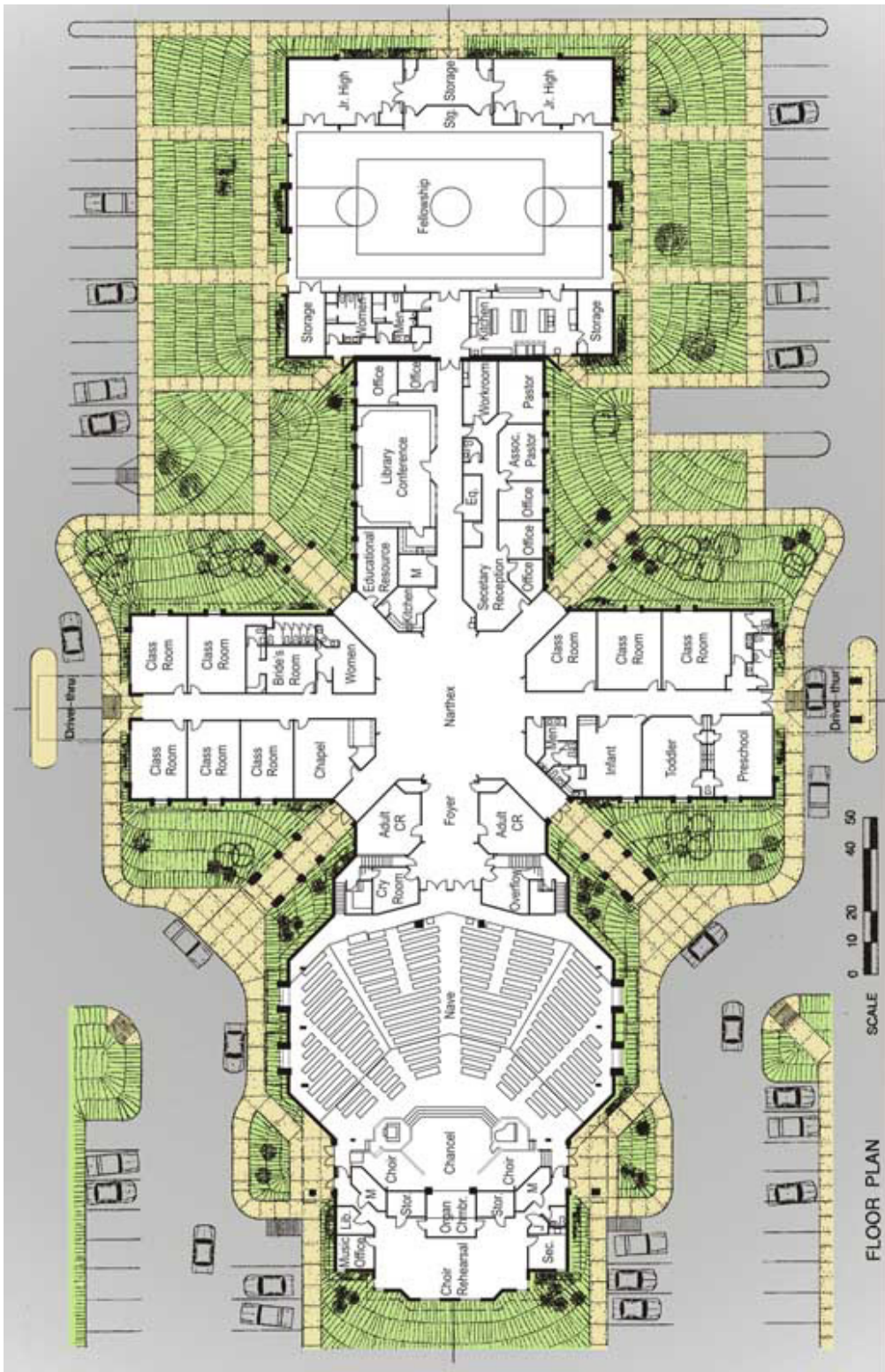


# Guide to Planning Church Facilities



**ELTON L. ROE, ARCHITECT**



# **Guide to Planning Church Facilities**

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**Note: Author grants limited right to churches to copy  
pages as needed for inter-church committee use.**



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## PREFACE

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Planning ahead is essential for the success of a building program. Considering long- and short-term goals and establishing a detailed building program prevents costly mistakes and ensures completed facilities will meet expectations.

By providing insight into the design and construction process, this Guide to Planning Church Facilities is intended to help smooth the sometimes difficult path of implementing and completing a building program. Although this is not a “how to” manual, the information found herein should enable church leaders, committee members, and other interested parties to perform their duties with greater confidence and efficiency. Church members may also find this booklet helpful in increasing their understanding of the building program, allowing them to give their enthusiastic support.

As an Architectural firm specializing in Religious Facilities Planning, we have found personal satisfaction in helping churches achieve their building goals. Our hope is that, perhaps indirectly, we are helping to preserve and promote Christian ethics, traditional family values, and good morals. After all, it is not the government, schools, or society, but our churches who offer us a sanctuary from worldly, humanistic influences.

