

The Building Blocks of Design: A Handbook for Early Childhood Development Facilities

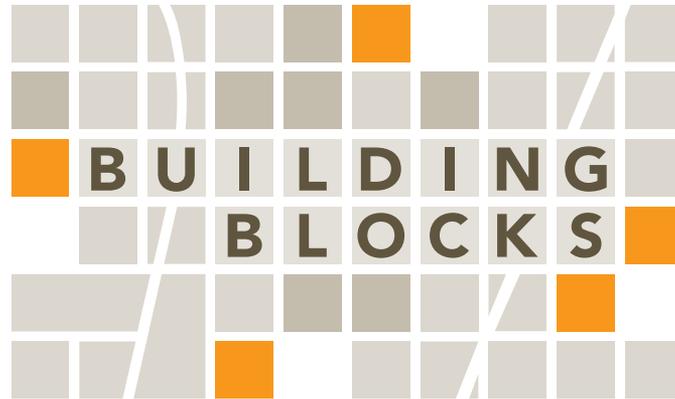


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Section 1 History and Perspectives

The Purpose of This Manual

The Building Blocks of Design: A Handbook for Early Childhood Development Facilities was produced by the Illinois Facilities Fund (IFF), and represents the accumulated knowledge and experience of more than sixteen years' of financing, designing, and developing the vital spaces in our communities where young children are cared for and educated. Early childhood development is a facilities-intensive field; the design of the physical space should be driven by principles of safety, pedagogy, and aesthetics that provide families with a warm and welcoming educational environment for their children. This manual is intended to serve as both a guide and reference tool for planning and improving centers. Whether you want to make simple cosmetic enhancements to your existing classrooms, or plan and build a brand new center, the *Building Blocks of Design* will help you realize your vision.

Throughout the industry, terminology varies widely reflecting differences of ideology, purpose, and practice. For this manual we have chosen to use the terms *centers* and *early childhood development*. *Early childhood development* is meant to encompass the variety of programs that provide care to children under the age of six, including both developmental care and early education services, whether provided together or separately. By *centers*, we mean any facilities in which these programs operate, and which promote early childhood development by providing a safe, comfortable and inviting learning atmosphere.

Learning from Experience

The issues and intricacies of developing space for early childhood development programs can seem overwhelming. As a growing body of research indicates, a suitable physical environment is essential to providing quality care, yet funding for this space—for facility construction or improvement—is sometimes impossible to obtain. Neighborhoods that need quality early childhood development programs the most are usually the communities where resources and support are hardest to come by. Successful but overcrowded programs are unable to expand, struggling families go without quality care, and disinvested communities are unable to develop valuable neighborhood resources. Typically, providers must put scarce funds towards programs with little money available for capital investment or even cosmetic improvements to their existing facilities.

These are issues that the IFF has addressed for sixteen years. Formed in 1988 to meet the capital needs of nonprofits serving low-income communities, the IFF today is one of the nation's leaders in community development finance. Working with agencies serving low-income and special-needs populations, the IFF provides financing and real estate development services for Illinois nonprofits, and supports a vital nonprofit sector through research projects and community planning initiatives.

While IFF borrowers and clients serve people of all ages, and in many capacities, throughout its history the IFF has developed a special interest and expertise in early childhood development. From its very first loan—to North Avenue Day Nursery in Chicago—the IFF has remained committed to the goal of providing safe and educational facilities to care for the children of Illinois families. IFF programs have consistently supported this endeavor through financing, real estate development, research, community planning, and public policy advocacy.

The information contained in this manual represents the culmination of this experience. The IFF's first major early childhood development initiative came in 1990, only two years into the organization's existence. The U.S. Congress had allocated \$27 million to improve care in Illinois, but the state lacked the existing facilities necessary for such an expansion effort. New centers were needed, and the IFF stepped forward with an ambitious plan.

Moving Towards a System, the statewide needs assessment published by the IFF in late 2003, documents that there are approximately 384,000 children in Illinois between birth and six years of age, in working families of all income levels, who potentially need full-day, full-year care. Currently only 52 percent of these children can be served with licensed full-day care. Profiles for Illinois community areas and additional details can be downloaded at iff.org

Under contract with the Illinois Department of Human Services, IFF launched the Child Care Facility Development Program. With financing through a tax-exempt bond issue, IFF designed and constructed seven new family resource centers. In high-need neighborhoods from Chicago to East St. Louis, these centers now provide quality care for over 1,200 children a year.

That experience was a crash-course in early childhood development—in the issues of zoning and construction codes, financial packaging, operating budgets, and design principles that are unique to the field. In the years that followed the IFF leveraged these acquired skills and lessons learned to become a leader in the field. The IFF's 1999 *Chicago Child Care and Education Needs Assessment*, commissioned by the City of Chicago, became the basis for the Children's Capital Fund (CCF), a \$28 million public-private partnership between the City and the IFF to increase licensed care. CCF is creating or expanding 17 centers for nearly 1,400 children in Chicago's highest-need communities. Additionally, in the course of managing the CCF project, the IFF successfully achieved extensive procedural and regulatory changes, which will serve as a model for center development and expedite future projects of this type.

In recent years, in partnership with community organizations, early childhood development providers, and public and private funders, the IFF also served as construction project manager on three new, state-of-the-art family resource centers in Empowerment Zone communities of Chicago. This brought more than 860 early childhood development slots to some of the highest-need Chicago neighborhoods.

IFF's experience has also proven that big improvements can come from small changes. In 1999 and 2000, in partnership with the Chicago MOST Initiative, IFF demonstrated how after-school program space can undergo substantial aesthetic or nonstructural improvements with limited budgets. The partners chose six classrooms to undergo "makeovers," and assembled teams of architects, space planners, and teachers to create cost-effective ways to improve environments. Following the MOST program, the IFF developed the SPACE for Kids program, to bring these concepts to both preschool and after-school programs.

Through this program the IFF developed standardized, cost-effective solutions—included here in this manual—to address some of the most common classroom space challenges, such as: creating quiet spaces, enhancing shared space, promoting dramatic play and gross motor play, creating home-like environments, and creating warmer and more energy efficient environments.

All together, the IFF has made more than \$16 million in loans for early childhood development projects, and managed the development of 21 centers, totaling over 800,000 square feet of space. Each of these projects presented its own challenges, and each provided valuable experience in developing classroom space to meet the economic and programmatic needs of providers, while providing an atmosphere suitable to each child's intellectual, emotional, and social development.

In 2003, the IFF's experience in center financing, facilities development, policy, and community planning came together to form Building Blocks, a \$3.5 million, five-year initiative funded by the Grand Victoria Foundation, to address early childhood development needs in Illinois. Through Building Blocks, the IFF is working with communities to develop plans, design and build new centers, and make classroom improvements in selected high-need communities throughout the state. *The Building Blocks of Design* is published as part of Building Blocks, one of many components of the initiative that will support and improve the field of early childhood development throughout the state.

Gathered from these years of experience, the information and ideas presented in this manual represent the IFF's best thinking and practices about design solutions, materials, and the mechanics and operations of centers. Our hope is that sharing this information will help the early childhood development industry develop better practices, avoid costly mistakes, and keep up with the rapidly growing demand.

Centers Financed by the Illinois Facilities Fund (IFF)

- Abraham Lincoln Centre
- Almost Home Child Care, Inc.
- Alton Day Care and Learning Center
- Bethesda Community Children's Center
- Bloomington Day Care Center, Inc.
- Broadway Children's Center
- Carole Robertson Center for Learning (2 projects)
- Catholic Charities of Chicago (2 projects)
- Chicago Administrative Services
- Chicago Commons Association (2 projects)
- Chicago State University Child Care Center
- Child Life Community Day Care and Education
- Children's Center of Cicero and Berwyn
- Chinese American Service League
- Chipper Pre-School and Kindergarten
- Christopher House Family and Child Development
- Community Childcare & Service Center Association
- Community Mennonite Church of Markham
- Community Opportunities
- Decatur Macon Counties Opportunities Corporation
- East Moline Citizens for a Community Center
- Easter Seals Jayne Shover Center
- El Hogar del Nino-Cuidar
- Embarras River Basin Agency
- Equipping the Saints Ministry
- Erie Neighborhood House
- Ezzard Charles Montessori Day Care Center
- First Presbyterian Church of Chicago
- First United Methodist Church of Jerseyville
- Gads Hill Center
- Horizons Children's Center
- Howard Area Community Center
- Hull House Association
- Infant Welfare Society of Evanston
- Kids Hope America
- Lessie Bates Family Development Center
- Little Bear Child Development Center
- Little Bo-Peep Child Care Center
- Love Community Church
- Lutheran Family Mission
- Lutheran Social Services of Illinois
- Maranatha Christian Pre-School Academy
- Metropolitan Family Services
- Nehemiah Expansion
- New Earth Child Center
- New Hope Center
- New Life in Christ
- Orton Keyes Day Care Center
- Proviso Day Care Center
- PUKA Preschool
- Reba Place Day Nursery
- School for Little Children of Evanston
- Southside Educational Center for Youth
- The International Learning Center for Early Childhood Development
- Wee Care Christian Learning Center
- YMCA of Peoria
- Youth Service Bureau of Illinois Valley

**These projects are in progress and will be completed in 2005.*

Centers Developed by the Illinois Facilities Fund (IFF)

**Nia Family Center
Chicago Commons
Association**
744 N. Monticello Avenue
Chicago, Illinois

**Jubilee Family
Resource Center
Carole Robertson Center
for Learning**
3701 West Ogden Avenue
Chicago, Illinois

**West Englewood Family
Resource Center***
**Children's Home and
Aid Society**
1701 West 63rd Street
Chicago, Illinois

**Erie Community
Center
Erie Neighborhood
House**
1701 West Superior Street
Chicago, Illinois

**Lessie Bates
Davis
Neighborhood
House**
145 State Street
East St. Louis, Illinois

**Little Village Family
Resource Center
Carole Robertson Center
for Learning**
2929 West 19th Street
Chicago, Illinois

**Uptown Family
and Child
Development Center
Christopher House**
4701 North Winthrop
Chicago, Illinois

**Sinai
Community Institute
Gads Hill
Center**
2653 West Ogden Avenue
Chicago, Illinois

**Chicago Lawn
Center
Metropolitan
Family Services**
3215 West 63rd Street
Chicago, Illinois

**St. Joseph Early Childhood
Center Catholic Charities
of Chicago**
4800 South Paulina
Chicago, Illinois

**Concordia
Child Care
Center***
3300 North Whipple
Chicago, Illinois

**Howard Area Family Center
Howard Area Community
Center**
7510 N. Ashland Avenue
Chicago, Illinois

**Orton Keyes
Day Care Center
Circles of Learning**
2907 North Main Street
Rockford, Illinois

**Effie Ellis Community
Center***
**Centers for
New Horizons**
5140 South Federal
Chicago, Illinois

**New Horizon Family and
Child Development Center
Decatur Macon County
Opportunities Corporation**
275 East Condit Street
Decatur, Illinois

**Our Lady
of Lourdes
Catholic Charities
of Chicago**
1449 South Keller
Chicago, Illinois

**Paulo Freire
Family Center
Chicago Commons
Association**
1653 West 43rd Street
Chicago, Illinois

**New City
Child Care Center
Chicago Commons
Association**
4600 S. McDowell Avenue
Chicago, Illinois

**Little Village
Children and
Family Center***
El Valor
4303 West 24th Place
Chicago, Illinois

**Elgin Family
Resource Center
Kids Hope
America**
210 National Street
Elgin, Illinois

**Community Mennonite
Early Learning Center
Community Mennonite
Church of Markham**
3215 West 162nd Street
Markham, Illinois

The IFF Center Design Philosophy

The importance of early childhood development centers to the day-to-day life of a community cannot be overstated. In disadvantaged neighborhoods all over the country, centers bring needed jobs and assets, provide a safe haven for children, enable parents to work, and provide a focal point for services and planning efforts that build stronger communities.

The IFF believes that every center should itself be viewed as a community, and the classroom is the home, the communal center of that community. Just as in the home environment, centers should have different spaces for different functions. Some spaces in the home are open, and allow more freedom of movement, such as living rooms or play rooms. Others are cozy spaces that are devoted to specific activities or functions, such as kitchens, bathrooms, and bedrooms. Similarly, quality early childhood development spaces should not be devoted entirely to an open floor space, nor to a series of rigid, static zones. Classrooms should have spaces devoted to “flow” or movement, and smaller spaces that are for quiet activities for small groups or a single child. Classroom spaces should reflect a balance between filling a room with toys and décor and maintaining order. Cherished items add warmth and a home-like feel in small amounts—and a sense of chaos and clutter when too much is added.

Just as the classroom represents the home, the center is the larger community. Classrooms are grouped in zones and, for a larger facility, these zones reflect several components of the community. This community is an environment for adults and visitors as well as for children. Teachers need quiet areas for themselves, parents should feel welcome and comfortable, and administrators need private meeting places. Children and adults alike benefit from entry areas that allow for a smooth flow of traffic and feel secure but not intimidating. Creating spaces for adults offers the opportunity to demonstrate and foster a community-building process.

Outside the classroom children and adults gather in areas designed for commercial purposes. They meet and interact with other children and adults in the playground, the Gross Motor Room, or other gathering areas. Children may see other children’s artwork in the corridors, view kitchen staff at work, or observe adult interactions. These developmental experiences are actively reflected in the facility design, suggesting where artwork and windows should be placed, how each zone should be situated, and the interactions that can be fostered by the layout of the community.

These principles are reflected throughout *The Building Blocks of Design*, both in the material presented and in its organization. The IFF philosophy suggests an ideal to strive for, while acknowledging the limitations of your own space. Even with restrictions of space and budget, careful consideration of the function of each space and the flow of life within your center can help you make changes that improve operations, stimulate interaction, and help foster a true sense of community.

Acknowledgments

The Building Blocks of Design is being published as part of the IFF's Building Blocks initiative funded by the Grand Victoria Foundation (GVF). Building Blocks provides community planning for early childhood development in low-income communities with a primary goal of improving the allocation of public and private resources. One of the few statewide philanthropic entities, GVF shares the IFF's goal of increasing and improving licensed care in Illinois, and publication of this manual would not be possible without the foundation's support.

Thanks are due to the many architects with whom the IFF has worked on early childhood development centers over a dozen years. Special thanks go to Heidrun Hoppe, AIA, who has become one of the foremost specialists in early childhood development facility design. Heidrun spent countless hours with IFF staff on the preparation of this design manual.

Thanks are also due to Carol Ross Barney of Ross Barney+Jankowski; Jack Murchie of Schroeder Murchie Laya Associates; and Jim Miller and Maria Segal of Holabird and Root LLP for their commitment to the highest standards of design for all communities and their belief in the right of all children to experience the joys of discovery and learning that a well-designed environment offers.

The IFF recognizes Anita Olds, PhD, posthumously. Anita trained IFF staff to fully understand the principle that classroom design and early childhood development must be fully integrated.

Originally written by Joe Neri in his role as Director of the Chicago Children's Capital Fund, together with former IFF Real Estate Services Project Manager Edgar Velazquez, for the many architects undertaking center design in Illinois, this manual has been restructured to be of use to agency directors, managers and executives. Responsible for the re-draft are Gabriella DiFilippo, Vice-President of Real Estate Services; Elizabeth Evans, Director of Government and Community Affairs; Liz Reyes, Assistant Director of Real Estate Services; Heather Heaviland, Community Initiatives Manager; Michael McDunnah, Resource Development Manager; Dan Alexander, Senior Project Manager; Kirby Burkholder, Senior Project Manager; Ayse Kalaycioglu, Construction Manager; and Jennifer Overton, Manager of Closing and Escrow Services. Joe Neri is now the Vice President of Lending at the IFF.

How to Use This Manual

To assist you in reaching this ideal, the *Building Blocks of Design* will help you:

- Learn how design and developmental practices are linked and integrated.
- Follow a logical, comfortable series of steps to accomplish your goals.
- Make the best use of your financial resources.
- Incorporate the best practices of center design into your new or remodeled facility.

Recognizing that few projects have unlimited space and funds, this manual is designed to be useful for projects of all sizes: from projects that focus on specific improvements to a building or classroom, to expansion or renovation of existing facilities, to new construction and major renovation.

The information presented starts with a discussion of classrooms and smaller projects, while discussing finishes, storage, lighting, and considerations common to projects of all sizes. The section A “*Day in the Life*” will help you think about how individuals interact with and within your facility. The first project section, *The Small or Targeted Project*, addresses improvements to individual “homes” and havens within the center with smaller projects such as classroom and cosmetic improvements. Working from the classroom out, we then consider how these fit into the larger center community and delve into major renovations and new construction. We call this process “design from the inside out.”

If your project is small, you may not need the information provided for those who are pursuing large new construction projects. Then again, you may find that reading through the information about large projects helps you plan for future activities and growth. For those planning major renovations or construction projects, we recommend you read the whole manual, from start to finish.

Information presented here is based on Illinois regulations and the IFF's experience working in the State of Illinois, and incorporates basic principles of municipal and state codes and the licensing regulations of the Department of Children and Family Services (DCFS). However, it does not replace the very important step of investigating your own governing building codes, ordinances, and the specific licensing requirements of DCFS or your state licensing agency as they apply to your center. Further, none of the information presented is intended to replace the consultation of licensed architects, general contractors and other skilled professionals.

Section 2 Getting Started: Thinking and Planning First

Whether tailoring a project to an existing facility or starting from scratch, beginning with a clear assessment of program needs and goals and then developing a facilities plan that responds to those is always the best way to start.

Assessing Your Needs

Start by performing a needs assessment and thinking through your program goals for the next three to five years. Your agency's Board of Directors are often important participants in this process and may even take the lead on this assessment. Site Directors of multi-site agencies as well as parents, if they are appropriate to your governing model, may also contribute valuable insights. Consider the questions in the worksheet *Assessing Your Needs* as the first step in your planning process.



