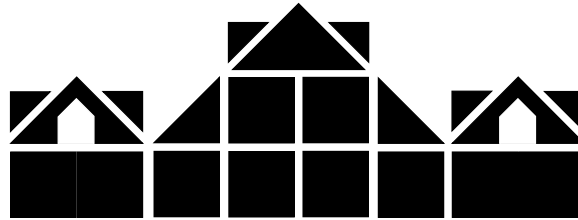




**The Affordable Housing
Study Commission
Final Report
2001-2002**



THE AFFORDABLE HOUSING STUDY COMMISSION

Dedicated to Promoting Affordable Housing in Florida Since 1986

www.dca.state.fl.us/FHCD/AHSC

July 15, 2002

Jeb Bush
Governor

Kristen K. Packard
Chair

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Santos De La Rosa
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The Honorable Tom Feeney, Speaker
Florida House of Representatives
420 Capitol
Tallahassee, Florida 32399-1300

Dear Governor Bush, President McKay, and Speaker Feeney:

On behalf of the Affordable Housing Study Commission, I am pleased to submit our final report for 2002. This report fulfills the requirements of section 420.609, Florida Statutes, and includes the Commission's recommendations to improve the delivery of Florida's affordable housing programs.

This year the Commission focused on three major topical areas—affordable housing and design, and infrastructure financing for affordable housing. The Commission also continued to focus its attention on the NIMBY (“Not In My Back Yard”) phenomenon and the efforts being undertaken to address this serious obstacle to providing housing for all of Florida's citizens.

Speaking for all members of the Commission, I extend our appreciation for the opportunity to serve the Citizens of Florida.

Sincerely,

Kristen K. Packard
Chair

Affordable Housing Study Commission Final Report 2001-2002



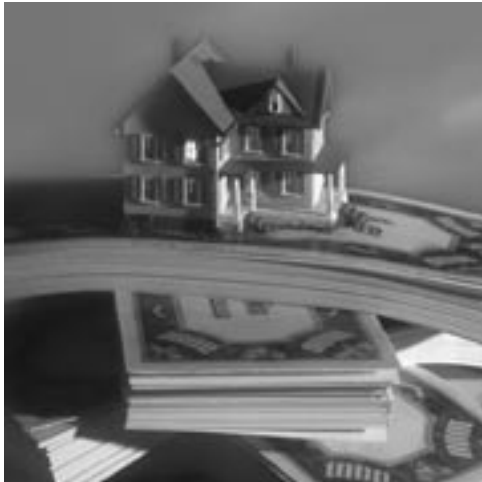
i Affordable Housing Study Commission
2001-2002 Membership

ii Mission Statement of the Affordable
Housing Study Commission and Strategies
for Accomplishing the Mission



1 CHAPTER ONE:
Introduction

4 CHAPTER TWO:
Affordable Housing and Design



12 **CHAPTER THREE:**
Funding Infrastructure and
Design



27 **CHAPTER FIVE:**
The Commission's 2002-2003 Agenda



28 **APPENDICES**
A. Design Considerations Checklist
B. State of Florida Median Incomes
by Occupation—2001

22 **CHAPTER FOUR:**
NIMBYism—A Continuing Barrier
to Inclusive Communities

**AFFORDABLE HOUSING STUDY
COMMISSION
2002 MEMBERSHIP**

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Representing Florida Association of Counties

Gregory S. Wood
Representing Florida League of Cities



MISSION STATEMENT OF THE AFFORDABLE HOUSING STUDY COMMISSION

The Affordable Housing Study Commission recommends improvements to public policy to stimulate community development and revitalization and to promote the production, preservation, and maintenance of safe, decent, and affordable housing for all Floridians.

Strategies for Accomplishing the Mission:

The Affordable Housing Study Commission implements its mission through the following strategies:

- Encouraging public-private partnerships and governmental coordination;
- Identifying opportunities to streamline state, regional, and local regulations affecting the affordability of housing;
- Advocating development strategies which comprehensively address the housing, economic, and social needs of individuals;
- Advocating the provision of increased technical and financial resources;
- Promoting research on affordable housing issues; and
- Educating the public and government officials to understand and appreciate the benefits of affordable housing.



CHAPTER ONE

INTRODUCTION

In 2001, the Affordable Housing Study Commission's Final Report contained a detailed analysis on the need for affordable housing and the many factors that go into defining that need. The Commission found that, no matter what perspective was used, the simple fact is that too many wage-earners pay too much money for too little housing. Things have not changed since last year.

Florida is not alone in this situation. Concerns are being raised throughout the United States over the housing crunch being experienced by many low and moderate-income families and households. With few exceptions, having a job does not guarantee a family a safe, adequate and decent place to live that is affordable. The following are a few examples of this growing national awareness:

- **The Center for Housing Policy** of the National Conference on Housing has four major publications that focus on the housing needs of working families. One of those publications, *Paycheck to Paycheck: Working Families and the Cost of Housing in America*, focuses on the severity of the housing crisis for these working families.
- A study conducted by the **State of Minnesota** (2001) determined that there was a shortage of working class housing in the Minneapolis-St. Paul metropolitan area of such severe proportions that the local economy was losing out on hundreds of millions of dollars because potential working class workers cannot locate housing they can afford.
- **Long Island (New York)** – the birthplace of the post-WWII affordable housing development, par excellence, Levittown – is being economically strangled by the lack of affordable housing for workers. The New York Times stated: "...employers have a hard time recruiting workers and paying the salaries to meet housing costs."
- **The Maine State Housing Authority**, troubled by the lack of housing for low and moderate-income workers, launched a statewide advertising campaign to combat local opposition to developing affordable housing. The campaign highlights the plight of firefighters, teachers and nurses as typical of vital occupations, the workers of which are unable to find housing in the towns and communities in which they work. One poignant road-side poster being used in the campaign shows an emergency room nurse, stethoscope slung over her shoulder, and the declaration: "She can save your life, but she can't live in your neighborhood."

Table A
MEDIAN INCOMES FOR SELECTED OCCUPATIONS IN SELECTED MSAS

| | Orlando | Ft. Lauderdale | West Palm Beach | Naples/ Collier | Tampa MSA | Jacksonville | Tallahassee MSA |
|--------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Protective Services | | | | | | | |
| Fire Fighters | \$28,120 | \$42,560 | \$40,250 | \$34,670 | \$32,450 | \$24,000 | \$34,510 |
| Police Patrol Officers | \$34,380 | \$44,570 | \$42,490 | \$33,800 | \$40,250 | \$32,660 | \$34,110 |
| Deputy Sheriffs | \$30,870 | \$34,920 | \$42,910 | \$43,200 | \$39,170 | \$29,850 | \$33,950 |
| Education | | | | | | | |
| Teachers - Elementary School | \$41,700 | \$34,280 | \$35,400 | \$41,100 | \$37,960 | \$34,260 | \$47,470 |
| Teachers - Secondary School | \$40,600 | \$35,570 | \$37,700 | \$42,540 | \$41,770 | \$35,340 | \$46,490 |
| Health | | | | | | | |
| Ambulance Drivers | \$21,220 | \$17,560 | \$17,660 | NA | \$17,350 | \$17,910 | \$17,370 |
| Licensed Practical Nurse | \$29,220 | \$31,050 | \$32,340 | \$30,430 | \$29,640 | \$31,100 | \$29,120 |
| Median Household Income | \$52,000 | \$56,900 | \$60,000 | \$65,000 | \$47,700 | \$54,500 | \$54,900 |
| 80% | \$41,600 | \$45,520 | \$48,000 | \$52,000 | \$38,160 | \$43,600 | \$43,920 |

The common thread through all this attention is the increased pressure being placed on working families and households to find housing that is affordable. Florida is no different. Table A contains the median salaries for several occupations that play a vital role in sustaining the social fabric of a community. To illustrate the plight of working families, we chose the occupations of licensed practical nurse, ambulance driver, fire fighter, police patrol officer, deputy sheriff, elementary school teacher and secondary school teacher. Also included in Table A is the median income for that area and the 80% of median income threshold. This is the threshold or ceiling for eligibility to participate and be a resident of an affordable housing development funded by such programs as the State Housing Initiatives Partnership (SHIP) or the multi-family rental programs administered by the Florida Housing Finance Corporation.