Elton L. Roe



## CHURCH UNITY

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The life blood of a building program is the unified, enthusiastic support of church membership. A building program that may have suffered defeat may also have suffered in the past from poor planning, lack of communication, inadequate preparation, partisanism, or other similar problems. Where there is a genuine need for a building program, a united effort will find the ways and means to meet the challenge.

Church leaders should communicate regularly with members about all aspects of the building program. Members place confidence in leaders who are honest and attentive to the needs of the congregation. And, members will usually be responsive to calls for support and financial commitment if there is visible evidence of responsible leadership.

Similarly, a supportive and involved membership is an encouragement to leaders during such a critical phase in the growth of a church. Members should acknowledge the efforts of their leaders, and when a recommended plan is being considered for adoption, each member should responsibly express his or her informed opinion. This should be done without private reservation of support if one's opinions prove to be in the minority. Unfortunately, some building programs have ended in disaster and even precipitated church division when there was a lack of unity.

# COMMITTEES

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The complexity, size, and quantity of committees should be proportional to the complexity of the building program. In simple projects, committee functions may be combined. Traditionally, the most common committees to serve productive roles in most church building programs are the **Long Range Planning Committee**, the **Building Committee** and the **Finance Committee**.

The **long range planning committee** (sometimes called steering committee) is organized before adoption of a building program to steer the Church in the right direction. Their work is invaluable in avoiding pitfalls due to inadequate early planning. Some typical tasks of the committee are:

- Architect selection for Master Plan development
- Congregational survey
- Departmental needs assessment
- Growth projection
- Establish long-term goals and prioritizing phased implementation
- Relocation vs. Expansion study
- Alternative site evaluation
- Feasibility/Cost study

The **building committee** is organized after a specific building program has been authorized. Typical duties are:

- Architect Commission for building design. Selection should be based on qualifications, experience, and reputation. While Architect's fee cannot be ignored, it should not be a decisive factor in selection as quality of services and construction cost control should be more critical determinants.
- Detailed building program development
- Arrange for topographical site survey
- Establish a target budget for construction and communicate budget limitations to the Architect
- Work with the Architect to develop a schematic or preliminary design
- Establish a tentative design development and construction schedule
- Engage services of consultants if needed for Audio Visual, Stage Lighting, Food Service, and Interior Decorating
- Engage services of a Geotechnical Engineer to provide subsurface soil investigation services. Submit a report summary to be furnished to architect to guide foundation design

- Where bids received do not meet established budget cooperate with Architect in his revision of Construction Documents to make cost reducing adjustments to size and/or quality of project prior to rebidding.
- Develop an informative, condensed building program guide for presentation to the Church for approval and fund-raising purposes
- Meet with the Architect as required during design and construction phases and make decisions in a timely manner.
- Select Contractor and negotiate construction contract
- Verify and process contractor's pay request in a timely manner.

Appoint a single point-of-contact person as liaison to Architect and Builder during construction phase.

The **finance committee** is usually organized at same time as the building committee and works with the building committee to:

- Determine the realistic financial ability of the Church regarding construction funding
- Establish and manage a building fund
- Investigate fund raising and capital stewardship programs, recommend best option
- Investigate means of debt service financing and recommend best option
- Secure both interim and permanent financing for project prior to start-up of construction.

Other subcommittees include:

- Educational
- Administrative
- Audio-Visual-Stage Lighting
- Music
- Nursery
- Day Care
- Kitchen
- Youth

It goes without saying that all committees should cooperate in spirit and purpose to make the building program a success.

# THE ARCHITECT

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The Architect, traditionally, serves as the lead design professional for the building project. This profession is uniquely qualified and possesses the multi-disciplinary skills to serve this role in the Design-Construction process from start to finish. The architect is directly responsible to the Church in conventional contractual arrangements. In some non-conventional arrangements, such as the “Package Builder” method, the required architectural services may be subcontracted and the owner may not have the benefit of full architectural services. Caution should be exercised before accepting any alternative arrangement which could leave the owner at a disadvantage without professional representation and protection afforded by full service contract direct with the client/owner.

The Architect should have:

- Experience in the design of church facilities
- A consistent reputation for on budget, on time project delivery
- Clientele that attest to the quality of services, integrity of conduct, and responsiveness

The Architect brings a high level of professionalism and multi-disciplined expertise to the entire process of design and construction. The Church’s Building Committee should work closely and directly with the Architect to design a building that satisfies the building program while meeting budgetary constraints. The Architect helps the Church explore design options and consider alternative materials and systems that may provide an acceptable balance of quality and economy. The end result should be a facility that provides maximum utility and benefit for funds expended.

## Architectural Law

Each state independently has statutory legislation requiring the use of Architectural Services for the design of public buildings such as church facilities. The Architect must personally seal, sign and date all construction documents, including plans and specifications, for each project.

The Architect must be a registered licensed architect in the state in which the project is to be built, and the plans must have been prepared under his direct personal control. "Plan Stamping" of drawings not prepared by him, or the use of certified plans for another project not prepared for the subject project is always illegal.

