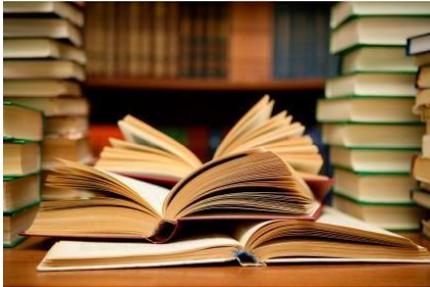
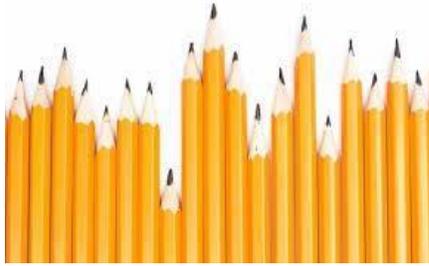


A Quick Reference Guide to School Construction Projects





The purpose of this reference guide is to aid school administrators through the process of school design and construction projects. The construction process is inherently complex. This reference guide will clarify the process by describing the progression from planning through the

completed project. An organized and well informed administrator will facilitate the building process and aid in accomplishing the ultimate goal of a successful building project. Many administrators and school board members have the question of when an architect is legally needed on a project. Through a checklist provided in this document, guidance will be given to administrators to help them understand when a design professional is needed for their project.

This is not a legal document. For questions and answers to precise legal issues, contact a licensed attorney or other entity exercising legal control.

Sequence of Events

Defining Building Projects

- **Identify Immediate and Long-term Needs** | Rank needs and keep this list on-going and updated on a regular basis.
- **Develop Goals or Objectives** | Develop goals/objectives to address each need.
- **Develop a Plan** | This will establish how the goals and objectives will be achieved. ●
- **Select a Project(s) and Develop a Building Program** | For each project to be pursued, expand on the basic outline and define the scope of the project.
- **Propose the Project Building Program to the School Board** | Add the proposed project(s) to the board agenda. Be prepared to present the project and additional documentation to support the project.

A Quick Reference Guide to School Projects |

Proceed with Building Project

- **Define Project Scope, Budget, and Timeline** | Finalize the project scope and budget.

Determine an ideal timeline for design and construction of the project.

- **Determine Sources of Funding** | Establish how the project will be funded: building funds, general funds, grants, bonds, etc. Confirm how funds are allowed to be used.
- **Determine if an Architect is Required** | Use checklist below to determine if you are required by law to use an architect for your project.
- **Select an Architect and Construction Manager** | If an architect is required by your project and has not been previously engaged, now is the time to select one. This is also the time to select a Construction Manager, if desired.

WHEN IS AN ARCHITECT REQUIRED FOR MY EDUCATION PROJECT?

The following checklist is a guide to see when an architect is required for an Education project in the State of Oklahoma. These requirements are from the **Oklahoma State Architectural and Registered Interior Designers Act, Section 46.21b**; and **Oklahoma Administrative Code, Title 55:10, Rules**. For more information please refer to both documents. If there are any further questions when an architect is required please contact the Board of Governors of Licensed Architects, Landscape Architects and Registered Interior Designers of Oklahoma at (405)949-2383 or your local Authority Having Jurisdiction (AHJ) from your city or county.

An architect is required for your education project
if **any** of the following situations occur:

- When the building addition, renovation, or alteration affects the primary structural, mechanical, or electrical systems, life safety systems, or exit passageways.
- When the occupancy is Education (E) or Assembly (A-2) or (A-3) with 50 or more occupants.
(As defined by current IBC code)
- When the project is more than 2 stories in height.
- When the occupancy is Assembly (A-1) (Assembly and theaters), (A-4) (Assembly, arenas and courts), or (A-5) (Assembly, bleachers and grandstands).
(As defined by current IBC code)

Note:

- Assembly A-1: includes areas for production or viewing of performing arts, typically with fixed seating.
- Assembly A-2: includes areas for food and drink consumption.
- Assembly A-3: includes areas for worship, recreation, amusement or other assembly areas not identified such as indoor sporting areas without spectator seating, libraries and galleries.
- Assembly A-4: includes areas for viewing indoor sporting events and activities with spectator seating.
- Assembly A-5: includes areas for participation in or viewing outdoor activities

Proceeding with Bond Issues (if required)

- **Select a Financial Consultant** | Select a consultant to assist in preparation and sale of the public bonds.
- **Contact the County Election Board** | After final school board approval, notify the County Election Board that a bond vote is required.
- **Promote the Bond Issue** | Bond issues should be publicized to the community in a positive light.
- **Sell the Bonds** | If the bond passes, work with the consultant and school board to arrange a date to sell the bonds. Ensure the date is after the mandated period of contestability.
- **Invest Bond Funds** | Immediately invest all bond funds to avoid a delay that could cost the school district money.