In no case does the occupation median income come even close to the median income for the area. In fact, in almost all cases the occupational median income falls below the 80% threshold. These are the kind of people that benefit from affordable housing.

THE 2002 FINAL REPORT AND RECOMMENDATIONS

This year, the Affordable Housing Study Commission focused on three major topical areas: affordable housing and design and infrastructure financing for affordable housing. The Commission also continued to focus its attention on the NIMBY ("Not In My Back Yard") phenomenon and the efforts being undertaken to address this serious hindrance to providing housing for all of Florida's citizens.

■ Affordable Housing and Design

The Affordable Housing Study Commission has long recognized that housing must be more than mere shelter. Affordable housing is not an inferior and cheaper version of market rate housing, stripped of everything but the basic essentials. Well-designed housing plays an integral role in shaping both the lives of the individuals and families who live in the housing and the vibrancy of the community in which it is located. The Commission understood that incorporating design into affordable housing first means determining what design objectives one wishes to accomplish.

For this year, the Commission formulated recommendations that will encourage and promote design considerations as an integral part of affordable housing development. These recommendations and the Study Commission's work on affordable housing and design is covered by Chapter Two of this report.

■ Infrastructure Financing for Affordable Housing

As with any residential or commercial development, construction costs and site development expenditures only represent part of the overall costs of a development. In many cases, the cost of infrastructure (roads, water, sewer, and other public services) can add significantly to a development's budget. Affordable housing developments, working on much tighter cost margins than market-rate higher-end developments, are particularly sensitive to off-site infrastructure improvement costs. The Affordable Housing Study Commission, mindful of the current fiscal atmosphere, examined a variety of approaches to addressing infrastructure financing for affordable housing within existing administrative, regulatory, and financing environments.

For this year, the Commission formulated recommendations that could, in several creative ways, provide funding for infrastructure financing. These recommendations and the Study Commission's work on infrastructure financing are covered in Chapter Three of this report.

■ NIMBYism – A Continuing Hindrance

Since the mid-part of last decade, the Affordable Housing Study Commission has looked at the NIMBY – the Not-In-My-Backyard – phenomenon. First coined several decades ago to characterize the public policy debate surrounding community



opposition to the siting of undesirable land uses (e.g., landfills or hazardous waste dumps), NIMBY cases are surfacing more and more in middle class urban and suburban neighborhoods in opposition to affordable housing. People who are hostile to this type of housing equate affordable housing with the worst of the public housing experiments of the past. Thus, at the same time that Florida is making huge strides with its model affordable housing programs such as the State Housing Initiatives Partnership (SHIP) and

putting more money than ever into working class housing for its citizens, the unprecedented increase in NIMBYism threatens this progress. For these reasons, the Commission continued its study of NIMBYism.

For this year, the Commission formulated recommendations that address the NIMBY syndrome and reduce its negative effects on the development of affordable housing around the state. These recommendations and the Study Commission's work on combating NIMBYism are covered in Chapter Four of this report.

THE AFFORDABLE HOUSING STUDY COMMISSION 2002 – 2003 AGENDA

The Commission considered several topics for its 2002 – 2003 agenda. While there are many topics with important policy issues that need to be addressed, the Commission chose to address how manufactured housing fits into Florida affordable housing delivery system as its sole topic for the 2002 – 2003 Commission year. More details on that agenda, including some of the policy questions and concerns are covered in Chapter Five of this report.

CHAPTER TWO

Affordable Housing and Design

The Affordable Housing Study Commission and affordable housing advocates, alike, have long recognized that affordable housing is not an inferior and cheaper version of market rate housing, stripped of everything but the basic essentials. Housing must be more than mere shelter. Well-designed housing—whether affordable or market-rate—plays an integral role in shaping both the lives of the individuals and families who live in the housing and the vibrancy of the community in which it is located.

Well-designed housing should meet the needs of its occupants. Different groups have different needs and housing should be responsive to these needs. For example, families with children need larger homes with more bedrooms. The elderly, on the other hand, need less space, but more attention needs to be paid to accessibility issues in overall design.

Well-designed housing must also be responsive to the context in which it is placed and should enhance the neighborhood. The context for housing includes the socioeconomic, legal, regulatory and physical environments. The design considerations of each of these environments must be sensitively balanced.

Well-designed affordable housing should be built to last and incorporate materials, finishes and mechanical systems that contribute to the longevity of a development and its ability to appreciate in value. These features should make a development easier to maintain and reduce operating costs by building in energy and environmental efficiency.

Most importantly, well-designed housing must fit within the budgets of the people who ultimately reside there.

About 42% of all households in Florida earn below 80% of median income. Design and construction of affordable housing should take advantage of the best practices in reducing costs to the ultimate customer – the family or individual who lives in the housing.

The Commission identified eight design objectives that may be used to shape affordable housing that is responsive to people's needs. Each of these eight design objectives is important, but the Commission realizes that these objectives must be balanced against one another and against the principal objective of lowering the cost of housing. But are these competing goals?

DESIGN OBJECTIVES¹

Design Objective 1: Contain Construction and Lifecycle Costs

The cornerstone of affordable housing is containing construction and lifecycle costs - the costs associated with long-term maintenance and refurbishment - without compromising other aspects of housing quality. Construction costs are the “hard” costs of building, such as the costs of materials, labor, and contractor fees. Many design strategies can be used to minimize these costs without compromising durability and livability. Efficient space planning, shared uses and amenities, and built-in furnishings are but a few possible strategies. Building dimensions and construction details that use standard size building materials can limit waste and labor costs.

Design Objective 2: Support Neighborhood and Community Fit

Housing that “fits” both its residents and neighborhood is appropriate for the types of households that live there and for its surrounding neighborhood. Designing to support household and neighborhood fit, however, is complex, because both households and neighborhoods vary and change over the lifetime of a building.

Conventional apartments or houses may not be the best living arrangement for all of these types of households: families with children, extended families, singles, and unrelated adults. Similarly, different cultural and ethnic groups may have different ways of organizing and using the spaces and rooms in their housing. The standard three-bedroom dwelling with a master bedroom and two smaller bedrooms, for example, may not be the best type of housing for unrelated adults or extended families. Unrelated adults may be better served by equally-sized bedrooms, and extended families by dwellings with an accessory apartment or a two-family house. Consideration also needs to be given to the appropriate size and organization of the kitchen, dining space, and living spaces to support household interaction and to the degree of separation that allow for privacy. Housing that includes spaces to accommodate working at home, or shared housing - often called “co-housing” - can increase housing affordability by providing shared amenities, and may be more appropriate to satisfy the lifestyles of many people with limited income and employment opportunities.

All across the United States, affordable housing is needed and has been built in different regions for different age groups

and types of households, in varying densities and scales, and in different architectural materials and styles. How well the housing fits into these varying neighborhood contexts influences residents’ and neighbors’ acceptance of affordable housing. A multi-family housing development, for example, may be acceptable in a single-family residential neighborhood, if it is designed to complement the scale and style of the surrounding homes. On an urban commercial street, apartments above storefronts may add vitality to the community and offer residents live/work opportunities. For any housing type, the participation of future residents, and/or their representatives, and neighbors in decisions about the design and site of a new housing development can enhance the possibilities for this fit.