Be forewarned not to be tempted to "save money" by circumventing state laws via purchasing plans used by another church or another project, or by getting a drafting service to draw up plans - even preliminary plans. State laws are usually specific to require Architectural Services for even preliminary or concept drawings.

Also, in most states, no other design professional can substitute for Architectural Services unless duly licensed as an Architect: not structural engineers nor civil engineers. The "Package Builder" must also show evidence of having secured Legal Architectural Services for your project before any drawings are presented and reviewed by the building committee. This is vitally important as not only the offerer of Architectural Services is subject to penalties and fines for violation of State Law, but the Owner as well.

Churches who either in ignorance or with deliberate purpose attempt to build without the benefit of Architectural Services may be compelled to engage an Architect after the construction is being underway at even greater expense for professional services and the possibility of remedial work being required. Or worse, after a non-compliant building has been completed and occupied, the State Building Inspector and/or Fire Marshall may padlock the building and not allow occupancy. In addition, fines may be levied to the Church which can be in the thousands of dollars. In such cases, the Church loses the Right To Occupy until brought into full compliance.

Get Informed! The burden of compliance with laws ultimately is borne by the Church. Working with duly licensed design professionals is not an option, it is the law. Such laws are intended to protect life, safety and the welfare of the public - not to protect the business interests of the respective professional disciplines. The good news is the choosing the right design professional can save more than the fees involved through efficient planning and coordination.

## **Basic Architectural Services**

*(Following is a brief outline of the basic services of the Architect. Inquire in detail regarding the scope, time for completion, and expected results of these services.)*

### **Schematic Design Phase**

- Perform building program development and code research
- Analyze site and existing conditions
- Perform conceptual planning and design in accordance with program and budget
- Prepare presentation drawings

### **Design Development Phase**

- Refine approved schematic design
- Make preliminary selection of building materials, systems, and components
- Coordinate provisions for equipment and furnishings
- Prepare preliminary cost estimate using building a volume/area method based on reliable regionalized cost data for project type-quality and complexity and projected market trends
- Prepare presentation documents

### **Construction Documents Phase**

- Produce Technical drawings and specifications based on approved preliminary design and budget
- Provide required structural, mechanical, and electrical engineering (Note: Civil engineering services are not included in the architect's basic services per AIA Contracts)
- Obtain approval of completed Construction Documents prior to issue
- Coordinate with Owner's consultants (if any)

### **Bidding/Contractor Selection Phase**

- Issue invitation to bid
- Maintain list of bidders
- Issue Construction Documents to bidders

- Issue Addenda as required during bidding
- Assist in receiving and reviewing bids
- Assist in selection of Contractor and execution of Contract for Construction
- If bids received do not meet established budget constraints, revise Construction Documents as necessary and rebid project.

## **Construction**

- Perform Administration of Contract for Construction
- Review and recommend payment of Contractor's periodic pay request
- Perform Inspection and issue Field Reports
- Issue Field Orders and Change Orders as necessary
- Review Shop Drawings and other submittals and take appropriate action
- Coordinate material, product, and color selections
- Determine date of substantial completion
- Make final inspection and punch list
- Recommend final payment to Contractor and acceptance of project

## **Architectural Services Contract**

Before signing the Contract for Architectural Services, read it! It has important information and legal implications. Insist on the use of a standard AIA contract form. This form is a time-proven industry and professional standard designed to perfectly coordinate with other documents required in the project. Always notice the Reimbursable Expenses article and make sure the terms are acceptable. Also, note that the standard contract does not hold the Architect responsible for redesigning and rebidding the project unless advised in writing of fixed budget limitations prior to beginning design work.

It is also noteworthy that the Standard AIA Contract provides that unless such "fixed budget" notice has been given, that the Architect is due his fee calculated on the lowest bid received, even if all bids are rejected regardless of any informal budgetary projections.

Regarding fee negotiation, be aware that the reputation of the Architect for

overall project cost control is more important than his fee basis. It is possible to be “penny-wise and dollar foolish” in this regard. The temptation to “save” tens of thousands on architectural fees by using a competitive discount architect can easily be negated by hundreds of thousands of dollars in construction cost overruns and expensive change orders. These extra cost items are usually due to poorly executed Construction Documents, inefficient design work, or extensive delays caused by poor coordination.

Your architect is not selling a product, but he is furnishing personal services. The more skillful and hard-working servant giving greater benefit for his hire should not have to compete with the unscrupulous and unskilled (ref - I Tim. 5:18). A similar warning might be given to not be influenced by empty promises by unprofessional professionals who would tempt committees with unrealistic promises of “cheap” construction prices. Often, these “too good to be true” prove to be just that, and the honest, forthright interviewer is left disadvantaged by his truthfulness regarding construction cost. Again, proven reputation is a paramount consideration rather than promises of cost-savings which could easily turn into cost extras with no guarantee or responsibility for overruns.

# SCHEDULING

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Adequate time should be allocated to each phase of design and construction. Shown below is the time required for the major phases of a typical building program.