Designing the Project

- **Notify the Architect to Proceed** | It is at the school board's discretion when to start the architect on the project. It is important to review contracts with the architect and determine how the architect will be paid, both in the case that the bond passes, and in the case that the bond does not pass.
- **Submit Construction Documents to Regulating Agencies** | After final school board approval, ensure the final Construction Documents are submitted to the required regulating agencies. These agencies include: the local building department, the local and/or State Fire Marshal, and the Health Department (if required).
- **Receive Approval and/or Permits from Regulating Agencies** | Before commencing construction, ensure that approval and/or permits from all required regulating agencies have been obtained.

Bidding the Project

- **Advertise the Bid of the Project** | After final school board approval, notify all prospective bidders and the public as required by law. Refer to the School Laws of Oklahoma, Section 956, for specific requirements.
- **Provide Bid Documents for Review** | By law, at least one complete set of bidding documents shall be on file in the main office of the awarding public agency at least twenty (20) days prior to the date set for opening bids.
- **Open Bids** | At the date, time, and location in the advertisement to bid, a formal meeting of the school board may be held to open bids. Bids should be read aloud and witnessed by an administrative officer of the school. Bid openings shall be as free of irregularities as possible. Only sealed bids shall be accepted.
- **Award the Contract** | The school board has thirty (30) days to consider the bids and award the contract. Refer to School Laws of Oklahoma, Section 963, for extensions to this time.

Execute the Contract | The contract must be executed within sixty (60) days. Often the specification will stipulate a lesser number, such as ten (10) days.

- **Obtain a Building Permit** | The contractor shall obtain a building permit from the Authority having Jurisdiction (AHJ), generally a local building department or the State Fire Marshal's office.

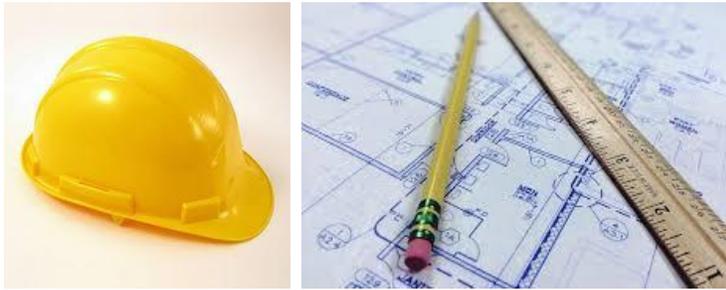
Commencing Construction

- **Notify the Contractor to Proceed** | Before Notice to Proceed is issued, Contractor should agree to furnish Owner with the following at the Contractor's expense: (i) a performance bond in an amount equal to the Contract Sum; (ii) a warranty bond in an amount equal to the Contract Sum for a period of one year from the date of completion of the Work; and (iii) the statutory bond required by Oklahoma law in connection with contracts for the making of public improvements (tit. 61, (1991) O.S. Section 1). All insurance, workman's compensation, and bonds must be received and on file prior to authorization to proceed. After the contract has been executed and all permits have been obtained, notify the contractor to proceed with the project. Make payments to the contractor according to the contract. Do not prepay for anything. The payment request should contain a notarized affidavit as required by law.
- **Maintain Security at the Construction Site** | Ensure that adequate security precautions exist at all areas of construction. Children are naturally curious around construction work and accidents are possible.
- **Payment** | A payment or draw on money during the construction sequence should be made on a percentage of Work complete. No advanced payments are allowed by State Law. The contractor shall provide a payment schedule showing the contracted amount, the payment request and the work percentage completed. This should be signed and notarized.
- **Obtain Certificate of Substantial Completion** | This certificate of substantial completion will be issued near the end of construction. Because of legal issues, occupancy should NOT occur until this certificate has been issued.
- **Contact Insurance Agent** | Prior to occupancy, contact the school's insurance agent to arrange for the cover of all improvements.
- **Obtain Certificate of Occupancy** | When the project is fit for occupancy, the local and/or State Fire Marshal's office will issue a certificate of occupancy (CO).
- **Obtain Releases from Contractor** | When the school board is satisfied that the work is complete, obtain a relief from the contractor against any liens or claims for payment from the contractor, subcontractor, and/or material suppliers. The retainage of the contract amount is due at completion. Retainage of the contractor's money after acceptance requires an interest payment of 0.75% per month.
- **Obtain all Project Documentation** | Receive all project documentation (including the record documents, operating manuals, warranties, etc.) from the contractor or the architect. These