Design Objective 3: Adapt to Household Changes

While a housing development typically is built with the intent of permanence, the lives of residents change over time. Some households move, while others remain in place as household members grow, age, and change in their stature, and mental and physical abilities. Society’s ideas about what is good and proper housing and how residents should use the spaces of their homes also change with time. Similarly, changes in governmental housing policies and regulations and management rules may have different impacts on residents’ use of their dwellings. The livability of a housing development over

¹ These design objectives were excerpted, with permission, from the Design Matters: Best Practices in Affordable Housing web page. The page is sponsored by the City Design Center at the College of Architecture and the Arts, University of Illinois at Chicago. The Design Matters site is a web-based guidebook on design objectives and the application of the objectives to existing affordable housing development. The site is located at: www.uic.edu/aa/cdc/AHDC/

the years is partly dependent upon how it can be adapted to accommodate these changes. Household fit may be maintained over the long term if the housing is designed to allow for flexible use and/or is easily expandable. A spare room, for example, located near the entry of a housing unit can function equally well as a den, home office, or spare bedroom. Major alterations, such as reorganizing the space in a dwelling or adding a room, can be cost-effective and simplified by planning for such additions in the initial design or by providing unfinished space. Necessary alterations to the dwelling can be simplified, for example, by providing devices that accommodate the installation of accessibility equipment, such as grab rails in a bathroom, or kitchen cabinets and counters that can be adjusted to accommodate wheelchair access. Adaptable housing allows people to comfortably “age-in-place” without incurring the emotional and economic costs of being forced to move or engage in expensive remodeling.



Design Objective 4: Be Universally Accessible

Universally accessible housing is housing designed to be usable, safe, and acceptable to people of a broad range of ages, needs, and abilities. Universally designed buildings and outdoor spaces benefit all residents and their visitors—children, adults, and seniors—regardless of their stature and level of mental and physical ability or disability. Universal accessibility includes: entrances that are free of steps; hallways, doorways, and clear floor spaces that are wide enough to accommodate a wheelchair; lever door and window handles for ease of use; slip-resistant flooring; work surfaces with variable or adaptable height; and multi-sensory controls, switches, and way-finding devices like signage.

Mandatory requirements that vary widely by locale regulate accessible housing. Examples of such codes and regulations are contained in the Department of Housing and Urban Development’s Program 202 and 811, Section 504, and the Fair Housing Amendments Act. They also are found in standards

such as the American National Standards Institute A117.1 (ANSI A117.1 - 1986, 1992), the Uniform Accessibility Standards (UFAS), and the ADA Standards for Accessible Design (1991). Advocates for universal design, however, call for design strategies that go beyond the minimum legal requirements of accessibility codes and regulations. While it is virtually impossible to design “all things for all people,” universally designed products, buildings, places, and communities embody inclusivity by taking into ac-

count the needs and well being of as many different users as possible.

Design Objective 5: Meet High Aesthetic Standards

Aesthetic quality is subjective—“beauty is in the eyes of the beholder.” There is no one standard of aesthetic interest. When judging the aesthetic quality of affordable housing, however, the following criteria are particularly relevant: the cultural appropriateness and appeal of the housing development for both residents and neighbors and the extent to which the new development complements its physical context.

The visual appearance of a housing development is central to people’s experience of aesthetic quality in most cultures. Among the many characteristics that contribute to the visual appearance of a building and its setting are formal qualities such as height, shape, and proportions of exterior and interior spaces; building and landscaping materials, finishes, textures, and colors; the interplay of light and shadow on its surfaces; and the quality of natural and artificial lighting. How the building meets the sky and how the building is perceived from varying distances also are important. In housing developments that include more than one building, the following may be considered: the overall size and density of the development; the relationship of building forms, locations, and spacing; indoor and outdoor connections; and paths, streets, parking, and site landscaping. The organization and sequence of spaces as a person moves through the development and its buildings,

including available views and vistas, significantly affect visual experience.

In addition to visual appearance, sounds, aromas, tactile qualities, and other sensory properties can contribute to people's aesthetic experiences. The choice and combination of all of these characteristics, and the resulting degree of complexity or simplicity of the development, contribute to residents' and neighbors' perception of aesthetic quality. Finally, how the aesthetic qualities of a new housing development embody or diverge from the style, scale, materials, and appearance of existing buildings and its site within the neighborhood should be handled with sensitivity and community participation.

Design Objective 6: Promote Energy and Resource Efficiency

Housing design that minimizes energy consumption, reduces construction waste, and sustains building durability and utility over the long term enhances housing affordability and resource sustainability. It is estimated that, in the United States, a 25% reduction in energy costs to conserve fossil fuels would also represent an 8% reduction in housing costs. Similarly, a resource-efficient design that conserves construction materials can reduce building construction costs by as much as 10%.

Energy efficiency design conserves fossil fuels and counters global warming while ensuring user comfort. Energy efficient design and building strategies include: the use of passive and active solar energy design and equipment to heat and cool the building; minimizing the "building envelope" (the exterior surface of the building, and its window and door openings) to decrease heat losses and gains; and energy efficient and environmentally safe appliances and equipment. "Airtight" construction of the building envelope can be a strategy to conserve energy, but careful consideration of all building materials, adhesives, paints, sealants and finishes is essential to



avoid the problem of indoor air pollution. Siting and shaping buildings to maximize appropriate solar access, and providing protection from potential damage of extremes of wind, temperature, and water are more examples of resource-efficient building practices that conserve non-renewable materials and products while ensuring building utility.

Natural resource consumption and construction waste can be reduced through using modular components and specifying materials derived from sustainable sources that are durable, contain recycled materials, and are easily dismantled, recovered, and recycled. Effective design and construction practices also can facilitate the rehabilitation and recycling of an entire building to prolong its useful life. If it is necessary to dispose of building materials and products, using materials that are reusable or biodegradable, non-polluting, and recyclable supports environmental sustainability. Lastly, water conservation has become increasingly important. Common means of water conservation include ecologically sensitive landscape design, equipment that minimizes water use, and the use of rain and gray water recycling from sources such as clothes washers and showers for landscaping and other non-drinking uses.

Design Objective 7: Ensure Healthy Indoor Environment

Housing should be built to provide healthy indoor environments by minimizing indoor air pollution and protecting water quality. Most indoor air quality problems arise from pollutants that are introduced into the house by construction practices,

building materials, adhesives, paint, and finishes. Gases, airborne particles, dust, and biological contaminants are the most common pollutants, and when combined with a lack of natural ventilation, these pollutants can reach concentrations that become hazardous to occupants' health. Ironically and unfortunately, homes that are designed to be energy-efficient are often built with airtight envelopes to minimize air leakage. The result can be insufficient airflow necessary to reduce indoor pollutants.

Eliminating the source of pollutants and diluting the concentration of contaminants promotes a healthy indoor environment. This may be accomplished by using less toxic materials, sealing equipment and surfaces to prevent the release of polluting gases, and using a balanced mechanical ventilation system to control the introduction of fresh air. Filtration systems also may be used to remove particles from indoor air. Soil tests and environmental assessments are needed to test for and minimize site and building pollutants that may affect air and water quality, and remedial measures should be taken when necessary. In addition, rehabilitation and adaptive reuse developments require examinations for pollutants such as lead paint, asbestos, and manufacturing chemicals. These toxins, if present, also necessitate remediation.



a perception of ownership, whether by a household or a group of residents. Minimizing the number of people using a common entry; increasing the visibility of common indoor spaces; and using security hardware, systems, and personnel—these are all techniques to enhance building security.

Buildings need to be made safe from physical hazards for all residents, including children, people with disabilities, and elderly people, by adhering to appropriate building codes and other

physical safety standards. Supporting physical safety also includes separating automobiles, trucks, and other vehicles, as well as building equipment and construction activity from pedestrian streets and common areas, such as playgrounds. Good site and building maintenance also enhances both physical safety and perceived and actual security.

Design Objective 8: Ensure Physical Safety and Security

Residential communities should offer people a sense of personal safety and security from physical hazards and criminal harm, both in the home and the community. Architectural and planning strategies, combined with building management, police, and community security organizations and programs, are effective in supporting physical safety and protecting neighborhoods from crime and the fear of crime.

Crime prevention through the design of outdoor spaces includes providing adequate visibility for both residents and passersby. Such strategies include: orienting building entries and first and second story windows toward the street and other frequently used outdoor spaces or common building areas; avoiding dead-ends and isolated spaces; designing short and visible pathways; and providing adequate lighting. Outdoor spaces that are perceived as a “no-man’s land” or offer blind corners and hiding places should be avoided in favor of places that are clearly designed for frequent use by many households or for individual household use. All spaces should encourage

What do we need to do to promote good design in Florida?