Worksheet

Assessing Your Needs

Program Goals

- Do you anticipate program growth or decline, or other program changes in the next three to five years?
- What is the demand for your services?
- What is your organization's current ability to meet these demands? What would you need to change to meet these demands?
- What are your organization's short-, medium- and long-term goals?

Space and Growth Needs

- Does your current space meet your organization's present needs? How much space do you currently use? How much space do you need?
- Can you consolidate programs from multiple sites into one location? Would this reduce costs and enhance programs?
- If you determined that your organization's programs would change in the next three to five years, what space would the program shifts require? Can your current space accommodate these future needs?
- Do your programs require specialized space (e.g., for privacy, flexibility, traffic flow, circulation)?

Board Commitment

- Does your Board of Directors participate in the long-term strategic planning process? Are they committed to the organization's short-, medium- and long-term goals defined above?
- Is there consensus to undertake a real estate development project?
- Are Board members willing to provide leadership and support to achieve facilities goals? Are they willing to serve on a facilities planning committee?
- Does the Board have experience undertaking a capital campaign? Are they prepared to commit additional time and resources for training, planning and funds solicitation?
- Will the Board support taking on debt to finance the project?

Worksheet

Assessing Your Needs



Revenue Stream and Financial Stability

- Are you running large deficits or surpluses at the end of the year?
- Are you able to meet expenses on a regular basis?
- Are you dipping into unrestricted net assets at the end of the year?
- Do you have a source of cash, line of credit, or cash reserve to meet timing and cash flow issues?
- Does your organization have secure revenues that would allow you to cover long-term debt payments (e.g., program fees, government grants and contracts)?
- Will your government contracts reimburse you for mortgage principal payments? Interest payments? Depreciation expenses?
- Do you have capital available or potential sources identified?

How you answer these questions will help you to determine the scope of project you're ready for. A clear need for additional space and a demand for more services, combined with a committed Board and stable revenue stream, all suggest that you're ready for a bigger project. If you have a smaller project in mind, these things may not be as important. However, considering where your program is headed will help you determine how much you want to invest in your current facility. For example, if your program is rapidly outgrowing your existing space, you may want to start planning for a move instead of investing in additional improvements.

Supporting Curriculum through Design.

Sometimes we think of program and curriculum planning as two separate things. In reality, they are closely intertwined. The learning and development goals you've set should be reflected in the environment you create. In other words, considering "what, when and how" you will achieve certain objectives is incomplete unless you consider "where" they will happen. So, space planning and curriculum planning go hand in hand. Make a list of your curriculum goals and the type of spaces that would help you achieve them.

In the philosophy of your program, you may give more or less weight to different areas, and how you organize your space should reflect your objectives.

Setting Goals

Once you've completed your needs assessment, your first task will be to define your vision for the project. It is best to avoid setting a specific agenda such as "buy a new building" or "renovate the kitchen" until you've worked through exactly what you hope to accomplish. Most likely, you'll find that considering your real, underlying goals will lead you to a better understanding of how to accomplish your vision and what your next step should be. (You may discover, for example, that renovating or adding on to your current space is a better solution than moving to a new facility.)

Every agency has its own vision and purpose and should ideally have or make a list of project goals that support them. These goals should be as specific as possible, such as "provide a playground just for toddlers."

The following list contains a sample of the goals you may have for your project.

- **Curriculum goals:** Improve the ability to fully present your chosen curriculum; reorganize classroom space to support more reading and art activities; change or expand your curriculum; convert a space for gross motor activities.
- **Quality of care goals:** Bring in more natural light; add toilet facilities to a classroom; provide more outdoor play opportunities; provide better accommodation for children with special needs; improve security.
- **Program goals:** Add infant, toddler, after-school or other programs; provide parent enrichment, staff development, more community services, or nighttime care; expand into a new community.
- **Management goals:** Increase revenue; reduce expenses; become more self-sufficient; move away from rental of facilities; improve staff retention, increase staff salaries, or offer more training.
- **Social goals:** Provide a healthier, toxin-free environment; use facility as an example of "green" or energy-efficient development; reduce operating costs.

Here are some examples of overarching developmental goals and sample space considerations to get you started:

Independence and Interdependence.

Are sinks low enough so children can wash their own hands or do they need adult assistance? Are there small tables that promote work in groups of two or three?

Trust.

Is toy storage accessible to the children? Can they take ownership of their space?

Sensory Skills.

What sensory skills does the classroom engage? Is there access to the out-of-doors? To windows?

Psychological and Emotional Development.

Where can a child go to calm him or herself? Does that space feel safe and quiet?

Cognitive Skills.

Are there opportunities for learning spatial relationships like “up” and “down”?

Defining Your Project

Thinking through your program goals and vision should help you get a clear sense of exactly what kind of project you should undertake. Your budget constraints will also help determine how many of your goals can be achieved.

The result of this process should be a specific project:

- Renovating one or more classrooms
- Modifying or renovating your existing facility
- Adding on to your existing facility
- Moving or expanding into an existing building to be renovated
- Building a brand-new facility on a new site, or on your own land

Early Bird Day Care: Making Strategic Facilities Decisions

When facilities and equipment age, improvement costs escalate and may require an agency to make tough decisions about resource allocation. This was the situation Early Bird Day Care* faced. After several years of owning and operating multiple sites in Rivertown, Early Bird's facilities and equipment were aging and the neighborhood was changing. The center needed to decide how to invest their limited funds in a way that maximized their ability to provide services. Early Bird started by convening a sub-committee of its Board of Directors. Using the goals laid out in their strategic plan, Early Bird identified their program priorities. The agency then hired the IFF to conduct an assessment of each existing facility. IFF first looked at the life safety, code, handicap accessibility, building systems and maintenance issues faced by each building and used this information to estimate improvement costs. The IFF and Early Bird then looked at the neighborhood demographic trends and competition within its various communities. They used this information to project revenue for Early Bird's prioritized programs. The IFF summarized the information into a tool that allowed Early Bird to conduct a cost-benefit analysis on each facility. Early Bird was able to make long-term strategic decisions that maximized impact and minimized loss.

**While based on actual IFF experiences, names for all agencies described in this manual have been changed.*

Putting Together a Team

When the Project is Small

For large-scale projects, you may want to involve multiple people from your agency and hire outside consultants. For classroom makeovers, cosmetic and other improvements that don't involve construction or building system changes, one individual may manage the process with input from those affected.

It is always a good idea to engage one or a few of the space's adult end-users in the design process. Not only does this give them ownership of their new space, but it will also bring valuable insights. For example, the teacher will probably have a good idea of the play areas children use the most and that need the most space.

As the project scale increases, so does the need for expert help. In many cases, you may need to bring on an architect and/or general contractor. An architect can help to make sure all your plans meet local codes, use space efficiently and effectively and achieve the goals you've defined. Many architects specialize in designing centers and can offer creative solutions to your space dilemmas.

When the Project is More Extensive

For larger projects that involve construction, organizations will often put together an internal committee to handle in-house planning and a Project Team to manage the project as a whole. This internal committee functions like the planning team for smaller projects.

The Project Team should include the center director and/or other administrators and Board members, as well as teachers and parents. Involving a large group can take longer, but may result in good ideas, resolve misconceptions and encourage greater investment in the outcomes.

Keep in mind that your team will meet and work together over a long period of time, so it's usually best to limit the number of members to the essential personnel, in order to help keep the team from becoming unwieldy. Each Project Team member should be able to represent their larger organization or department and bring to the worktable relevant ideas and input from staff and other members of the organization. It is especially important to secure the involvement of any influential people within the organization who will need to approve final plans.

Members and associates of your Board may help find professionals that can assist with your project at reduced or no cost, if you are working on a tight budget. We recommend planning your facility with an architect, but also employing a contractor or construction estimation firm to provide an independent expert opinion on probable construction costs. This affords the owner the greatest likelihood of achieving the best design possible within the budget.

To get you started, below is a list of people you might want to consider including on your Project Team, with some related observations. Your Project Team members may include:

- **Agency Representative(s):** Ideally, the agency representative will have decision-making capacity, financial expertise or knowledge and experience in the early childhood development field. Often, the Executive Director or Site Director fills this role. However, it may sometimes be advisable to bring in additional representatives for certain key meetings, such as site walk-throughs, color selection, and other occasions when the material presented at the meeting can't be easily communicated back to the agency by the main contact.
- **Early Childhood Development Point Person:** If the agency representative doesn't have direct classroom experience, involve someone who does have first hand knowledge of the classroom. This point person can provide useful insights regarding issues of day-to-day usage that affect planning and design.

- **Financial Representative(s):** At the point in the process where financial matters are discussed, you'll want to include representatives of the people and organizations involved in financing the project, such as the agency Chief Financial Officer or Comptroller and outside entities like the IFF, other lenders or development coordinators.
- **Project Manager:** This person is responsible for leading and coordinating all aspects of the project including site selection, design and construction. The project manager will be the main point of contact for the team and will coordinate communication between the members. Often, the project manager acts as the "owner's representative" to offer a level of expertise that may not exist on staff. Many professionals specialize in fulfilling this function and can be hired as a consultant.
- **Architect:** Involving your architect early on can help you make site, programming and project feasibility decisions. However, if it's not yet clear what services will be offered, it may be better to bring the architect on board once the basic parameters of the project have been established.
- **Engineering Team:** This category includes mechanical, electrical, plumbing, fire protection, civil, structural and landscaping service providers. It may not be necessary to have this entire team present at every meeting, but individuals can be brought in when their particular field of expertise is on the agenda. These team members are usually subcontractors to the architect and your architect will know when their input is needed.
- **Cost Estimator:** The cost estimator can be a subcontractor to the architect, or hired directly by the owner or the project manager. These services might be provided by the general contractor (see below).
- **General Contractor (GC):** In some cases, the GC might be part of the team only during the construction process. In other cases, you might want to bring the GC in earlier to provide pre-construction services such as cost estimating, comparison of construction options and so forth.



Worksheet

Finding the Right Professionals

It is important to choose professionals who are a good fit with your agency and project. In particular, you should do the following:

1. Collect a List of Candidates

- Ask other organizations for recommendations or contact groups that have recently completed projects that involved architects or project managers.
- Pre-qualify architects or project managers according to your criteria, such as:

The reputation and relevant experience of the firm.

The track record of the candidate as confirmed by referrals.

Evidence of repeat clients and the candidate's recent project history.

The design quality and style of the architectural firm's work.

2. Solicit and Review Proposals

- Develop a Request for Proposal (RFP) that covers your selection criteria.
- When reviewing proposals, it is important to consider:

The proposed Project Team, including the qualifications of specific individuals assigned to the project within the firm.

The reputation and relevant experience of the architect or project manager and team members.

The budget-and-schedule track record of the candidate.

The size, area of specialization and length of practice as it corresponds to the size and type of project proposed.

The individual or firm's familiarity with local building conditions, codes and approval processes.

The proposed construction monitoring process.

The fee proposal.

Worksheet

Finding the Right Professionals



3. Interview the Candidates

- When interviewing architectural firms, be sure to ask about:

The level and type of involvement one can expect from the project's principal architect and key personnel.

The architect or architectural firm's approach to cost estimating and cost control. Secure evidence that the firm has designed projects that have been on budget; ask about the average number of change orders (changes in construction costs resulting from design or construction errors, unforeseen conditions, or agency requests) on projects.

The firm's experience in getting local approvals. Navigating the local building department can be a complicated and challenging process and individual inspectors interpret the code in a number of different ways. Look for an architect that has experience with similar projects, understands the code and has a track record of successfully completed projects within your municipality.

What, if any, set procedures the candidate has for solving design problems.

The firm's approach to the design of the building.

The firm's experience working with nonprofit agencies or relevant projects.

Relationships with special technical consultants the project will require.

- When interviewing project management firms be sure to ask about:

The level and type of involvement one can expect from the project's key personnel.

The firm's approach to ensuring that projects are completed on time and on budget.

The firm's experience working with nonprofit agencies or relevant projects.



Worksheet

Finding the Right Professionals

4. Check References

- This final step is critical. Your principal question should be aimed at discerning whether the previous client would use the same architect or project manager again, and why or why not. Other questions to ask references include those listed above under the interview questions.
- Feel free to request a tour of facilities designed by the architect or managed by the project manager.

5. Negotiate a Contract

- Select a firm and then enter into a contract to outline the firm's services.
- AIA (American Institute of Architects) contracts are the industry standard for architects, but can be viewed as a starting point.
- Review the contract carefully with an attorney familiar with the standard practice of construction.
- The contract with the architect governs the relationship and lays out the responsibilities of both parties, cost of the work, instruments of service, change in services, mediation, arbitration, claims for consequential damages, miscellaneous provisions, termination or suspension, payments to architect, scope of services and compensation.
- Typically architects and project managers are paid from the project budget.

Bright Beginnings: Making the Most of the Project Team

For several years, Bright Beginnings made do with their leased space. When the landlord put their building up for sale, the agency decided it was time to think about a better, longer-term option. Bright Beginnings assembled a team that included, for the initial assessment, a project manager, an architect and a sub-committee of its Board of Directors.

Bright Beginnings' first step was to convene a Board sub-committee. This committee was charged with identifying, based on the agency's strategic plan, what programs were the highest priorities and how much space they needed. Because some of Bright Beginnings' funding and program agreements limited their geographic boundaries to a high-rent area, they needed to decide which programs were central to their goals.

Once these decisions were made, Bright Beginnings hired the IFF as the project manager. Because all space parameters had been identified and pre-approved by key decision makers within the organization, Bright Beginnings was able to make the most of its contract with the IFF. Instead of paying for IFF staff to assess spaces for programs that they had not yet agreed upon, the clearly defined mandate allowed the IFF and the project's architect to focus on leading the organization through the planning of new and accessory spaces for program growth and expansion. Having a project manager helped the organization evaluate options for leasing versus buying and assess each possible location's fit with the established space needs. As a result, Bright Beginnings settled into a new, flexible space that meets its needs today and well into the future.

Defining Project Constraints

Once your Project Team is assembled and your goals are set, you're ready to define the parameters of your project location and budget. If you will be doing a minor renovation or makeover of an existing site, the project budget will be the primary constraint. For major renovation, additions or new construction, location options also define your project plans. Your architect will play a central role in helping you assess potential sites. Major considerations for your architect and team are outlined in Section 4.

The Budget

Establishing a realistic budget is a key element in the success of your project. You may find you need to prioritize your project goals in order to stay within your budget. Once you've put together your Project Team, some of its members (especially your financial representatives, project manager, architect and contractor) may be helpful in refining your sense of what can be accomplished with your available funds or to set your fundraising goal.

You may find that budget issues will constrain your design plans, with your total budget determined by the amount of debt your organization can support and the availability of government and private grant funds. In some cases, an organization may go through the entire design process, develop a project budget and then make a commitment to raising the funds. Keep in mind, however, that the fundraising process can be lengthy and may extend your project timeline considerably.

For minor renovations and cosmetic improvements, furnishings, equipment and construction fees, and materials will consume most of your budget. For more extensive renovations, the total development budget includes not only the cost of construction and property acquisition ("hard costs") but also all the peripheral costs ("soft costs") that will be needed. Soft costs include architectural, engineering and legal fees, insurance and financing costs, and closing costs. While many factors will determine your particular budget, the *Sample Budgets* give you an idea of how costs are distributed and what to include in your budget.

Sample Budgets

Classroom Makeover
Cosmetic improvements (new flooring, paint and furnishings) for a 900-square-foot classroom.

\$200,000 Renovation
Acquisition of a well-kept 3,000-square-foot facility and conversion for use as an early childhood development center.

\$700,000 Expansion
Purchase of and expansion into a 5,800-square-foot space adjacent to an existing center.

	Classroom Makeover	\$200,000 Renovation	\$700,000 Expansion
Property Acquisition		100,000	235,000
Construction Costs	4,200	60,000	296,400
Architecture and Engineering		7,900	66,950
Soft Costs (Legal fees, inspections, permits)		25,500	34,910
Project Management Fees		5,500	14,630
Furniture and Equipment	3,575	39,000	30,000
Construction Interest			27,910
Total	\$7,775	\$237,900	\$705,800

A “Day in the Life”: Understanding the Needs of Facility Inhabitants

Every day, children, teachers, parents and managers come into the classroom or center. They traverse the same corridors and some inhabit the same spaces all day long. Yet each experiences the facility in a different way, and these experiences frame different points of view that will likely surface when facility planning begins. Each group knows what aspects of the existing building interfere with their daily activities, and fixing them will rank high among their priorities. Understanding the interests and priorities of each of these groups will help the internal committee and Project Team make informed decisions.

The observations below reflect the experiences of IFF clients. We recommend you map out your own “Day in the Life of Your Classroom” and “Day in the Life of Your Center” before beginning your project. If possible, have a member of your Project Team who does not regularly use the space complete this. Ask him or her to spend a day—from open to close—observing both the classroom and center. Throughout each phase of the day, the observer should make careful notes reflecting what people do and where they go.

Interviewing or surveying parents, teachers, managers and children will also help the observer get a good idea of the facility’s issue areas. The interviewer might ask what bothers them the most, what they like the most, what they’d like to change and so on. Parents and teachers may also have had experiences in other centers that they can compare with your center: Ask them what they liked better at the other facility.

The Child’s Perspective

For most children, interaction with the center begins at the door. While architectural style or a decorative façade may not interest the child, whether the center is welcoming or not will have an impact. Is the doorway large and intimidating? Does it feel like home?

Once inside, curiosity and play take over. Windows, glass doors and peek-through windows facilitate exploration, while solid doors and walls inhibit. Likewise, the ease and readiness of opportunities for engaging in messy, outdoor or other active play are priorities. Is art play clean up difficult, making it less likely that it will be available? Is the playground far away, limiting trips?

