as the passage of a local school bond.

One of the most significant responsibilities of the board will be to strive to meet the expectations of the school community while working within limited funding constraints.

The school board can help ensure that the district has all the information it needs to effectively plan and provide high-quality, safe and appropriate school facilities through the following actions:

Steps for a comprehensive facilities master plan

- Communicate the board's priority on developing and implementing a thoughtful planning process that obtains perspectives from key stakeholders.
- Allocate funding, other resources and sufficient time for a thorough needs assessment.
- Work collaboratively with all other local and state agencies.
- Request that data be provided by the superintendent and district staff to the board regarding the projected enrollment data for school sites. This data should include, information from the city, county, census bureau, public records and other agencies to determine potential changes in:
  - housing costs and availability
  - employment projections
  - planned residential and commercial development
  - city master plans
  - demographics
- Understand the historical development of the community, as well as its future direction.
- Determine how new construction/modernization projects will correlate with district and community goals.
- Establish parity across sites – set district standards for technology, aesthetics, equipment, fixtures, etc.
- Prioritize funding and resources for individual construction projects. Communicate with staff and the public why some facilities/projects receive differentiated funding.
- Provide clear policy direction regarding facilities planning and set expectations for regular reviews of facilities needs.
- Convene a group of stakeholders to review enrollment data. In the case of the renovation of an existing site, facility data should also be reviewed.
- Establish clear guidelines and expectations for the group of stakeholders.
- Conduct forums, focus groups and surveys to gauge the wishes of students and parents for the new or renovated school facility.
- Provide opportunities at board meetings for reports on the status and results of the needs assessment.
- Use FMP data to identify concerns as well as to define goals and desired outcomes of the construction project(s).
- Create a plan for communication and refer to your existing district communication plan. Be transparent with decisions, convey realistic project timelines and goals.

Site Selection and Land Acquisition

There are many steps involved in the selection and acquisition of a site for a new school campus. The process of identifying, conducting a review of, getting approval for, and acquiring a site will typically take more than a year of effort. Before embarking on a search for potential sites, it is critical to have a comprehensive, thorough, and up-to-date Facilities Master Plan (see the CSBA Construction Management Task Force Policy Brief on Facilities Master Plans). Additionally, before the process of site selection begins, a process for determining who will be a part of the site selection team that will make the recommendation of a site to the board should be clearly defined.

Key Resources and Decision Points in Site Selection

In order to make the site selection process as efficient as possible, the district should have in place a Facilities Master Plan. With a Facilities Master Plan already adopted by the board, the necessary criteria that will be used to judge potential school sites is defined and understood, such as the amount of square footage per student needed, educational program requirements, whether specialized spaces will be built on the site (kitchens, science labs, etc), and whether there are identified partners for the possibility of building joint-use facilities. Other considerations include whether to partner with a developer to build a school, and whether eminent domain or a land trade are tools that should be employed to potentially acquire a piece of property. With the important criteria that will determine which site are logistically feasible, the district will have a clear basis for evaluation of potential sites.

For the purposes of site selection, it is also critical to have the following pieces of current information available in order to conduct a review of potential locations:

- Demographic statistics
- Enrollment projections and potential growth rates
- Attendance area maps
- Capacities at existing school sites
- Zoning plans
- Mitigation agreements with developers (current and proposed)
- Local community plans
- Jurisdictional boundaries for counties, cities, water districts, utilities districts, law enforcement and fire districts

Another important factor will be the district budget for construction and land acquisition. In order to identify potential parcels of land, the district must have an estimate of how much funding is available for real estate and construction. The process for the purchase of land will likely require consultation with the district's counsel and real estate brokers.

The Role of the Board in School Site Selection

The five responsibilities areas of school board members are to set direction, establish structure, provide support, ensure accountability and act as community leaders. The board will have numerous responsibilities in the planning and oversight of the school construction process. The site selection part of the construction process has specific consideration the board may need to address, including:

Setting direction

- Is there a Facilities Master Plan already adopted? Is it comprehensive and reflective of both the current reality and future needs?
- Is there an opportunity to bank land for the future, based upon the projected needs identified in the Facilities Master Plan?
- Has the board given consideration to everything included in Appendix A?
- Is there benefit to forming an architectural subcommittee of the board?
- Have clear budgets been defined and communicated

so that all parties have a shared expectation about the available funding for land and construction?

Establishing Structure

- Is there a committee established to make a recommendation to the board on the best options for potential school sites? Are the appropriate stakeholders and staff involved?
- Is there a policy in place to prevent investors or speculators with knowledge of district site selection discussions (including consultants and family members) from purchasing property identified as a potential school site?

Providing Support

- Has the board provided adequate resources, professional development, staff capacity, and budget to allow for the appropriate level of information to be presented to the board for consideration?
- Do the actions of the board reinforce the concepts from the adopted Facilities Master Plan?

Ensuring Accountability

- Is there a clearly defined process for staff and consultants to report to the board on the process of site review?
- Have expectations and budgets been made clear so that board monitoring and oversight of the process can occur?

Acting as Community Leaders

- Have working relationships been established with city, county, and local communities before an actual project is under review?
- Is there a process in place to communicate with other local elected officials and planning departments of other local agencies?
- Has the board engaged local planning committees, homeowners associations, and neighborhood groups?
- Has an effective committee been established to provide input from appropriate stakeholders, including the community?
- Have partners for the potential joint-use of facilities been considered as part of the site selection process?
- Is there an opportunity for regular reports, discussion, public comment, and other communication about the site selection and land acquisition process during board meetings?

Forming a Selection Team

The district must decide who will be responsible for the process of site selection process and determine what criteria will be considered in selecting the site. It is recommended that districts form a selection team recommend a site or sites to the board. This team should be composed of a variety of stakeholders, district staff, and can also include outside consultants. The committee makeup should include the following kinds of representatives:

- Stakeholders
  - Parents
  - Community Members
  - Teachers
  - Administrators
  - Staff members
  - Homeowners Associations representatives
  - Local planning committees
  - Neighborhood groups
- Consultants or District Staff
  - Facilities/construction manager
  - Chief Business Officer
  - Real property negotiator
  - Real estate appraiser
  - Civil engineer
  - Environmental consultants
  - Legal counsel
  - Architect
  - Traffic engineer

Hiring a facilitator to guide the work of the group may also be an avenue that a district would wish to pursue, in order to expedite the site selection process.

Characteristics of a Potential School Site

There are a many factors that go into the selection of a site as the potential location of a school campus. The factors include the location, size, and shape of a parcel of land, cost, as well as health and safety concerns. The recommendations of a particular site will have to be based not only on the current situations and requirements, but also on predicted needs in the future. It is also important to consider the history of the title of the property when evaluating a potential school site. A detailed, comprehensive list of characteristics appears in Appendix A.

Communications about Site Selection

Keeping others informed about the school site selection process is an important responsibility for the board and district staff. Holding community meetings to engage members of the public in the process can be a key way to gather input and to provide information. Not only should there be a plan to inform the community at large and specific stakeholders, but the district should also have a specific plan to keep in touch with other governmental agencies, municipalities, and districts that could be affected by a new school site. Some cities and counties may have designated future school sites on general plan land use maps and school site selection teams should take that information into account as part of their evaluation process. Having an open, transparent process will help to identify potential concerns and generate understanding about decisions being made.

While the California Department of Education approves school site selection plans, it is beneficial for districts to keep cities and counties informed of their decisions, so that land use plans are kept updated. Board members and district staff should keep open lines of communications with cities, counties, and local communities since future school sites will have an impact on each of their budgets and the communities they serve. As community leaders, school board members should ensure that they are communicating with their counterparts in other local agencies and keeping lines of communication between district staff and city/county planners open.

Regulatory Process

While much of the work in the acquisition of land for a school site will be conducted by district staff or by consultants, it is important for board members to know how detailed and time-consuming the process will be. The regulatory process for state approval of a district school site selection is complicated and multi-phased. Once a district narrows down its choices and the board selects a single site to be reviewed by the state, a project manager (either district staff or an outside consultant) must oversee numerous tasks required by the state of California. This complex process, which must be completed before the close of escrow on a property, has at least five different steps that must be completed as part of the school site acquisition regulatory process. These requirements include:

- Ordinary due diligence investigation,
- California Department of Education approval,
- Department of Toxic Substances Control approval,
- Compliance with the California Environmental Quality Act, and
- Notice and coordination with other local agencies such as cities and counties.

As part of the approval process, the school district will have to provide the state with specific information on a variety of particular characteristics of the land. These characteristics may include:

- Safety
- Public acceptance
- Location
- Environment
- Soil
- Topography
- Size and shape of the parcel of land
- Accessibility
- Public Services
- Utilities
- Cost
- Availability

Each of these pieces of information must be thoroughly researched by district staff and/or expert consultants as the process of identifying and selecting a parcel for a school site moves forward.

Safety

With a goal of safety being the paramount concern, the site selection process can get into highly technical detail in order to ensure that nothing is overlooked. As an example, the criteria used to evaluate the safety of a site include fourteen specific points, including:

- Proximity to airports;
- Proximity to high-voltage power transmission lines;
- Presence of toxic and hazardous substances;
- Hazardous air emissions and facilities within a quarter mile;
- Other health hazards;
- Proximity to railroads;
- Proximity to high-pressure natural gas lines, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Proximity to propane tanks; noise; proximity to major roads and freeways;
- Results of geological studies and soils analyses (including seismic and fault hazards, liquefaction subsidence or expansive potential, dam or flood inundation and street flooding, and slope stability);

- Condition of traffic and school bus safety; safe routes to school; and
- Safety issues for joint-use projects.

In addition to the demographic information and regulatory requirements, there are other considerations when looking at potential school sites, including:

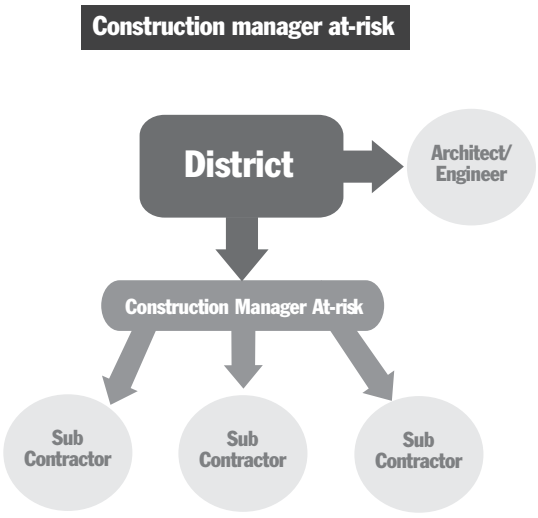
- The environmental and climate impact of the building.
- Is there an opportunity to use eco-friendly materials in construction?
- Could sources of natural light or carbon-neutral sources of power be incorporated into the plan?
- Renovation vs. New Construction. Is there an opportunity to remodel an existing building to adapt it to use as a school? Traditionally, California's acreage requirements and funding formulas for school sites favored new construction in outlying areas. But in some situations, adaptive reuse of existing space for a school site could be pursued as better option than starting with an empty parcel of land. This option may surface when there is an immediate need to provide more school space, the lead times for construction are long and the state-mandated minimum site sizes were not available, and non-educational buildings existed within the district that could be transformed affordably.
- The relationship between the school site location and how students get to school. The location of a school site can impact the surrounding community in terms of pedestrian and automobile traffic, the quantity and quality of open space in the neighborhood, and proximity to other social and civic sites as a community gathering place. The site and design selected for a school can have an impact on whether students walk, bike, take buses, get dropped off in cars, or drive themselves to campus. The method of transportation can have implications on air quality, traffic, and school transportation budgets. Does a potential school site offer proximity to public transportation and shopping areas, medical centers, and recreational facilities?