When the Commission looked more closely at specific design objectives, it became clear that these are not competing goals – that we can achieve well-designed affordable housing that meets user needs, is responsive to the context in which it is placed, is built to last and incorporates savings in both construction and long term costs. Whether or not any one individual house or development achieves this goal of well-designed affordable housing, depends more on education, knowledge and design intent than anything else.

The Commission aggregated these design objectives into the following two overlapping groups. The design focus of the first group is on the physical aspects of housing construction and design. The design focus of the second group is on people and the community.

DESIGN FOCUS:**Physical aspects of housing construction and design*****Objectives***

- Contain construction and life cycle costs
- Adapt to household changes
- Promote energy/resource efficiency
- Ensure physical safety and security
- Ensure healthy environments
- Build for universal accessibility

DESIGN FOCUS:**Community and people*****Objectives***

- Support neighborhood fit
- Meet high aesthetic standards
- Ensure physical safety and security
- Promote energy/resource efficiency
- Ensure healthy environment
- Adapt to household changes

CROSCUTTING THEMES

The Commission recognized that there are eight areas or themes where promoting the eight design objectives could be accomplished. These are: education, best practices, benefits, documentation, dissemination, partnerships, process, and investment. These areas formed the basis for the Commission's recommendations on affordable housing and design.

Education

The cornerstone of any successful effort in promoting good design in affordable housing is education. The housing development community and especially the general public need to learn about good design and its importance in their lives.

Best practices

We all learn from experience. There are numerous examples of outstanding design for each of the objectives. These should form the core of a corpus of "best practices" in affordable housing and design.

Benefits

If well-designed housing addresses human needs, then we need to understand more fully the benefits that this brings to the everyday life of individuals and families. This is the true testing ground of good design.

Documentation and data collection

Special attention needs to be placed on documenting the benefits of well-designed housing, especially where design has contributed to reducing the housing costs of the residents. Other areas include adaptability and accessibility for the aging or the disabled and the important contribution that good design can make to ensure neighborhood fit and community acceptance.



Dissemination

In promoting well-designed affordable housing, we need to recognize that there are various stakeholder communities all of whom will play a critical role in incorporating design objectives into Florida's affordable housing stock. These stakeholder communities include: the public and private development community, existing and future homeowners and renters (customers), and the general public

Strategic partnerships

Good design is beneficial to all and particular design objectives often crosscut the stakeholder communities that will benefit. Where possible strategic partnerships should be crafted to recognize and accomplish shared goals.

Process

Part of the cost of any development is related to the regulatory process. Process can add time and time often translates to unnecessary costs. In affordable housing there is a much thinner margin between the end cost of a house or development and the feasibility that the units will remain reasonably priced for lower income families.

Investing in physical design

Investment must be made in physical design. Resources must be expended to make well-designed affordable housing.

RECOMMENDATIONS

The following are the Commission's 2001-2002 recommendations regarding affordable housing and design.

Recommendation 1: *The Department of Community Affairs should incorporate education on design and design objectives in the Catalyst Affordable Housing Training and Technical Assistance Program.*

Comment: The Catalyst Program provides statewide training and technical assistance on affordable housing through workshops, on-site visits, and one-on-one assistance. Given its current role and status in assistance to affordable housing providers, the program provides an appropriate venue to promote affordable housing and design.

Recommendation 2: *The Florida Housing Finance Corporation and local housing finance authorities should incorporate incentives for the inclusion or accomplishment of specific design objectives in proposed affordable housing developments.*

Comment: For example, the universal application (i.e., the application used by the Florida Housing Finance Corporation under its competitive affordable housing programs) could include points for developments that demonstrate or otherwise certify the use of the Affordable Housing Design Advisor design considerations checklist in development planning.

Recommendation 3: *The Department of Community Affairs, in partnership with the Shimberg Center for Affordable Housing, should develop a guide for design standards and encourage their use. Design standards should cover three general development levels or areas: (1) site selection and site development, (2) building design and configuration, and (3) housing unit design.*

Comment: For example, the Council of State Community Development Agencies developed a guidebook report for states wanting to take a more active stance toward encouraging the incorporation of design standards in affordable housing. This could be used as a starting-point model for developing a Florida design guidebook.

Recommendation 4: *The Department of Community Affairs and the Florida Housing Finance Corporation, in partnership with private industry and other housing and advocacy associations such as the Florida Home Builders Association, the Florida Housing Coalition, and Florida's Coalition of Affordable Housing Providers, should develop an annual awards program to recognize best practices and outstanding developments that incorporate specific design objectives.*

Comment: Recognition for a job-well-done is a time-tested technique for promoting best practices. The eight design objectives could be used as a starting point for an award program that recognizes developments and practices that best exemplify each or several of the design objectives.

Recommendation 5: *The Department of Community Affairs, in partnership with the Florida Housing Finance Corporation, should provide for the development and dissemination of materials on best practices, model approaches and web-based design resources.*

Comment: Many times people do what they do because they are unaware of different ways or approaches, not because they are resistant to change. This is particularly true with affordable housing and design. All avenues for educating affordable housing stakeholders on the incorporation of design considerations should be explored. This should include the burgeoning array of web-based design resources.

Recommendation 6: *The Florida Department of Community Affairs should work with the building industry to overcome obstacles to innovative approaches to housing design and construction.*

Comment: There are an increasing number of innovative approaches to housing design and construction that can have an impact on construction or operating costs. Yet, there are many obstacles for new approaches to be adopted by the building industry.

CHAPTER THREE

Funding Infrastructure to Support Affordable Housing

Infrastructure, in all its forms (roads, sewers, potable water, and the like), is an essential component of the development process. Without infrastructure, no development is complete. Florida's stand on this has been clear—infrastructure needed to support a development must be in place concurrent with or soon after the development receives its certificate of occupancy (Section 163.3180(2), *Florida Statutes*).

As with any development, infrastructure costs associated with affordable housing increase the overall cost of the development, and scant resources are available to assist with this expense. The lack of infrastructure in rural areas and outmoded, dilapidated infrastructure in urban areas are regularly cited as impediments to developing affordable housing.

In 1998, the Florida Legislature authorized the Florida Housing Finance Corporation to “provide for the development of infrastructure improvements and rehabilitation primarily in connection with residential housing consistent with the applicable local government comprehensive plan” (Section 420.507(36), *Florida Statutes*). However, this authority has yet to be funded.

In its 2001 Final Report, the Commission outlined an agenda for 2001-02, wherein it expressed its intention to develop a recommendation to implement and fund Florida Housing's authority to provide for infrastructure. Throughout the past year, the subject has been a key topic of discussion. Other methods of providing infrastructure for affordable housing were examined as well. Particular focus was placed on urban infill and refill, small cities and towns, and small developments (less than 20 units).

The Commission concluded that the cost associated with developing “internal” infrastructure for an affordable housing development is already included in the overall cost of development and is, therefore, already eligible for financing through various Florida Housing Finance Corporation programs, such as:

- Multi-Family Mortgage Revenue Bond Program
- State Apartment Incentive Loan (SAIL) Program
- HOME Rental Program
- State Housing Initiatives Partnerships (SHIP) Program

The Florida Housing Finance Corporation also administers the federal housing tax credit program and issues guarantees on obligations incurred in the financing of affordable housing developments.

What is not offered through these programs is financing for infrastructure that is “external” to an affordable housing development. These infrastructure costs would include such items as road construction and bringing in water and sewer lines. While the Florida Housing Finance Corporation does have the statutory authority to finance such infrastructure through its Mortgage Revenue Bond Program, a lack of security to back the bonds makes it infeasible.

In light of the current, fiscally conservative climate, there is little likelihood that additional funding to produce external infrastructure for affordable housing will become available. For this reason, the Commission looked for more creative solutions to fill the need. The Commission broadened its charge and gave itself the challenge of identifying new ways to address the costs of infrastructure while working, for the most part, within

the existing administrative, regulatory, and financing environments. In simple terms, the Commission chose to focus on new methods to provide funding or otherwise lower the cost of infrastructure for affordable housing developments without creating or proposing a new revenue stream (no new taxes) or new programs. The following sections in this chapter present the results of those deliberations.