<u>Phase</u>	<u>Time Required</u>
Master Planning	3 - 4 weeks
Architectural Schematic Design	6 - 8 weeks
Architectural Design Development	6 - 8 weeks
Construction Documents Preparation	8 - 12 weeks
Bidding and Contract Negotiation	3 - 4 weeks
Construction	9 mo. To 1 yr.

Please note that specific time requirements will vary for each project. Before determining a project schedule, inquire of each service provider regarding a reasonable time frame for performance of that portion of the work. Each service provider needs adequate time to do his job well but should be expected to meet critical deadlines to avoid delaying others.

**Note:** If church will need a break after Schematic Design Phase to perform Fund Raiser or Capital Stewardship campaign, Architect should be so advised such conditions should be and stated in the terms of agreement between the Owner and Architect. Failure to do so could cause Owner (church) to incur penalties for suspension of project according to most AIA documents.

## EXISTING BUILDINGS FIELD SURVEY

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When a building project involves construction within or connected to existing buildings, the Church should furnish the Architect with all available information regarding construction, floor plan, and modifications. As built record drawings are an invaluable source of information to the Architect and Engineer, especially regarding concealed work.

The Architect must obtain other information about existing buildings through field investigation. Important data include structural information, weather tightness, finishes, energy efficiency, life-safety code compliance, and adequacy of mechanical and electrical systems.

As a general rule, when renovation work exceeds 50% of the cost of what equivalent replacement new construction cost would be, the building will require upgrades to meet all current building codes. Some of those upgrades can be quite costly, particularly if it must be retrofitted with a fire-suppression sprinkler system.

# MASTER PLAN

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When multiple phases of construction are anticipated, a Master Plan is invaluable for ensuring well coordinated site development. Complete adherence to a Master Plan is unlikely because the long-term needs of a church may not be totally predictable. However, such planning will help the Church avoid costly mistakes and will ensure a well ordered coordinated building when the multi-phase project is finished. A Master Plan can save construction costs over the years by preventing situations like these:

- Tearing up parking lots and other site improvements to make room for additions
- Structural alterations to buildings where no provisions were made to accommodate expansion or additions
- Premature obsolescence of buildings due to inadequate room sizes, corridor widths, rest room accommodations, etc.
- Tearing down or relocation of existing buildings that interfere with necessary construction work
- Purchase of additional land and relocation of church facilities due to lack of planning for growth or inefficient use of site.

## **BUILDING PROGRAM AND CONSTRUCTION BUDGET**

These two all-important subjects are joined to emphasize their inseparable relationship. Each has a direct effect on the other. The Building Program requirements affect both building size and cost. It is not unusual to find that a church needs more than their budget will accommodate. Remember, the Architect does not work miracles. The Building Program must be reconciled with the budget to avoid overspending.

The first step toward staying within budget is to formulate a building program congruent to the budget. The Architect can assist you with this task.

The next chapter contain an outline of items to be addressed specifically in the Building Program. This outline is intended only as a general guide and may be customized to fit the needs of a specific building program. All items may not be applicable to a particular project.

**Note: Seating capacities should include allowance for projected growth**

# BUILDING PROGRAM OUTLINE

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## Worship Center

- Sanctuary Seating  
Maximum (peak attendance) \_\_\_\_\_  
Comfortable (80% of max) \_\_\_\_\_  
Configuration \_\_\_\_\_
- Balcony Seating  
Maximum \_\_\_\_\_  
Comfortable (80% of max) \_\_\_\_\_
- Main Level Expansion/Overflow Seating \_\_\_\_\_
- Choir Seating \_\_\_\_\_
- Chancel Furniture (identify items)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Piano  
Type \_\_\_\_\_  
Size \_\_\_\_\_
- Organ  
Type \_\_\_\_\_  
Size \_\_\_\_\_
- Handbells  
Table Length \_\_\_\_\_
- Orchestra  
No. Pieces \_\_\_\_\_
- Projection Screen(s)
- Lighting/Sound Control Booth
- Vestry/Sacristy
- Baptistry/Dressing Rooms

## Choir/Music Department

- Practice/Robing Room
- Music Office
- Music Library
- Audio/Video Production
- Instrument Storage

## Foyer/Narthex

- Gathering Space
- Brides Room
- Ushers Room
- Ladies Parlor
- Greeters Station
- Hospitality Areas
- Rest Rooms

## Building Program Outline (continued)

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### Nursery/Preschool Department

- |   |   |
|---|---|
| <input type="checkbox"/> Infants<br>No. Children _____      | <input type="checkbox"/> Nursery Office       |
| <input type="checkbox"/> Crawlers<br>No. Children _____     | <input type="checkbox"/> Control Center       |
| <input type="checkbox"/> Toddlers<br>No. Children _____     | <input type="checkbox"/> Mothers Nursing Room |
| <input type="checkbox"/> Kindergarten<br>No. Children _____ | <input type="checkbox"/> Day Care Facilities  |
|   | <input type="checkbox"/> Indoor Play Area     |
|   | <input type="checkbox"/> Outdoor Play Area    |
|   | <input type="checkbox"/> Snack Area           |