Delivery Methods

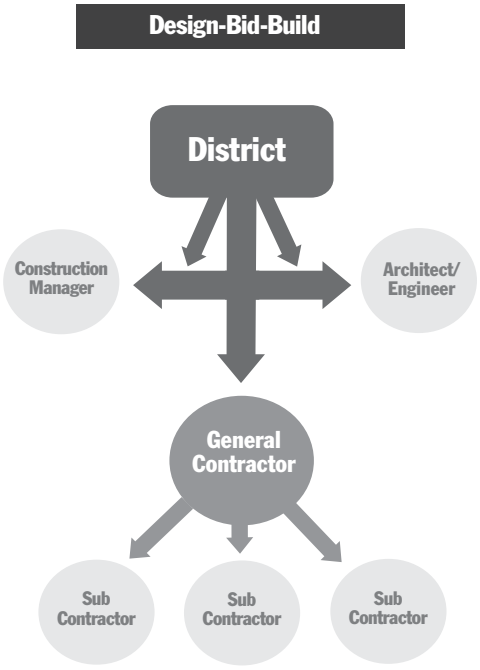
During the initial stages of preparing for any construction project, a district must select a delivery method which will match the school district's construction objectives. The delivery method will influence the planning, design and construction phases of a project. The decision of which delivery method to choose is wholly dependent on staff capacity, funds available, project timeline, and many other local considerations. When deliberating about various delivery methods, local governing boards should rely extensively on superintendent and staff recommendations based on previous district construction experiences; consult legal counsel to ensure compliance with state and federal law; advice from the project manager (if applicable); and the experiences of other local school districts and public works projects.

Regardless of the delivery method chosen, a critical understanding of the district's options can enable the board to be resourceful and innovative with district funds. The purpose of describing these options is to provide governance leaders with a better context as they plan for and provide high-quality facilities. Listed below are the delivery methods most often utilized by California school districts.[1]

Construction manager at-risk: A delivery method in which the construction manager makes a commitment to the school district to deliver a project within a guaranteed maximum price. The construction manager acts as consultant to the district in the development and design phases, but as the equivalent of a general contractor during the construction phase.[2]



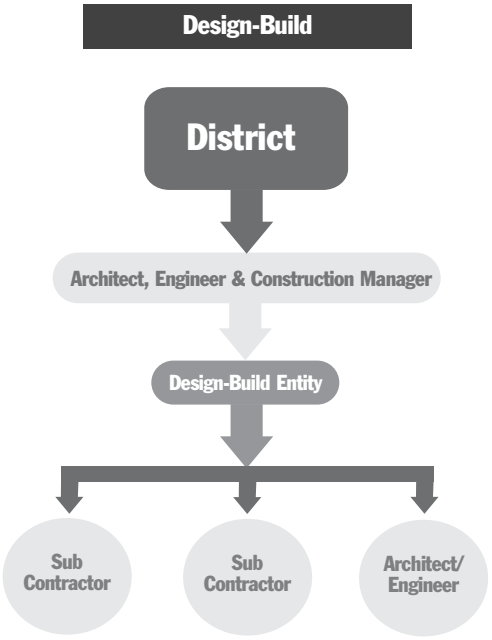
Design-Bid-Build (DBB): When a school district uses DBB as a project delivery method, an architect is hired to create design documents from which general contractors will bid.



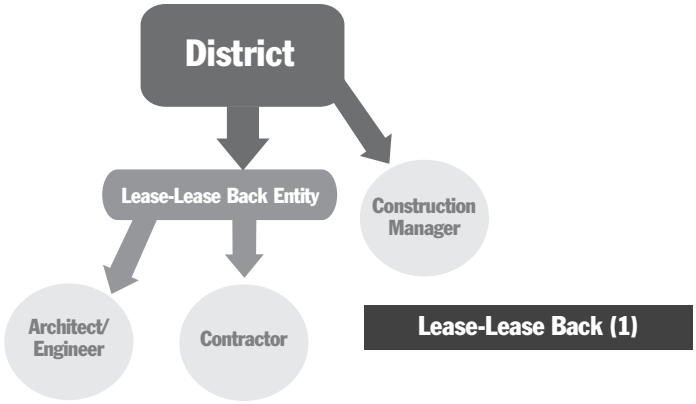
1 If the school board is interested in other, additional delivery methods they should consult the project manager or appropriate district staff person.

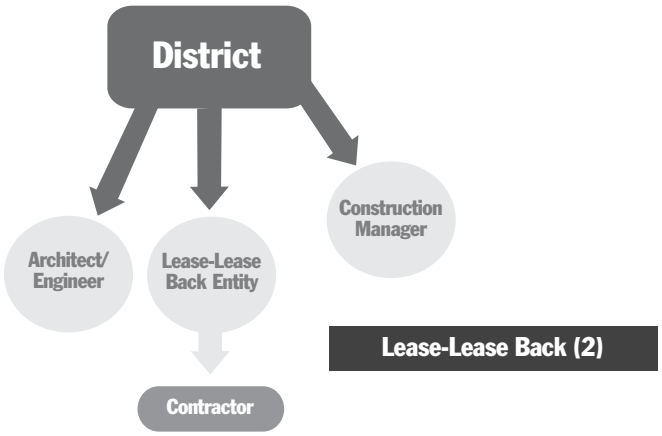
2 Within the construction industry, there are differing opinions regarding the definition of this delivery method. For more information, please visit: http://cmaanet.org/user_images/forum.cm_at-risk_-_avoiding_conflicts_of_interest_-_kenig.pdf

Design-Build (DB): A procurement process in which both the design and construction of a project are procured from a single entity contract.[3] The award of the contract shall be made to the responsible bidder whose proposal is determined, in writing by the school district, to be the best value to the school district.[4]



Lease-Lease Back (LLB): This delivery method establishes a contract by which a district owns a piece of property and leases it for a nominal amount to an entity (typically a contractor) that will build a school on the sight. That entity then leases the finished school and site back to the district for a specified period of time at a specified rental price. At the end of the lease, the school and site become property of the district. This delivery method does not require the selection of the lowest responsible bidder but does require that general prevailing rates will be paid.





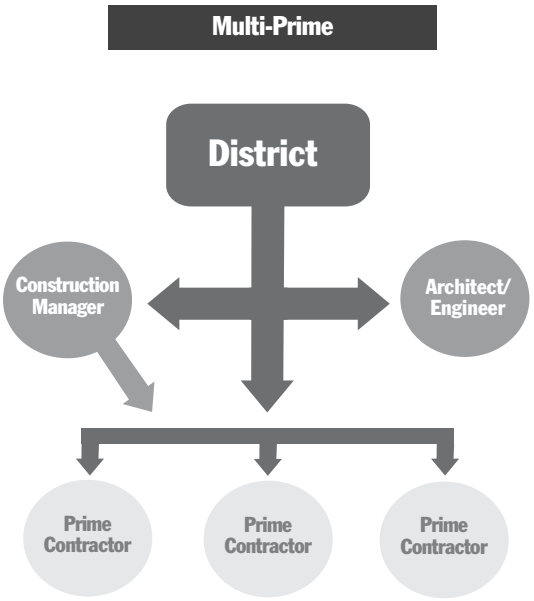
3 As defined in Education Code Section 17250.15. See Education Code Section 17250.10-17250.50 for more information.

4 Education Code Section 17250.25 c2B

5 Education Code Section 17406

6 Education Code Section 17424

Multiple prime contracts: Separate trade contractors deal/contract directly with the district (and/or construction manager) for specific and designated elements of the project.



Acknowledgements

ACCM Project Delivery Handbook: A Guide to California School and Community College Facility Delivery. A summary and overview of various delivery methods prepared by the Association of California Construction Managers and; Murdoch, Walrath and Holmes. For information about ACCM please contact, Ernest Silva, (916)441-3300, esilva@m-w-h.com

Hiring a Program Manager

Construction and renovation projects can be huge undertakings. During the initial stages of preparing for any construction project, a district must evaluate the capacity of its own staff to manage and oversee the planned project. Based on the experience and ability of existing district staff to take on additional responsibilities a governing board may choose one of the following scenarios for oversight of the project: use existing district staff, hire a new staff person as lead on the project, or hire a project manager from an outside company. The decision of which management option to choose is wholly dependent on staff capacity, funds available, project timeline, and many other local considerations.

If a district decides to hire a project manager, a critical understanding of the district's options can enable the board to be resourceful and innovative with district funds. The purpose of describing these options is to provide district leaders with a better context as they plan for and provide high-quality facilities.

Project management[1] is a professional service that uses management techniques during the planning, design and construction phases of a project for the purpose of controlling time, cost and quality. A project manager may work independently or be part of a larger firm. The role of the project manager is to represent the school district during the planning, design and construction phases of a project, regardless of the delivery method [See Policy Brief on Delivery Methods].[2] If a board opts to use a project manager, the project manager should ensure that the delivery method chosen results in a cost-effective and dedicated representation of the school district's objectives.

A local governing board may choose a construction project manager based on the best value to the school district or county office of education, rather than the low bid basis. This law also applies to the selection of architectural and engineering services.[3]

Is your district using Proposition 39 bond dollars?

Hiring a project manager is an allowed cost under the Proposition 39 bond requirements. If a project manager is hired only for the duration of the project, their contract fee is considered a reimbursable expense.[4]

When to hire a project manager

If a district has made the choice to hire a project manager, the individual or firm should be hired as soon as possible in the planning process. Many districts hire the project manager concurrently with the architect to ensure a seamless and collaborative planning phase. Ideally, the project manager should be hired prior to Division of the State Architect approval, selection of a delivery method and bidding.

Hiring process

Although there will likely be local considerations, hiring a project manager often follows the following steps.

1. Request for proposals (RFP) or request for quotation/quote (RFQ)
2. Review proposals and conduct interviews

[1] Project management is often used interchangeably with construction management.

[2] Hiring a facilities consultant may be another option for districts and county offices of education. Facilities consultants typically (although services vary greatly by qualification of consultants) help districts navigate: state and federal funding processes for new and modernization construction, class size reduction, and other grants. These consultants may also assist districts with state and local approval requirements for other facilities projects (site approval, DTSC, etc.).

[3] Government Code 4527 (a)

[4] California Constitution, Article 13(A), Section 1

3. Board vote
4. Contract negotiations
5. Board vote to finalize the project management contract
6. Project manager hired and project begins

1. Request for proposals or quotation

To begin the process of hiring a project manager, the board may consider directing district staff to write a request for proposals. Government Code 4529.5 states, "Any individual or firm proposing to provide construction project management services pursuant to this chapter shall provide evidence that the individual or firm and its personnel carrying out onsite responsibilities have expertise and experience in construction project design review and evaluation, construction mobilization and supervision, bid evaluation, project scheduling, cost-benefit analysis, claims review and negotiation, and general management and administration of a construction project."

The RFP should include appropriate input from the board reflecting district goals and expectations. A list of qualifications should be developed and included as criteria for hiring. Once the RFP is prepared and approved by the board, it should be advertised in the publications of professional societies and sent to qualified firms.[5]

2. Review proposals and conduct interviews

After all interested and qualified individuals or firms have submitted proposals, the appropriate district staff person should meet with no less than three firms regarding anticipated concepts and the relative utility of alternative methods of approach for completing the required services. Staff typically make recommendations to the board. Then the district shall select a minimum of three of the most highly qualified project managers to consider for hire, in order of preference, based upon criteria established in the RFP.[6]

Qualifications to consider

Many project managers and firms offer a wide array of services and specialized personnel through all phases of the construction project. During the hiring process, the board may request that district staff prepare documents outlining the differences and similarities of services offered by each applicant, including:

- Facilities master planning
- Budgeting
- Scheduling including phasing, design and construction
- Bidding process
- Facilitating communication to and between district staff, construction professionals and the community
- Coordination between designers, various trades and the school district
- Outreach to local businesses
- Construction administration
- Claims management and mitigation
- Labor compliance
- Safety and security

The board may also wish to consider the following points relating to experience and quality of work of potential project managers.

- Experience with public education construction in California
- Scope of previous projects
- Experience with other construction consultants, including local businesses
- References from other districts
- Previous projects completed on time
- Previous projects completed on budget
- Possesses knowledge of construction related costs and prioritizes work to keep district expenditures low
- The match between the characteristics of the project manager and the needs of this project and the district
- Membership in professional associations or organizations[7]
- Personnel to be used by the project management firm on specific projects
- Prior litigation
- If applicable, experience with project stabilization agreements

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[5] Construction services are exempt from the bidding requirements per Public Contract Code 20111

[6] Government Code 4527-4528

[7] From the Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2006-07 Edition*: There is a growing movement towards certification of construction managers to ensure that a construction manager has a certain body of knowledge, abilities, and experience. Although certification is not required to work in the construction industry, voluntary certification can be valuable because it provides evidence of competence and experience. Both the American Institute of Constructors (AIC) and the Construction Management Association of America (CMAA) have established voluntary certification programs for construction managers. Requirements combine written examinations with verification of education and professional experience.