IMPACT FEE PROPORTIONALITY

Background

Impact fees are one-time charges against new development to help finance infrastructure improvements and other capital facilities needed to serve it such as public safety, library, education, park and recreation, water, wastewater, drainage, and transportation facilities.

The state's rapid growth over the past several decades has made Florida a prime locale for the use of impact fees to generate funds to pay for infrastructure and public improvements. Consequently, impact fees play a major role in adding to the cost of housing. Recognizing this, partial or full impact fee waivers are a typical mechanism used by local governments to promote affordable housing under the State Housing Initiatives Partnership program. Nonetheless, impact fees have contributed to the cost of affordable housing.

Florida does not have state-level impact fee authorizing legislation. Rather, the courts found authority for the imposition of impact fees in Florida in several broad grants of power to

local governments, including the home rule power of Florida counties and municipalities, and the Local Government Comprehensive Planning Act of 1975. The Florida Growth Management Act of 1985 recognized the validity of impact fees. It also required local governments to maintain adequate service levels and tie development approvals to the maintenance of those service levels. This became the concurrency requirement that adequate public services be concurrent with development. Given that there were no new major state-level revenue sources for local government infrastructure funding, it practically guaranteed the proliferation of impact fees to cover the costs of public facilities and services. In fact, much of the groundbreaking case law that has shaped impact fee jurisprudence has been in Florida.

As a basic issue of equity, new development should not be charged more than its "proportionate share" of the cost of such facilities, otherwise the excess revenue can be considered an unauthorized tax. For example, if the local community establishes a need for 10 acres of parkland per 1,000 residents at a cost of \$100,000 per acre, the cost is \$1,000 per person. If the average household size is 2.5 persons, the impact cost is \$2,500. But if a new home pays property taxes that are also used to help finance parks and the present value of those payments over 20 years is \$1,250 the impact fee becomes \$1,250 (the \$2,500 impact cost less the \$1,250 revenue credit). Payments more than this would mean new development pays for more than its own way.

It is in cases such as this when "over-payment" of impact fees can have an adverse effect on affordable housing. For ex-

ample, if the park impact fee in this case is \$2,000 it will be proportionately higher on lower-cost homes than more valuable homes. First generation impact fees were guilty of this because many simply charged the same fee regardless of the size or type of house. Second generation impact fees at least considered that single-family detached homes averaged more occupants than attached homes and so impact fees were scaled. For example, single-family detached homes may average 3.0 persons per unit while attached homes may average 2.2 persons per unit. Second generation impact fees thus charged detached homes \$1,500 per unit and attached homes \$1,100.

New generation impact fees are even more sensitive to differences in dwelling unit sizes and types. This is good for affordable housing because, generally speaking, smaller units are occupied by fewer people than larger ones. For example, statistics tell us that smaller units have fewer public school children than larger ones – despite conventional wisdom otherwise in some circles. Some counties throughout Florida recognize this and charge school impact fees on the basis of house size. In Martin County, for example, school impact fees for the largest homes are about 60 percent higher than for smaller ones. The same logic is used to assess impact fees for parks and recreation facilities.

In summary, making impact fees more sensitive to dwelling unit size and location needs to be expanded. A principal beneficiary of this will be affordable housing. While making impact fees more sensitive to these factors will not raise money for infrastructure, it will lower the development cost to the developer, lowering the fees the developer would typically pay for infrastructure improvements.



Guidance on factors for impact fee proportionality

1. Because most fire and police activities are related to property (such as fires and burglaries), impact fees should be calculated on the basis of house size.
2. Impact fees that are related to people, such as schools, parks, and libraries, need to be based on recent census data showing more clearly the relationship between house size and impact. This is especially important in the

case of schools because such impact fees are among the highest.

3. Impact fees for some facilities need to include nonresidential development. This will reduce impact fees on residential development, especially smaller homes. For example, parks and recreation facilities are often used by business leagues and so a portion of the park impact fee needs to be shifted to businesses. This applies also to libraries.

4. Impact fees for water and wastewater facilities are often the largest of all impact fees. Impact fees for these facilities are typically based on the type of house, such as single family detached or apartment. Yet, larger homes on average have more people and, consequently, larger homes certainly have more impact on these facilities than smaller ones. A possible mechanism to better assess fees for these services would be through the total number of “plumbing fixture units” as calculated by the American Water Works Association. This will provide a reasonable way in which to distinguish potential impacts between larger and smaller homes.

5. Impact fees for these water and wastewater facilities should also consider the lot size and area density. Few, if any, now do so. In terms of water consumption, for example, homes on larger lots usually consume more water than homes on smaller lots because of lawn irrigation. Yet, water impact fees do not reflect this difference. Also, homes in high density areas

probably consume less water and wastewater than the same number of homes elsewhere even when they are similarly sized. The reason is that water loss through transmission lines or wastewater inflow and infiltration occurs as a function of line distance, meaning that higher density areas usually have less loss than areas of lower density.

6. Transportation impact fees are among the highest in many communities, sometimes being the highest. They are also the least likely to be scaled based on differences in house size although most distinguish between type of unit such as single family detached and attached. More should be done to ensure that fees are proportional to impact. The following considers more specific factors:

(a) First, transportation impact fees need to be tailored to reflect the number of vehicles per dwelling unit based on unit size and type. Trip generation by vehicle needs to be considered. The result can be transportation impact fees that are more sensitive to house type and size than they are now, with a likely favorable outcome for affordable housing.

(b) Second, the density of the area where new homes are constructed needs to be considered. Census data usually show that higher density areas have fewer vehicles, fewer trips, and shorter trip lengths than areas of lower density. Because affordable housing is often found in higher density configurations, adding this consideration may reduce transportation impact fees.

(c) Finally, the presence of pedways (i.e., pedestrian walkways) and accessibility to public transit needs to be considered. There is some evidence to show that where sidewalks and bicycle pathways are present, vehicular trips are reduced. In some cases, average trip lengths are likewise reduced. More important, however, is that accessibility to public transit is known to reduce dependency on automobiles. Within about



a half mile of rail transit stations, for example, commuting trips per dwelling unit via the automobile is reduced by about a quarter and perhaps more.

If all these measures are taken, impact fees for new, large homes on large lots at the urban or suburban fringe will likely become higher than they are, while impact fees for new, smaller homes on small lots or attached configurations close-in will likely become less.

It is not easy for communities to consider all the above factors. The Commission believes that what is needed is a state-level effort to generate data, adaptable to the local level where appropriate, that cities and counties can use to refine impact fee calculations through impact fee proportionality.

Recommendation 1: *The Florida Department of Community Affairs, in cooperation and partnership with the Florida League of Cities and the Florida Association of Counties, should examine ways in which impact fee proportionality could be promoted to ensure that affordable housing developments are only paying their proportionate share of the costs of infrastructure needed to support these developments.*

BONDING FOR INFRASTRUCTURE IMPROVEMENTS

Bonds and bonding often provide the financial engine in the provision of infrastructure. In Florida, local governments may issue bonds as instruments of indebtedness to finance the costs of public developments, including infrastructure. Because of this major role that bonding plays in addressing infrastructure needs, the Commission decided to examine bonding in Florida and consider what could be done to couple bonding with the provision of infrastructure for affordable housing.

Two types of bonds are used: general obligation bonds and revenue bonds. Because of certain requirements for general obligation bonds, revenue bonds are more commonly used to finance water and wastewater projects.

General obligation bonds are backed by the “full faith, credit and taxing authority” of a local government. The taxing power of the jurisdiction is pledged to retire the bonds and they are paid from the ad valorem tax revenues on real or tangible personal property. The bonds may only be issued after a voter referendum approving the bonds. Other security may be provided to back the bonds as long as a specific repayment plan is specified.

Revenue bonds are repaid by the revenues generated by the enterprise, such as a water or wastewater system improvement. Revenue bonds may be for any capital expenditure that a local government determines is a public purpose, including the refunding of any bonded indebtedness that may be outstanding on an existing development that is to be improved because of a new development. Revenue bonds are backed by proceeds from certain non-ad valorem taxes and special assessments. Other tax sources include local sales taxes, public service taxes, and state revenue sharing funds. Special assessments may be levied against the property receiving a direct benefit from the project being financed with a special assessment revenue bond.