### Education Department

#### Elementary Grades (Children)

- First  
No. Children \_\_\_\_\_
- Second  
No. Children \_\_\_\_\_
- Third  
No. Children \_\_\_\_\_
- Fourth  
No. Children \_\_\_\_\_
- Fifth  
No. Children \_\_\_\_\_
- Sixth  
No. Children \_\_\_\_\_
- Assembly Area
- Puppet Stage

#### Jr. / Sr. High Grades (Youth)

- Seventh  
No. Persons \_\_\_\_\_
- Eighth  
No. Persons \_\_\_\_\_
- Ninth  
No. Persons \_\_\_\_\_
- Tenth  
No. Persons \_\_\_\_\_
- Eleventh  
No. Persons \_\_\_\_\_
- Twelfth  
No. Persons \_\_\_\_\_
- Assembly Area
- Lounge/Game Area
- Snack Bar/Kitchenette

# Building Program Outline (continued)

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## Adult

- College  
No. Persons \_\_\_\_\_
- Career  
No. Persons \_\_\_\_\_
- Adult  
\_\_\_\_\_  
No. Persons \_\_\_\_\_  
\_\_\_\_\_  
No. Persons \_\_\_\_\_  
\_\_\_\_\_  
No. Persons \_\_\_\_\_
- Rest Rooms

- Young Married  
No. Persons \_\_\_\_\_
- Singles  
No. Persons \_\_\_\_\_
- Seniors  
\_\_\_\_\_  
No. Persons \_\_\_\_\_  
\_\_\_\_\_  
No. Persons \_\_\_\_\_  
\_\_\_\_\_  
No. Persons \_\_\_\_\_
- Special Focus Groups  
\_\_\_\_\_  
No. Persons \_\_\_\_\_

## Administration

- Secretarial/Reception  
Size \_\_\_\_\_  
No. of Desks \_\_\_\_\_
- Work/File Room  
Size \_\_\_\_\_
- Pastor's Office  
Size \_\_\_\_\_
- Study
- Private Restroom
- Outside entrance
- Counseling Room(s)
- Teacher's Resource Room  
Size \_\_\_\_\_
- Conference Room  
Size \_\_\_\_\_
- Staff Restrooms
- Computer Server Room

- Staff Offices
  - \_\_\_\_\_  
Size \_\_\_\_\_
  - \_\_\_\_\_  
Size \_\_\_\_\_
  - \_\_\_\_\_  
Size \_\_\_\_\_
  - \_\_\_\_\_  
Size \_\_\_\_\_
- Church Library/Media Center  
Size \_\_\_\_\_
- Supply/Storage Room  
Size \_\_\_\_\_
- Copy/Printer Area
- Kitchenette
- Money Safe
- Records and Files Vault
- Benevolence Pantry

## Building Program Outline (continued)

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### Fellowship/Activities Center

- Seating Accommodations
  - No. at Tables \_\_\_\_\_
  - No. Chairs Only \_\_\_\_\_
- Stage
  - Size \_\_\_\_\_
- Proscenium Curtains
- Stage Storage/Dressing Rooms
- Lighting/Sound Control Booth
- Athletic/Health Accommodations
  - Basketball
  - Racquetball
  - Volleyball
  - Walking Track
  - Exercise Equipment
  - Other \_\_\_\_\_
- Game Room
- Ping Pong
- Billiards
- Video
- Arts and Crafts Room
- Music Room
- Meeting Room(s)
- Hospitality Center/Snack Bar
- Vending Machines/Kitchenette
- Kitchen
  - Size \_\_\_\_\_
  - Noncommercial (pot luck)
  - Commercial (prepared food for sale)
  - Pantry
  - Equipment
  - Self Serve Food Service Area
- Activities Director's Office
  - Size \_\_\_\_\_
- Rest Rooms
- Showers
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

## Building Program Outline (continued)

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### Miscellaneous Rooms and Features

- Chapel  
Size \_\_\_\_\_
- Prayer Rooms  
No. \_\_\_\_\_  
Size \_\_\_\_\_
- Stained Glass Feature Window(s)
- Covered Drive-Through  
Lanes \_\_\_\_\_  
Size \_\_\_\_\_
- Security Alarm System
- Surveillance System
- Electric Door Locks at entries with intercom and camera

### Ancillary

- Janitor's Storage
- Electrical
  - High efficiency lighting
  - Dimming System
- Heating and Air Equipment  
Type \_\_\_\_\_  
Efficiency \_\_\_\_\_

### Site Improvements

- Parking  
No. Spaces \_\_\_\_\_
- Bus Garage  
Size \_\_\_\_\_
- Outdoor Storage  
Size \_\_\_\_\_
- Outdoor Recreational Facilities
  - Pavilion
  - Softball
  - Volleyball
  - Playground
  - Jogging/Walking Track

## **SITE CONSIDERATIONS**

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### **Topographic Survey**

This is furnished by the Owner and prepared by a licensed Surveyor. It should include plat information, legal description, grading at one or two feet intervals, significant trees, existing site improvements, easements, set backs, zoning classification, available utilities, and other significant features or information. The scale of the drawing should be one inch equals 20 or 30 feet. The Architect should be able to rely on the accuracy of the survey.