3. Board vote to select a project manager

Once the board and superintendent (and other appropriate staff, such as a chief business officer) have considered each qualified proposal, the final decision must be taken to the board for a vote. The board may continue to use the background information provided by district staff to analyze each proposal's qualifications and ability to meet the district's objectives. After the board has made its decision by voting, the superintendent (or other appropriate staff person) begins negotiating a contract.

4. Contract Negotiations

To ensure a well-coordinated execution of the construction project, the district and the project manager should discuss several items, including but not limited to:

- How to reach goals and objectives of the district and the project
- Definition of the scope of all district consultants
- Discussion of and policies set for potential change orders and cost over-runs
- Agreement on the total budget and program management fee
- Agreement and understanding of construction master project schedules
- Guidelines for communication with the public including content, frequency, and methods
- Communication processes and procedures between the project manager, district staff, citizens oversight committee and the governing board

5. Board vote to finalize the project management contract

Once a negotiated contract is agreed upon, the final contract will need to come back to the board for a vote at a public meeting with open session.

Additional information detailing the procurement and selection of a project manager can be found in Government Code 4527-4529.5.

Certification Resources

For information about constructor certification, contact the American Institute of Constructors, 717 Princess St., Alexandria, VA 22314. http://www.constructorcertification.org or http://www.aicnet.org.

For information about construction management and construction manager certification, contact the Construction Management Association of America, 7918 Jones Branch Dr., Suite 540, McLean, VA 22102-3307. http://www.cmaanet.org.

Project Stabilization Agreements

With the recent passage of numerous local and statewide school facilities bonds and parcel tax initiatives, many school districts and county offices of education are primed to renovate and/or build new facilities in the coming years. As the governing board and district administration prepare for this construction, they must also plan for the staffing of the project by skilled construction workers. Research into labor options may lead a school district or county office of education to consider a project stabilization agreement (PSA).

Project stabilization agreements or *project labor agreements* or *pre-hire agreements* are names given to a type of contract, usually entered into between a project owner or developer (including public agencies) and several building trade unions. The contract is designed to govern the employer-employee relations of the general contractor and all subcontractors in connection with a particular construction project. As it relates to school districts and county offices of education, a PSA is a contractual agreement between the local education agency and a consortium of labor unions (and sometimes a construction firm). PSAs normally govern work rules, wages, benefits, and dispute resolution processes for every worker on a particular project. Typically, PSAs are pre-hire collective bargaining agreements that are signed either before planning begins or construction commences. The agreement can cover one large project or several related smaller projects and usually lasts only for the duration of the project.

Because these are contracts that are subject to negotiation between parties, however, the terms of these agreements can vary widely. For example, some require all contractors to hire local workers or participate in job training programs, while others only impose certain work rules on the project (e.g., arbitration procedures, vacation and overtime rules).

District considerations

Some districts may find PSAs beneficial while others may decide that a PSA is unnecessary. PSAs are a tool that may be most helpful during a major building and/or renovation campaign of a few large sites and/or several smaller projects.

In some districts, boards have decided that PSAs may help coordinate a large labor force of diverse subcontractors' employers and their employees. Districts that choose to use a PSA believe that entering into an agreement will save costs and may eliminate any uncertainty with respect to supply and cost of labor for the life of the project.

However, in other districts, boards have decided these contracts can limit the autonomy and authority to select contractors and subcontractors. Also, although labor costs are stabilized under a PSA, other costs can still fluctuate due to unforeseen project delays and obstacles.

Ultimately, the decision to enter into a PSA must be done on a case-by-case basis. A PSA must meet the specific needs of each local district and be written in a way that addresses the specific goals, desired outcomes and budgetary limitations of the district. The decision to enter into or not to proceed with a PSA should be made carefully with adequate time for thorough research, discussion, advice and counsel.

Common features of a project stabilization agreement

Dispute Resolution

- No-strike and no-lock-out agreements are in place during the course of the project.
- Mediation and arbitration clauses are in place to help resolve workplace disputes in a timely fashion that does not disrupt progress on the job.

Hiring Practices and Working Conditions

- All California school construction is covered by state prevailing wage laws. A PSA has no effect on wage rates.
- The construction firm and/or school district may agree to exclusively hire workers through a union hiring hall or use a hiring hall first.
- While workers under a PSA are not required to be union members, they are required to pay agency fees for representation.

- The construction firm and/or school district may standardize working conditions, grievance procedures, work rules and guidelines, as well as corresponding postings on the job site.

- The construction firm and/or school district may create a uniform workday, workweek, overtime, holiday, and payday schedules.

Addressing District Goals

- When creating a PSA, a school district may wish to build into the agreement provisions to include certain groups of workers (for example, local workers, minorities and women) through local hiring agreements and pre-apprenticeship programs.

- Many districts have adopted PSAs have included specific training requirements, including cooperation with district sponsored programs like construction academies.

Questions for board members to ask when deliberating a PSA

It is the board's responsibility, working with the superintendent, to determine whether it is in the district's best interest to enter into a PSA and, if so, to establish parameters for negotiating the contract. The board might consider the following questions that pertain to each of the board's major areas of responsibility.

Setting the direction for the community's schools

- Will the district's construction goals, as outlined in the school district's facilities master plan, be met and/or furthered by a PSA?

- Does the PSA take into account the board's criteria for:
  - Quality
  - Cost and value
  - Orientation to apprenticeship and apprenticeship programs
  - Work delay contingencies

Establishing an effective and efficient structure for the school district

- What is the level of complexity for the project or series of projects? Will the design and construction plans involve multiple construction trades and multiple different skills to complete the project? Does district staff or construction manager have experience in administering projects of this complexity?

- What would be the duration of a potential PSA as compared to the duration of the project?

- Has the likelihood of a disruption in the supply of labor been evaluated? For example, would related collective bargaining agreements expire during the construction process?

- What role, if any, will the district play when selecting subcontractors?

Providing support

- Does the school district have the appropriate staff or consultants available to:
  - Research
  - Draft
  - Negotiate
  - Administer
  - Monitor a PSA

Ensuring accountability to the public

- What measure can the district use to determine whether the PSA is implemented appropriately and is effective in meeting its goals? (See section on "Success Indicators" below).

- Do the benefits to the school district advance the district's goals in the areas of facilities, educational programs and community benefits?

- What added costs, if any, will the district incur if it signs a PSA?

- Will the best work be obtained for the best price?

Acting as community leaders

- Is it in the best interest of the district to promote employment and/or training of specific classes of individuals for construction projects?

- What would the effect be on workers (union or non-union) in the community if the district were to sign a PSA?

- What are the projected long-term effects of entering into a PSA with regard to labor unions, the business community, the supply of skilled workers, etc.?

History and use in California

General

The construction of the Shasta Dam, which ran from 1938 to 1944, was the first project involving a PSA in California. Other notable projects include the Bay Area Rapid Transit (BART), the Los Angeles Convention Center, and the San Joaquin Hills Corridor toll road.

Schools

In the past few years, an increasing number of school districts have signed PSAs. Several large school districts including (but not limited to) Los Angeles USD, Pittsburg USD, Sacramento City USD, Vallejo USD, and West Contra Costa SD have used PSAs. With the availability of state bond dollars and requirements for Labor Compliance Programs, some medium sized districts have also found it advantageous to enter into PSAs.

Legality

According to the California Research Bureau, the legality of PSAs has been thoroughly tested in both federal and state courts and with respect to both private and public construction projects. Their validity has been upheld in both federal and state cases.

Success indicators of a PSA

If a school district or county office of education is considering a PSA, it may want to outline what success would look like as a result of the agreement. Below are some suggested indicators of success; however, the district's specific local needs must be part of the consideration.

- The benefits to the school district or county office of education must be clear and measurable.
- The PSA will enable a project to be completed on time.
- Constituents of the school district or county office of education will be assured the results of the project have met the fiduciary responsibility of the board.
- The PSA will provide cost-saving benefits for the school district or county office of education. Projects included in the agreement will be completed on-budget or under-budget.
- Projects will be completed correctly, the first time.
- The agreement will allow the best trained and

District profile – Sacramento City Unified School District[1]
Project stabilization agreement

As part of its labor plan and strategy, the Sacramento City USD considered entering into a PSA for all of its construction work in the summer of 2005. The district's goals included:

- Construction quality
- Construction cost and value
- Pre-apprenticeship and apprenticeship programs
- Reduced work delays
- Worker healthcare and pension benefits

The consultant and construction manager hired by the district to evaluate the PSA found that "if, as referenced in Resolution 2410, creating employment opportunities of district students and/or graduates is an important goal for the Board, then a PSA is a tool that can be used to achieve it." In their findings, the consultant concluded that "the objective expressed in Resolution 2410 of securing quality construction at a competitive price, on-time project completion without labor disruption while providing career opportunities for district students/graduates and fairness in the process have a greater likelihood of being met by utilizing a PSA."

[1] Swinerton Management and Construction report to Sacramento City USD July 20, 2005.

experienced workers for the project. If the PSA includes inclusive provisions (for example, female and/or minority workers), those workers are successfully employed for the duration of the project and beyond the duration of the project.

- As a result of the PSA, the school district or county office of education will build relationships with community partners (i.e., business councils, labor unions and community based organizations).

- If a community survey has been completed prior to the start of the project about attitudes and beliefs, survey results will be incorporated into the completed project.

Cost Containment

Staying on budget and containing the costs of a construction or modernization project is a critical goal for any school district embarking on building or renovating a school site. The decisions involved in school construction have long-lasting implications and board members need to know the types of questions to ask in order to ensure that they are making the most effective decisions to benefit the students in their district. Engaging the community, gathering input, and setting the appropriate expectations up front about the scope of the project can also be critical actions in containing costs.

In an effort to minimize cost overruns, board members will want to ensure that important considerations are factored into the planning, design, and building processes of school construction and modernization projects. By thinking ahead, anticipating potential problems, and defining processes in advance of issues arising, districts can take steps to contain costs. By considering the best practices and strategies that can keep costs down and by avoiding some key issues and processes that inflate the cost of construction, districts can do their best to stay within budget.

This document is designed to give school board members an overview of the types of questions to raise with staff and consultants. Some of the areas that can most impact the cost of a project include an estimating timeline, having appropriate plans in place, doing careful budgeting and cost estimating, ensuring that there are processes for communicating decisions and changes, and other issues that can impact the cost of a project.

Budgeting/Cost Estimating

It is recommended that part of the budgeting process include cost estimating in phases, revising the numbers at different points of the planning and construction process. These estimates will likely require input from multiple sources: district financial staff, the project architect, construction managers, facilities managers, and perhaps outside professional costs estimation consultants. A district may also want to consider building contingency funding into the construction or modernization budget, explicitly including potential change orders as cost in the project budget, typically somewhere from 1 percent to 5 percent of the project budget, depending upon the size and complexity of the project.

The first estimates should be built into the Facilities Master Planning process. The Facilities Master Plan should include:

- Educational specifications
- Enrollment projections
- Community needs
- Project timeline/schedule
- Site selection information
- Delivery method options
- Project budget

See the CSBA Construction Management Policy Brief on Facilities Master Planning for more detailed information. As part of the Facilities Master Plan, in order to set standards that will keep construction and modernization costs in line, a board may also wish to create a single standard for all sites, instead of thinking about each site as an individual project. Such a framework could be a way for the district to achieve the goal to finish all modernization projects, at all sites, while keeping down costs.

Secondly, during site identification and project design planning, the estimates should be revised to ensure that they reflect the desired educational specifications, specialized areas to be built, and accurate student enrollment projections. As part of the process of validating the project's estimated budget, it should be remembered that any increase in one part of the budget has to be offset by an decrease in another area.

- Are construction plans, drawings and specifications as accurate and complete as possible?

- One point to consider at this phase is whether the initial cost of construction been weighed against the long-term maintenance costs. Will decisions to reduce costs at the front end contribute to long-term spending to operate the facility on the back end?