documents are invaluable and should be stored in a safe place where they will not be damaged or lost.

Roles of Design and Construction Professionals

The following descriptions of roles are not exclusive, nor are the intended to unduly restrict



the practice of the professional who is properly registered or licensed in the state of Oklahoma and is practicing within the laws and regulations governing his or her profession or industry. The design professionals, including a Construction Manager, do not have to be bid out for public school projects. A general contractor who will perform the improvement work *does* need to be bid out.

Architects

Architects must be concerned with the health, safety and welfare, and basic concepts of the full spectrum of design considerations, including codes and life safety, as well as budget and scheduling conflicts, when developing both the building and site associated with a project. Architects develop a comprehensive package of design and construction documents, taking all aspects of the project into account and coordinating various elements prepared by other design team members.

Landscape Architects

Landscape architects must be concerned with all aspects of site design when planning and developing a project site. Landscape architects perform site planning, environmental impact reports and studies, design civil improvements, prepare erosion control documents, design landscaping and irrigation, prepare documents showing site grading and in general coordinate the site design with the architect and other design professionals when preparing their portion of the construction documents.

Registered Interior Designers

The role of the registered interior designer is to evaluate interior space utilization needs, prepare conceptual drawings and construction documents for interior spaces (provided such drawings exclude load bearing partitions and fire rated walls) and specify finishes, furniture, fixtures and equipment, all of which may be regulated by building, fire and other codes.

Engineers

Engineers must be concerned with planning and analysis of a wide variety of project functions.

These include structural system design, electrical system design, plumbing and mechanical system design, fire protection system design, soils analysis, and design of civil improvements. In Oklahoma, engineers are regulated by the Oklahoma State Board of Licensure for Professional Engineers and Land Surveyors.

Professional Land Surveyors

Land surveyors must be concerned with providing property line and horizontal control, topographic data and construction layout of projects. Land Surveyors in Oklahoma are regulated by the Oklahoma State Board of Licensure for Professional Engineers and Land Surveyors.

Contractors

The role of the contractor involves the building or improvement of structures, roads, utilities and other works. Oklahoma doesn't license construction contractors who are residents of the State of Oklahoma, other than those in the electrical, mechanical, plumbing and roofing trades. The Oklahoma Construction Industries Board is a self-funded agency whose mission is to protect life and property by licensing and inspection of the related trades for the health, safety and welfare of the public.

Construction Manager (CM)

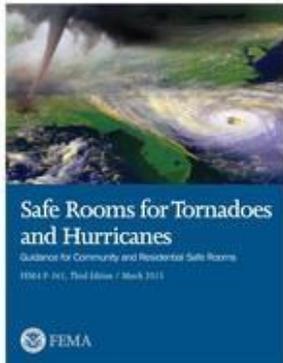
A Construction Manager is a professional that uses specialized, project management techniques to oversee the planning, design and construction of a project, from its beginning to its end. The CM should be hired prior to beginning the job and is valuable in helping provided cost savings and value engineering to the school. A CM can provide a not-to-exceed bid to the school and provide a cost savings sharing plan. These professionals must be credentialed and registered with the state. Schools may interview these firms the same way they would interview an architecture firm.