What can the children do themselves: Are sinks low enough for child access or must children wait for teacher assistance? Bathroom location presents similar concerns. A child may not want to leave the castle he just built for a long trip down the hall, but may not mind if facilities are just steps away. As he builds the castle, traffic may also be a concern. A building area located in the middle of the room, where others are likely to trip over and destroy castles or other creations, can be a frustration. And, as the day progresses, the opportunity to release energy becomes important. If the need for high activity cannot be expressed, frustration can build.

Conducting a “day in the life” of your classroom and center will help to identify what areas of your classroom and center promote similar responses. Understanding the child’s experience involves both observation and viewing the space from their perspective.

As you begin to observe, ask yourself: What is the first thing the children see, hear and touch as they enter the classroom? What attracts the children’s attention? How do they react: Are they calm? Excited? Now notice how the children move through and interact with the room. Do they know where to find play items? Does the room’s equipment facilitate or interfere with their play? What paths do they follow from one activity to another? Do these promote a smooth flow of traffic through the room? Or do they disrupt other play areas? As you observe, you may even want to sit on the floor to get a view from the child’s eye level. Also notice how many children are in each different area at once: Is there enough space? As the children move through the day, observe their changes in mood and behavior. How free are they to express themselves? Note the points at which independence is limited, where small groups form and so on.

The Teacher's Perspective

Like the children, teachers are generally uninterested in the building's exterior, but they are very interested in their classroom. Arriving at work, locking up personal items and hanging their coats in a designated space is the first priority. As the day progresses, teachers, like most people, want to do their job as easily and comfortably as possible. Aspects of the room that make their work difficult will typically rank high on teachers' priority lists. For example, if window blinds do not effectively block daylight during naptime, then children might not be able to sleep and this negatively impacts the teachers' experience. Likewise, the inability to control room temperature is a frequent complaint for teachers.

Other issues that create problems for teachers are inadequate storage space for classroom materials, the inability to contain messy projects to easily cleaned areas, and having to leave the classroom to escort children to the washroom.

Adults look for and need adult spaces just as children need child-size options. While much of the room's elements are, appropriately, scaled to child-size, teachers need a place to sit during story time and an adult height countertop for paperwork. Outside of the classroom, teachers and other staff need a quiet space. When they need to take a break, is there someplace where they can go? Is it removed from children and parents? Is it quiet?

Observing the teacher throughout the day will highlight problematic aspects of the facility. Notice how the teacher moves through the classroom and center. Can he or she get from place to place quickly and easily? What interrupts their interaction with the children?

Interviews are also a good way to better understand their perspective. Teachers will very likely have a good idea of what facility issues they want changed.

The Parent's Perspective

For parents, the facility and classroom entry areas, including outside parking and walkways, are the primary locus of interaction with the building. Parents' priorities are straightforward: They want to complete pick-up and drop-off as efficiently as possible and ensure that their children are safe during the day. This means that parking should be close to the entry, entry areas should be monitored and secure, traffic should flow smoothly and quickly through the building, and parents should have enough space to help get their child's coat off and hung without entering the classroom interior. When payments need to be made, parents want a drop-off point that is close to the entrance.

If parents meet regularly with a staff person, such as a family worker, these offices should also be close to the communal areas that parents frequent the most. Notably, this may be more important than placing the site director's office in the most central location, if the site director is not the primary parent resource or contact person.

Observation of the center's morning and afternoon "rush hours" will likely highlight problematic points for parents that are specific to your facility. For example, parents who split drop-off and pick-up between two people may need space to store strollers or car seats. Be sure to note how children get to the facility: Do they arrive on foot or by car? If they're driven, where do parents park? Once parked, how do parents get into the center? Do they use the front door? The observer should also note problem areas: Are entry areas clogged? Are parents searching for a place to sit while they remove their child's boots? At what points do any of the center's users exhibit frustration?

The Manager's Perspective

The manager's perspective focuses more on general center issues and less on classrooms. In addition to a host of other responsibilities, managers must coordinate facility maintenance and repair, attract parents and donors, manage budgets and assume responsibility for the children's safety. When planning a facility, their perspective is funneled through these roles. Durable, cost-effective materials that prevent maintenance hassles are prioritized. Likewise, well-functioning heating and cooling systems that minimize staff complaints are preferred.

In contrast to teachers and children, managers are generally interested in the building's façade, traffic flow and supplementary spaces. They want a secure, appealing facility that attracts donors and new clients. Space for staff meetings and, in some cases, community gatherings, may be important places where the manager conducts his or her work.

Observing and talking with the manager about his or her role and interests will help you to understand these perspectives. If you are the manager and conducting the assessment, take time to think through what your priorities are and how they fit with those of the facility's other users. In some cases the priorities of children, teachers, parents and management will all coincide; in others, they may conflict. Managers may prefer cutting costs by centralizing toilet facilities and spending more on installing easily cleaned floors. If teachers and children were given the choice, however, they would select in-room facilities. Likewise, while managers may wish to allocate more funds to dressing up the building's façade with a glass entryway, children may prefer windows in their classrooms that they can look out of throughout the day.

Understanding the perspectives of each user will not only help you to identify potential conflicts, but also opportunities for improving your facility. In many cases, the needs of all users can be met. For example, a Gross Motor Room that allows children space to run and climb can double as a conference or community room.

Section 3 The Small or Targeted Project

Many projects focus on one aspect of the facility: You may have a specific problem to address, or want to upgrade just one part of the facility. For example, you may want to address a noise problem by installing sound-absorbing ceiling panels or add more natural light to dimly lit corridors. This section addresses some common projects that work to improve one part of the facility, including:

- Classroom layout improvements
- Adding/changing classroom furnishings
- Cosmetic improvements (flooring, ceilings and walls)
- Lighting upgrades and adding natural light
- Adding toilet facilities or diapering areas to the classroom
- Improving storage systems
- Playground improvements
- Minor additions

Targeted projects that involve building systems or other parts of the center, such as upgrading your heating and cooling system, are not specifically addressed in this section. The next section, *The Full Center*, discusses building systems.

As the heart of the center, classrooms are the area where both children and teachers spend the most time, and we begin our discussion there. We'll talk first about improvements to the classroom layout, including furnishings. Improving the classroom environment may also involve changes to your flooring, ceiling system, lighting, wall finishes, or adding plumbing fixtures. Whether your project involves all of these or focuses on one, classroom layout considerations will guide your other decisions. Similarly, if you are planning a larger project, thinking through your classroom needs first will ensure that the final structure is designed for learning.

Planning Classrooms

Quality classroom design allows for essential, age-appropriate child development activities and functions within the classroom. Clearly, these activities (and the intensity and level of these activities) will change dramatically as children grow from infancy to age five. Infants take two crib naps a day, whereas five-year-olds will often have only “quiet time” in their cots; gross motor activities for an infant include crawling up a ramp, whereas five-year-olds may master a five-foot rope climb. Enabling these activities for children with the greatest ease and flexibility for staff, while creating a homelike environment, is the goal of good center design.

Classrooms are also work environments for adults, because adults perform administrative tasks in addition to leading the activities and functions described above. Dedicated space that is conducive to this work as well personal space for each teacher are also important components of a successful classroom.

The licensing guidelines referenced throughout this manual refer specifically to Illinois. Thus, whenever we refer to “DCFS,” we mean Illinois DCFS. Be sure to check with your own state licensing agency if you are operating outside Illinois.

Balancing Children, Staff and Space

In Illinois, the Department of Children and Family Services (DCFS) regulates the maximum number of children that are allowed in each group and the allowable ratio of children to staff members, according to the age of the children. Usually it will be most cost-effective for your program to have the maximum number of children per staff member that DCFS allows. However, space limitations may not allow your center to achieve this efficiency. If the required ratio is one adult to eight children, and you have space for 14 children, you still need two adults.

Check current DCFS regulations, or those of your state child care licensing agency, to confirm the maximum number of children allowed in each classroom per age group. However, meeting licensing requirements and achieving the most cost-effective ratio is not always synonymous with designing for quality. You may very well follow an educational philosophy that recommends a lower child/adult ratio than that allowed by DCFS. For example, the National Association for the Education of Young Children (NAEYC) recommends no more than eight infants share one group space.

You may want to design classrooms that are relatively equal in size to each other and can accommodate various groups, in case your ratio of ages changes and you want to convert classrooms from one age range to another in future years. You’ll need to balance the value of this flexibility against the increased cost of providing larger rooms than are currently needed.

Also keep in mind that having half as many children per classroom, for example, doesn't necessarily mean you'll only need half as much space. There are basic requirements for furnishings and other objects that will dictate a certain minimum amount of space per classroom, regardless of the head count.

Square Feet

Determining the total amount of space available in your current or planned classroom is the first step in planning any classroom project (and in planning a full center). DCFS has minimum standards for the measurement of each classroom in square feet, based on the age of the children and the number of children in the room. This required square footage does not include teacher areas, countertop and prep areas, cubbies, storage and so forth. For a better working and learning environment, it's recommended that the DCFS standard be considered a minimum and that approximately 20 percent additional square feet be included wherever possible.

It is also a good idea to consider whether your individual curriculum requires more space. Minimum standards are exactly that—minimums. So if space is available, strive for more square feet. The Worksheet *Estimating Classroom Space Needs* can help you determine needs for meeting minimum licensing requirements, workable space and ideal square footage. If you are working with an existing classroom and expanding is not an option, use this information to guide your decisions about furnishings, storage and classroom configuration. For example, if you have a tight space it may be worth investing in a loft, storage cribs and other space-saving devices. *The Small Expansion Projects* section (p.63) provides ideas for minor changes that add square footage.



Worksheet

Estimating Classroom Space Needs

Copy & Use

The total number of square feet (SF) allocated for classroom space will depend on whether you base your space needs on licensing requirements (“Licensable”) or on the IFF suggested (“Suggested”) allocation. Allowing only enough space to meet licensing requirements may be necessary in some situations; however, it is difficult to furnish and equip these rooms sufficiently without creating a cramped environment. If possible, base your SF allotment on the IFF-suggested level. Primary square footage needs refer to the amount of actual finished floor space. Secondary square footage is for cabinetry and countertops, cubbies, closets and other fixed elements of the room. Twenty SF is a general guideline for planning; however, less space may be needed in some classrooms.

Age Group	Licensable		Suggested	
	Primary SF/child	Secondary SF/child	Primary SF/child	Secondary SF/child
Infant	55	20	75	20
Toddler and older (through After-School)	35	10-15	40	15-20

Computing Square Footage Needs:

To determine how many square feet (SF) you need for each classroom and all together, complete the following for each classroom. Then, add them together. Example. For an infant classroom with 8 children, based on the suggested space:

Infant Room A	:	8	X	(75	+	20)	=	760 SF
	:		X	(+)	=	
	:		X	(+)	=	
	:		X	(+)	=	
	:		X	(+)	=	
	:		X	(+)	=	

Classroom Square Footage Needed: _____

Planning classroom layouts is a good place to involve teachers, if they are not already. They know the environment best and can be especially helpful for providing information about traffic flow through the classroom.

Laying Out Your Classrooms

After completing your “Day in the Life of Your Classroom” project, you should have a good idea of the priorities for each classroom. These will help to guide your layout decisions. In addition, classroom layout should achieve five general goals:

- 1 Adequate space for all different play types and classroom functions**
- 2 Unobstructed circulation**
- 3 Easy access to resources for both teachers and children**
- 4 Effective use of the room’s architectural features (windows, doors, corners)**
- 5 A comfortable, safe and stimulating environment**

The first step in working toward these goals is dividing the classroom into zones. Ideally, classrooms should be zoned to have both wet areas and dry areas.

The wet area is a high-activity area with surfaces that are easy to clean and relatively maintenance free. The dry area offers a softer space with a more homelike feel, where children can read, play with toys and listen to others. Within each of these areas space will be needed for a variety of different functions. The *Classroom Layout Checklist* on pages 41-42 lists each general function and can help you think through how much space is needed for each area.

The wet or “messy” area, with its vinyl floors and easy clean up, is ideal for classroom entry and exit, water play, and the preparation and consumption of meals or snacks. From the child’s perspective, it’s better to change wet boots before trampling across the rug where she will later sit and play. From the teacher’s perspective, there is no time for clean up when the whole room becomes a “messy” area. Therefore, the location of this area, which covers approximately 50 percent of the room, should be adjacent to the room’s entrance and water source.

Wet Area Tips: Bottle prep and work area

Ideally, each classroom's wet area should have a bottle prep area (for infant and toddler rooms) and a work area that can be combined with an area for arts and crafts projects requiring water and storage. In some cases, these areas can look and be laid out somewhat like a home kitchen, although they should not be used for any food preparation other than bottle warming.

The work area should include a countertop, storage cabinets and a wide, deep sink with a gooseneck faucet and a flexible sprayer. For toddler and preschool classrooms, a child-height sink and counter is desirable, if your budget allows.

This area might also be combined with space for the teacher to use the telephone, do paperwork and keep track of children's locked medicine cabinets and schedules if no separate teacher's counter or desk is provided.

If at all possible, this counter and storage area should be made wheelchair-accessible for children and staff with special needs. (In fact, this may be required by local codes.) Infant/toddler rooms should include space for a refrigerator and dishwasher. If these are provided, they may need to comply with local codes and regulations (including Health Department requirements), so it will be important to check with local authorities. (See *Adding Toilet or Diaper-Changing Facilities* (p. 49) for more information.)

The dry area is usually carpeted and includes games and toys, as well as ramps, lofts and cribs (in infant/toddler rooms). Existing architectural features (or new ones, if you're constructing a new space) can help to determine ideal locations for different activities in the classroom, particularly within the dry area. For example, if there is a lowered ceiling in one part of the classroom, use this area for a distinct area like dramatic play.

Similarly, take advantage of varied light levels in the classroom, near and away from the windows, to set up different activity areas. Daylight encourages active play in larger groups, while softer light encourages quiet play, smaller groups and napping.

Likewise, corners and areas with lower ceilings create a feeling of coziness that is ideal for quiet areas. (For that reason, it's a good idea to make an effort to keep corners free of large or wooden furnishings. Stick to pillows or other soft seating materials instead.)

In general, higher ceiling heights encourage more activity, while lower ceilings promote quieter, more subdued activities. If you're planning new construction, ceiling height can easily be varied in one portion of your classroom. Half-walls or sturdy furnishings that don't obstruct the teacher's view can also be added to create corners.

For renovations or smaller projects, suspending painted umbrellas, banners, trellises, canopies or other items is a creative way to create special spaces.

Corner guards are recommended as an excellent way to protect both children and “out corners” (those that protrude into the room) in high-traffic areas. Some are applied during dry walling and consist of a strip of PVC or aluminum that runs along the corner. Some guards can be placed directly over existing walls. These are easy to install and can be purchased from your local home supply store.

Raised platform areas also help to define different spaces. In general, these should not exceed six inches in height, unless they’re also used to store cots. Doubling as cot storage can help to save space elsewhere, but final height should take safety into consideration.

Architectural elements not only help you to decide where to locate areas for the various types of play and activities that occur in the classroom on a daily basis (such as gross motor play, structured play, dramatic play, quiet play and discovery play) but can also help to define those spaces without obstructing circulation or consuming licensable floor space. For example, lowering a ceiling height can help to create a distinct area, such as a mock kitchen for dramatic play, but does not obstruct the flow of traffic in and out. Wall coverings, platforms and pits, rugs, accent walls, decorative borders and other features work much the same way.



A built-in, child-height ledge defines the window area and allows children to peek out.



Worksheet

Classroom Layout Checklist

Copy & Use

Use this checklist as you plan your classroom layout. Unless an age range is indicated, each general area will need to have space for all of the functions listed. As you think about how much space to allocate to each function, be sure to think about the furnishings each area will need to accommodate, how many children will be in the area at one time and how active the children will be. Your program goals and the age of the children will also guide your allocations.

Wet Zone

Entry Area

- Parent sign-in counter
- 1 cubby for each child
- For Infant and Young Toddler Rooms:*
- Booty changing stool and basket

Teacher Work Space

- 1 wet counter with sink
- 1 dry counter for classroom paperwork
- File storage (if needed)
- Telephone/Intercom
- For Infant and Young Toddler Rooms:*
- Bottle prep area (including bottle warmer)
- Dishwasher (ideally)
- Formula and bottle storage

Eating and Table Area

- For Infant and Young Toddler Rooms:*
- Developmentally appropriate seating
- For 2-year-old/Older Toddler, Preschool and Kindergarten Rooms:*
- 1 seat per child for simultaneous meals
- For After-School Rooms:*
- Seating areas for games and snacks

Art Area and Clean-up Sink

For Toddler and Older Rooms:

- Wet area for art projects with a child-height sink

Diaper-Changing Area

For Infant, Young Toddler and (if applicable) 2-year-old/Older Toddler Rooms:

- Sink
- Storage for each child's changing supplies
- Diaper and waste disposal (or toilet)
- Changing table(s) (2 if shared by 2 classrooms)

Toilet Areas

For 2-year-old/Older Toddler, Preschool and Kindergarten Rooms:

- Sufficient toilets/lavatories for licensing requirements (Ideally within the teacher's view and handicapped-accessible)

For After-School Rooms:

- Sufficient toilets/lavatories for licensing requirements (Ideally within the teacher's view and handicapped accessible; check codes on gender separation)

Worksheet

Classroom Layout Checklist



Dry Zone

Quiet Reading or Cuddling Area

For Infant and Young Toddler Rooms:

- Space for at least 1 rocking chair (or, ideally, 1 rocking chair per staff)

For 2-year-old and all Older Rooms:

- Reading area, secluded as much as possible

For After-School Rooms:

- Homework area

Sleeping/Crib Area

For Infant and Young Toddler Rooms:

- Space for 1 crib per child including an evacuation crib

For 2-year-old/Older Toddler, Preschool and Kindergarten Rooms:

- Sufficient floor space for 1 cot per child

Open Play Areas

- Gross Motor play (ideally including a loft)
- Quiet play (possibly including a computer)
- Discovery play (including space for blocks)
For 2 year-old and all Older Rooms:
- Changing table(s) (2 if shared by 2 classrooms)
- Dramatic play
- Structured play
- _____ (other play area, curriculum defined)

Other Storage

- Lockable cabinet for staff belongings
- Toy/book storage
- Art supplies
- Other classroom resources

Making the Classroom Work for Different Ages

While many of the general principles of classroom layout apply for all age groups, each age group has special needs that you'll want to take into consideration in addition to the variations in licensing requirements for square footage. As you plan, however, think about maintaining flexibility in case you want to use the room for a different age group down the road.