Bond pooling

There are a variety of standard costs and fees associated with issuing bonds. A significant savings in bond costs could be realized if municipalities could aggregate projects from each jurisdiction for a single bond issue. Pooling of projects would allow the cities or counties to combine certain expenses for the bond issue and save money. A larger bond issue could result.



State Bond Authority

In Florida, the Division of Bond Finance of the State Board of Administration is the agency that administers bond activity for the state. The Division of Bond Finance issues bonds on behalf of state agencies and authorities, administers the volume cap for private activity bonds, provides technical assistance on bond-related issues and activities, maintains a system for local government bond issuance reporting, and provides coordination for continuing bond disclosure filings.

Under federal guidelines, the state volume limitation is set at \$75 per capita for each calendar year for private activity bonds that require an allocation. As allowed under the Internal Revenue Service Code, a first initial amount (\$97.5 million for 2002) is allocated to the Manufacturing Facility Bond Pool for use statewide by manufacturing projects, as determined by the Governor’s Office of Tourism, Trade and Economic Development (“OTTED”) and the Department of Community Affairs. Fifteen percent of the Manufacturing Facility Bond Pool is reserved until July 1 for use by certain small counties.

Of the remaining state volume limitation, 50% is divided among 17 geographical Regional Pools on a per capita basis, 25% is allocated to the Florida Housing Finance Corporation (FHFC) for multi-family and single family housing bonds, 20% is allocated to the Florida First Business Allocation Pool, and 5% is held in the State Pool until May 1, for priority projects (i.e., solid waste disposal and sewage facilities and projects located within an enterprise zone).

On July 1, the Regional Pools are dissolved and the unallocated volume cap is transferred to the Florida First Business Allocation Pool. Any amounts remaining in the FHFC Pool for which an issuance report or notice of intent to issue bonds has not been received also revert to the Florida First Business Allocation Pool. On November 16 any unallocated or unused volume

cap remaining in the Manufacturing Facility Bond Pool and the Florida First Business Allocation Pool reverts to the State Pool and becomes available statewide on a first-come, first-served basis. On December 29th of each year, all unused (i.e. bonds not issued using volume cap) allocation reverts to the State Pool and is reallocated on a first-come, first-served basis to projects, as defined by the Internal Revenue Code, including but not limited to mass commuting facilities, facilities for the furnishing of water, sewerage facilities, solid waste disposal facilities, multi-family housing developments, and single family housing bonds.



FLORIDA SMALL CITIES CDBG

The Community Development Block Grant Program (CDBG) is a federal program that provides funding for housing and community development. In 1974, Congress passed the Housing and Community Development Act, Title I, and created the program. The program, administered by the U.S. Department of Housing and Urban Development (HUD), consists of two components—an entitlement program that provides funds directly to urban areas and a small

cities program which funds rural community activities. The law was further amended in 1981 to allow states to administer the program on behalf of non-entitlement communities. Statutes now require that the states:

- Adhere to the stringent requirements imposed by the U.S. Department of Housing and Urban Development on entitlement communities;
- Target low and moderate income persons that are below 80% of the median household income (70% of the funds must be used for activities that benefit such persons);
- Provide for citizen and public participation; and
- Allow home ownership assistance as an eligible activity.

The program has five categories for projects. These are housing, neighborhood revitalization, commercial revitalization, economic development, and the Section 108 Loan Guarantee Program. Under state rules adopted for the Florida program, the first four categories are allocated funding based on a percentage of the total amount received from HUD. Also set by state rule is a requirement that local governments may not have more than one open CDBG contract before applying for additional funds. While this requirement may stimulate local jurisdictions to complete projects, it impedes local govern-

In 2002, the total private activity bond allocation was \$1.23 billion. The Florida First Business Pool had an allocation of approximately \$226 million and the Florida Housing Finance Corporation had an allocation of approximately \$283 million.

In summary, the Commission believes that there are several things that could be done to in the general area of bonding authority to provide infrastructure financing for affordable housing.

Recommendation 2: *The Division of Bond Finance should develop guidelines for a pilot program whereby local jurisdictions may pool projects to create a larger bond issue and share bond issuance costs to provide infrastructure that will benefit affordable housing development.*

Recommendation 3: *The Florida Housing Finance Corporation should capture some of the bond allocation excess from the Florida First Business Pool at the end of the year to provide bond funding for infrastructure improvements that will benefit affordable housing.*

ments ability to address multiple needs. State rules also establish a priority for building new sewer and water facilities over the need to fix dilapidated infrastructure. Yet, substandard systems in existing neighborhoods due to deterioration are a very pressing redevelopment need.

The Commission believes that consideration should be given to Florida Small Cities CDBG program flexibility for local governments. This could help jurisdictions approach housing and community development in a more holistic manner and address infrastructure financing and improvement issues in Florida's smaller cities and towns. Because of program targeting to households earning below 80% of the median income, affordable housing will be a likely beneficiary.

Recommendation 4: *The Department of Community Affairs should create greater flexibility in the Small Cities Community Development Block Grant program.*

CDBG Section 108

The CDBG Loan Guarantee Program is an economic and community development financing tool authorized under Section 108 of Title I of the Housing and Community Development Act of 1974, as amended. The program provides both entitlement and non-entitlement communities with a source of financing large enough for economic development, housing rehabilitation, public facilities (e.g., water, sewer and sidewalks) and other large-scale physical development projects. Funds may not be used for new housing development. In order to be eligible, a project must meet all applicable CDBG requirements and result in significant employment and/or benefit for low and moderate-income people.



HUD sells treasury bonds on the private market and uses the proceeds to fund a Section 108 loan to local governments, which then use the funds for CDBG-eligible activities. These loans are secured by a pledge of a community's future CDBG funds and additional collateral acceptable to HUD.

The State of Florida was legislatively approved for participation in the Section 108 program in 1997. Each Florida entitlement community and the Florida Department of Community Affairs

have the ability to obligate up to five times its yearly CDBG award amount. To date, HUD has approved two developments in Florida.

Since CDBG funds are an essential and critical resource for communities, participants typically use conservative rating, selection and underwriting criteria (per 24 CFR 570.482(e)) in evaluating requests for pledges of grants. Terms for Section 108 Loans vary up to 20 years. The most common use for Section 108 funds is in the rehabilitation of existing units or economic development activities. However, in one unique instance in Florida (Roosevelt Gardens, a proposed affordable housing development in Key West), Section 108 funds are being used to assist with onsite infrastructure development.

The Commission believes that the existing Section 108 Loan Program offers opportunities for local jurisdictions to fund infrastructure improvements that will benefit affordable housing residents. The state should consider earmarking additional funds for the Small Cities CDBG Section 108 Loan program.

Recommendation 5: *The Department of Community Affairs should make more funding available for affordable housing infrastructure financing in the Small Cities Community Development Block Grant Section 108 Loan Program.*

INFORMAL TAX INCREMENT FINANCING (iTIF)

Tax increment financing (TIF) is often an extraordinarily effective tool to redevelop urban areas and create opportunities for affordable housing. Tax increment financing in Florida is authorized under the Florida Community Redevelopment Act of 1972, Chapter 163, Part III, Florida Statutes. It is a typical financing vehicle for local redevelopment efforts by community redevelopment agencies.



area needing public investment to stimulate revitalization and sells bonds to do so. The bonds need only be standard general obligation bonds, which are normally easier to process than TIF bonds. The local government then informally “freezes” the property tax base and establishes a base line for the affected area. It then earmarks subsequent incremental taxes to retiring the bonds. The reasoning here is that, without the investment, the incremental taxes may not be realized. The process is essentially a simple ledger account-

Tax increment financing works as follows: An area is declared blighted according to criteria established by statute. The community redevelopment agency adopts a plan for redevelopment of the area, including costs of land acquisition, infrastructure improvements, and other public investments. A baseline of property taxes is established for the affected area. The tax increment is the incremental amount of additional taxes collected above the base line amount in ensuing years. This tax increment may then be used as a revenue stream to issue, for example, TIF bonds. TIF bonds are issued to acquire land, install infrastructure, and make other public investments as needed. The bonds are paid off by the increment in property taxes generated above the base year. In some instances, the TIF revenue may be used directly to finance infrastructure improvements, including improvements to support affordable housing. Despite its successes in rejuvenating deteriorated areas, the process is lengthy and fraught with legal and planning challenges. And, in the case of TIF bond issues, it is expensive because of the extensive documentation needed to satisfy the buyers of bonds. Because of these and other reasons, many community redevelopment agencies choose not to use TIF financing.