- Could uniform parts such as windows, paint colors, and flooring be used throughout the site and throughout the district?
- Do the cost estimates take into account the costs of the land, access, utilities, and foundation design in addition to the construction costs to develop the site?
- Do the plans include cost estimates for details such as architectural features, landscaping, flooring, technology, roofing, electrical, phone systems, hardware, etc.?
- Are the estimates and bids for the project recent? Have the costs for materials and labor increased between the time the proposals were made and the decisions are being considered?
- Does the budget include an appropriate estimate of the time it may take to obtain state agency approval for the project?
- Does the budget take into account any potential changes in the economy that could impact cost?
- Do the plans for the site and the size of the building accurately reflect the student capacity, desired curriculum options, and scheduling opportunities expressed in the Facilities Master Plan?
- Is reusing an existing plan an option? Are there prototype elements from other sites that can be duplicated at this site? Reused plans can sometimes streamline application process with the DSA and OPSC. It can also enable the district to more accurately project construction costs because architect fees should be reduced and contractors already have a familiarity with the project details, have an established history with the design, and know where potential overruns may occur.

The next estimate should occur about 25% into the construction of the project – ensuring that detailed costs such as the square yards of carpet required, number of light fixtures, and components of the HVAC system are accurately accounted for in the budget. This is the time to assess the budget and make trade-offs, if necessary, to ensure that costs are contained.

- Is there an opportunity to use interchangeable fixtures or uniform paint colors/flooring types to make repair and replacement easier and control costs?
- Does it make sense to limit the bid specs for a particular project? A district must weigh the potential savings from using uniform features with the potential higher costs of utilizing proprietary specifications, which could limit the number of potential bidders, because requirements are narrowly focused. For example, if a district wants to install the same fire alarm system in a new site to that is used in existing buildings, the number of bids could be limited if there only a few contractors who support and service this system.
- Is there a process to keep control of change orders in a methodical and timely way? Board vigilance on approving change orders is a critical piece of controlling costs.

Finally, near the end of the construction project, when about 95% of the work is complete, another look should be taken of the estimates to make minor adjustments (but not major changes) to provide flexibility in areas such as flooring and fixtures.

- Have "bid alternatives" been identified? For example, could the district defer a decision on the quality of the materials to be used for countertops only after the budget estimates have been validated, after most of the work has been completed and budget estimates validated?
- Have credits been requested where change orders have been deducted or not required?

Other Aspects of Planning

By adequately planning, with a thorough review process, districts can work to minimize the number of change orders that add to the final cost of a construction project. Change orders are typically driven by three reasons: a policy decision by the board resulting in a change request, an architectural feature, and because of unforeseen conditions. Some other factors to consider, beyond design and site selection that can affect cost:

- Is there an opportunity to collaborate with a developer?
- Is there an opportunity to bank land? How certain are demographic projections?
- Is there a project tracking system in place?
- Is there sufficient capacity to work on multiple projects? For many districts, it may be advisable to start no more than one or two modernization projects at a time, because of the potential for unforeseen conditions. For example, once a project begins, it may be discovered that assumptions may not be accurate, such as a structural support that was assumed to be in place not existing, or discovering that walls are insulated with asbestos.
- Have the references/background/history of contractors and architects been thoroughly checked?
- Is the scope of the project well defined? Are the bid specifications of the project appropriately defined?

Staffing the Project

In some districts, construction and modernization projects may be infrequent, and therefore the internal staff capacity for handling such projects may be limited, both in terms of available staff resources and familiarity with project delivery methods. Other staffing factors that can impact costs include:

- Does your district have adequate staff capacity to manage the project for the entire proposed timeline?
- Does district staff have experience with projects of this level of complexity?
- Does district staff have an appropriate understanding of how to pace modernization projects, based on the overall pool of money available?
- Could hiring outside professional consultants save the district money in the long run? Consultants with experience in school facilities, educational planning, design, and facilities needs may benefit the district, including:
  - Demographic consultants
  - Architects
  - Construction managers
  - Engineers
  - Site surveyors
  - Geotechnical engineers
  - Environmental consultants
  - Energy consultants
  - Traffic engineers
  - Real estate attorneys
  - Financial consultants
  - Bond consultants
  - Developer fee consultants
  - Appraisers
  - Construction testing engineers
  - Construction inspectors
- Have consultants been carefully selected? Do consulting contracts include a complete scope of services, time and fee in the contract language?

Communications

Ensuring that stakeholders have access to information and understand decisions being made can help to prevent issues from arising after the fact. Therefore, it is important to have a process for communications about construction and modernization projects in place.

- Is there a Proposition 39 Citizens Oversight Committee in place? Have the members been trained? Do they understand their role to look for waste, identify issues that arise, review change orders, and ensure that funds are spent appropriately?
- Is it clear to members that modernization funds are different from construction funds?
- Have progress reports to the board and citizen oversight committees on the construction process and milestones been made a part of agendas?
- Have discussions and decisions been documented so that they can be clearly communicated back out?
- Is a plan in place to keep the community informed?
- Is there a shared understanding of the budget and shared expectations of what elements will be a part of the final project?

In any project, there are likely to be unforeseen circumstances that arise and will cause the initial plans to be modified. However, through careful planning, conscientious estimating, and well-defined processes to make adjustments during the project, there are multiple opportunities for a district to contain costs.

Orientation to apprenticeship

Introduction

Orientation to apprenticeships provide basic, introductory training on a particular subject area or offer an overview of several related trades such as construction, health or business. In some areas, orientations to apprenticeship may overlap with internships. Typically, these courses outline the qualifications necessary to enter the specified trade. High school orientation to apprenticeships may be linked to course offerings during the regular school day and may include the career technical education standards. The programs may also serve community college students or adults. Typically, at the completion of the program, trainers and program partners may offer career-entry advice and placement to students.

The term pre-apprenticeship is often used to describe an articulated and integrated program that: 1) provides information to students regarding apprenticeship programs; 2) improves reading, writing, and math skills necessary to qualify for an apprenticeship program; and/or 3) offers classroom instructional job training which guides a student to a registered apprenticeable occupation. It should be noted, however, that some trades use the term pre-apprenticeship as a classification of worker. In order to avoid confusion, this policy brief uses orientation to apprenticeship rather than pre-apprenticeship when referencing a secondary level educational program.[1]

Orientation to apprenticeships helps provide opportunities for students and adults to become aware of academic and career options in a structured paid or unpaid work setting. Programs may vary in their duration, depth, breadth and program partners including school districts, regional occupational centers and programs, community colleges, universities, private businesses, nonprofit agencies and both union and non-union programs/organizations.

One potential benefit of the programs is that students come to a better understanding of how the academic concepts they learn in school are related to their work experiences in orientation to apprenticeships.

How does an apprenticeship program differ from a orientation to apprenticeship?

Registered apprenticeship programs differ because they include highly specialized, formalized training in one trade and may last from two to six years. Training includes both classroom instruction and on-the-job hours and is often paid employment. In California, program sponsors may prepare apprenticeship standards to be approved by the Chief of the Division of Apprenticeship Standards (DAS) that include all terms and conditions required by the Labor Code, Education Code and other applicable apprenticeship codes. When the apprentice has completed the training, the program hosts a "Turning Out" or commencement ceremony where an apprenticeship receives their Journeyman card.

	Orientation to apprenticeship	Registered apprenticeship
Duration	Varies depending on program design. An orientation to apprenticeship is often a capstone course in a series of courses so may range from two semesters to two to three years. Perkins programs require a minimum of two courses totaling 300 or more hours.	• 2-6 years • Programs less than two years are typically classified "training" programs.
Training type	• On the job • Classroom instruction required in Work Experience Education Programs	• On the job • Classroom instruction Registered apprenticeship programs require 2,000 hours annually of reasonably continuous employment

[1] Orientation to Apprenticeship: A Guide for Educators. California Apprenticeship Council and California Division of Apprenticeship Standards. January 2001. http://www.dir.ca.gov/CAC/CACPublications.html

	Orientation to apprenticeship	Registered apprenticeship
Program partners	May include any of the following: • School district • Regional Occupational Centers and Programs • Community colleges • Higher education institutions • Adult schools • Union and non-union sponsors • Business and industry employer sponsors	May include any of the following: • School district • Regional Occupational Centers and Programs • Community colleges • Higher education institutions • Adult schools • Union and non-union sponsors • Business and industry employer sponsors
Payment	Typically unpaid (Work Experience Education: paid or unpaid)	Typically paid, many with benefits
Focus	One career pathway or an overview of several related job titles (e.g., building trades and construction careers, health careers or business careers)	One craft or trade
Regulation and oversight	Pre-apprenticeship programs are typically monitored solely by the institution offering the program (school district, community college, etc.)	The California Apprenticeship Council provides policy advice on apprenticeship matters to the director of industrial relations, issues, rules and regulations on specific apprenticeship subjects to be published in the California Code of Regulations, and conducts appeals hearings. Registered apprenticeship programs work with and are monitored by the Division of Apprenticeship Standards (DAS)
Certification	Varies	Journeyman certification is issued by the DAS upon the completion of apprenticeship training

Approaches to delivering pre-apprenticeship programs in California school districts

- School district provides pre-apprenticeship programs to high school students
- School district provides pre-apprenticeship programs to adult students
- School district provides pre-apprenticeship programs through ROCPs
- School district partners with community colleges to offer pre-apprenticeship programs

Many districts and counties have implemented other activities to promote communication and strengthen articulation, such as:

- In 1998, San Diego USD began planning for the Construction Tech Academy. The formation of the Academy was instigated by both the school district and construction industry leaders (union and non-union) focused on training students for construction-related careers. Primarily through the work of an advisory committee, all parties collaborated and reached consensus to provide highly engaging options for students. Industry leaders offer internships to students, co-teach courses and guest lecture at the site. A full-time employer outreach specialist (funded primarily by private donations) is able to connect students with opportunities beyond the high school campus. Due to ongoing discussions and relationship building, school staff have been able to articulate high school credits with local community colleges. The principal, Glenn Hillegas, credits much of their initial success to several outside factors including significant cash and in-kind contributions from private donors and local industries. One unique element of the Academy is the firmly established linkage with a registered apprenticeship program; a program with policy level opportunities for successful high school graduates to receive special consideration upon enrollment in a registered apprenticeship program. Construction Tech Academy is a charter school.
- Over the last several years community members, school board members and district staff have joined in collaboration to create the Construction Tech Academy housed within Kennedy High School in West Contra Costa Unified School District. To guide the implementation of this new academy, the district established an advisory committee composed of industry

professionals and the supporters listed above. The academy has culled funding from the Irvine Foundation, California Partnership Academies and the Quality Education Investment Act in addition to industry support in the form of volunteers, field trip opportunities and guest speakers. The school board, middle school and high school staff have heavily recruited students for the program, which resulted in over 100 applicants for the 2006-07 school year. Although the program has grown significantly in enrollment and course offerings each year, the Assistant Principal in charge of the program, Latoya Williams expressed an ongoing need to find excellent teachers with industry experience and a desire to work with high school students.

Governing boards and superintendents considering expanding access to orientation to apprenticeship programs should be aware of the general governance models or approaches to delivering these programs. These approaches are currently being employed in various parts of the state, and have proven successful in providing access to orientation to apprenticeships. Frequently these models are utilized in combination with one another – that is, a district will rely on multiple approaches in order to expand the availability of programs to students. Often these approaches rely on multiple (or "blended") funding sources, and involve different types of partnerships, ideally to draw upon the strengths of all participants.

The purpose in describing these models is to provide district leaders with a better context for understanding how local districts can play a meaningful role in the planning and provision of quality orientation to apprenticeships. Building on this context, boards and superintendents should consider which approach or combination of approaches meet their local needs. From a school district perspective, current service models include:

1. **The school district administers and provides orientation to apprenticeships directly at a site (or sites) to high school students.**

   To include only high school students in orientation to apprenticeships, the school district or county office of education may provide course offerings during the regular school day or summer school classes. Classroom instruction must be blended with on-the-job training. Depending on the amount of material to be covered, classes may last for one or more semesters. Ideally, courses will meet one or more of the new career technical education standards. Credentialed teachers must be the primary instructors; however, classes may benefit tremendously from the inclusion of experts as guest speakers, demonstrators and resources.