Infant Rooms

For infant rooms, location of the sleeping area is a primary consideration. The lighting and location of the crib area needs to allow for sleeping at all times. Cribs should be located away from windows and other areas of the classroom that may be noisy or brightly lit, such as feeding areas or teacher work spaces. Ideally, sleeping areas should be illuminated by lights that can be adjusted with dimmers. (If you're doing a new construction or major renovation, confer with your architect and/or general contractor about having those installed.) Each crib will require approximately 30 square feet. It's important to note that when adequate space for and around cribs is not allocated, the room gets overrun with cribs and leaves little room for other important activities, such as crawling. (See p.46, *Furnishing Your Space*, for crib ideas and considerations.)

Rocking chairs and cuddling areas also need their own location, as do areas for play and gross motor development. In addition to cubbies for outerwear and personal belongings, the entry area will need space for boot storage and changing, ideally with an adult chair. Infant and toddler rooms may also require more workspace for preparation, storage and cleaning of bottles. In Illinois, a refrigerator is required and many centers choose to add a dishwasher as well. In addition, space will need to be allocated in one general area for diaper changing, storage and disposal. The diaper-changing area must be kept separate from the bottle-prep area for sanitation purposes and to meet health codes.

Mechanical, electrical and plumbing considerations

As you design the layout of your classroom, you may need to consult with your architect and/or general contractor about the mechanical, electrical and plumbing (MEP) implications of your design (See p. 84 *Major Building Systems* for more information).

Here's a checklist of things you may need to go over:

- Ventilation for diaper-changing areas
- Ventilation for toilet areas
- Sink placement in the diaper-changing area
- Child-height toilets and hand-washing sink
- Child-height art and clean-up sink
- Floor drain in the diaper-changing area (if not in the classroom wet area already)
- Floor drain in the toilet area
- Dimmable lights for sleeping and crib areas
- Outlets for refrigerator
- Phone jack in the teacher area
- Computer/data outlet
- Hook-up for dishwasher
- Childproof electric outlets

Location of the diapering area also affects caregiver–child interaction. Caregivers usually talk to infants while changing them—an interaction that helps with language development as the child is fixated on the caregiver's face while he or she is being changed. When the diapering area is efficiently planned, with easy access to individualized diaper supplies, caregivers can easily give the infant this important attention. Locating diaper-changing areas so that caregivers do not need to turn their heads from the rest of the infants is also important to consider. (See p.49, *Adding Toilet or Diaper-Changing Facilities to the Classroom*, for additional considerations.)

Toddler Rooms

Rooms for toddlers have many of the same needs as infant rooms, especially if cribs are used. Toilet facilities and space for toilet training are an exception. These are needed for younger toddlers and possibly for older children as well. Depending on your program goals and the age of the toddlers, you may want to allocate additional space for more types of play. If possible, you may want to add a peek-through window to adjoining classrooms for this age group and possibly for younger infants.

Preschool Rooms

Most preschool rooms need less space for teacher-led activities like diaper-changing, formula preparation and cuddling, and more space for child-driven play. Preschool children may also need larger cubbies that they can easily access. While preschool rooms don't need designated sleeping areas, because the children usually play and sleep in the same area, light control is still important. Effective blinds and lights with dimmer switches are highly recommended.

Kindergarten Rooms

Because schools and early childhood development centers are collaborating more and more, kindergarten classrooms are increasingly common. In many respects, kindergarten rooms are set up similarly to preschool rooms. However, kindergarten rooms are licensed for more children. In Illinois, as many as 30 children may be in one room. While you may not want to have this many children in one room, if you do, be sure to plan accordingly. More children in one classroom means more children will want to access each different play area at once. Additional nooks for children to escape the hubbub may also be desirable.

You may also want to create rooms exclusively for before- and after-school programs. While this guide is not targeted for these age groups, many of the same basic principles apply. *Great Spaces, Fresh Places*, available for download at iff.org, provides more ideas and tips for before- and after-school spaces.

Storage on Wheels

Make your own storage on wheels. Mobile carts are low-cost and easy storage solutions, especially in spaces that are used for multiple purposes. Stack two fruit or milk crates and put a wooden slab between them to make a shelf.

Bolt the crates together with the shelf in the middle. Nail or bolt castors to the bottom. Most local hardware and home improvement stores will carry all of these items and can help you select the right ones for your needs.

Before- and After-School Spaces

For most children arriving at the center after several hours spent seated and learning at school, three needs prevail: quiet time, burning off energy, and snacking. If you include this age group in your “day in the life” profile, the older child’s viewpoint is likely to reflect these needs. Organizing the classroom to accommodate this group involves creating spaces where kids can be alone, tables for snacks and games, and larger active areas (especially if outdoor access is limited).

More and more, preschool and other rooms are doubling as after-school spaces. Accommodating developmentally appropriate furnishings and activities in a space used for other activities can be challenging. Putting storage and other furnishings on wheels is one way to create flexibility. Sliding partitions can be useful for dividing rooms and when decorated with their own artwork give the older kids more ownership of this shared space. Creating before-and after-school spaces in dual-use areas often presents a tradeoff between ease of setup and breakdown, and spending time and effort to create a high-impact environment. Both should be considered and balanced as you plan your space.

Furnishing Your Space

The upgrading of furnishings may be a primary purpose of your project. In fact, furnishing and laying out your space go hand in hand. The type and amount of furnishings required by licensing requirements and your program goals will determine how much space is needed both overall and for each different area. No matter how many children the room will accommodate, the minimum amount of furnishings your program requires will influence the total square footage you will need.

While your particular program may suggest certain furniture decisions, such as using “real” household furnishings when using the Italian Reggio Emilia teaching model, a few general principles apply. First, include items that can be used for multiple purposes to save space; furnishings that include storage space is one way to achieve this.

Second, select furnishings that are similar in style and color to create a clean, simple look that harmonizes with the rest of the room. Next, when deciding where to place furnishings, try to avoid blocking access to windows or corners. If placing a low furniture item under a window, put pillows or other inviting items on top to encourage children to climb up and view the outdoors. (Safety considerations, and the height and sturdiness of the item, will of course affect your decision whether or not to encourage climbing.) The age and developmental stage of children that the room will accommodate also affects furnishing decisions.

Always remember to consider how new furnishings will affect the flow of traffic and potential overcrowding in a room. If you can't visualize how the piece will fit, try taping off the area it will cover so you can see exactly how much space will be left around it.

Infant and Young Toddler Rooms

For infant rooms and toddler rooms with cribs, smaller cribs are generally preferable in order to give the required two- to three-foot space around each crib. Separate storage areas for the infants are often overlooked in infant room design; storage drawers underneath the cribs can easily solve storage problems without demanding more space of the room. Evacuation cribs are cribs equipped with wheels so that infants can be transferred out of the room together in the case of an emergency.

Typically, these will not have storage drawers; however, storage space can easily be accommodated elsewhere in the room. Although DCFS allows up to 10, the IFF recommends no more than eight infants and cribs per room. More than eight overwhelms the space and caregivers alike. (In some instances, providers who have tried 10-infant rooms have later downsized to eight.)

In addition to cribs, feeding seats for each infant will be needed. To save on space, consider stackable seats that can easily be put away when not in use. Low chairs in which infants sit with their feet touching the floor are preferred over high chairs as they give the infant greater control and help with motor development. These are also stackable and help save on space. As they mature, infants between the ages of six weeks and 18 months will gradually improve their upper body control to enable feeding in the feeding seats. Staff will feed and cuddle infants between the ages of six weeks and 18 months in cozy rocking chairs; at least one rocking chair per staff should be available in the infant room.

As infants and toddlers grow, they become increasingly mobile and access to developmentally appropriate structures will encourage mobility development. Caregivers will find it tiring to protect an infant from injury while allowing a full range of explorations. A better approach is to provide toys and structures that safely encourage active play. Infant lofts, foam bolsters and an appropriately sized climber with pull-up bars that are soft and have rounded edges can achieve this goal.

Older Toddler, Preschool and Kindergarten Rooms

Older toddler, three- to five-year-old and kindergarten rooms require almost the same furnishings as infant/toddler rooms; the primary difference is the quantity and size of items. Since three- to five-year-old and kindergarten rooms are permitted to have more children than older toddler rooms, they will need more furnishings.

Cot placement and storage is one of the biggest challenges for many providers. When in use, cots can be arranged in the open group play area. If bedding is to be kept on the cots, then it should be temporarily labeled so that cots and bedding are not swapped between children. (This will limit the spread of lice and disease.) Cots are almost always stackable so that they can be stored away when not in use.

Add quality to older toddler, three- to five-year-old and kindergarten rooms with lofts for active play. Lofts provide ways for children to use their bodies and to experiment with perspective: “High, low, under, over and through.” They also often provide an ideal place for storing cots. The design of loft structures will depend on the shape of the room and its configuration with other furnishings. Be sure to check with your local licensing representatives before building your loft and work together on safety considerations. Keep your licensing representative informed of your plans as they develop.

Tables are a necessity as they are used for organized group play and arts and crafts. Round tables are the norm, but consider trapezoid tables that take up less space, are easier to move and can be arranged in various configurations to better complement different activities.

Try to incorporate movable risers that can serve various purposes. These risers are boxes without a top. They are made of wood or plastic and are designed to be movable by caregiver and child (depending on the age and strength of the child). The risers can be equipped with handles so that they can store and carry toys. They can be turned over to give the caregiver a seat in the open area so that he or she can comfortably interact with the children during play. Don't be surprised if the movable risers are incorporated into dramatic play.

Storage, storage, storage: Never underestimate your need for storage when your room caters to older children. Books will be an increasingly intriguing “toy” as the children age. While books can be stored in cubbies, bookshelves offer easy accessibility and allow children to learn to recognize and read titles.

Along with DCFS requirements, the IFF has a recommended list of basic furnishings for the older toddler, three- to five-year-old and kindergarten rooms. This list has been organized into the table below. Check DCFS standards for a complete list of furnishings and maximum number of children allowable per room.

	Older Toddler	3- to 5-Year-Old	Kindergarten
IFF Recommended Number of Children	16	20	20
Furnishings			
Cots	16 stackable	20 stackable	20 stackable
Tables	2 trapezoid tables	4 trapezoid tables	4 trapezoid tables
Stackable chairs	One per child	One per child	One per child
Loft	Toddler loft	Size appropriate loft with cot storage below	Size appropriate loft with cot storage below
Risers	as needed	as needed	as needed
Storage	16 child cubbies	20 child cubbies	20 child cubbies
Storage	Bookcases	Open shelves	Open shelves
Storage		Bookcases	Bookcases
Creative Play	Water/Sand Table	Water/Sand Table	Water/Sand Table
Creative Play		Easel	Easel
Miscellaneous	Diaper-changing station		

Adding Toilet or Diaper-Changing Facilities to the Classroom

As your “day in the life” project likely revealed, having toilet facilities in the classroom is a priority for children and teachers. Your project may involve adding a toilet room to one or more of your classrooms. Alternatively, you may be converting a room for infant or young toddler use and need a diaper-changing area. If adding either type of area is your goal, the first step is to determine, with your architect, how much space is needed for the toilet or diapering area, how much space will be left in your classroom once the area is added, and whether or not the leftover space is adequate. As a part of this process, your architect can help you determine if a closet or other area adjacent to or within the room can be converted for use as part of the toilet or diapering area. Your architect can also provide guidance on regulations for handicap accessibility and gender separation.

Making Existing Toilet Facilities Kid-Friendly.

In some cases, you may have a toilet facility already in the classroom but with toilets and lavatories sized for adults, not kids. While replacing the fixtures themselves may be costly, building a platform to raise the floor (in the whole bathroom or just around the toilet and sink) is not. Talk to an architect or general contractor about your space. They can help you to build a platform low enough for safety, but high enough for easy preschooler access.

In addition to space, cost is likely to factor into decisions about which and how many classrooms are equipped with toilet facilities. It is best if toilet areas for young children are accessible directly from the classrooms. If your budget allows, it's recommended that toilet facilities for older children be directly accessible as well, in order to minimize time outside the classroom. One way to save costs is for pairs of adjoining classrooms to share toilets and diaper-changing areas.

It is important for staff members who are changing diapers to be able to see the children in the rest of the classroom, and for staff members to be able to easily supervise children who are using the toilets. Diaper-changing areas can be integrated into the toilet room, or can be located within the classroom itself. In diaper-changing areas, the sink should be large enough for the caregiver to bathe a child using a gooseneck faucet. (Gooseneck faucets with extended handles are recommended for reasons of health and sanitation; the extended handles allow adults to turn on the water using their elbows while changing diapers. If the budget permits, faucets with infrared sensors are another great approach.)

Note that Illinois DCFS requires that a hand-washing sink be directly accessible from the diaper-changing table, without intermediate barriers such as doors. To encourage independence (and save teachers' backs!), changing tables can have pull-out stairs that allow toddlers to climb up to the changing table on their own. These can be purchased along with the changing table, or built into custom units. In the diaper-changing area, it's highly recommended that a small cubby or space be provided for each child's personal diaper supplies. If you are adding or modifying plumbing, especially for child-height sinks, consider adding a temperature control. Child-height sinks can be adjusted so that only lukewarm water is emitted, eliminating risk of burns.



Shared diapering area is accessible from two classrooms.



Child-size toilet facility combines in-room convenience, observability and an appealing homelike structure.

Cosmetic Improvements

Housing children all day long eventually creates wear and tear. This can detract from the welcoming appearance and learning environment most centers want to create. Thus, cosmetic considerations are a central component of any project, and are often the focus. Improving the look of your classrooms or whole facility with lighting, ceiling, flooring or other upgrades can achieve multiple project and program objectives.

Windows and Natural Light: Creating a Welcoming Space

Natural lighting isn't just a licensing and building code requirement—it's of primary importance in creating a welcoming and pleasing space for children. So, maximizing natural light comes high on the list of priorities and is the goal of many minor renovation projects. Windows that open onto corridors or between classrooms help children to see themselves as part of a larger community, and exterior windows promote engagement with the outside world.

Thinking creatively can help you find ways to add more natural light. Even in existing buildings, it's possible to add skylights, enlarge existing windows, or cut out windows between rooms to "share" light from one room to another. However, windows that are too large should be avoided when they create an "institutional" appearance, when they're expensive to clean and/or cover, or when they result in high utility cost. One solution to the problems that may be posed by excessively large windows is to create the appearance of smaller windows through the use of intermediate mullions, dividers or grilles.

It is important for children to be able to see out of windows and enjoy smaller windows that are "just for them." Window seats are highly recommended for this purpose. Windows in infant and toddler rooms should be placed lower to the ground, and combined with furniture or ramps, to provide views for infants and toddlers. If windowsills are lower than 36 inches from the floor, "hopper windows," which open from the top, can be used safely with children.

The size and location of windows should allow for proper shading so that the room can be fully darkened during nap times. (DCFS requires that all classroom windows have either blinds or shades.) Window treatments should be included with windows as part of the construction budget and should be designed for easy cleaning and maintenance.

Artificial Lighting: Using it Appropriately

Using artificial lighting appropriately can be one of the most difficult challenges for centers. Fluorescent lighting is the most efficient and cost-effective form of artificial lighting, but it's not conducive to a homelike environment. For cost reasons, fluorescent lighting is likely to be the majority of lighting provided; however, all reasonable attempts should be made to supplement fluorescent lighting with incandescent lights and sconces. Providing this range of lighting options will also allow teachers to vary light levels in the room according to the current activity.

A few other key tips:

- When using fluorescent lights, it's recommended that you choose the bulbs that provide the most natural color mix. A variety of full-spectrum bulbs (bulbs that include the full spectrum of light and are therefore most similar to daylight) are currently available, although they may increase costs.
- Fixture covers that lessen the glare of fluorescent lighting can be provided if they prove cost effective.
- Indirect fluorescent lighting is generally best for infant classrooms, especially near napping areas.
- Dimmers should be specified in nap areas, except in cases where varied light sources allow lighting to be reduced simply by turning some of the lights off. This will make it possible to promote a sleeping-place atmosphere at any time of day.

Floors and Ceilings

New floors, ceilings and walls—and the materials and colors you choose for them—can give a major boost to the appearance of your facility. Finish selections not only affect the homelike feel of your space but can also reduce maintenance costs and noise, and solve a number of other facility challenges.

Creative floor designs:

Floors can be more than just tiles or carpets that mark wet and dry areas. Whether your project is big or small, you can add creative design elements that help to define play areas and paths through the classroom.

Here are some ideas to get you started:

- Use colored tape to mark paths to different areas, such as the bathroom, sink or a play area.
- Use colored tiles to make a floor design in one part of the classroom that you want to set apart.
- Paint pictures or objects on the floor, such as murals, shapes or other items.

Floors

You may want to make flooring improvements to your classroom. Do you have stained, unattractive tile or carpets? Are you having difficulty keeping your floors clean? Does your tile smell from use, wear and tear? If so, some flooring solutions are suggested below. Floors should be of three types, corresponding to the toilet rooms, the wet zones and the dry zones.