### **Zoning Classification**

In municipalities or extended planning areas, property for a proposed building site must be appropriately zoned. If not, rezoning or a zoning variance may be requested by the proper application process but is not automatic. To avoid delays, zoning should be checked before planning begins. Any property zoning amendments are the responsibility of the property Owner.

### **Available Utilities**

Type and location of available utilities will directly affect the design and cost of the proposed construction. Cost of sewer and water extensions can be devastating to budgets if unaccounted for in early planning. Septic disposal fields, if required, must be an approved type. In some situations, septic disposal fields may not be allowed or may be impractical if the soil is too impervious or is saturated with ground water. Utility extensions, where required, usually necessitate professional Engineering design outside the scope of basic Architectural services.

### **Easements**

Right-of-ways, access and utility easements, un-built or closed street easements, etc., must be identified. Buildings cannot be constructed in an easement area, but parking, landscaping, and grading may be permitted. Exact wording of the legal easement is important. In some cases, unused easements may be closed, but proper application and legal documentation will be required.

## Soil Tests

Subsurface soil exploration tests are required to determine the structural capability of soils in the vicinity of the building site. Soil testing and a report of findings is furnished by a Geotechnical Engineering Firm and paid for by the Church. Results will be used by the Architect and Structural Engineer to design appropriate foundations. If not identified and resolved, problem conditions such as expansive clays, uncontrolled fill sites, silty soil, excessive rock, high ground water levels, and low bearing pressures can have detrimental affects on structures and increase construction costs. Early investigation will allow proper analysis and evaluation of options to achieve optimum results and maximum economy.

## Landscaping

Most municipalities require a landscaping plan to be submitted for approval. The requirements vary extensively but are generally reasonable. Usually, the Architect can incorporate landscaping into the site plan as part of his basic services. Therefore, the services of a landscape Architect are not usually required but are optional. It is important to note that some municipalities have right-of-way improvement ordinances controlling driveway widths and locations, turning radii, and curb and sidewalk construction.

## Flood Plain and Storm Water Run-Off

In some municipalities, Flood Plain Ordinances prohibit construction of habitable buildings in designated areas. However, parking lots and other site improvements may still be permitted. In some areas, a surface watershed calculation prepared by a Civil Engineer will be required. The watershed calculation compares the rate of storm water run-off before and after site development. Where surface run-off is too rapid due to large parking lots, roofs, sidewalks, etc., retention ponds may be required. These are small dams with controlled outlets that help lower run-off rates and prevent flooding of storm water drainage systems. Please note that required Engineering services are not normally included in the Architect's basic services.

## Parking

Parking accommodations are basic to the usefulness of a facility. To ensure a practical and attractive parking area, it is important to plan early. This means estimating the number of spaces needed and then compiling a tentative layout of spaces. Caution should be exercised to avoid a commercial parking lot appearance. Distributed small parking lots appointed with generous green space and landscaping will help avoid the “shopping center” effect. Where site area is limited, multi-story construction may be the best option to conserve space for parking and landscaping.

Under municipal ordinances, a minimum quantity of parking spaces is required. However, these minimums are generally not enough. Even more will be required where there is a major component of young families. A good rule of thumb is one space per three seats of worship center capacity. Handicap spaces usually occupy from 4 to 6 percent of the total number of spaces.

Size of parking spaces and driveway widths are also specified by local ordinances. Generally, an average of 500 square feet of pavement is required per parking space, including drives and turn around space. In addition, size of handicap spaces, identification, ramps, and other access details must comply with local and state ordinances.

## LAWS, CODES, AND ORDINANCES

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Because church facilities concentrate a large number of people into a relatively small space, some of the most stringent building laws, codes, and ordinances govern their construction. These regulations are important for public safety, health, and welfare. For example, non-compliance with certain building codes can cause disasters such as fire and structural failures. In such emergencies, private civil suits are possible where the plaintiff holds the Church responsible for injury or loss of life.

A State-licensed Architect is best equipped to make the proper application of governing regulations. In fact, the services of an Architect are required by law for all but the smallest of projects. Check state laws for specific requirements. Construction laws also require the use of licensed Contractors and trades persons for certain portions of the work. Again, check local and state ordinances for specific requirements. To build without the benefit of an Architect and licensed Contractor invites trouble and even fines if investigations prove that governing laws were violated.

In municipalities, building regulations are enforced through permits and inspections. In rural areas without a Building Code Official, regulations are enforced by the following persons and agencies:

- State Fire Marshall
- State Health Department
- State Board of Architects
- State Engineer's and Contractor's Licensing Board

If the above parties are called to inspect a building in violation of laws, codes, or ordinances, extensive and costly modifications could be required to bring the building into compliance.