2. **The school district administers and provides opportunities to apprenticeships directly at a site (or sites) to adult students.**

   To teach adults from the community, a district may offer classes through its adult education program. Classes are offered for a nominal fee to participants. Depending on demand, classes may be offered in the morning or evening on weekdays, or on weekends. Vocational programs may include job placement assistance for positions with the school district or other local businesses. In order to provide high-quality classes and to reach a large pool of participants, school districts may wish to partner with local government agencies such as the Department of Human Assistance, Veterans' Administrations and city and county governments.

Opportunities for apprenticeships and project stabilization agreements

If a school district is considering or formulating a project labor agreement (PSA), it may wish to consider incorporating terms with labor unions to include hiring certain percentages of graduates of district orientation to apprenticeships, local workers, minorities and women.

   Whether teaching students or adults, the district is responsible for operating all aspects of the orientation to apprenticeship, including facilities, curriculum, funding, human resources and oversight. A blend of program funding is typically used to cover all of the costs.

3. **The school district provides orientation to apprenticeships through regional occupational centers and programs.**

   ROCPs originated in 1967 to provide opportunities for specialized job training on a regional basis through a well-established series of programs at school and community sites. The purpose of the ROCP is to provide high school students 16 years of age and older, and adult students, with valuable career and technical education so students can 1) enter the workforce with skills and competencies to be successful; 2) pursue advanced training in higher educational institutions; or 3) upgrade existing skills and knowledge. Counseling, community based training and basic skills reinforcement are additional benefits of the program. Currently, seventy-three ROCPs in California serve over 375,000 high school students and 143,000 adults

annually. Students receive training at a variety of venues from regular classrooms to actual business and industry facilities, such as automotive dealerships and hospitals. In most ROCPs, courses are offered during the regular school day throughout the school year, in the late afternoon and evening and sometimes during the summer months. High school students frequently spend part of the school day in a traditional academic program and the other part focusing on a vocation – either in a program offered in their high school, a regional center or industry site. More than 300 different ROCP career technical education courses are offered in areas such as information technology, agriculture, business, culinary arts, healthcare, construction and auto technology.

ROCPs operate under three different organizational structures: 1) joint power agreements comprised of two or more school districts (25 ROCPs); 2) county board of education (43 ROCPs); and 3) single districts (6 ROCPs). ROCPs are primarily state funded using the ADA model and in 2004-05 the state's ROCPs received $364 million in state funds.

In most cases, the ROCP governing board includes member(s) of school districts participating in the ROCP. This position allows for ongoing collaboration and dialogue between local districts and the ROCP.

4. **School districts partner with local community colleges to provide orientation to apprenticeships for high school students transitioning to community college.**

In this model, the orientation to apprenticeship follows a series of consecutive courses that may begin in high school and continue into community college. Courses are offered on either high school or community college campuses and are often taught by community college instructors. Due to the long duration and depth of these offerings, many may begin as pre-apprenticeship programs and continue to a full apprenticeship, vocational certificate or associates degree.

There are active and consistent efforts by school districts and community colleges to collaborate, and there is a mutual commitment to ensure successful articulation. This collaboration might take the form of frequent, formalized communications between the district and community college, sharing of curriculum and resources, sharing of professional development opportunities, and other efforts. In this model, a formal contractual relationship may exist between the district and the local community college or may not be needed.

Some of the advantages of this model include a high degree of flexibility to accommodate students, and – for districts that lack facilities space or funding – an opportunity to become more actively engaged in orientation to apprenticeship without incurring many new expenses.

Questions for local governing boards

Many districts that have already had success expanding access to quality orientation to apprenticeships have utilized aspects from more than one of the above models. Each of the potential models has certain strengths and implications for school districts and communities relative to quality assurance, funding, facilities, curriculum, workforce, accountability and other areas.

It is important for school board members to recognize that school districts and county offices of education, while playing important roles, do not necessarily need to create or operate their own, new orientation to apprenticeships at each of their sites in order to effectively expand offerings. Other options or combinations of options exist.

Some key governance considerations for districts seeking to expand access to quality orientation to apprenticeships are:

- Should the district run programs independently or in partnership with another educational agency?
- Should the district work in collaboration with other public education agencies or trades and not directly run programs?
- Would a combination of these approaches be feasible?
- Who has the local expertise and experience to help ensure program quality?
- What funding mechanisms shall be used to fund the program?

Implementing quality orientation to apprenticeships: Key issues and considerations

Depending on which general model or combination of models a district utilizes – and depending on the level of local need and collaboration – a number of issues and strategies should be considered relative to areas such as funding, articulation, curriculum, facilities, workforce and oversight, in order to ensure that programs effectively implement the components that contribute to positive for students.

1. Funding

A lack of funding is what most often gives school boards pause about pursuing orientation to apprenticeships and career technical education courses in support of enhancing K-12 student achievement and job readiness. Navigating the current funding systems can seem daunting at first, and even by mixing or blending funding sources, securing the necessary money to provide quality programs is a challenge. Fortunately, it can be done – and done very effectively – as many school districts, county offices of education, ROCPs and local communities have demonstrated. These local governing boards understand the various sources of funding available and the various requirements for each, and they have sought to be creative and collaborative in order to maximize every available dollar.

At the local level, the cost of providing orientation to apprenticeships and the funding mechanisms used to finance them depend in large part on program design, the qualifications of staff and the participants served (high school students, adults or both). Funding issues are complicated further because state and federal programs, like the Perkins Act or Title 1, may only serve certain eligible students. Therefore, money from those programs can only be used to expand access to students whose families meet the eligibility requirements. Clearly, additional funding must be found by local districts and the state legislature to serve larger groups of students.

What is the Perkins Act?

The Carl D. Perkins Career and Technical Improvement Act (formerly the Carl D. Perkins Vocational and Technical Education Act of 1998) was reauthorized in 2006. Through the distribution of grants to state education agencies, federal funds are made available to help provide career-technical education programs and services to youth and adults. Local education agencies and postsecondary institutions are eligible recipients for subgrants. Funds may be used for, but are not limited to, occupationally-relevant equipment, vocational curriculum materials, materials for learning labs, curriculum development or modification, staff development and career counseling and guidance activities. In 2006 $1.6 billion was allocated for all 50 states and California received just over $140 million.

Potential local and statewide funding options

- Foundation grants
- Quality Education Investment Act (QEIA)
- California Partnership Academies

Those districts and county offices of education that have already embarked on efforts to expand access to orientation to apprenticeships recommend a number of important steps relative to funding, including:

- Understanding each of the various funding sources that may be available and the rules for their use
- Combining resources and collaborating with partners wherever possible to maximize those resources
- Pursuing grants and charitable contributions
- Determining what support can come from the district's general fund, categoricals and/or participant fees
- Setting priorities for resources as they become available that support achieving long-term goals
- Advocating for new funding sources and greater flexibility with existing programs – and being positioned to apply for these funds

2. Articulation/Transitions

Whether or not the high school students enrolled in district orientation to apprenticeships continue

to community college, quality programs help ensure that students are ready for further training. A vital element of any high-quality orientation to apprenticeship involves strong communication between high school staff and ROCP staff, as well as community college staff and local businesses, about the expectations for participants when they enter the workforce and apprenticeship programs. Strategy also involves making certain there is a consistency in the curriculum and types of instruction that all participants receive. Districts must consider what strategies can be put in place to encourage communication and partnerships between these groups from school districts, higher education, local business, etc.

The need for school district staff to reach out to ROCPs, community colleges and local businesses and conduct research and share information is significant. The district can identify local employers who are hiring students with pre-apprenticeship experience and invite representatives to identify ways to partner. Partnerships may include developing a shared expectation for what participants should know and be able to do upon entry into the job and allowing pre-apprenticeship program participants to visit or shadow workers in related industries.

3. Curriculum

A quality pre-apprenticeship program experience can open doors for students and adult participants who might otherwise enter the workforce lacking the necessary skills to succeed in a particular vocation. An integral component of that experience depends on the curriculum being utilized. The State Board of Education adopted the Career Technical Education Standards in 2005 and the curriculum frameworks in 2006. These new standards emphasize both academic and technical skills. Open communication, ongoing dialogue and training that involves high school staff, ROCP staff and community college instructors can help build understanding about the best curriculum for a district program to consider.

Some important things to consider relative to curriculum include:

- What type of curriculum will meet the academic, technical and developmental needs of high school and/or adult students?
- What strategies can be put in place to ensure pre-apprenticeship programs provide culturally and linguistically appropriate services?
- What services and support should be provided to meet the needs of English language learners?

4.Facilities

If a district intends to provide orientation to apprenticeships on its high school or adult education campuses, it is required to have appropriate facilities. The district should conduct a facilities needs assessment [link to CSBA Construction Management Policy Brief "Facility Master Planning"] to determine whether adequate and appropriate facilities space is available on existing school sites or on the sites of ROCPs or community colleges. If additional facilities are necessary, the district can explore possible financing options to build new classrooms.

The district should develop a facilities master plan [link] that identifies short- and long-term strategies to meet the district's facilities needs. These needs may include determinations about program locations and how the district will determine which sites are the highest priority to receive services.

Some strategies districts have pursued to find facilities space for orientation to apprenticeships include:

- Utilizing unused space on existing public school sites. In most cases this entails renovating existing classrooms so they can accommodate orientation to apprenticeship coursework, as some school districts in declining enrollment have done.
- Utilizing existing classrooms after regular hours such as in the evenings when they may not otherwise be used.
- Applying for state and local grants to build new facilities.
- Including orientation to apprenticeship facilities in a local school bond measure.
- Advocating for provisions for orientation to apprenticeship facilities in future statewide school bonds.

Some school districts may lack available classroom space entirely, or they may have available space but lack other aspects of the infrastructure needed to implement a quality orientation to apprenticeship. In those cases, a formal partnership where the district can offer courses with ROCPs and community colleges and use their facilities should be considered.

5. Workforce

Effective teachers, paraprofessionals and administrators are essential to delivering high-quality orientation to apprenticeships. The state currently has Education Code requirements for the qualifications of high school staff and the student-to-teacher ratio in each classroom. Local school boards may set additional criteria for the qualifications of orientation to apprenticeships staff. For instance, some California school districts now require their teachers in orientation to apprenticeships to have several years of job-related experience.

Recruiting and retaining highly qualified instructors and staff pose one of the biggest challenges for school districts wishing to expand access. The need for bilingual instructors and staff is especially critical in many parts of the state. Even so, across California there are examples of school districts that have developed partnerships to support orientation to apprenticeships staff recruitment and retention, as well as professional development. Reaching out to higher education, neighboring school districts, the county office of education and local businesses to develop partnerships relative to orientation to apprenticeships can be a useful strategy in supporting workforce development. Many administrators also reach out to contacts in related industries to find new staff.

6. Quality measurement and oversight

Measuring the performance of orientation to apprenticeships is vital to ongoing improvement and accountability. In developing any plan, school boards need to consider how orientation to apprenticeships should be monitored and evaluated. Who should be responsible for monitoring and evaluating orientation to apprenticeship? What indicators will be used to determine if a program is successful? In most cases, the governing board will provide direction setting and oversight for the district staff.

It is especially important for districts that formally partner with other agencies to have a clear, agreed upon process for monitoring and evaluation, as well as clear contracts, written agreements and understandings.

School Board and District Leadership

There is a full continuum of activities school boards and district staff can pursue to support efforts to expand access to high-quality orientation to apprenticeship. School boards are elected to govern the community's schools and fulfill their important responsibility by:

- setting the vision and direction for the district;
- establishing and maintaining an organizational structure that supports the district's vision;
- providing support to the superintendent and staff as they carry out the direction of the board;
- ensuring accountability to the public for the performance of the community's schools; and
- providing community leadership as advocates for children, the school district and public schools.

Through its governance role, the board has the ability to encourage and support efforts to expand access to high-quality orientation to apprenticeship. There are a variety of strategies the school board can pursue that will help to highlight the value of orientation to apprenticeship throughout the district, and to make these programs a vital component of overall school reform efforts. For example, the school board, working closely with the superintendent as a governance team, can:

Set direction for student achievement

Setting the direction for the district is one of the most important actions elected school board members take. The vision is a tool school boards use to record what the public wants its schools to achieve for all its children and to ensure the district moves in that direction. Many districts also develop long- and short-term goals in strategic areas to measure whether or not the district is making progress toward achieving the vision.