Toilet room floors should be the most impervious and the easiest to clean. Ideally, they should be made of non-slip sheet vinyl, non-slip ceramic tile, or stained concrete. Ceramic tile can be hard to clean because of grout, but it has the virtue of durability. Vinyl tile can also be used if necessary for budget reasons, but it's harder to keep clean (because of joints) than sheet materials.

Wet zone floors in the classroom should be vinyl tile, sheet vinyl, or sheet linoleum. Patterns requiring extensive labor for installation, or special-order colors, will normally cost more. Real linoleum is ideal from a "green" standpoint, highly durable, and moderately priced. Linoleum does require regular polishing, however, and may not hold up in very wet areas (check with the manufacturer before purchasing linoleum for areas where water is likely to puddle).

Using color

Tips and tricks for effective use of color:

- Soft colors and lighter floors make rooms feel larger.
- Adding 50% white or cream to your ceiling color helps make low ceilings feel less enclosing.
- Warm, intense colors can make a faraway wall or the end of a long corridor feel closer.
- Different colors on either side of a long corridor make it feel wider.
- Vivid colors with a high level of reflection brighten dim corridors.
- Neutral colors highlight artwork.
- Semi-gloss or high-gloss paints work best in wet areas.
- Yellows, blues and greens make people look pale and jaundiced when used in bathrooms with fluorescent lighting.

Dry zone floors in the classroom should be broad-loom carpet or fixed carpet tiles. As an alternative, the entire room floor can be finished with “wet zone” finishes and rugs can be provided in the soft, or dry zone. Some providers prefer rugs for their homelike qualities, whereas others prefer the durability and permanence of carpet. Carpet tiles, while sometimes more expensive, have an advantage in that you can order extras and replace specific tiles if they become stained. Care should be taken that carpet edges are bound and flat so there is no tripping hazard.

Ceilings

Noisy classrooms and common areas detract from the relationships and interactions fostered within them, and wear on staff. Sound-moderating acoustic tile ceilings are recommended if you do not already have them. In existing buildings, suspended ceiling grids and/or sound attenuation panels can be installed. Create cozy havens within classrooms by lowering ceiling heights over quiet areas.

It’s important for an appealing, safe space to make sure that decayed or wet ceiling tile gets replaced (and that the source of the problem is fixed).

Finishing Touches: Color

Above and beyond its aesthetic appeal, color has a substantial effect on children’s moods and ability to concentrate. For example, reds and oranges generally stimulate and excite, while greens and blues can calm and soothe. Shade and color mix vary these effects, however, and color associations may vary across cultures. A good general guideline is to use neutral, cream colors on the walls and introduce accent colors in small amounts on appliances, trim, doors, carpet, tiles, work surfaces and art display boards. Try to avoid stark whites or grays and very bright or very cold colors. Instead, use warm tones with subtle variations that coordinate to create a homelike environment.

Wainscoting—a panel that affixes to existing walls and is usually chair-rail height—is usually recommended in corridors and Gross Motor Room areas to prevent damage to the walls and help with maintenance over the long run. Protective wall-coverings can also be added to active classroom play areas such as those designated for blocks and wheeled vehicles.

Happy Day Child Care: Getting a Fresh Look

Happy Day Child Care is a small center that serves 60 pre-school children full-day. The center is 100 percent enrolled and has been operating in its Chicago neighborhood for more than 20 years.

The center was fortunate enough to secure improvement grants to help make some much-needed building and system improvements. Grants were also sufficient for the center to make improvements in each of its classrooms, which had shown signs of wear and tear and had become very cluttered due to lack of storage space over the years.

The classrooms were situated in areas of the building where natural light was limited; the rooms felt dark and gloomy because of the stark white walls and heavy primary accent colors on the walls, doors and carpet throughout. The first course of action was to re-paint the walls with a lighter color and add warmer accent colors throughout the classrooms. This process gave the classrooms a bright and airy look, which seemed to open up the space and provided a warmer, more homelike environment.

To help alleviate one of the main storage problems—cot storage—child play lofts were built into an area of the classroom that utilized underneath storage for the sleeping cots and provided an active play area in the loft. This step freed up a corner of the room where the cots had been previously stored for the creation of a quiet reading area. The center also utilized some of the open wall area by purchasing and installing wall-mounted storage cabinets, in which teachers could store classroom supplies and personal belongings.



A simple countertop doubles as cot storage and a teacher work space.

Addressing Storage Needs

Many agencies realize that they do not have enough space for the many toys, supplies and other resources they need. For many organizations, improving storage systems may be the solution to inadequate or chaotic space, under-use of resources and lack of aesthetic appeal.

Classroom Storage

Every classroom has a variety of storage needs. Near the classroom entry, for instance, you'll need to make sure there are cubbies or hooks for the children's personal belongings. In the countertop area and wet zone, storage is needed for small amounts of formula and related items such as bottles and water. Diapering supplies for each child, cots and tools such as toys, games, books, blocks and play dishes all require space. In addition, teachers need storage space within the work area or other cabinets, including a place to lock up personal items, hang coats and store classroom paperwork. (See *Laying Out Your Classroom*, p.38, for more information on storage and where to position it.)

Providing accessible storage spaces is a critical component of fulfilling the needs of the children and teachers, and creating a space where they can feel at home. For teachers, having needed items on hand reduces stress and hassle. For children, accessibility promotes independence and use of classroom resources.

At the same time, too many or cumbersome storage units create barriers within the room that disrupt flow. As you plan your storage system, strive to use units that take up floor space only for things that kids need to access regularly; place items that only the teachers use on higher shelves. Consider storing items that many teachers share, or that are needed only rarely, outside the classroom if space is tight.

As you get started with your project, use the *Classroom Layout Checklist* (pp.41-42) to make a list of the storage needs for each area of your classroom. You may want to ask the teacher to complete both this list and one listing their individual storage needs. Think through each area and decide where would be the best place for storage. For each item on your list, ask yourself (and the teacher): How often is this item used? Who needs to use it? Where should they use it?

Keeping storage spaces organized can be a challenge. Sometimes, just cleaning out and reorganizing existing spaces can solve a space crunch. Keeping things neat will also help to ensure they get used. Once storage units become overfilled, project and other materials kept at the back may not get used. So it's a good idea to have cleaning plans built into your yearly schedule: Plan time every year for staff to go through storage items and purge what's no longer needed to avoid excess accumulation. Staff may be reluctant to discard unneeded things: Making the cleanout a contest with rewards is one way to make this more fun. A give-away table for parents is another way to make the process more rewarding.

Then think through what type of material and unit you want to use. For items that children use regularly, clear boxes or drawer fronts or see-through baskets are ideal. Plastic-coated wire baskets, sold in many closet stores, are one durable and flexible solution. Other household items like laundry baskets, hanging shoe bags, multiple skirt hangers and Ziploc® bags are also good for storing program supplies. Choose a variety of different sizes and shapes so that you can separate different items and keep them organized. For books and other items that you want to encourage children to use, try display systems that show the covers face out and at eye-level.

For the teachers' items, use wall units that are hung higher up to save floor space. Units that have doors on at least some portion can help to give the room a less cluttered look. Most cabinet doors can also be ordered with locks, providing a place for teachers' personal items.

Cots present one of the most common storage challenges. Rather than stack them in a corner or hallway where they use up valuable floor space, store cots under furnishings or other structures. Lofts and platforms, discussed in the *Furnishings Your Space* (p.46) and *Laying Out Your Classroom* (p.38) sections of this manual, provide one good place. Another option is to build in a bench, countertop or half-wall that is sized for cots. For example, one IFF center built "benches" with sliding doors on either side. The architect helped design a built-in unit at the height needed for the number of cots the classroom uses. During naptime, the staff opens the doors and rolls out the cots. During other times, the cots are hidden behind the doors and cushions on top offer a place for teachers and children to sit.

Facility Storage

As you plan your storage system, decide how much storage should be in each classroom and how much should be centralized. Once you have a good idea of what your centralized storage needs are, you can go through much the same process as for planning classroom storage. As in classrooms, putting storage units near the area where they will be needed is important for ensuring their use. For example, if infant buggies are stored far away from the facility exit, the hassle of getting them may discourage teachers from taking the children on regular walks. For items that are delivered in bulk, like food and maintenance supplies, also consider proximity to delivery entrances (See *Kitchens*, page 100).

Springdale Community Center: Tackling a Storage Backlog

Springdale Community Center offers early childhood development and a variety of other community services. With many different programs running in the same building, space is tight. Storage issues were a problem, especially in the community room, which has a long counter running along one side that was originally intended for refreshments and other meeting materials. Before beginning this project the counter and floor beneath it were covered with stacks of boxes and baskets. Not only was every inch of counter space in use, staff was finding it difficult to locate and access needed items, and the room looked cluttered. Springdale solved all of these problems by adding custom wall cabinets below the counter, ordered in a finish that matched the rest of the room and fit the space exactly. Springdale also installed locking doors because so many different people use the space, and installed adjustable shelves that could neatly accommodate a variety of different materials. For \$3,200 Springdale Community Center added a 25-foot storage system that is attractive, functional and durable.

Taking Learning Outside: Playground Design

Outdoor play time is an important part of a child's day and is a licensing requirement. For some programs, outdoor learning opportunities are built into curriculum goals. Whether you're reconfiguring your outdoor space to further your curriculum goals or building or expanding a playground, certain layout, equipment and landscaping choices will need to be made.

Square Feet: In Illinois, licensing requires 75 square feet of outdoor play area per child for 25 percent of licensed capacity, or a minimum of 1,500 square feet. Therefore, a center with 200 children must have at least 3,750 square feet of playground space (25 percent of 200 children, multiplied by 75 square feet per child).

Every effort should be made to maximize the amount of outdoor play area for each center. As with classroom spaces, licensing regulations are minimums to be exceeded whenever possible. To achieve this goal, plan for an additional 25 percent of children at the center using the play area at one time.

Play Area Layout

Your curriculum will have an impact on the type of outdoor play spaces you provide and the amount of time children will spend in them. All children need room to expend their energy, and you may allocate space for running, climbing, sliding, riding tricycles, or other similar activities. There should also be opportunities for exploring, observing nature or planting, imaginative play and interacting quietly with others. Classroom activities such as reading, music and artwork can also be brought outside on nice days. The design of outdoor play areas should create separate zones reflecting the different types of outdoor play. The outdoor play area should include an entry/patio area to facilitate moving classroom activities outside, a messy/wet area incorporating sand and water play, a quiet area for playing with toys and exploring nature, and active play areas where playground equipment, if provided, should be located.

Note: Infant and toddler play areas must be separated from the play areas of older children, usually with fencing, and should ideally be located directly outside their classrooms. If sharing a divided play lot, some areas will need to be duplicated. For example, an active area may be needed for each age group.



Large berm with balcony promotes imaginative play.

Equipment

The amount of playground equipment is dependent on the size of the outdoor play area. Crowding the outdoor area with large pieces of playground equipment should be avoided, especially if it only serves a single function. Small play areas must emphasize active play first, with the opportunity for messy play second. These smaller areas may not provide significant room for quiet, but attempts should be made to have some quiet area outside. There are safety guidelines for all play equipment (see the *Handbook for Public Playground Safety*) that specify the soft surfacing needed around each piece of equipment. Plan for the entire space requirement when choosing equipment.

Materials

An important trend in play areas and equipment design is toward more rustic and naturalistic settings. This trend substitutes berms (ledges or small, raised areas), created slopes, wooden huts, bridges, and grass and trees for large, expensive all-encompassing steel playground equipment. The great advantage of this method is that it can be less expensive to implement and offers more opportunities for imaginative play; however, good design and maintenance costs are a factor.

Landscaping

Open grass is probably the single most important and flexible outdoor play area surface. However, centers have an extremely difficult time maintaining grass. The success of grass at centers is directly related to the amount of grass area provided and the number of children using that area. Small grass areas with a high volume of use won't survive and aren't cost effective to maintain, so they're not recommended. Sloping surfaces require vegetation to avoid causing run-off. If you have hilly terrain, you'll want to make sure appropriate drainage is provided.



A back "porch" provides shade away from equipment. The concrete surface allows outdoor classroom setup.

Designers should choose only the hardiest of plants and trees for play areas. And again, designers should plan for the lowest levels of landscape maintenance once the center is open. Specified shade trees should be extremely tough; specified shrubs should be hardy enough to survive infrequent watering and handling by inquisitive children.

Also keep in mind whether or not plants included in the landscaping have thorns, drop fruit or berries, or are otherwise unsuitable for use near children. And of course, be very careful not to choose anything poisonous!

It's important to provide shade, whether by means of trees or trellis coverings. Some municipalities require landscape architects to approve drawings. (Your project architect will be aware of this requirement.)

Play Area Entry/Patio

When play areas are directly off individual classrooms, a small concrete patio or pad should be specified to serve as an entry to the play area and also to serve as an outdoor classroom area where tables, easels, and other "interior" furniture can be used. An outdoor faucet should be specified where staff can access water for crafts projects and to clean up messy children. Some form of shading in this area is recommended, to provide children and staff a break from direct sun.

When the play area isn't directly accessible from classrooms, a larger concrete patio should be provided for the entire center to allow for more than one classroom to use at a time. This patio should have access to an outdoor faucet and have some shading from direct sun.



Tricycle storage doubles as a play structure.

Messy/Wet Area

The messy/wet area should be connected to the patio area. This area should allow children to use a number of messy materials including art supplies, science materials and water. A sandbox could be included and designed to be covered when not in use. The area should include a drain for easy clean-up of paints and sand with a hose.

Quiet Area

This area should include a grassy/soft area for reading, gathering and stories. Shade trees should be provided along with outdoor seating.

Active Area

This area should include all larger playground equipment, based on the program of the provider agency. Surfacing for this area should comply with the standards specified in the *Handbook for Public Playground Safety*.

Equipment selections for active play should include options for different age groups and disabled children. While handicapped-accessible equipment may seem like a substantial investment, all children are likely to use and enjoy these items.

Storage

It is a good idea to have locked storage for tricycles and other outdoor equipment on or near the playground. Some storage structures can also double as playground equipment if, for example, built with a fort on top.

Small Expansion Projects

Your project plan may be to make modifications to your existing center to increase your licensed capacity. This kind of project may entail converting rooms into classrooms or reconfiguring your existing layout to create more efficiency within your space. Adding classrooms or changing layout will mean that you may have to make other systems renovations (electric, plumbing, heating and cooling) to properly expand your facility. No matter what the project is, you will need to use an architect to walk through the space with you to determine whether the project is feasible.

If the existing rooms and spaces aren't large enough or organized in a way that meets your needs, your project may involve moving walls. Evaluating your reconfiguring options involves first determining which walls are "load bearing," and therefore cannot be removed. Many interior walls may have been built only for the purpose of dividing rooms and your architect can help you determine which can be removed or moved. When load-bearing walls have to be removed, structural columns can sometimes be put in place to carry the weight of the upper floors and/or roof. Before planning any major structural changes, however, your architect should consult with a structural engineer.

Once you've determined that an expansion to your existing center is feasible, you should ask your architect to propose a schematic layout (blueprint) for your new configuration as well as a narrative on the scope of work that will be required in order to achieve your goals. At this point, in addition to the layout changes, you will want to know all the implications of the project. Will you be moving walls? Will you need additional plumbing? Will you need to re-work your electrical or HVAC (heating, ventilation and air conditioning) systems? Other sections in this manual will help you with some of these questions, but the goal here is for you to determine how much this expansion project will cost and whether you can afford to pay for it. Your next step should be to secure a cost estimate based on the schematic drawing and narrative scope. If the numbers work, then you can proceed with your expansion.

The other sections in *The Small or Targeted Project* will walk you through your next steps from here. You will probably be incorporating many components already addressed in this section, as every new classroom will need new finishes or cosmetic improvements. Just remember that an expansion or reconfiguration project usually means more work than a small or targeted project; once you start reconfiguring systems and tearing down walls, you may unearth a whole host of issues that you were not expecting (and your construction estimates should include enough contingency to account for unforeseen conditions). On the other hand, a small expansion can significantly increase your service capacity and help you meet your program goals.

Section 4 The Full Center

Once you've completed your "day in the life" assessments, identified your project goals and established a project budget, you should have a good idea of what your new space needs to accomplish. How you proceed will depend on the scope of your project. If your project involves renovations, you will need to consider whether or not layout changes are needed and identify the building constraints.

Renovation

Are You Changing the Layout?

If the existing rooms and spaces aren't large enough or organized in a way that meets your needs, your project may involve changes to the building layout. Reviewing *Small Expansion Projects* (p.63) will help you to identify things to consider, such as the walls that can be moved and potential changes to your plumbing, electrical or other building systems. Changes to the layout also require thinking through how this will affect the community you are creating; in other words, how they will affect the relationships among spaces in the center and how they affect the interaction of the facility's inhabitants. *Laying Out Your Center* (p.68) will help your team think through these issues.

What are Your Constraints?

If your project involves adding on to or moving into an existing facility, your team will need to consider whether or not the building and lot can accommodate all of the needs for a center. Complete a building program discussed in *Creating a Building Program* (p.76) to help you evaluate the facility and answer the questions in the following worksheet *Evaluating a Space for Renovation*.

Worksheet

Evaluating a Space for Renovation



Evaluating the Lot

- Is there adequate lot space for required parking? If not, is there adequate and approved off-site parking?
- Is there adequate lot space for required playground space? Playground space must be 75 square feet per child for 25 percent of licensed capacity, or a minimum of 1,500 square feet. This is a minimum, and effort should be made to have more if possible.

Evaluating the Building Structure

- Is the building space at ground level or are there stairs? Is there any entrance to the facility that is wheelchair accessible?
- If more than one story, does the building have an elevator? Can an elevator be added?
- If there are stairs, how many? Is there space to build an ADA ramp?
- Is there more than one exit? Can more exits be created?