Some examples of areas governed by building codes include:

- Provisions for handicap accessibility
- Minimum indoor air quality for mechanical ventilation systems
- Exits and exit signs
- Emergency lighting
- Corridor fire protection
- Panic hardware on doors
- Fire stairs
- Fire alarm systems
- Fire extinguishers and/or automatic sprinkler systems
- Electrical and mechanical systems
- Structural systems
- Height and size limitations
- Building construction fire resistance ratings
- Flammability rating of interior finishes

## BUILDING PERMIT

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Before a building can be erected, the plans must be submitted to the appropriate Building Code Officials for approval and issuance of a building permit. In smaller municipalities, one person may assume multiple roles in the review and permit process. However, in larger cities, several persons and departments may be involved.

Review of plans can take up to several weeks, but there are ways to expedite this process. First, get to know the Building Officials early. Their input in preliminary planning can help avoid delays in obtaining permits. And, their interpretation of building codes is usually just as binding as the codes themselves. It is also important to ask questions of the Building Officials. This initiative fosters a positive working relationship and promotes cooperation.

Don't expect rules to be bent because of a church status. Laws and ordinances are as binding on church facilities as other building types. If open communication with the Building Official has been established, his interpretive latitude may be more favorable. However, requests which are in obvious violation of ordinances will certainly be denied. Churches should be examples to the community in matters of compliance with civil laws as well as in spiritual matters.

# FUNDING/FINANCING

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Funding arrangements should be finalized before construction begins. Building programs are often delayed because of prohibitive interest rates and construction costs. Of course, every church would like to build debt-free and some have actually succeeded in this noble endeavor. Others have required some means of debt service. The following information may assist in analyzing funding and financing options and in selecting the one best suited to the needs and abilities of the Church.

## **Miscellaneous Fund Raising**

In quest for church construction funds, many innovative ideas have been developed through the years. For example, some denominational foundations have sizeable funds budgeted for construction programs and offer low-interest loans and grants for new church development. Terms, interest rates, and years of repayment vary.

Occasionally, churches may be given a Challenge Gift by a charitable foundation. For example, the contributing foundation may agree to give one dollar for every dollar the Church secures on its own. In other cases, charitable foundations may donate funds to purchase windows, pews, sound systems, or other items.

In some fund raising campaigns, members donate or loan the cash value of their insurance policies. Others may give land, homes, cars, jewelry, and other items with resale value.

## **Capital Stewardship Programs**

In almost every building program, some type of capital fund raising program is initiated before other funding means are sought. In this popular program, the Church receives financial support from its own membership. Through cash donations and short-term pledges, a church typically raises a substantial portion of the required funds. Capital stewardship programs provide interest-free funds and substantially reduce, sometimes even eliminate, the need for long-term indebtedness.

Fund raising programs led by outside consultants are usually more successful

than those managed by church leaders. A professional capital fund raising group can help raise two-and-a-half to four times the annual church budget for a needed project. Discretion is advised when selecting a consultant because fees for this service can be substantial. For small projects, the basic building fund managed by church leaders may be sufficient. Usually this will take longer but there are no fees. Some denominations offer assistance to member churches in their capital stewardship programs.

An important aid to any capital stewardship program is the fund raising brochure. This pamphlet is usually distributed to the church membership early in the campaign. It describes the financing program and contains an overview of the Building Program with reduced Architectural presentation drawings of the proposed facilities. If it is professionally prepared, adequately supported, and confidently presented, the fund raising brochure may be the single most effective tool in generating and maintaining enthusiasm and support for the Building Program.

## **Bank Financing**

Churches sometimes find it convenient to fund a project through a local bank. Repayment of loans can span as much as 10-15 years. Fees may include loan-origination, appraisals, recording, and others. Interest rates can vary substantially with market conditions, with the total cost of borrowing sometimes approaching 150% of the base interest rate. Be sure to get a letter from the lending institution confirming permanent financing and locking in a fixed interest rate before starting construction.

During construction, it is usually necessary and expedient to utilize short-term interim financing in addition to other financial arrangements. Where permanent mortgage financing has been arranged, interim financing supplements the Church's building fund savings until the project is completed and accepted by the lender. Where other means of financing have been employed, such as a bonding company or capital stewardship program, interim financing allows convenient and timely payment of construction accounts (without penalties for premature withdrawal of interest-bearing building fund deposits or delays caused by deferred receipt of

committed pledges).

## **Church Bonds**

Church bonds are another method of financing church buildings. In this arrangement, members are given the opportunity to buy bonds, and remaining bonds are sold to the community and other investors. Trust funds are set up with local banks administering the program. Repayment varies from 10 to 15 years. Interest rates are comparable to or slightly lower than bank market rates. Some bond companies are willing to purchase a portion of the issue at a premium rate with their own funds or through brokers with whom they work. With bonds, the total cost of borrowing may be equal to or even slightly higher than bank financing. But, the tax advantages of church bonds provide an attractive opportunity for church members with savings or retirement accounts to invest their funds in the building program.