However, there may be another way to accomplish the same objectives but more quickly and at less cost. It is called “informal” tax increment financing, abbreviated here as iTIF. Here is how this process might work: A local government identifies an

ing system and there is no obligation to commit incremental taxes to retiring bonds, but since the bonds need to be retired anyway the ledger accounting is a reasonable way in which to gauge the extent to which redevelopment is occurring.

The Commission believes that iTIF offers an opportunity for local governments to use a proven infrastructure funding mechanism in a creative way to avoid some of the typical obstacles to tax increment financing under existing statutory authority.

Recommendation 6: *The Department of Community Affairs should develop an informal tax increment financing model for local use and market this model.*

TRANSPORTATION-RELATED IMPROVEMENTS (TEA-21)

Communities throughout the country are seeking ways to improve their quality of life through “Smart Growth” initiatives. Smart Growth is growth that provides a balance between community livability, economic viability, and environmental sensitivity. Sound planning methods include increasing neighborhood contact through pedestrian (pedways) and bike ways; slowing traffic passing through the community through landscaping and traffic calming methods; and preserving special or unique features such as historic, scenic or environmental attributes. These enhancements maximize the quality of life of the

residents, and build a sense of place and pride in the community. The costs of many of these enhancements can be met through alternative funding sources.

A major source of alternative funds is the Transportation Equity Act of the 21st Century otherwise known as TEA-21. TEA-21 provides funds for “brick and mortar” type developments to implement sound transportation planning and improve the environment. This includes infrastructure needs and aesthetic enhancements such as pedestrian and bicycle facilities, landscaping and other scenic beautification, safety and educational activities for pedestrians and bicycles, acquisition of scenic easements and scenic historical sites, scenic or historical highway programs, control or removal of outdoor advertising, and environmental mitigation to address highway runoff pollution. This can translate to sidewalks, landscaping, street lighting, round-a-bouts with landscaping features and other traffic calming improvements. These are features that are common in market-rate and upscale developments and are just as appropriate for affordable housing development. In fact, aside from the possible cost savings in providing for infrastructure, aesthetic enhancements would provide a real tangible benefit in regard to considerations such as neighborhood fit and community acceptance.

TEA-21 projects are competitively awarded through the local Metropolitan Planning Organization (MPO). Metropolitan Planning Organizations are regional transportation planning entities that receive and coordinate federal transportation funds from the Federal Highway Administration for urbanized areas. Local MPOs prioritize projects typically through the use of ranking criteria or a scoring system. There is no requirement for matching funds. Recognition of a preference for affordable housing would increase the likelihood that certain costs for infrastructure for affordable housing development could be paid by TEA-21 funds. Other alternative funding sources that



should be considered by affordable housing developers for transportation-related improvements and aesthetic enhancements include:

- The Florida Highway Beautification Council Grant Program provides funding for landscape projects along Florida’s roadways through the Florida Department of Transportation.
- The Surface Transportation Program under TEA-21 provides state aid under a federal block grant to fund mass transit, bikeway, pedestrian, and intermodal transportation projects.
- The Surface Transportation Program (STP)- Safety funds are federal funds designated for highway safety improvements. This can include sidewalks, bike lanes and paths.
- The National Tree Trust provides financial assistance and or trees and planting material to municipalities to enhance urban environments.

The Commission believes that TEA-21 and these other existing programs should be used, where appropriate, to address transportation infrastructure needs for affordable housing development. Additionally, the Commission believes that transportation planning agencies should recognize the importance of affordable housing in their funding decisions.

Recommendation 7: *The Department of Community Affairs should promote TEA-21 and other sources of alternative funding for transportation-related affordable housing infrastructure.*

Recommendation 8: *Metropolitan Planning Organizations should provide a preference for affordable housing developments that incorporate development features eligible for Transportation Equity Act of the 21st Century funding.*

COMMUNITY DEVELOPMENT DISTRICTS AND AFFORDABLE HOUSING

There are four types of “local governments” recognized in the State of Florida - counties, incorporated cities, school boards, and special districts. Each entity is circumscribed in regard to its duties and responsibilities and each receives tax or special assessment revenues to fulfill those responsibilities. While cities and counties have the principal responsibility for the provision of adequate infrastructure and services within their jurisdictions, special districts sometimes fill this role. Special districts are special purpose government with a limited boundary and exist only to serve one or more special purposes with a variety of limited and special powers.

Community Development Districts (CDD) are special districts, created under the authority of Chapter 190, Florida Statutes. They are independent local governments of limited and specialized authority that manage the planning, construction, implementation, and maintenance of infrastructure over time. They also have authority to generate funds for this purpose.

The idea behind CDDs is simple. In areas where a city or county cannot provide adequate infrastructure to support development, a CDD may be used to do so. Generally speaking, CDDs are created and charged with one or all of the functions of planning, financing, constructing, and maintaining infrastructure within the district. In practice, many CDDs are created to facilitate individual large-scale developments, such as developments of regional impact (DRI). After major infrastructure is installed by the DRI developer, its maintenance is provided by the district. This shifts the financing burden of long-term maintenance from the local government to the development itself. In many cases, the local government owns



the facilities but occupants of the development finance its maintenance.

How can CDDs advance affordable housing? One approach could be for the local government to extend its low interest borrowing power to large-scale new developments that offer a substantial number or percent of affordable housing units. This can work in one of two ways. First, it can borrow funds at tax-exempt rates to finance infrastructure in the CDD through the sale of general obligation bonds. Second, it

can borrow state or federal funds at low interest rates through programs that could be expanded for this purpose. In either case, the developer is sheltered from much of the cost of installing infrastructure. The developer can sell land at a lower cost because the infrastructure element is financed. Although the CDD would finance the infrastructure, the ability to do so at below-market rates may result in lower land costs on the whole. This would allow more flexibility for the developer to target or otherwise guarantee the inclusion of affordable housing (e.g., agreeing to a minimum number or percent of housing units affordable to households of certain income ranges.)

The Commission believes that the infrastructure funding opportunities provided by the creation of Community Development Districts pursuant to Chapter 190, Florida Statutes, offers a presently untapped source for affordable housing infrastructure financing.

Recommendation 9: *The Department of Community Affairs should explore how community development districts can be used to facilitate affordable housing infrastructure development.*

CHAPTER FOUR

NIMBYism – A Continuing Barrier to Inclusive Communities

Blind and naked Ignorance

Delivers brawling judgments, unashamed,

On all things all day long.

Alfred Lord Tennyson (1809 – 1892)
Idylls of the King: Merlin and Vivien

The NIMBY or “Not-In-My-Back-Yard” syndrome continues to be a widespread problem in Florida, occurring in both urban and rural communities. NIMBYism is recognized by the Commission as a major barrier to the placement of affordable housing in communities throughout the state, particularly in areas where it is needed most—close to employment opportunities and services such as health, day care, and public transportation. Oftentimes opponents of affordable housing are opposed to a proposed development because of their negative perceptions of what “type” of people live in affordable housing. These perceptions are based on the belief that affordable housing will attract “those” people to their community, and the unsubstantiated fear of lowered property values, crime, and physical deterioration.