Evaluating the Interior Space

- Are the classrooms large enough for the number and age of children you plan to serve? (See worksheet *Estimating Classroom Space Needs* on page 37.)
- Is there enough space for non-classroom activities including reception, office space, kitchen, adult toilets, conference room, parent room and staff lounge? (See *From Classrooms to Communities: Designing Other Center Spaces* (p.94) for square feet guidelines for these areas.)
- Is there adequate storage space?
- Is there space for a ramp that could accommodate an evacuation crib?
- Are the doorways wide enough for wheelchair access?
- Are the doorways to the classrooms wide enough for wheelchair access?
- Is there adequate natural light? Are there windows in each classroom space?



Worksheet

Evaluating a Space for Renovation

Evaluating Building Systems

- Is there a fire alarm system? Are there smoke detectors connected to the fire alarm system?
- Is emergency lighting present in hallways?
- What is the HVAC system? How old is the boiler or furnace? When was the last time it was reconditioned?
- How old are the window or condenser air conditioning units?
- If there is no A/C, is there adequate electricity to add window units?
- Is there adequate electricity? While building size will affect total need, there should be a minimum of 200, and ideally closer to 400, amp service for a center with A/C. Check the circuit breaker box; if there are no circuit breakers, then consider electricity to be inadequate. Are there enough circuits for expansion?
- Is there an adequate number of outlets in each classroom? In other rooms?
- Is the lighting adequate or will it need to be enhanced or fully upgraded?
- Are there enough toilets or washrooms for the proposed capacity of the center? If not, does the facility have the ability to readily add plumbing? (Is there a basement where piping can be run?)

Laying Out Your Center

Whether you are renovating or adding on to your current center, renovating another structure, or building a new facility, you will need to consider how your space will be laid out.

For projects at a new site, developing the building layout won't begin until the site or new building has been identified because the existing conditions at the site or building are critical to how the building will ultimately be designed. However, thinking through layout considerations will help your team evaluate potential locations. You can think of your final design as collaboration between your vision and the existing conditions.

Classroom Location

If you're working with an existing facility, you may not have complete control over the location of classrooms; however, the guidelines below describe best practices that should be observed to whatever degree possible.

When possible, larger facilities should place infant and toddler rooms further away from rooms for older children.

- The floor on which a given classroom needs to be located depends on the age of the children who will use it, among other factors. Certain classrooms will need to be on the first floor, whereas others can be on upper floors. Infants and toddlers should be (and in most Illinois communities are required to be) located at ground level for emergency access to the outdoors. Classrooms for two-year-olds should also be at ground level if possible; however, a limited number of two-year-olds may be located on a second floor if local codes allow. (Be sure to check local requirements as to what ages can be located on a second floor.)

- Classrooms should be placed to maximize the amount of natural light they receive and for the most ventilation. Eastern and southern exposures give classrooms the best quality of light.
- To create a peaceful, homelike environment, rooms should be located away from other rooms that will be used for purposes with high noise levels, such as the Gross Motor Room or the kitchen. All ages need quiet time, but this is especially important for infants.
- If possible, rooms for infants and toddlers should be placed further away from rooms for older children, so that the younger children won't be disturbed during their more extensive naptimes.
- If it's not a security risk, ground-level rooms should have direct access to outdoor playgrounds. (Outdoor access is required for infant rooms in Illinois.) It is best if infant and toddler rooms don't open onto play areas for older children, which can be very noisy.
- For classrooms that aren't on the first floor, it's preferable to provide easy access from them to the outdoor play areas with the most direct route.
- Be sure to take into consideration how the children will be dropped off at the facility and how the parents will get to the classrooms through the building.

Building Layout

Laying out a building is synonymous with planning the childcare community. The location of each zone and the paths from one part to another will affect how the facility's inhabitants interact. Locating classrooms together and away from public areas creates the neighborhood haven. Creating a large entry or other central common area provides a forum where all different members of the community meet and share experiences.

In general, the layout of your building should take into account the following issues:

- Integration of the facility's interior spaces—how they all work together
- The location of classrooms
- Public or open areas, versus areas that should be accessed only by center staff and children
- Other groups who may be using the building and how they're integrated into the facility
- Circulation—how paths are set up for exiting, deliveries, parent drop-off, meal distribution and so on
- Whether the administration should be visible for easy access, or set apart for a quieter work environment
- Light and views
- Access to the outdoor play areas

Even if your project does not involve changing the building's footprint, any changes to the interior layout or even use of existing rooms will need to take these issues into account.

Figures 1 through 3 are components for linked rooms and functions, to provide a general understanding of the flow and relationships of spaces within a center. The sizes are not intended to indicate the size or importance of the spaces. Figure 4 shows how one center was laid out to account for many of the considerations outlined above.

Figure 1 General Center Relationships

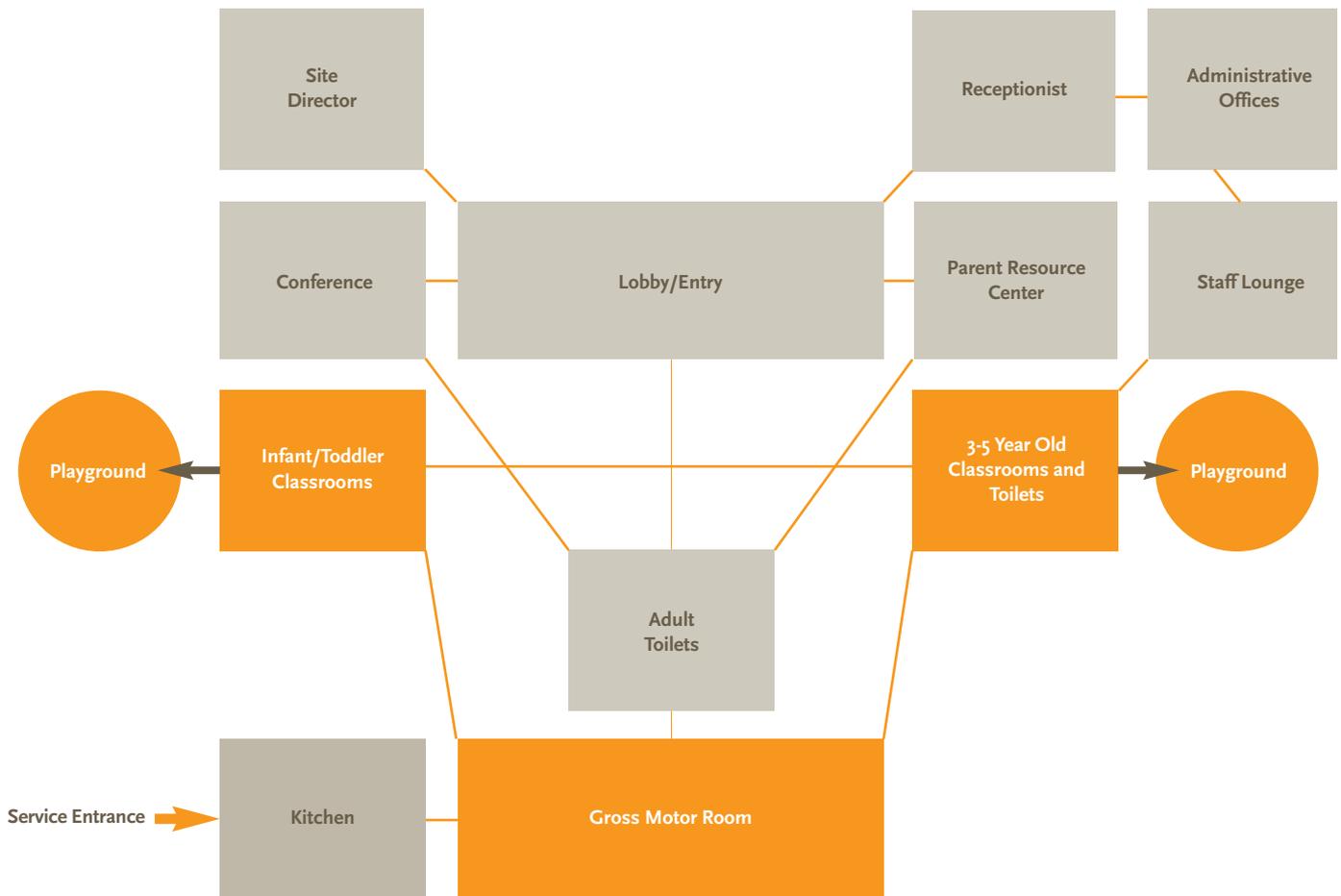


Figure 2 Reception / Administrative Relationships



Figure 3 Gross Motor Room/ Toilet/ Kitchen Relationships

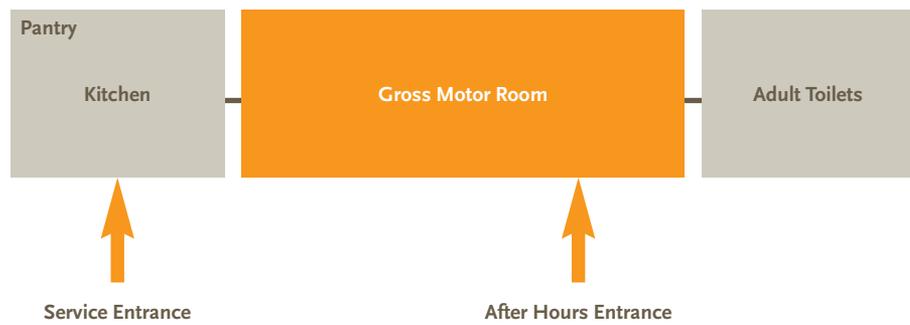
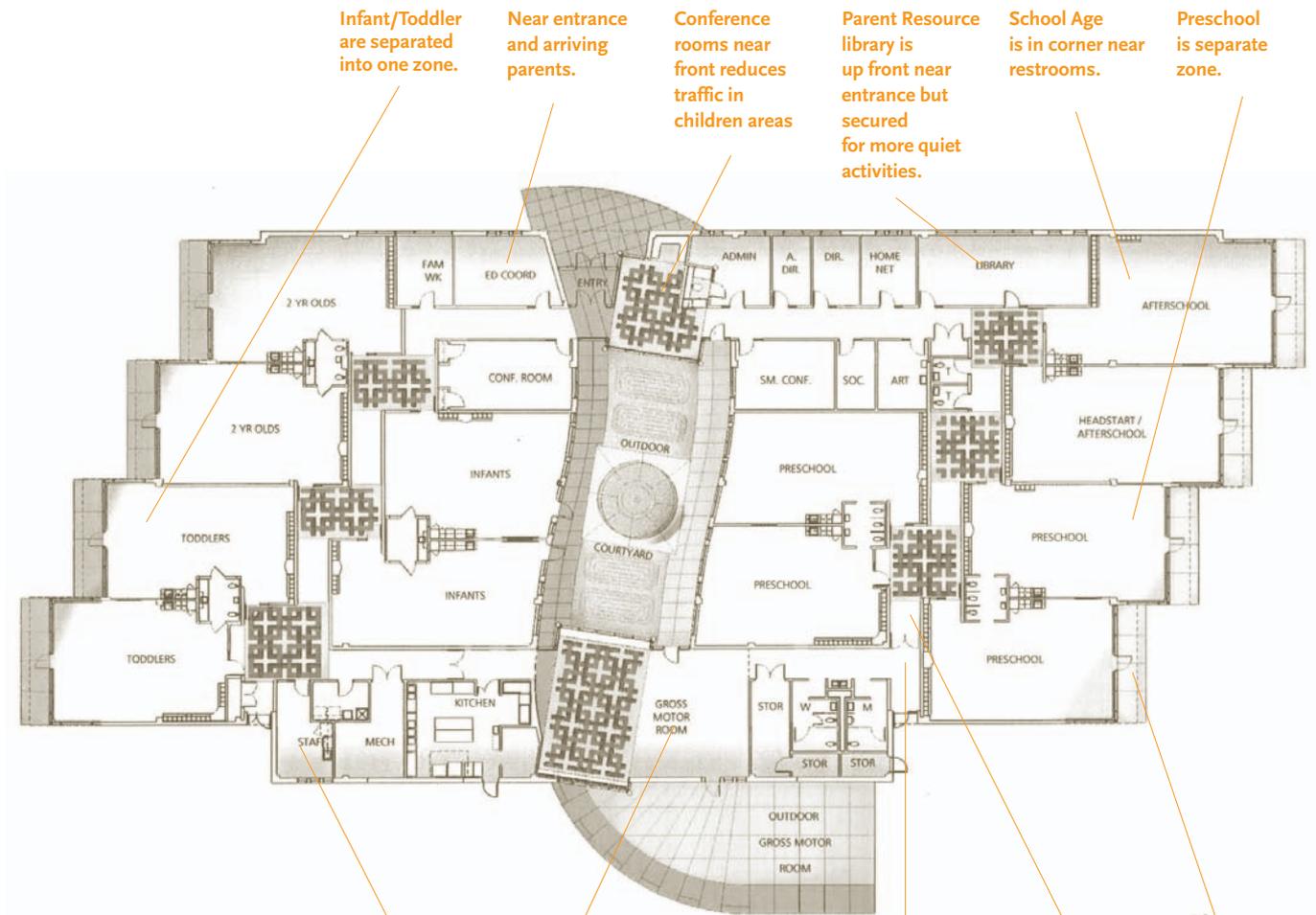


Figure 4 Jamboree Floor Plan



Infant/Toddler are separated into one zone.

Near entrance and arriving parents.

Conference rooms near front reduces traffic in children areas

Parent Resource library is up front near entrance but secured for more quiet activities.

School Age is in corner near restrooms.

Preschool is separate zone.

Staff Lounge is away from entry for privacy.

Gross Motor Room is packaged with kitchen and restrooms for separate community events. The section can be shut off from rest of building by 2 doors.

Door directly to outside allows for after hours entry control.

Minimum distance to get to outdoors for 2 classrooms without direct outside access.

Direct access to outdoor for all but 2 classrooms.

Grove Park Nursery: Using Renovation to Improve Care

Grove Park Nursery in downstate Grove City provides full-day, year-round care to toddlers and preschoolers in a converted orphanage. The building was constructed in a gracious residential style on a double lot around 1900. Parents feel comfortable in the building and its function is understood and valued in town. Space in the building was limited, however, and Grove Park wanted to improve the educational component of its care.

Grove Park's management and Board wanted to pay 20 percent more in salary and attract and train a staff with early childhood development degrees. With the help of an architect and project manager, and the support of their Board, Grove Park was able to increase capacity, progress toward this goal and give the facility a facelift.

Experts told Grove Park Nursery that their center had strengths and weaknesses. On the plus side, every space felt like a part of a home—from the old-fashioned wooden staircase to the upper rooms (allowed for service to children aged three to five by local code, by the local Fire Department and by the DCFS licensor) to the pictures and posters of famous characters in children's literature in the classrooms and hallways.

On the negative side, the rooms were licensed for different group sizes—from 13 to 16 instead of the maximum of 20 allowed. Their low teacher-pupil ratios were limiting their income and this prevented Grove Park from realizing optimum cash flow. Several of the classrooms could be expanded to be licensable for 18 to 20 students if some staff offices were moved to a small addition on the side of the building. The center looked carefully at its options, prepared projected operating budgets for a center with larger classrooms,

and decided it might make sense to make the three smallest classrooms larger and to equip all five classrooms with sinks. Approaching a friendly lender with their plan, they discussed the probable construction costs and projected operating budgets. With the lender's encouragement, they presented the ideas to their Board and got approval to interview an architect/project manager.

Three classrooms were expanded. The center was able to provide more space per child than the licensing minimums with a better range of classroom activities. Grove Park also took advantage of their increased cash flow to finance cosmetic improvements to the classrooms: durable, neutral flooring and wallpaper that complemented the building's older appearance while lightening the spaces. They created two new windows to help brighten two classrooms, replaced the furnace and upgraded the electrical wiring so that each classroom would have a new, efficient window A/C unit for hot summer days. The kitchen was relocated to the addition and improvements were made: a commercial grade dishwasher, a commercial freezer and refrigerator, and better counter and pantry space.

The capital costs of the project totaled \$250,000. With \$50,000 contributed from local supporters, the nursery incurred about \$23,000 in annual mortgage costs on an IFF loan. The 13 additional children brought about \$55,000 in net revenue (after subtracting increased expenses). Thus, additional funds were made available for increasing salaries and promoting professional growth, while improving the children's development and strengthening the nursery's funding base in town.

Establishing a Schedule: Keeping Your Project on Track

Establishing what type of project you'll be undertaking, as discussed above, will go a long way toward helping you determine the length of time you'll need to realize your goals. Once you've set up your Project Team, your project manager, architect and contractor can all help set realistic timeframes for the various construction scenarios.

When establishing a schedule, you can also work backwards from the time when you must be able to occupy the facility (for example, if you have a lease that will end at a specified date) in order to determine when you must start and how quickly you must move ahead. The project schedule will also help you determine the schedule for disbursement of funds.

New Construction

Building a center from the ground up is a complex task, which the expertise of your architect and Project Team will help you navigate. (See *Putting Together a Team* (p.20) if you haven't already reviewed these roles.) The next sections define many of the considerations your team will need to work through. Remember, however, that creating communities begins with the neighborhoods and homes within them. In other words, the classroom environment and other considerations discussed in the previous sections are central to all of your planning. Be sure to read through and refer to all of the preceding material as you proceed with your project. Once you've completed the preliminary planning outlined in Section 2, your team's first task will be establishing a building program.

Creating a Building Program

When you're adding capacity or otherwise expanding your program, you'll want to create a building program.