In the district's vision statement or long- and short-term goals, a board can emphasize its priority that all students be ready to enter the workforce or college. More and more school districts are viewing high school as a critical component in their overall plans to raise student achievement. In many districts, implementing high-quality orientation to apprenticeship and/or working in collaboration with other entities is one strategy being used to meet the district's overall vision and goals for student achievement.

Be an advocate for all students and community members

As the only local officials elected solely to represent the interests of children, school board members have a profound responsibility to speak out on behalf of children and schools. And although adults are not enrolled in the public schools, many are eager learners who are already part

of the community. School boards have the ability to raise awareness about the needs of participants in orientation to apprenticeships, communicate the value of high-quality programs and get involved in local and statewide activities to improve the quality of orientation to apprenticeships. Boards should seek opportunities to influence legislative and regulatory bodies on this issue.

Adopt policy

School boards adopt policies to communicate expectations and to provide a written guide for action in the district. The board can review the district's policy manual to look for opportunities to promote, support and create high-quality orientation to apprenticeship within the district. Policies can be developed that support stronger communication and collaboration with ROCPs, businesses, colleges and universities within the community. Policies can also be developed to guide the implementation and ongoing monitoring of district-administered orientation to apprenticeship.

Adopt and monitor the district budget

The school board adopts and monitors the district budget, and in doing so, must ensure that the budget reflects the goals and priorities in the district's vision. Orientation to apprenticeships need adequate funding to provide high-quality services and must be supported with resources. In addition to adopting and monitoring the budget, the board can ask staff for periodic updates on the district's strategies to finance orientation to apprenticeship operations and facilities.

Set parameters for the district facility master plan [link]

The school board works with the superintendent to develop a long-range facilities master plan that supports the school district's vision and enhances the educational program of the district. If the district provides or partners to provide orientation to apprenticeship, it is important that the governance team establish a short- and long-term strategy to provide facilities for these programs.

Ensure program accountability

It is the ongoing responsibility of the school board to ensure that the district is making progress toward accomplishing its vision and goals. The board monitors program outcomes and holds the superintendent accountable. The board may want to request periodic information on the district's orientation to apprenticeship and its partners.

Appendix A | Glossary of Construction Management Terms

Learning and understanding the terminology of public school construction can seem daunting at first, but a familiarity with this specialized vocabulary is crucial to fulfilling the role and responsibilities of school board members. A critical understanding of the field of construction management can enable school board members to be creative and collaborative with district/county office resources. There is a full continuum of activities school boards and district/county office staff can pursue to support efforts to plan for and provide high-quality facilities.

The purpose of describing these terms is to provide school leaders with a better context for understanding current projects in a district or county office. Included at the end of the glossary are acronyms, state agencies, court decisions and delivery methods relevant to school construction as an additional resource. Building on this context and using this reference tool, local leaders can consider which approaches or combination of approaches best meet their local needs.

Ad valorem tax: "According to value;" a tax based on the value of property.

Allowable area: The amount of space the district/county office can, could or should have based on Office of Public School Construction per-pupil standards.

Americans with Disabilities Act (ADA): Federal law that prohibits discrimination on the basis of disability; requires that all public facilities provide access for disabled individuals.

Architect: A licensed professional who designs plans for buildings, either new projects or renovations.

Asbestos Hazard Emergency Response Act (AHERA): The federal AHERA, the law with particular impact on schools. The rules implementing AHERA are published in the Code of Federal Regulations, Chapter 40, Part 763, Subpart E.

Assessed value: The value of land, homes or businesses set by the county assessor for property tax purposes. Assessed value is either the market value of any newly built or purchased property (i.e., the price at which it was actually purchased) or the value on March 1, 1975, of continuously owned property, plus an annual increase. This increase is tied to the California Consumer Price Index but may not exceed 2 percent (Proposition 13).

At-risk construction manager: *See construction manager at-risk.*

Average daily attendance (ADA): The average number of students who attended school over the course of the year; the total approved days of attendance in the school district divided by the number of days the schools in the district are in session for at least the required minimum day.

Bid: An offer by a contactor or other group to perform work described in contract documents at a specified cost.

Bid documents: Documents prepared by the architect and used by the bidders to prepare the bid. A typical bid document might include construction drawings, specifications, instructions to bidders, a bid form and other information used by the bidder in the preparation of a bid.

Bond: A certificate containing a written promise to pay a specified sum of money (the "face value") at a fixed time in the future (the "date of maturity") and specifying interest at a fixed rate, usually payable periodically.

Bond elections: Bond elections may be called by a board of education, with the election conducted by the county, and with the school board's proclamation for an election stating the amount of bonds to be voted upon and the purposes for which such bonds would be issued.

Bonding capacity: The maximum amount of credit coverage the lender will extend to the company (school district or county office of education).

Bridge financing: Temporary debt financing to provide a "bridge" to a company (school district or county office of education) that will eventually be replaced with permanent capital.

California Basic Educational Data System (CBEDS): Enrollment taken in all schools in California in October and used by the Office of Public School Construction in determining funding eligibility.

California Environmental Quality Act (CEQA): The state law that requires an environmental review of all projects (Public Resources Code 21000-21178).

Capital outlay: Funds spent for the physical structure of a school, such as new buildings, renovations, reconstruction or certain new equipment.

Certificate of Participation (COP): A mechanism for providing capital for construction projects, equipment purchases or refinancing of existing leases; provides long-term financing through a lease with an option to purchase or a conditional sales agreement.

Change orders: Process for modifying a construction contract when unforeseen changes occur during the planning and construction of a project which may drive the cost of a project upward.

Citizens' oversight committee (COC): An independent committee appointed by the school board to inform the public concerning the expenditure of Proposition 39 local bond proceeds pursuant to Education Code 15278-15282.

Class-Size Reduction (CSR) program: Provides incentives for school districts to reduce K-3 classes to a student-teacher ratio of no more than 20 to 1. Established in 1996, the program also provided a one-time allocation of $25,000 per added classroom for full-day classes to improve facilities or acquire portable classrooms.

Cohort survival: A statistical method of projecting enrollment increases that is the basis for the state's enrollment projection (State Allocation Board Form 411).

Condemnation: Legal process by which government invokes its powers of eminent domain and acquires private property for public use. The owner is compensated by the government at a fair price determined by the condemnation process. Also see eminent domain.

Construction cost index: The monthly percentage increase or decrease in construction costs that is applied to a base number to determine construction allowances in the state program.

Construction management: A professional service that uses management techniques during the planning, design and construction phases of a project for the purpose of controlling time, cost and quality. Used interchangeably with project management. *Also see owner construction management.*

Construction manager: A Construction manager manages the entire project with pre-planning, design, construction, engineering and management expertise.

Construction manager at-risk: A delivery method in which the construction manager makes a commitment to the school district to deliver a project within a guaranteed maximum price. The construction manager acts as consultant to the district in the development and design phases, but as the equivalent of a general contractor during the construction phase.

Critically Overcrowded Schools (COS) program: Allows school districts with qualifying critically overcrowded school facilities to apply for a preliminary apportionment for new construction projects to relieve overcrowding. The preliminary apportionment serves as a reservation of funds and must be converted within a four-year period to a final apportionment that meets all the School Facility Program's New Construction program laws and regulations for such an apportionment.

Debt limit: The maximum amount that a municipality can borrow.

Deferred maintenance: Major repairs or replacement of buildings and equipment; preventative maintenance expenses delayed due to lack of funding. When state funding is available, the state provides some money to match school districts' funds for deferred maintenance, up to one-half of one percent of the districts' general fund.

Demographic study: Shows population changes and trends in student enrollment by study area.

Design-Bid-Build (DBB): When a school district uses DBB as a project delivery method, an architect is hired to create design documents from which general contractors will bid.

Design-Build (DB): With one contract agreement, this delivery method combines construction performance with architectural and engineering design. Design build includes a maximum price guarantee.

Developer fee: The fee districts can collect from developers of new construction and property owners who remodel, in order to build or renovate schools or add portable classrooms, based on the premise that new construction will lead to additional students. The law requires districts to substantiate the financial impact of new development and sets a maximum fee per square foot that may be charged for residential and commercial construction.

Drawings: *See plans.*

Education program analysis: Specified program requirements and changes in organizational structure that have an impact on facilities needs.

Eligibility: Amount of square footage a district qualifies to build after using the state formula considering unhoused students and existing buildings.

Eminent Domain: The right of the government to acquire private property for public use through a court action called condemnation.

Environmental Impact Report (EIR): A report of the environmental impact of a proposed construction project, required by the California Environmental Quality Act. State or local projects that may have significant environmental impacts must complete an EIR.

Facilities master plan: A process in which the board of education and district staff collect and analyze data regarding the current and future needs of district facilities. The data collected is used to inform future district facilities planning.

Facilities survey: Delineates the capacity of existing facilities to house projected student populations and to meet program requirements.

Field Act: California state law which requires earthquake-resistant design and construction for all public schools and is built on four major principles: seismic design standards, plan review, construction inspections and special tests.

Financing plan: Plan to determine how the facility construction or modernization costs and operating costs will be met.

General obligation bond (GO bond): A bond for renovating, reconstructing and building new facilities or for acquiring certain new equipment. Local bonds are financed by an increase in property taxes; they must be approved by two-thirds of voters, or 55 percent if additional accountability requirements are met.

General plan: Outlines the general policies regarding the long-term development of a local jurisdiction (either a city or a county).

Good repair: As defined in SB 550 (Ch. 900, Statues of 2004) to implement the settlement of the Williams v. State of California lawsuit, means that a school facility is maintained in a manner that assures it is clean, safe and functional as determined pursuant to a state evaluation instrument.

Guaranteed maximum price (GMP): A contract where the construction manager sets a maximum price for the cost of the work.

Hardship funding: If a district has reached sixty percent or higher of their bonding capacity, they can be considered fully bonded and are eligible to become a financial hardship district. Financial hardship districts may qualify for up to 100 percent funding from the state.

Implementation plan: Provides a detailed plan to house the district's future student population.

Increment financing: *See redevelopment.*

Inspector of record (IOR): Required for all projects regulated by the Division of the State Architect. For school facility projects, the Inspector of Record is the building inspector. They work as an independent entity contracted with the school district and are managed by the architect of record.

Interest income: The dollar amount of the interest earned from investments such as bonds, savings accounts, and government and corporate debt obligations.

Joint-use facility: A facility that is operated by a school district in cooperation with another public agency or company. For example, the city or county in which the district is located.

Labor Compliance Program: The Labor Compliance Program requires contractors on public works projects to pay their workers based on the prevailing wage rates. This program is outlined in California Labor Code section 1770 et seq. and Education Code section 17323. Labor Code sections 1720 through 1861 details the prevailing wage system.

Land banking: The practice of acquiring land for a future use. A school district may wish to acquire sites at the most favorable terms if they expect a potential increase in student enrollment.

Lease-Lease Back (LLB): This delivery method establishes a contract by which a district owns a piece of property and leases it for a nominal amount to an entity (typically a contractor) that will build a school on the sight and pay employees the prevailing wage. That entity then leases the finished school and site back to the district for a specified period of time at a specified rental price. At the end of the lease, the school and site become property of the district. This delivery method does not require the selection of the lowest responsible bidder (Education Code 17406).

Lease-purchase agreement: The lease of equipment or facilities with the option to purchase.

Lease-Purchase Program: The state school building program established by the Leroy F. Greene Lease-Purchase Act of 1976.

Lease-revenue bond (LR bond): Revenue bonds (or enterprise revenue bonds) are a form of long-term borrowing in which the debt obligation is secured by a revenue stream produced by the project. Because revenue bonds are self-liquidating and not backed by the full faith and credit of the state, they may be enacted in statute and therefore do not require voter approval.

Local Agency Formation Committee (LAFCO): Committee comprised of county, city, special district and public members responsible for orderly growth including boundary decisions, annexations and incorporations within a countywide area.

Local education agency (LEA): A public board of education or other public authority within a state which maintains administrative control of public elementary or secondary schools in a city, county, township, school district or other political subdivision of a state.

Lowest responsible bidder: A bidder that is trustworthy as well as demonstrates quality and fitness. The bidder is responsible for the division of work described in the bid document or contract. The lowest responsible bidder does not have to be the lowest bidder. A public agency cannot reject a bidder as not responsible without conducting a hearing.