Building Officials

A building official, which may, but not necessarily, include staff of the State Fire Marshal's office and at the state level, is authorized and directed to enforce provisions of adopted codes and ordinances by regulating and controlling the design, construction, use, location, and maintenance of all buildings, structures and other improvements within his or her jurisdiction. The state adopts a building code and each county and city may also adopt the state code, as well as other local building ordinances to safeguard health, property, and public welfare. In this role, the building official provides a balance between the necessities of the ownerdesigner-building team, as creators of buildings, and the protection of the public, as users of the buildings.

Community Safe Rooms

This portion of the document is intended to give you an overview of what a community safe room is and what the regulations are that will influence the design of the structure.



The administrator and/or school board must first determine what the performance expectation of the future safe room or shelter will be in order to move forward with design. The following describes the differences between a “Safe Room” and a “Shelter.”

Safe Room

A hardened structure that provides life-safety protection from an extreme-wind event.

Shelter

A shelter includes all of the following:

- A place where people go after their home has been destroyed;
- A place where people evacuate to in order to be protected from high winds;
- A place of last resort providing only limited protection from the effects of an extreme-wind event.
- Can also be a hardened room that is not necessarily built to FEMA standards or have had the official FEMA inspection.

What is a Safe Room?

- The term “shelter” and “safe room” should not be used interchangeably.
- All safe rooms are either a residential safe room (designed for a single family residence) or a community safe room.
- A safe room is a shelter that meets FEMA criteria and provides “near-absolute protection” from wind events.
- “Near-absolute protection” means that, based on our current knowledge of tornadoes and hurricanes, the occupants of a safe room built according to this guidance will have a very high probability of being protected from injury or death. ...”To date a wind event exceeding the maximum design criteria in this publication has not been observed.” – FEMA 361, Chapter 1, Page 1-2.

Safe Room Publications

The following publications provide guidance and criteria so that design and construction of safe rooms will result in buildings or portion of buildings that provide near-absolute protection for occupants from wind and debris associated with tornadoes.

FEMA 361 – Design and Construction Guidelines for Community Safe Rooms (2015)
ICC 500 – ICC/NSSA Standard for the Design and Construction of Storm Shelters (2014) **Safe Room Publications Additional Criteria**

- All safe rooms should be constructed to meet modern engineering codes and standards
- ASCE 7-10 (2013), Minimum Design Loads for Buildings and Other Structures • From FEMA 361, Section 3.1:
 - When questions arise pertaining to a criteria or requirement not addressed by this publication of the ICC 500, the 2015 IBC and 2015 IRC (with references to ASCE 7-05 2006 and ASCE 24-05 - 2010) should be used to provide the necessary design and construction criteria. When these codes or standards provide conflicted criteria, the most conservative criteria should apply.

Contact Information

Publications & Links

ADAAG, 2010 and ADA-ABA Guidelines, 2010: www.access-board.gov/adaag/about

ICC/ANSI A117.1, 2209 Edition: www.iccsafe.org

International Building Code, 2015 Edition: www.iccsafe.org

National Links

American Institute of Architects (AIA): www.aia.org

International Code Council (ICC): www.iccsafe.org

National Fire Protection Agency (NFPA): www.nfpa.org

Americans with Disabilities Act (ADA): www.ada.gov

United States Access Board: www.access-board.gov

State Links

Oklahoma Board of Architects: www.ok.gov/Architects

Oklahoma State Department of Education: <http://sde.ok.gov/sde/>

Oklahoma School Law Book: <http://sde.state.ok.us/Law/LawBook/default.html>

Oklahoma State Fire Marshal Home: www.ok.gov/fire

Oklahoma Uniform Building Code Commission: www.ok.gov/oubcc

Board of Professional Engineers and Land Surveyors: www.ok.gov/pels

Office of Disabilities Concerns: www.ok.gov/odc

Oklahoma State Department of Health | Protective Health | Consumer Health Services:

www.ok.gov/health/protective_health/Index.html

Cooperative Council for Oklahoma School Administration: www.ccosa.org

Oklahoma State Boards Association: www.ossba.org

Construction Industries Board: <http://cib.ok.gov/>

Sustainability Links

Alliance to Save Energy: www.ase.org

Energy Star: www.energystar.gov

Oklahoma Green Schools: www.okgreenschools.org

U.S. Department of Energy: www.eere.energy.gov

U.S. Green Building Council Green School Buildings: www.greenschoolbuildings.org

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