What Your Building Program Does for You

The purpose of your building program is to help translate your project goals into an understanding of what type of spaces your facility will need, including the size of the spaces as well as how they will interact with each other and with the site on which the facility is located. A good building program should address the facility as a whole—not just the indoor spaces but also any necessary outdoor areas, such as parking and playgrounds. (For example, a building program can address the issue of locating tricycle storage near the exits to the playground.)

The building program should be a written document that you can refer to during the design process, in order to check the developing design against your needs and budget. As you work through the building program, your team can use established industry standard costs to keep tabs on the projected cost of your project, and determine if what you're proposing will fit within your budget. If not, the program can be adjusted and prioritized as needed.

If you're searching for an existing building to rehabilitate, or vacant land for new construction, you'll be able to focus your search using key information from the building program, such as the desired total square footage of the building and outdoor space requirements.

Developing a schedule includes these steps:

- Determine your project goals.
- Select professional consultants (such as a project manager, an architectural/engineering team and a contractor).
- Develop a building program (discussed later in this manual).
- Perform a site search, site selection and site acquisition (if a new site or facility is part of your plan).
- Commission the architectural design.
- Open the project to bidding.
- Secure the building permit.
- Move forward with construction .
- Secure your Child Care License from DCFS (or your state child care licensing agency).
- Move in and have furniture delivered. *Staffing and operational considerations will also need to be planned for and incorporated into a larger project schedule.*

What Your Building Program Should Include

Here are some key items that should be included or addressed in your building program (your architect or internal team should work through this list):

- A list of all the facility's spaces and their respective sizes (classrooms, offices, storage, exits and entrances and so on)
- The facility's *adjacencies* — which rooms and functions are located in proximity to which other rooms and functions
- The size of the population to be served by the facility, including both the number and ages of the children to be served, as well as staff and administration
- Any other uses for the building besides early childhood development, if it's going to be shared with other programs or activities
- Site development issues, such as parking requirements, outdoor play areas and other outdoor spaces
- The facility's hours of operation

State licensing guidelines, as well as local codes and ordinances and the Americans with Disabilities Act, all must be taken into consideration by your architect when planning the necessary sizes of spaces within the facility—such as the width of corridors, the number of toilet rooms required, exit requirements and so on. These spaces determine the total square feet of the facility.

Remember that many codes are written with a certain amount of ambiguity that your architect will decipher. Also, many cities and towns have zoning codes that were written for other building types but apply to centers as well.

There are many other codes that regulate the operation of a center: health codes, which might be enforced by a city or county health department, and apply especially to bathrooms and kitchens; fire safety codes, which are typically enforced by city or county fire departments, but might also involve the office of the state fire marshal; and in Chicago, and possibly elsewhere, extensive business licensing requirements that govern the operation of early childhood development businesses.

As you're developing your building program, code evaluations should become an important part of the process and are usually carried out by the Project Team. The term *code* is most generally used to refer to *building code*, and although it's the responsibility of the architect to research and interpret that code, anyone can access the building code by contacting the city or county governing authority.

Designing Your Center: How Your Architect Will Work

In general, your architect will work through the following major areas when planning your new center.

1. **Site parameters (codes/zoning, safety, parking and security)**
2. **Major building systems (heating/cooling, electric, plumbing)**
3. **Classrooms (layout, furnishings, lighting)**
4. **Playgrounds**
5. **Offices, conference rooms, kitchen, Gross Motor Rooms, staff lounge and laundry**
6. **Façade**

With the exception of items three and four, which are addressed in Section 2, each of these items are addressed in order below. While your architect will take the lead in each area, the Project Team will input at several points and everyone should understand decisions made with regards to each point.

Site Parameters

Zoning, Codes and General Location Considerations

The site for your facility will need careful evaluation. The location of your facility plays an important role in the life of the facility. Working through the considerations outlined in *What are your constraints* (p.65)? will help you and your architect to evaluate the suitability of your chosen building site.

Whether you're looking for a new site or modifying your existing facility, your architect's first step will be to identify the zoning requirements, which include the distance between the building and the street, limitations on the height and size of the building, and landscaping and parking requirements.

The best way to check local zoning requirements, if you have access to the Internet, is to consult your city's web site. (Zoning issues are generally handled by the city's department of buildings or planning department.) Your local library is another good place to check for this information.

Other important questions, which your architect will consider in the design and evaluation of the site, include:

- How will your clients and staff get to the facility? How will you receive deliveries?
- What's the best location for the outdoor play areas?
- What's the best location for the parking lot and main entry?
- What are the positive aspects of the site that can be used to your advantage (such as views, natural topography and so on)?
- What are the potentially negative aspects that need to be addressed (such as possibly heavy adjacent traffic, noise, buildings that block sunlight, or difficult topography)?
- Where do utilities enter the site?
- What was the past use and are there any environmental issues?

Parking and Security

Sufficient parking will need to be allocated for staff, visitors and parents. Your architect can help you determine what is required by local code and what is ideal for your center. For larger projects, it's important to make sure that specific attention is given to security during site planning and design.

Security systems

Many types of security systems are available, from simple “burglar alarm” types that can help avoid theft, to closed-circuit TV systems that can be continuously monitored. These systems can be very costly. Their benefits may not outweigh the amount of operating costs they consume. If you're considering cameras, plan ahead regarding wiring, placement and monitoring (a substantial number of staff hours will be needed). In some cases space will need to be allocated in the building for the security equipment and tape storage. Below are several key guidelines to keep in mind for creating a secure space.

Entrances and exits

Location of entrances and exits affects both safety and flow. Consider the following:

- To the greatest extent possible, the center should have only one entrance for staff, parents, children and visitors. Ideally, the facility should be sited so that parking for drop-off is at or near the main entrance. Having one entrance allows for better control over who is entering and exiting the center.
- If a single entrance isn't possible, add an additional entrance for “staff only.” In that case, there should be signage directing all visitors to the main entrance. No center should have more than two entrances. If the center does have a second, staff-only entrance it should be provided with an entry card system or other required security provisions. Note that there may be additional emergency exits from the building, but these should be kept locked from outside entry.



Receptionist area provides views of buzzer-operated door, entry area and equipment for task completion.

- Typically there is another entrance specifically for deliveries. Because this entry is used most frequently for food deliveries, it is usually located close to the kitchen. This should be kept locked on the outside at all times, and entry should be controlled by the kitchen staff and main receptionist. This entry can double as a required fire exit.
- The main entrance should be controlled by the center receptionist or main office, by means of a buzzer. The hardware on main doors should also allow them to be left unlocked during morning arrival when staff members are closely monitoring families dropping off children. For the remainder of the day, all visitors should use an intercom buzzer to the receptionist for entrance. Keep in mind that although buzzers are useful, the electrical mechanism that powers the buzzer can burn out, so it will be necessary to regularly test, monitor and replace the mechanisms.
- All other doors, including fire exit doors and exterior classroom doors, should have closers and automatic locks. Doors leading to the playground that are used by multiple classrooms should be provided with a kick stand, so that the doors can easily be propped open to allow for large numbers of children to exit and re-enter.

Safety

- A fence surrounding the entire property (or selected areas) can be provided in order to limit access to the building site. It is important to make sure that the design and layout of this fence present a welcoming appearance to the community.
- It is recommended that all interior doors have at least a view window (4" x 25") so that all spaces in the building can be supervised.
- If the building is being used for other purposes in addition to early childhood development, careful attention to layout and circulation can insure that the early childhood development portion of the building, if desired, is not accessible to other programs.

Playground safety

The following are playground safety considerations, See *Taking Learning Outside: Playgrounds* (p.59) for more information on playground design.

- There are specific safety guidelines for all play equipment and soft surfacing that should be followed when you're designing playgrounds and specifying playground equipment.
- Typically, playgrounds are fenced to keep children from wandering and to monitor access to the playground. You may also need to provide secondary fencing so that the older children and younger children (usually through age two) are kept separate to avoid accidents. (This is usually a requirement of DCFS.)
- Be sure to follow DCFS' rules with respect to the spacing of fence pickets and other playground constructions: distances are specified in order to protect children from getting their heads and fingers stuck.
- Remember to leave enough space between playground equipment and circulation spaces, such as tricycle racks. DCFS has mandatory spacing rules regarding this issue. Combinations of equipment in close proximity should be carefully reviewed for safety; it's a good idea to review manufacturer's statements and recommendations for all playground equipment.

Lighting

Exterior lighting is another building element that can enhance security. It is a good idea to include lighting for the playground and parking areas, in addition to lighting the building and its entrances. Be aware of adjacent structures and activities, however, so that your facility's lighting isn't offensive to neighboring properties. (For interior lighting ideas, see p.51 *Windows and Natural Light: Creating a Welcoming Space.*)

Children and Adults with Special Needs

Not only a code issue but also an important goal for all facilities is that they be accessible and usable by people who have special needs, including children, staff and parents. The best way to accomplish this is through *universal design*, an approach in which the entire facility is usable by everyone. Examples of universal design include using lever door handles instead of knobs, and placing sinks, cabinets and hooks at a lower level.

The Americans with Disabilities Act (ADA) and the Illinois Accessibility Code provide detailed information on how to achieve accessibility. Local and national organizations that serve and support disabled children are also a good source of information and resources.

These considerations are especially important for new construction and modification projects. Meeting these standards will be more challenging for those working with an existing facility, but at the least they represent important goals to work toward.

For new facilities, we recommend that you consider those with special needs when designing each and every space for your facility, both indoors and out. Some important elements to consider include:

- All entrances and exits should be wheelchair-accessible (ramps, if needed, can be fun and interesting for children!).
- Wheelchair-accessible toilet facilities should be provided for both adults and children.
- Teachers' counters and storage in every classroom should be accessible (or easily modified to be accessible) to teachers in wheelchairs.

- Play equipment that can be used by children with special needs should be provided both indoors and out.
- Fire alarm systems should be required to have both audio and visual alarms.

Major Building Systems

Building systems decisions will have a major impact on both the development budget and long-term maintenance costs. For this reason, their cost needs to be taken into consideration at the outset of large projects involving new construction or extensive renovation. Systems in this category include HVAC (heating, ventilation and air conditioning), electrical and lighting, plumbing, security systems and fire protection. (Also see *Mechanical, Electrical and Plumbing Considerations* on page 44 for classroom-specific needs.)

HVAC (heating, ventilation and air conditioning)

There are many different systems for supplying a space with heat, ventilation and air conditioning. Your architect and engineer will recommend an appropriate system. HVAC can vary from simple radiators and window air conditioning units to a sophisticated, integrated system with many zones for individual area control. The cost of these systems also varies greatly and can be a significant part of the overall building cost, so it's a good idea to develop a realistic budget for HVAC early on.

For new facilities, or rehabilitation projects that involve deciding on a new HVAC system, you should take into consideration how much control over individual spaces will be needed and, if controls are provided, who will have access to them. Generally speaking, overall building systems often run more efficiently if control is centralized and individual staff members are not able to modify their specific spaces.

Whatever system is chosen, it's important that the appropriate staff be trained in its operation and maintenance.

For projects that involve modifying existing systems, you should evaluate how your HVAC system has been functioning and incorporate any improvements to it into your plans. It is sometimes possible to improve existing HVAC systems substantially through modifications such as adding temperature controls to improve distribution of air in the facility.

Keep in mind that design regulations for centers generally include specific requirements for HVAC that may be more stringent than the requirements for more standard business uses. If you're rehabbing a space for early childhood development that was previously used for other purposes, make sure that your mechanical engineer verifies that the existing system can handle the code requirements for center use.

See also *Environmentally Friendly Products and "Green" Design* (p.88) later in this manual, for information on the potential for environmentally friendly approaches to your HVAC system.

**Learning
Horizons:
Resolving a “Too
hot, too cold”
Dilemma**

Learning Horizons was having serious problems with its heating and cooling system. Some sections in its 18,000-square-foot center would be overheated while others were too cool. Teachers were complaining; children had to wear jackets on some days and parents were becoming concerned. Learning Horizons realized it was high time to overhaul its HVAC system, so staff brought in a mechanical engineer to assess the problems.

After analyzing the system and the original blueprints, the engineer informed Learning Horizons that its current system didn't have enough “zones” to accommodate the various uses and areas in the building. For example, the kitchen and the infant classrooms were located in the same zone and the heat of the kitchen was triggering a cooling mode, which was much too cold for the infants in their classrooms. The solution, she said, was to add a few more zones to the facility so that the different uses of the building would not be competing for hot or cool air.

The engineer recommended an HVAC contractor and together they worked out an affordable solution that allowed Learning Horizons to add three more zones to its facility and simultaneously add a more sophisticated temperature control system so that teachers and staff could exercise more control over the airflow to their various rooms.

Once the work was completed, and the staff was trained on how to use the improved system, everyone felt the difference and commented that the environment was greatly improved. For Learning Horizons, a little money went a long way in terms of comfort, efficiency and program quality.

Electrical and Lighting

Electrical service includes all of your facility's electrical outlets, as well as electrical power to fixed equipment (such as kitchen equipment, elevators and mechanical systems), computers and lights. The nature and characteristics of your program will determine the electrical requirements for your project and your approach to lighting. (See *Laying Out Your Classroom* (p.38) and *Windows and Natural Light: Creating a Welcoming Space* (p.51) for ideas on classroom lighting locations and using light effectively.)

If you're working with an existing building and will be adding many outlets, lights, equipment, computers and so on, it may be necessary for you to increase the electrical service to the building. This will increase costs, so it will be helpful to your budget planning to determine early on if this will be the case.

See also p.88, *Environmentally Friendly Products and "Green" Design*, later in this manual, for information on the potential for environmentally friendly approaches to your electrical system and lighting.

Plumbing

Centers can often be more plumbing-intensive than other types of buildings, for a number of reasons:

- Children generally need more toilets and hand-washing facilities than do grown-ups.
- Diaper-changing areas need dedicated sinks for the teachers.
- Classrooms often include both adult-height and child-height sinks for food preparation, art projects and so on.

For large projects involving new construction or extensive renovation, plumbing is a key consideration. The most economical approach would be to group all plumbing facilities into one or two locations. However, best practices for center design recommend that children's washroom facilities be spread out so that they're part of, or near, the classrooms. Ideally, washrooms should be as close to classrooms as possible, if not actually in them. Your architect should be able to work with you to find the most efficient layout.

A good compromise is for pairs of adjacent classrooms to share one connecting toilet room and diaper-changing area. See p.49, *Adding Toilet or Diaper Changing Facilities*.

If you are adding or constructing a kitchen, keep in mind that state regulations usually require more plumbing than does residential construction (for example, three bowl sinks, grease traps, separate hand washing and prep sinks, commercial dishwashers).

Environmentally Friendly Products and “Green” Design

As you are planning your building systems, your team and agency may want to prioritize environmentally friendly decisions. Your architect can incorporate “green design” if you request this. There are now many options for sustainable or “green” building design, as well as opportunities to use environmentally friendly products. The options range from complete dedication to renewable resources, energy-efficient equipment and non-toxic materials, to modest inclusion of the most convenient and affordable green elements.

The options described here will be easiest to embrace for projects that involve new facilities or extensive renovation, but even small projects can take into account the value of such considerations as using green products and non-toxic materials.

Sometimes green approaches can cost a little more at the outset, but can save you money over the long term. Ultimately, you’ll want to strike your own balance between what you can afford in terms of initial costs and the long-term savings that green approaches can provide.

You may want to consider applying to have your building rated using the Leadership in Energy and Environmental Design (LEED) rating system. LEED is a voluntary program through which a project receives points for every element used that meets its standards for environmentally friendly design.

Non-toxic materials are also an important consideration in planning your facility. Children are especially sensitive to materials that can trigger or aggravate allergies and asthma. So, best practices for center design recommend that safe and toxin-free materials be used whenever possible to ensure that the interior environment and air quality are safe for both children and adults.

There are many actions you can take that will help you successfully include sustainable design in your project, and they'll be most effective if you plan them from the outset of the project:

- Organize the elements of your building to take best advantage of energy-saving options.
- Maximize daylight in rooms and allow for partial lighting when full lighting isn't needed.
- Allow some room in the budget for slightly higher initial material costs.
- Consider the cleaning products needed for various materials as you're selecting them.
- Consider drought-resistant landscaping to cut down on future watering costs.

In addition, consider the ideas in the following worksheet *Building "Green": Material and Design Suggestions*.

Worksheet



Building “Green”: Material and Design Suggestions

Ideas for the site on which your building is or will be located:

Erosion & Sedimentation Control

- Reduce negative impact on water and air quality by controlling construction activities in a way that reduces the release of dust and other matter into the air and water.
- Prevent soil loss through water runoff during construction by putting up silt fencing and stockpiling topsoil.

Site Selection

- Try to find a site that is within a half-mile of public transportation.
- Reduce the environmental impact of your building on the site by staying clear of designated wetlands and FEMA (Federal Emergency Management Agency) identified floodplains. Try to avoid destroying any healthy trees that are on the site.

Development and Population Density

- Develop in areas with existing infrastructure such as roads with curbs and gutters (less prone to flooding), sewer lines (instead of septic fields) and non-well water.
- Incorporate any green spaces that may be on your property into your site design whenever possible.

Off-street Parking and Landscaping

- Size parking lots to meet the minimum spaces required by local zoning requirements, but try not to exceed them.
- Choose landscaping that is designed to reduce or eliminate excessive watering and that shades windows during hot weather.
- Decrease water runoff and increase the amount of rainwater that penetrates into the ground by planting vegetation that holds on to rainwater (such as ground cover) on slopes and providing as much permeable (non-paved) ground area as possible.

Light Pollution Reduction

- Avoid installing outside light fixtures that direct the light off and away from your site. Avoid creating night-sky pollution by installing “down-lighting” (lighting that is pointed downward and not out).