Matching funds (legislative): A program of financial support in which the federal or state government creates an incentive for the development of needed programs on the state or local level by offering to "match" state or local funds allocated for the same purpose.

Maximum price guarantee: See guaranteed maximum price.

Mello-Roos bonds: To sell bonds for school construction projects, school districts may form special districts. (A special district generally does not encompass the entire school district.) The bonds, which require two-thirds voter approval, are paid off by property owners located within the special district.

Mello-Roos community facilities district: A portion of the district, often a new housing development, whose property owners pay a special tax that is not based directly on the value of the property.

Modernization: If students are housed in permanent buildings 25 years or older and relocatable classrooms 20 years or older, they are eligible to receive grant funds from the State Allocation Board to modernize school facilities. These grants typically require a forty percent local contribution although greater funding may be eligible for supplemental grants based on the type and location of the project.

The modernization grant can be used to fund a large variety of work at an eligible school site. Air conditioning, insulation, roof replacement, as well as the purchase of new furniture and equipment are just a few of the eligible expenditures of modernization grants. A district may even use the grants to demolish and replace existing facilities of like kind. However, modernization funding may not be spent for construction of a new facility, except in very limited cases generally related to universal design compliance issues, or for site development.[1]

Multiple prime contracts: Separate trade contractors deal/contract directly with the district for specific and designated elements of the project.

Naylor Act: Requires that school districts offer up to 30 percent of unused, surplus school sites to other local government agencies for park and recreation purposes at up to 25 percent of fair market value.

Needs assessment: *See facilities needs assessment.*

New construction: A construction project of a new school facility. The funding for new construction projects is provided in the form of grants. The new construction grant provides state funds on a 50/50 state and local sharing basis for public school capital facility projects. The grants are made up of a new construction grant (pupil grant) and a number of supplemental grants. The new construction grant is intended to fund design, construction, testing, inspection, furniture and equipment and other costs closely related to the actual construction of the school buildings. This amount is specified in law, based on the grade level of the pupils served. A district must first establish eligibility for a project by demonstrating that existing seating capacity is insufficient to house the pupils existing and anticipated in the district using a five-year projection of enrollment.[2]

Owner construction management: The district uses an in-house staff person to perform construction management services. Also see construction management.

Performance bond: A bond that binds a surety company to complete a construction contract in the event of a default in performance of contractual obligations.

Planning grant: A grant awarded to a school district to aid in facilitating site or district level facility planning.

Plans: Construction drawings show where to build the project, sizes, shapes and which products to use where.3 Also known as Drawings.

Pre-bid conference: A meeting held by the district and attended by potential bidders to describe project details and answer questions.

Prevailing wage: Establishes labor rates on government-financed construction projects.

Program management: The use of a construction manager on multiple sites/projects within a single district or county office of education. Program managers integrate the various phases of design and construction and provide consistency throughout the process.

Project management: See construction management.

Project stabilization agreements (PSA): A contractual agreement between the district, a consortium of trade unions and sometimes a construction firm. PSAs typically govern work rules, and dispute resolution processes for every worker on the project.

Property checks: Field checks of existing facilities against site plans, conducted by the Office of Public School Construction.

Proposition 39: Passed by the California electorate in 2000, this proposition permits school districts the passage of general obligation bonds upon the approval of 55 percent of the votes cast on the measure. Certain conditions must be satisfied including: a mandatory list of school facilities projects to be funded certified by a school board evaluation of existing conditions. If a school district is authorized to issue general obligation bonds under Proposition 39, the school board will be required to establish a Citizens' oversight committee. Proposition 39 also changed the types of projects that are authorized to be financed by general obligation bonds.[4]

Redevelopment: Also known as "increment financing." Redevelopment plans provide for a division of property-tax revenues within a redevelopment project area, with a prescribed portion of those tax revenues to be allocated to the redevelopment agency to repay the indebtedness incurred by the agency to finance or refinance the redevelopment project.

Renovation: See modernization.

Request for Quotation (RFQ): A request for a quote to perform work.

Revenue: All monies coming into an agency that are reflected in a local agency budget.

School Facilities Improvement District (SFID): Established by a school district to tax a portion of the district through a general obligation bond based on the value of the property. The voter approval threshold is two-thirds, or 55 percent if additional accountability requirements are met.

School Facility Program (SFP): Funds for the School Facility Program may be from any funding source made available to the State Allocation Board, including proceeds from the sale of state general obligation bonds or funding from the state general fund. In addition, districts are required to provide a portion of the cost of a project from funds available to the school district. This may include, among other sources, local general obligation bonds, developer fees, general fund, etc.

School Site Council (SSC): Teachers, classified staff, parents, community members and students (high school only) are selected by their peers and work with the principal to prepare and review the school improvement plan. This council is required when a school receives funding through a School Improvement Program (SIP) or through Title I.

Secured property: Property which cannot be moved, such as homes and factories.

Secured roll: Assessed value of real property, such as land, buildings, secured personal property, or anything permanently attached to land as determined by each county assessor.

Specifications: The written descriptions of materials, equipment, construction systems, standards and workmanship and other qualitative information pertaining to a construction project.

Subcontractor: A contractor that has a contract with the prime contractor, not directly with the district.

Subdivision Map Act: Defines the specific use of the division of land.

Teaching station: The room or space "loaded" with students for teaching purposes.

Title 5: Standards for School Facilities Construction set in the California Code of Regulations (Division 1, Chapter 13, Subchapter 1).

Appendix B | Acronym List

ADA : Average daily attendance or Americans with Disabilities Act

AHERA: Asbestos Hazard Emergency Response Act

CBEDS: California Basic Educational Data System

CEQA : California Environmental Quality Act

COC: Citizens' oversight committee

COP: Certificate of Participation

COS: Critically Overcrowded Schools program

CSR: Class-Size Reduction program

DB: Design-Build

DBB: Design-Bid-Build

DSA: Division of the State Architect

DTSC: Department of Toxic Substances Control

DVBE: Disabled Veteran Business Enterprises

EIR: Environmental Impact Report

GMP: Guaranteed maximum price

GO bond: General obligation bond

IOR: Inspector of record

LAFCO: Local Agency Formation Committee

LEA: Local education agency

LLB: Lease-Lease Back

LR bond: Lease-revenue bond

OPSC: Office of Public School Construction

PLA: Project labor agreement

PSA: Project stabilization agreements

RFQ: Request for Quotation

SAB: State Allocation Board

SFID: School Facilities Improvement District

SFP: School Facility Program

SFPD: School Facilities Planning Division

SSC: School Site Council

YRE: Year-round enrollment

YRS: Year-round school

Appendix C | State Agencies

Agencies school districts will most likely have direct involvement with:

Department of Toxic Substances Control (DTSC): The DTSC is the sole agency responsible for evaluating hazardous substance releases and overseeing investigations and cleanups of school sites, including naturally occurring hazardous materials, if the district seeks to obtain California Department of Education approval and state funding. http://www.dtsc.ca.gov/.

Division of the State Architect (DSA): The DSA is involved in three phases of school construction projects: plan review and approval, construction oversight, and project closing and certification. http://www.dsa.ca.gov/.

Office of Public School Construction (OPSC): Processes state school building applications and serves as staff to the State Allocation Board. http://www.opsc.dgs.ca.gov/.

School Facilities Planning Division (SFPD): This division of the California Department of Education reviews public school sites and plans to determine if they meet Title 5 standards (e.g., standards for school site selection and design). Approval from the SFPD is required if state funding is sought. http://www.cde.ca.gov/re/di/or/division.asp?id=sfpd.

State Allocation Board (SAB): State agency responsible for apportioning school building and deferred maintenance funds. The SAB is also charged with the responsibility for the administration of the State School Facility Program, the State Relocatable Classroom Program and the Deferred Maintenance Program. http://www.opsc.dgs.ca.gov/SAB/.

State Agencies school districts may have involvement with:

California Energy Commission: The state's primary energy policy and planning agency. www.energy.ca.gov.

Bright School Program: A program through the California Energy Commission offers specific services and technical assistance for school districts building new schools, and renovating existing sites. They also can help districts save costs on energy bills. http://www.energy.ca.gov/efficiency/brightschools/.

Department of Health Services: The California Department of Health Services administers a broad range of public and clinical health programs that provide health care services to Californians. www.dhs.ca.gov.

California Indoor Air Quality Program: Provides assistance and training to school districts that have air-quality problems. http://www.cal-iaq.org/.

Department of Transportation: CalTrans manages California's highways and freeways, provides inter-city rail services, permits public-use airports and special-use hospital heliports and works with local agencies. http://www.dot.ca.gov/.

District Transportation Planning Division: Determines whether a school is likely to have an impact on the state transportation system or any of its facilities. http://www.dot.ca.gov/hq/LocalPrograms/.

Office of Emergency Services Hazard Mitigation: Provides funds for school construction projects that reduce or eliminate future damage from disasters (e.g. seismic retrofit, modernization, flood control). Administer both federal and state funding for repair and replacement of eligible facilities damaged by a disaster event. http://www.oes.ca.gov.

Office of Planning and Research: Distributes state required environmental documentation to various governmental agencies for review and comment as part of the CEQA process. http://www.opr.ca.gov.

Office of Small Business Certification and Resources: This office is a division of the Department of General Services and provides a listing of certified California Small Businesses, Microbusinesses, and/or Disabled Veteran Business Enterprises (DVBE) and has a tool to check the certification status of a firm or application. www.pd.dgs.ca.gov/smbus.

Appendix D | Court Decisions

Hart decision *(William S. Hart Union High School District and Saugus Union School District v. Regional Planning Commission of the County of Los Angeles)***:** Appellate Court decision that reconfirmed the Mira decision by ruling that a developer application involving a zone change has the right to be denied, in part, on the grounds of the inadequacy of school facilities. 1991. *Please see note below.*

Mira decision *(Mira Development Corporation v. City of San Diego)***:** Appellate Court decision that a city or county may deny a general plan amendment or zone change based on the lack of school facilities needed to accommodate the growth from the new changes. 1998. *Please see note below.*

Murrieta decision *(Murrieta Valley Unified School District v. County of Riverside)***:** Appellate Court decision that ruled an environmental impact report concerning a general plan should address mitigation of the need for adequate school facilities. 1991. *Please see note below.*

Williams v. State of California: Lawsuit filed by the American Civil Liberties Union in 2000 claiming that the State of California had failed to provide students in the lowest performing schools with equal educational opportunity. The settlement of the case in 2004 established requirements related to inspection of facilities, complaints regarding emergency or urgent facilities conditions, classroom notices, information in school accountability report cards, monitoring of facilities by the county superintendent of schools for schools ranked in deciles 1-3 of the Academic Performance Index, and funds for needs assessment and emergency repairs in the lowest achieving schools.

Note: *Developer fees are one method of financing facilities available to the district. As amended by SB 50 (Ch. 407, Statutes of 1998), Government Code 65995 prohibit cities and counties from requiring development fees in excess of the maximum amounts set forth in Education Code 17620 to help fund school facilities. Government Code 65995 essentially repeals, until 2006, the Mira/Hart/Murrieta line of case law which had granted cities or counties the authority to deny development projects based on a determination as to whether the schools were adequate to meet the demands created by the development. Districts with current Mira agreements should consult legal counsel in order to determine whether that agreement can be "grandfathered," and therefore exempted from the SB 50 requirements.*

Appendix E | Delivery methods

Construction manager at-risk: A delivery method in which the construction manager makes a commitment to the school district to deliver a project within a guaranteed maximum price. The construction manager acts as consultant to the district in the development and design phases, but as the equivalent of a general contractor during the construction phase.

Design-Bid-Build (DBB): When a school district uses DBB as a project delivery method, an architect is hired to create design documents from which general contractors will bid.

Design-Build (DB): A procurement process in which both the design and construction of a project are procured from a single entity [contract].[5] The award of the contract shall be made to the responsible bidder whose proposal is determined, in writing by the school district, to be the best value to the school district.[6]

Lease-Lease Back (LLB): This delivery method establishes a contract by which a district owns a piece of property and leases it for a nominal amount to an entity (typically a contractor) that will build a school on the sight. That entity then leases the finished school and site back to the district for a specified period of time at a specified rental price. At the end of the lease, the school and site become property of the district. This delivery method does not require the selection of the lowest responsible bidder[7] but does require that general prevailing rates will be paid.[8]

Multiple prime contracts: Separate trade contractors deal/contract directly with the district for specific and designated elements of the project.