# BUILDER SERVICES/CONTRACT FOR CONSTRUCTION

After completing the Construction Documents phase, the Architect assists the Church in selecting a builder and contracting method best suited for the project. Several options are briefly described in this chapter.

## **Publicly Advertised Open Invitational Bidding**

This is probably the most common contracting method. In this arrangement, General Contractors offer a sealed bid containing a fixed “lump sum” cost amount for construction of the building under a Single Prime Contract. Such bids are read aloud at the place and time specified in the Invitation to Bid. Upon consultation with the Architect, the Church will usually award the Contract for Construction to the low bidder or will reject all bids if not within budget. When bids are “out of the money”, the Church may re-bid the project as originally designed. Or, the Church may ask the Architect to revise the drawings and specifications to reduce cost and then re-issue the revised construction documents and advertise for bids again.

This method allows competitive open market bidding and offers the option of a bonded contract to insure performance. Please note that the Bonding Company can only insure, not ensure, a builder’s work. This means that the bond reduces monetary risk involved in the event of default of the Contractor, but it does not guarantee his work.

Bidding results are sometimes unpredictable due to several subjective factors. Contractors may bid abnormally high when unusually busy with other work, and fewer bids may be offered if this intensive work load is typical of the region. In contrast, an abnormally low bid may be received when a contractor is in financial distress or when substantial errors have been made in his cost estimating. Ideally, bids should be within  $\pm 5$  percent of the average of all bids. A single low bid substantially outside this range should draw suspicion, and the Builder’s credentials and references should be verified prior to awarding the contract. In some extreme cases, a low bidder will forfeit his bid bond and refuse to execute a contract due to serious errors in his bid. This, of course, is better than awarding the contract to such low bidder and then dealing with a Builder struggling to make us for his

losses by shorting the job. Bids are usually valid for 30 days from receipt, allowing time to verify bidder credentials.

Churches should be aware that the open invitational bidding method is fairly inflexible. There is virtually no control over selection of trades persons, subcontractors, and vendors. Such decisions rest with the General Contractor. Also, any post contract changes to the work requested by the Church require a Change Order. Usually, any change in contract price is in the General Contractor's favor with minimal opportunity for negotiation or competitive bidding.

Though this method safeguards the Church's interests in many ways by minimizing risks, it is not necessarily the most economical way to build.

### **Closed Invitational Bidding**

This is a variation of the foregoing method, allowing pre-selection of bidders based on their experience, reputation, and business stability. With this method, risks are reduced and quality is assured. However, due to reduction of competitive bidding, cost is usually not reduced when the contract is for a fixed amount. The cost plus a fixed fee basis and omission of the performance bond may be worth considering when dealing with a reputable builder. However, be aware that omission of the performance bond, though it offers potential for cost savings, carries some risk of cost overrun unless there is a guaranteed maximum cost included in the Contract.

### **Construction Management**

With this method, the Church selects a Construction Manager (C-M) who acts as his agent for construction. The C-M performs duties similar to the General Contractor, including coordinating the work, taking care of taxes and insurance, and furnishing required licenses and some equipment and tools. However, his compensation is based solely on a fixed fee tied to a detailed cost estimate prepared by the C-M and approved by the Church before construction begins. Therefore, he has no profit-motivated interest in the project, allowing him to truly act in the Church's interest. Technically, the project is contracted as a group of Multiple Prime Contracts for major trade work and vendor purchases with other materials

and labor being furnished and managed through the C-M. The Church pays only the direct cost of these items, eliminating the normal profit, overhead, and contingency factors associated with Single Prime Contracts with a fixed lump sum cost amount.

Cost control is further enhanced by the opportunity for continued price negotiation after project start-up for certain phases of the work. In addition, the opportunity for Change Order Extras is effectively eliminated.

Of course, these benefits are not without some risk trade-off. Since there is no single guaranteed contract amount for the project, final cost depends on the accuracy of the C-M's estimate and his ability to maintain cost control during the course of the project. However, major portions of the work are fixed cost contracts and can be bonded if desired, leaving only a relatively small portion of the construction cost at risk.

Although the construction management method of contracting offers potential for cost savings, care should be exercised to select a Construction Manager experienced in church construction with a solid reputation for cost and quality control.

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Elton L. Roe, Architect, since the firm's inception, has been actively involved in church projects with the majority of its productive effort in the field of religious architecture. Projects have ranged from very modest to large and complex facilities each reflecting the needs and budgets of the individual church clients. These projects have included sanctuaries, educational and administrative facilities, fellowship and activities buildings, day-care centers and Christian retirement center.

This broad experience base is the cumulative effect of many years of service to churches with each project receiving individualized attention. Each prospective client can expect personal service from the working principle of this firm, who will guide and direct the work from its conception, through its design development, to its construction. We listen to the client's requirements and directives working in a cooperative and responsive manner to produce a building design which is uniquely an expression of the client's own program and budget.

This firm's professional competency in church design is evident in its completed work and can be attested by its clientele. We are pleased to have served the religious community in this capacity and invite investigation of our past service record by communicating with any of our clients.

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