Worksheet

Copy & Use

Building “Green”: Material and Design Suggestions

Storage and Collection of Recyclables

- Provide an easily accessible area that serves the entire building and is dedicated to the separation, collection and storage of materials for recycling including (at a minimum) paper, corrugated cardboard, glass, plastics and metal.

Ideas for the inside of your building:

Suggestions for Greater Energy-Efficiency

- Install high-efficiency mechanical systems such as a 92.5% efficient sealed combustion/direct vent gas-fired forced air furnace with a programmable thermostat and a 60% efficient hot water heater.
- Think about a mixture of incandescent and energy-efficient fluorescent lighting. Use dimmers and multi-level switching.
- Consider insulated glass (dual panes separated by space), low emissivity (“low-e”), vinyl frame windows with a very good U-value of .30. A window’s U-value is the measure of heat loss through the window (the whole unit, glass and frame) under nighttime winter conditions. The lower the number, the better.
- Take advantage of natural ventilation during pleasant spring/ autumn weather. Operable windows are a good investment even in an air-conditioned facility.
- Extensively caulk and seal the whole building envelope, including the panels, windows, doors and so on.

Sustainable and safe products to use in your rooms:

Paint

- Use low-VOC primer and paints for all interior painting. Some good choices are Benjamin Moore Paints such as Pristine Ecospec Interior Latex Flat 219 and Pristine Ecospec Interior Latex Semi-Gloss Enamel 224. These primers and paints have minimal odor and, in the white color, have no Volatile Organic Compounds (VOCs). The colorants have minimal amounts of VOCs. Pittsburgh Paints are also VOC-free.

Worksheet



Building “Green”: Material and Design Suggestions

Carpet (Broadloom and Tile)

- For carpet padding, consider a synthetic felt carpet pad that contains no Butylated Hydroxytoluenes (BHTs), and which is non-allergenic and will suppress bacterial growth. Carpet padding such as Right Step by Mohawk contains no BHTs and has superior insulating and sound absorption qualities.

Mohawk Carpet (www.mohawkcarpet.com)

For carpet, there are several products on the market that are made from sustainable products:

- Aladdin 4601 Commitment by Mohawk. This 30 oz. polyester carpet is manufactured from recycled plastic food and beverage containers (primarily soda and ketchup bottles) and is naturally stain resistant.
- Interface Carpet Company has a carpet by the name of Cool Carpet. Cool Carpet’s manufacturing process has a much lower release of CO₂ than a normal carpet manufacturing process. The overabundance of CO₂ in the atmosphere is the main contributor to global warming.
Interface Carpet (www.interfaceinc.com)
- Lees Carpet Company has developed a carpet backing called UNIBOND that is manufactured with a renewable resource that is a by-product of the forestry industry, thus using fewer petrochemicals. The UNIBOND backing uses no weld seams, which are often toxic. The adhesives used with this backing have no VOC emission.
Lees Carpet (www.leescarpets.com)
- Collins and Aikman Company’s POWERBOND ER3 carpet has a vinyl backing that is made entirely from old reclaimed carpets.
Collins and Aikman (www.powerbond.com)



Worksheet

Building “Green”: Material and Design Suggestions

Floor Tile

- Expanko Cork and Rubber Company is well known for its use of cork in its XCR3 flooring products. Cork is a natural product and a renewable resource. In early 2004, Expanko introduced rubber flooring called Reztec that is made of recycled tires, post-industrial waste rubber and virgin rubber. This flooring is best used in high-traffic areas such as hallways. For playgrounds, Expanko has products called EX-Pavers and EX-Ground which have the durability benefits of Reztec but are made for the outdoors.
Expanko Cork and Rubber Flooring (www.expanko.com)
- Marmoleum Dual by Forbo Industries is an excellent quality substitute for vinyl composition tile, offered both in sheet form and as cut tiles in a wide range of colors. It is manufactured primarily from natural materials, including linseed oil, wood flour, rosin binders and dry pigments.
Forbo Flooring and Cork Boards (www.forbo-industries.com)

Acoustical Ceiling Tile

- Armstrong Ceiling (and Flooring) use recycled content in all of their tiles.
Armstrong (www.armstrong.com)
- Chicago Metallic Acoustical Ceiling Grid Suspension System is made of 90 to 100% post-consumer recycled content. 100% of the post-consumer steel they use is from the region.
Chicago Metallic (www.chicago-metallic.com)

Baseboards and Other Wood Trim

- Some centers try to use wood that is finger-jointed, which means that the products were made by connecting shorter sections of wood to create longer pieces. The pieces are firmly connected by creating finger-like notches at the ends to which other pieces lock. This method allows a smaller piece of wood to still be used, where normally it would be wasted or ground up for sawdust. Trim pieces are usually painted, concealing joints.

From Classrooms to Communities: Designing Other Center Spaces

In addition to the obvious classrooms, well-functioning centers contain many other important components. Depending on what services you provide, these may include any of the following:

- An entry lobby and waiting area
- Administrative offices and work areas, and break rooms or lounges
- An indoor Gross Motor Room or a multi-purpose room
- A kitchen – either a full facility or a warming kitchen
- Storage space – both indoor and outdoor
- An isolation area
- Parent enrichment/resource rooms
- Special therapy rooms
- Art room
- Service spaces, such as mechanical, electrical and telephone rooms

If your facility will be used for other activities in addition to early childhood development, or shared with other programs, you should include these considerations in your overall planning process. These other uses for the space need to be integrated into the overall design of the facility, so that the functions work well together.

Entry and Circulation

Size: 400 to 500 square feet, proportionate to center size.

The facility's entry and reception area must be designed to achieve two seemingly contradictory objectives: control and limit access to the center, and create a warm and inviting area to welcome families and very young children. To achieve these objectives, access through the front door or vestibule door must be monitored and controlled using a buzzer. Therefore, the receptionist must be in full view of a door that will be opened by a buzzer located at the receptionist desk. The receptionist should be able to see the door and operate the buzzer while seated. If the center is small and there is no dedicated receptionist, another office can be placed so that it opens to the main entry and a buzzer can be provided there.

The receptionist desk should be fully equipped to allow the receptionist to carry out most duties while monitoring the door, including answering the phone and working on the computer. The receptionist desk area should also be incorporated with other administrative functions, including access to the copier, fax and other office equipment. The reception office can be part of a larger administrative area including offices for other center staff. It might also be a good idea to consider a deposit/payment mail slot, in or around the receptionist desk, for convenient drop-off of payments.

The center's entry area should be large enough to handle the peak arrival and departure hours at the center without being so large that the open space is intimidating or wasted. The size of the entry area should be proportionate to the number of children the center serves. The entry should include an area where parents can sit and speak to other parents, wait for children, or wait for center staff to meet with them. The more friendly this area is the less intimidating it will be to parents, who will then relax while their young children gain comfort with the center. Larger centers will require greater flow space, which can be intimidating to young children. Therefore, special effort must be taken to provide features that are specifically sized for young children, in addition to features that make the center attractive to children, such as fish tanks or built-in toys.

When designing entry and access to the center's multi-purpose spaces, keep in mind that they may be used for evening functions as well as daytime uses, so consider how people arriving for those events will enter and exit.

Three other spaces can be associated with the entry area: the site director's office (large centers may also include an assistant director's office), the family worker's office and the Parent Resource Library.

ADA standards may also have an influence on design of entry areas. Taking ADA standards into account is mandatory for Head Start and Early Head Start quality standards, even though it may not be mandatory for DCFS or local code.

Administration

Site Director's Office

Size: 150-200 square feet.

There are two opinions on the location of the site director's office. Some prefer it to be near the entry so that the director is accessible to parents whenever they come to the center. The easy accessibility of the site director facilitates interaction between parents and the director by removing any formal separation. The other opinion is that complete accessibility does not give the site director enough privacy to carry out the business of the center. In cases where entry area office space is limited, it may also be a trade-off between having an accessible site director and family worker. Because of these differing complexities, the location of the site director's office is an open question to be determined by the provider agency.

Regardless of its location, the site director's office should be large enough to hold a desk, filing cabinets and a small conference table for meetings with families and staff. It may be a good idea for the site director's office to have windows that allow the director to view the center from the office.

Family Workers' Offices

Size: 96 net usable square feet per worker.

If a center is large enough, or if it includes Head Start, the center will require office space for family workers. Each family worker should have enough space to meet with parents on an informal basis, approximately 96 square feet. Family workers do not necessarily require private space, so a number of workers can be placed together in cubicle-style space. The family workers' offices should be located near the center entry.

Other Office Space

Depending on the size of the center, other office space for educational coordinators, social workers and counselors may be required. These offices are not necessarily required to be located near the entry. Positions that meet frequently with families, such as social workers, require privacy and may benefit from being located near the center's front, but it's not required. Educational or curriculum coordinator positions may be located anywhere in the center because their important access is to staff and not the general public. Use of equipment may dictate the location of all offices.

The sizes of these offices are specified as follows:

Office	Share Office	Approximate Square Footage	Location
Social Worker	No	100 – 150	1st Floor
Education Coordinators	Yes, if more	80 – 100 / person	Anywhere (near than one entrance if point person for families)
Assistant Director	May	100	Anywhere (near entrance if point person for families)
Administrative Assistant	May with Receptionist	80	1st Floor

Staff Lounge

Size: Approximately 200 to 300 square feet, depending on the number of staff.

All centers should include a staff lounge. Improving staff retention rates is often an important goal for centers. A staff lounge, where employees can take a break and visit with their colleagues, shows that they are valued, and can further their commitment to each other as well as to their work. The lounge should be large enough for a refrigerator, microwave oven, storage cabinets, a sink, a small table with chairs and a sofa.

The staff lounge can be located anywhere in the center, but is best located away from the center entry. Location near adult toilets provides a convenience to staff. Care should be taken to make sure this space is comfortable and refreshing, with windows if at all possible.

Gross Motor Rooms

Size: 1,200 to 1,600 square feet, depending on the size of the center and the child population.

All IFF-built centers have Gross Motor Rooms (GMRs), ranging from 1,200 to 1,600 square feet. In addition to being gross motor skills building areas for preschool children, they serve as community rooms for events, training, agency meetings, large conferences, parent social events and many other social functions. It has been the IFF's experience that these rooms are the most-used space in the centers.

The GMR should be located next to the kitchen, have access to adult toilets and have direct access from the main entry for after-hours daily events. The GMR, kitchen and adult toilets should be able to be sealed off from the rest of the center for after-hours events (See Figure 1, p.71).

If possible, additional ceiling height should be incorporated into the GMR design. Such ceiling height will encourage children and teachers to fully utilize the room as a gymnasium and will create better space for larger events. (Storage for a moveable six- to 12-inch stage/platform in the room will facilitate children's dramatic events and other meeting events.) A large storage closet with full doors should be located adjacent to the GMR to store equipment such as chairs and tables and large toys and tricycles. The closet should be approximately 100 to 150 square feet; verify this size and the door openings with the number of tables/chairs and size of furniture trolleys to be stored.

GMRs may be carpeted or covered with vinyl tile. Carpeting allows for better acoustics, whereas tile is easier to clean for community events involving food. Carpet tiles provide the acoustics of carpet and can be replaced more easily if an area becomes stained or ruined. Both seem to work well for preschool gross motor purposes. Wall finishes are more important to the success of the GMR. Because of the nature of the room, the lower quarter to third of the wall should be constructed or covered with a hard durable finish. Drywall is not an effective barrier against tricycles and other types of toddler toys. Because of the nature of the activities in the GMR, it should be free of columns and decorative elements that can be run into by children or block supervision or sight lines. (If columns are unavoidable for any reason, work with the architect to specify treatment for them in order to avoid creating an injury hazard. There are numerous products available to make columns safer by wrapping them in a soft, cushioned texture.)

Parent Resource Library/Center

Size: Approximately 250 square feet.

The final space to be located near the center's entry is the Parent Resource Center. This area is often a place for parents to meet informally. It can include books, pamphlets and other literature on parenting, jobs training programs and other community services or events. Some resource centers function as libraries of books or toys, or have computers with Internet access for job searches or access to other resources.

If the agency uses the space for parents to socialize, it should be somewhat open to the entry area, increasing the space for informal gathering and communication. If the library is to be primarily used for computer work and other “library”-type uses, then it should be more enclosed and separate. Regardless of the available resources, the Parent Resource Center should be located at the front of the center. If it is hard to find or get to, it will not be used.

This space can double as a small conference room if it has sufficient privacy, and can often be used for staff development as well.

Conference Rooms

Most IFF-built centers have included two conference rooms—one large and one smaller. (Some of the spaces described in the preceding sections can also double as conference rooms when not in use for other purposes.) Many of the agencies in the IFF’s Child Care Facility Development Program, an organized development project through which seven centers were designed and built at the same time, reported that they didn’t require two conference rooms and have since converted those rooms for other uses. However, the agencies providing higher numbers of other services in addition to early childhood development used both conference rooms to a great degree. Centers that don’t provide other services should have one conference room, approximately 400 to 500 square feet.

Centers that provide other services may want to have two conference rooms, divided between a total of 700 square feet, with the provider deciding the breakdown. If the center has two stories, a conference room on each floor may be a good option. Conference rooms should generally be located near the entry so that visitors don’t need assistance in finding the rooms and don’t need to walk through the entire center for meetings. However, the location of conference rooms has a lower priority in siting than classrooms and parent resource rooms.

Consider staff development and enrichment when designing the conference rooms; these spaces are often used for training sessions and related purposes.

Art Rooms, Therapy Rooms and Other Special Areas

Depending on your curriculum, you may include other specialized areas to be designed according to your needs. Here are two good possibilities:

An art room. It is ideal for this room to have good natural light, a sink for clean-up, easily maintained finishes and sufficient storage. It is beneficial if the art room can be open to the rest of the center (possibly via windows), since it is usually an attractive and inviting place.

Therapy rooms. These are small rooms for private therapy; they can double as conference rooms. If they're located next to a conference room, and a one-way mirror is provided between rooms, then therapy can be observed. One-way mirrors should have shades so both rooms can be used independently if desired. (Note: these mirrors work only when the therapy room lighting level is higher than in the observation room.)

Kitchens

Size: Approximately 500 square feet, depending on the size and use of the facility/kitchen.

The kitchen can be full-service or a warming kitchen, depending on whether meals are prepared on site or catered. Generally, freezers for storage of formula are located in the kitchen area, if allowable by licensing and health regulations. The kitchen should include pantry storage. The service area door should be extra wide and easily accessible to the pantry, refrigerators and freezer.

Many centers serving more than 120 children include a full-service kitchen. Smaller centers should include a catering (or warming) kitchen, which may include a microwave, refrigerator and dishwasher only. Generally, a convection oven is used to warm trays of food delivered by the catering service. Drinks and cold food such as salads are sometimes prepared in such a kitchen.

The kitchen's location should be near the building's service entry, so deliveries can be made without going through other parts of the center and refuse can be discarded easily. The kitchen should also be situated so that it's convenient for delivery of meals throughout the center. The kitchen should also be located near the dumpster area.

Kitchen ventilation is a major consideration for a number of reasons:

- Freezers and refrigerators require fresh air to function well over their natural life.
- Kitchen staff's morale can be negatively affected by cramped, airless over-heated workspace.
- Air circulation can be important for good sanitation.

It is ideal if the kitchen can be used in conjunction with the Gross Motor Room after hours and on weekends, while the rest of the center is gated off.

If at all possible, try to provide operable windows for the kitchen staff—it's great for staff morale and makes the kitchen seem bigger and less crowded. Look-through windows in the kitchen to the hallway are a nice touch, when possible, to allow children to observe food preparation.

As a final note, there are licensing standards that apply to meal and snack provision. Kitchen capacity should be carefully considered when creating a new center, because that can limit the possibilities for future expansion.

Laundry Room

Size: Approximately 100 square feet.

Centers with infants and toddlers require a laundry room with a large capacity washer and dryer. This room should also have cabinets for storage and counter space for folding clothes and linens. If space is tight, laundry equipment can be located within the kitchen or storage rooms.

Wherever the laundry machines are situated, it's important that the dryer be set up to vent outside the center, rather than inside.

Storage

Centers never seem to have enough storage and more is always welcome. It is best to determine at the outset how you want to handle storage needs: should it be centralized, or should it be available in each individual classroom or area? It is usually most efficient if several storage areas are provided, near to where they'll be needed. See p.56, *Addressing Storage Needs* for ideas and considerations when planning for your storage needs.



A small “porch” makes an imposing building more inviting.

Public and Staff Toilets

State and local regulations will dictate the number of toilets and lavatories required. You may want to expand on this if necessary and if budget allows. In smaller centers, the staff and public can use the same toilets; in larger centers it may work out that separate facilities can be provided.

You should also consider whether several single-user toilet rooms work better for your facility than larger, multiple-stall Men’s and Women’s rooms. The single-user rooms are more expensive per toilet, but in some cases may work better with your layout.

It is best to locate toilets conveniently for the public, so they don’t have to wander through the building to reach them. Toilets should also be located near the workplace for teachers and administrative staff, and near the staff lounge if possible. Keep in mind that some toilets will need to be accessible for after-hours use when the rest of the center is gated off.

Note also that ADA standards (which are part of Head Start and Early Head Start requirements) will have an influence on toilet design as well.

Other Service Areas (mechanical rooms, telephone)

You will most likely need to provide space in the building for service areas. Some examples:

- Janitor's closets with mop sinks, usually one per floor
- A telephone equipment room
- An electrical equipment room
- A mechanical room—even if you have rooftop units, you may need space for hot water heaters

Some of these rooms can be combined with each other, or combined with storage or laundry areas, for a more efficient use of space.

Façade

Building façade affects how your agency is viewed by the surrounding community, potential funders, parents, children and others. This does not, however, suggest that façade should be fancy or a budget priority. Your architect can help you to decide on a building exterior that is welcoming and fits with the surrounding architecture and your budget.

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