Appendix F | Educational Specifications

Besides cost, location, and required environmental hazard evaluations, another critical piece in the evaluation of a potential school site is whether or not it meets the educational specifications established in the district's Facilities Master Plan.

A comprehensive set of specifications will identify both physical and educational program requirements, and take into account the resulting space and equipment needs. The following list touches upon many of the considerations that a site selection committee will have to think about when evaluating potential sites:

- Number of students to be served / desired enrollment

- Grade configuration of school
  (K–5, K-6, K–8, 6-8, 7-8, 9-12, 10-12)

- History of property title

- Specific program requirements
  - Multitrack or year-round schedules
  - Single- or double-session kindergarten
  - Class size

- Joint use/community use of facilities
  - Adult classes
  - Recreation
  - Library and media center

- Design
  - Americans with Disabilities (ADA) requirements
  - Single-story versus multistory buildings
  - Campus style (single-building or clustered, open or closed)
  - Activity areas
  - Size and height
  - Setbacks
  - Relationship with outdoor environment
  - On-campus Healthy Start or preschool or day care
  - Room for growth of relocatable/portable classrooms

- Technology
  - Cable
  - Wireless
  - Network
  - Telephones
  - Internet
  - Intercom/Public Address
  - Bell and clock system

- Utilities & Environment
  - Sewer/septic system
  - Electricity
  - Lighting
  - Daylight requirements
  - Acoustic requirements
  - Air quality
  - Energy efficiency
  - Equipment storage
  - Energy systems
  - Climate control
  - Mechanical systems
  - Heating
  - Air conditioning
  - Ventilation
  - Restroom/stall requirements

- Security and safety
  - Alarm systems
  - Fencing
  - Visibility of all school entrances from the main office
  - Proximity of school to dangerous roads and freeways
  - Overall visibility of the site
  - Specific location of Pre-K and Kindergarten

- Classrooms and learning spaces
  - Size and number
  - Adjacency requirements
  - Flexible furniture

- Food service
  - Type

- Provision
- Kitchens
- Food Storage
- Cafeterias and lunch shelters
- Food pick-up

- Maintenance

- Transportation
  - Parking
  - Student pick-up and drop-off
  - Traffic flow
  - Delivery and shipping areas
  - County requirements on speed limits

- Teacher work areas
  - Offices
  - Workrooms
  - Lounges

- Administrative areas
  - Offices
  - Reception
  - Nurse
  - Office support
  - Record storage
  - Supply storage
  - Conference room's
  - Administration's relationship to academic space

- Specialty spaces
  - Music
  - Art
  - Science
  - Drama
  - Dance

- Storage
  - Supplies
  - Bulk
  - Textbooks

- Teaching support
  - Teaching wall
  - Equipment
  - Storage

- Hallways
  - Lockers

- Library
  - Conference rooms
  - Study carrels
  - Copy equipment
  - Check-out system

- Multi-purpose and auditorium spaces
  - Seat number and type
  - Stage
  - Technology needs
  - Storage
  - Fly
  - Lobby

Resources

ACCM Project Delivery Handbook: A Guide to California School and Community College Facility Delivery. A summary and overview of various delivery methods prepared by the Association of California Construction Managers. For more information on ACCM, contact Ernest Silva at Murdoch, Walrath and Holmes, (916) 441-3300.

An Exercise in Déjà vu. David Silva. California Construction. August 2006.

Ballot Propositions California Legislative Analyst's Office. A nonpartisan summary and overview of Proposition 1D is available online at *http://www.lao.ca.gov/ballot_source/propositions.aspx.*

Best Practices Report: A sampling of best practices and resources of school facility construction. Office of Public School Construction. March 2003.

Building Within Budget. Kelley D. Carey. American School Boards Journal. 2000.

California Coalition for Adequate School Housing. Cost Containment Cookbook For Public School Construction. January 2000.

California Department of Education, Learning Support, Facilities provides information to assist school districts and their communities in creating well-planned, K-12 learning environments in safe, clean and up-to date schools. This document can be found at *http://www.cde.ca.gov/ls/fa/.*

California Department of Education School Site Selection and Approval Guide Prepared by the School California Coalition for Adequate School Housing January 2001 *www.cashnet.org/resource-center/Section1/1-4-16.html*

Carl D. Perkins Vocational and Technical Education Act of 1998. An overview of the federal act can be found at *http://www.ed.gov/offices/OVAE/CTE/legis.html.*

Community Needs Assessment. The Arizona State Library's Department of Archives and Public Records offers specific information about the strategies and challenges faced when conducting a needs assessment in a local community. More information can be found by visiting *http://www.dlapr.lib.az.us/cdt/commneeds.htm.*

Constructing California: A Review of Project Labor Agreements, Kimberly Johnston-Dodds, Prepared at the request of Senator John L. Burton, President pro Tempore by the California Research Bureau, California State Library, October 2001

Construction Information Sheet - Project Labor Agreements, Los Angeles Unified School District, Facilities Services Division

Construction Management Association of America offers an overview into the professional service of construction management, including the planning, design, and construction of projects from inception to completion for the purpose of controlling time, cost and quality. This document can be found at *http://www.cmaanet.org.*

Construction Managers. A section from the Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2006-07 Edition may be found at: Internet at http://www.bls.gov/oco/ocos005.htm. This comprehensive section outlines significant points describing construction managers including: nature of work; working conditions; training and other qualifications; employment and job outlook.

Creating Schools and Strengthening Communities through Adaptive Reuse. August 2003. Stephen Spector. National Clearinghouse for Educational Facilities. *www.edfacilities.com/pubs/adaptiveuse.pdf*

CSBA Construction Management Task Force Presentation. Tim Holcomb, deputy superintendent, Anaheim Union High School District and president, Southern California Chapter, Construction Management Association of America gave this presentation at the 2006 CSBA Annual Education Conference on December 2, 2006 at the Moscone Center in San Francisco. Further information on the Construction Management Association of America can be found at *www.cmaanet.org.*

Facilities Planning Division 5/20/2007 *http://www.cde.ca.gov/ls/fa/sf/schoolsiteguide.asp*

Fast Tracking School Site Acquisition. Jerry Behrens, Lozano Smith

Fixing it Right. An article explaining the importance of careful planning of construction projects, including the identification of needs up front, securing funding and setting a schedule. This article was written by Richard A. Henry through the American School & University. The document can be found by visiting *http://www.asumag.com/mag/university_fixing_right/.*

Governance Matters: The School Board Guide to Reinvigorating High Schools produced by CSBA's High School Task Force and the Policy Analysis Department, addresses areas around reform for school board members and superintendents with a focus on effective governance and student achievement. See *http://www.csba.org/pa/hs_reform_06.pdf*

Guide to School Site Analysis and Development (2000) California Department of Education School Facilities Planning Division

Keeping the Roof on Building Costs. James E. Rydeen. School Administrator. June 1994.

Link Students' Out-of-School Learning Experiences to Classroom Learning from Vishner's 1999 "Key High School Reform Strategies" is a collection of examples of out-of-school learning with corresponding research.

Maximizing School Board Governance: School Facilities Management. A publication by the California School Boards Association, details the role and responsibilities of the governing board in ensuring that a comprehensive facilities is in place, identifying and allocating resources for facilities projects, providing direction and making major decisions that support implementation of the facilities plan, monitoring progress, and engaging in community leadership and advocacy on behalf of the district's facilities needs.

Maximizing School Board Governance: School Finance School Facilities Management, part of the "Maximizing School Board Governance" series produced through CSBA's Governance Institute, addresses school construction and facilities management with a focus on effective governance and student achievement.

Needs Assessment: Mapping a Course for the Future. A Web site that offers general information regarding the execution of a needs assessment with a focus on school facilities. This resource is provided by the San Diego State University National Center for the 21st Century Schoolhouse and may be found at *http://www.edweb.sdsu.edu/schoolhouse/21C_PlMdl_C1.htm.*

Office of Public School Construction facilitates the processing of school applications and makes funding available to qualifying school districts. This document can be found at *http://www.opsc.dgs.ca.gov.*

Orientation to Apprenticeship: A Guide for Educators. The California Apprenticeship Council and California Division of Apprenticeship Standards collaborated in January 2001 to produce this guide to introduce educators to career opportunities for students in apprenticeable occupations. See *http://www.dir.ca.gov/DAS/apprenticeship.pdf*

Planning 101. A comprehensive look at the need for detailed planning before beginning a school construction project. Planning 101 is presented by Lettie Boggs and Colbi Technologies and produced by the California Coalition for Adequate School Housing Resource Center. The document can be found by visiting *http://www.cashnet.org/resource-center/resourcefiles/594.pdf.*

Planning for the Long Haul. An article written by John D. Blackwell and the American School & University which details the reasons that a facilities needs assessment and master plan are invaluable tools for districts facing future construction. To find the article visit *http://asumag.com/mag/university_planning_long_haul/.*

Project Labor Agreements, Bill Rickman, State Building and Construction Trade Council of California, 2000

Project Labor Agreements, Kristen Thur Plemon, Real Estate Weekly, March 24, 2004

Project Labor Agreements, Public Service Research Foundation, 1990

Project Labor Agreements and the Cost of Public School Construction in Connecticut, Paul Bachman, Beacon Hill Institute at Suffolk University, September 2004

Public School Construction Process is a Web site that summarizes the state role in the process of public school construction, including general information on the agencies involved in each phase.This document can be found at *http://www.schoolconstruction.dgs.ca.gov.*

Public School Construction Cost Reduction Guidelines. State Allocation Board. April 2000.

Sacramento City Unified School District Project Stabilization Fact-Finding Report. Swinerton Management & Consulting. Presented to the Board of Education on July 20, 2005 *http://www.scusd.edu/board_of_education/agendas/index.asp*

School Site Selection – California Department of General Services JoAnn Koplin, Jim Bush, Fred Yeager *http://www.excellence.dgs.ca.gov/PlanningTeamwork/S3_3-3.htm*

State Agencies' Top Tips for Getting Your Project Approved is a presentation by Dave Hawke of the California Department of Education, School Facilities Planning Division providing insight into the approval process for school construction projects from the perspective of statewide agencies. The document can be found at *http://www.cashnet.org/resource-center/resourcefiles/606.pdf.*

The Division of the State Architect Sustainable Schools Website *http://www.sustainableschools.dgs.ca.gov/SustainableSchools/index.html*

The Effect of Project Labor Agreements on the Cost of School Construction, Dale Belman, Michigan State University, Presented at Sloan Industrial Studies Conference, December 2005

The Evolution of Career and Technical Education in California. This July 2005 Ed Source study outlines the history of career and technical education and current funding opportunities. The brief may be found at *http://www.edsource.org/pdf/careertech05.pdf.*

The Guide for Planning Educational Facilities (2004) Council of Education Facility Planners International

The State School Facility Program – A District's Perspective is a presentation by Janet Dixon of The Riverside Unified School District which provides an overview of the process of school construction application and funding from the perspective of local school district staff. This document can be found at *http://www.cashnet.org/resource-center/resourcefiles/605.pdf.*

Tips for Containing Costs on School Construction Projects. Rich Henry. CASH Register. April 2003.

Up, Up and Away! Dealing with Cost Escalations in School Construction. California Coalition for Adequate School Housing Conference on School Facilities. February 2007. Julie Arthur, Brian Cahill, Ed Mierau, Julius Conway, Len Metcalf.

We Build Local Worker Program an overview of the Los Angeles Unified School District's program that offers local residents training in construction fields. A complete program overview can be found at *http://www.laschools.org.*

CSBA would like to thank Richard Dahl and Rick Mejia, consultants, California Department of Education for their guidance and information.

The California School Boards Association's Construction Management Task Force provides districts with policy briefs and fact sheets on construction related issues. District staff and Governing Boards should use this information as a resource when making local decisions. These documents are provided for informational purposes only and are not a substitute for legal advice from school districts legal counsel. Districts should obtain independent legal advice and review when necessary.

If you have any questions, please contact CSBA Policy Services at (800) 266-3382 or via e-mail policy@csba.org

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