Nothing could be further from the truth. Affordable housing today is indistinguishable from market rate housing; the only difference is how the housing unit is financed. The individuals and families that live in affordable housing are typically existing community residents who represent a broad spectrum of Florida’s citizens. Community residents who depend on the availability of affordable housing include our friends and co-workers, the elderly on fixed-incomes, the nurses that take care of us when we are sick, the teachers who educate our children,

as well as the police officers and firefighters who risk their lives to keep our families safe. People in retail sales, the tourism industry, other service oriented occupations and military families are also affected by opposition to the development of affordable housing. Put simply, NIMBYism is an impediment to fair and safe housing for people and their families who go to work every day. As Florida’s economy continues to be service-driven, the lack of quality affordable housing due to NIMBYism is a serious obstacle for companies considering expansion or relocation to Florida.

The rise of NIMBYism unfortunately is not unique to the Sunshine State. It is a problem affecting communities throughout the nation. Its negative impacts on the availability of safe, affordable housing for Floridians are well documented and have long been a concern of the Commission, the Department of Community Affairs, the Florida Housing Finance Corporation, fair housing advocates, and others, such as the Sadowski Coalition, 1000 Friends of Florida, and the Florida Housing Coalition. NIMBYism manifests itself in many forms. In 1996, the Commission identified the various forms of NIMBYism, undertook a national survey of NIMBY activities, and prepared a series of case studies to better understand the causes and successful approaches to combating NIMBYism. A survey of home builders helped document the growing impact of NIMBYism in Florida. In 1997, the Commission prepared recommendations on remedies to combat NIMBYism and produced an educational video showing what communities can and should expect from today’s affordable housing. This year the Florida Housing Coalition, 1000 Friends of Florida, Capital City Bank, and the Department of Community Affairs, through its Catalyst



Program for Technical Assistance and Training have partnered to create a new tool to combat NIMBYism: “A Guidebook for Local Elected Officials and Staff on Avoiding and Overcoming the Not in My Backyard Syndrome.” NIMBYism and its insidious impacts on Florida’s communities and the state’s economy continue to be a primary concern for the Commission, the Department of Community Affairs, elected officials, civic leaders, and fair housing advocates.

NIMBY in the 21st Century

One would think that with all this attention and the many efforts that have been undertaken to educate elected officials, community leaders and residents, the NIMBY phenomenon would have begun fading away. In fact, the exact opposite appears to be true. Technology has sped up the dissemination of inaccurate information fueling unsubstantiated fear and has helped opposition to affordable housing grow. The Affordable Housing Study Commission has once again concluded that much more must be done by everyone who cares about Florida’s future to educate Floridians about the positive impacts of affordable housing in our communities, combat NIMBYism, and create affordable housing. Unfortunately, ignorance, community fear and opposition to affordable housing are still very much a part of life in Florida today. Left unchecked, ignorance and fear will continue to guide community residents’ actions and hinder efforts to build inclusive communities that can accommodate all of Florida’s citizens.

It is ironic that even as the funding environment for affordable housing has undergone dramatic positive change almost un-

thinkable at the beginning of the last decade, the rise of NIMBYism threatens the progress made to provide attractive, safe, and affordable housing in Florida. The passage of the William E. Sadowski Act in 1992, the creation of the State Housing Incentives Partnership (SHIP) program, the creation of the state Loan Guarantee Program, the reauthorization of the federal Low Income Housing Tax Credit program, and the continued funding of the HOME affordable housing program for state and entitlement city programs have combined to make the funding environment for affordable housing the most attractive it has ever been. The Florida Housing Finance Corporation provides hundreds of millions of dollars each year for affordable housing. The SHIP program alone, with its dedicated funding source, now channels \$150 million a year into local city and county affordable housing efforts.

Putting a Face on NIMBY and Affordable Housing

The individuals and families that live in housing funded by the Florida Housing Finance Corporation and other affordable housing providers represent a broad spectrum of Florida’s citizens. Community residents who depend on the availability of affordable housing include hard working citizens. Oftentimes opponents of affordable housing are opposed to a development because of their negative perceptions of what “type” of people live in affordable housing and where they come from. They fail to make the connection that affordable housing serves existing employed community residents by providing housing that our teachers, nurses, friends and co-workers live in. The recent research publications from the Center for Housing Policy of the National Conference on Housing dramatically

highlight the need for affordable housing for working families around the nation. This puts a face on affordable housing – faces that we see everyday at the supermarket, doctor’s office, in schools, on buses, or at malls.

Again, Florida is no different. To demonstrate this, we have included a table in Appendix B that lists median annual incomes for all 788 worker occupations in Florida for 2001. The following table lists the median incomes for all the metropolitan statistical areas in Florida. The third column is the percentage of occupations with annual median salaries below the median household income for that MSA. For example, at one end of the spectrum, in the Ocala MSA 80.2% of the occupations have incomes below the median household income. The Naples MSA is at the bottom of the list where a whopping 97% of all occupations have annual median salaries that fall below the Naples MSA median income.

Table 2
MEDIAN INCOMES FOR METROPOLITAN STATISTICAL AREAS IN FLORIDA

| Metropolitan Statistical Area (MSA) | Median Income | % Occupations with Annual Salary Below Median |
|-------------------------------------|---------------|---|
| Ocala | 40,000 | 80.2% |
| Pensacola | 43,800 | 84.3% |
| Panama City | 44,100 | 84.4% |
| Daytona Beach | 44,400 | 84.5% |
| Lakeland | 44,800 | 84.6% |
| Miami | 45,600 | 84.8% |
| Gainesville | 46,800 | 85.2% |
| Tampa/St. Petersburg | 47,700 | 86.5% |
| Fort Walton | 48,900 | 87.3% |
| Fort Meyers/Cape Coral | 49,000 | 88.6% |
| Sarasota-Bradenton | 50,500 | 90.1% |
| Fort Pierce | 50,600 | 90.0% |
| Melbourne-Titusville | 51,200 | 90.4% |
| Orlando | 52,000 | 90.9% |
| Jacksonville | 54,500 | 92.5% |
| Tallahassee | 54,900 | 92.8% |
| Fort Lauderdale | 56,900 | 94.0% |
| West Palm Beach | 60,000 | 95.2% |
| Naples | 65,000 | 96.7% |

The conclusion is irrefutable. The vast majority of workers in the state would qualify for affordable housing, especially if they are a member of a single wage-earner family. That is the face of affordable housing.

Combating NIMBY - Signs of Positive Change

The fight against NIMBYism and discrimination towards affordable housing and the people who live there has not been one of unrelenting retreat. There has been progress on many fronts. There is a growing list of resources available - from a newsletter devoted solely to NIMBY issues to a burgeoning array of national and international research examining the misperceptions and unfounded prejudices that lie at the root of the NIMBY phenomenon. A powerful and effective legal weapon has also been added to this list.

In 2000, the Florida Legislature passed 2000-353, L.O.F. This law amended the Florida Fair Housing Act, (Chapter 760, Part II, *Florida Statutes*) by adding the following language to Section 760.26, *Florida Statutes*:

760.26 Prohibited discrimination in land use decisions and in permitting of development.--It is unlawful to discriminate in land use decisions or in the permitting of development based on race, color, national origin, sex, disability, familial status, religion, or, except as otherwise provided by law, the source of financing of a development or proposed development. (Section 760.26, *Florida Statutes*)

What the Legislature did was to prohibit discrimination in land use decisions or permitting based on the source of financing for a development. Described as a “bombshell” by some, Florida’s new fair housing provision makes it illegal to oppose a housing development based on the grounds that its financing includes one or several affordable housing funding sources. The knowledge and potential impact of this provision are not widespread, but its effects are already being felt.

The Florida-based Wilson Company proposed a 270 unit affordable housing development in the City of Oldsmar, Pinellas County. A majority of elected officials and some residents of the community opposed the development because it was affordable housing and the “kind of people” who would live there. The Wilson Company hired Washington, D.C. civil rights attorney John Relman and brought suit against the City, the City Council and the neighborhood association opposing

the development. Facing a lawsuit in excess of \$10 million, city officials settled with the developer in November, 2001. Neighborhood opponents agreed to a settlement in March, 2002.

Although litigation should be reserved as a last resort, the Commission believes that illegal discrimination against affordable housing needs to be stopped. The new groundbreaking fair housing provision under Florida law should prove to be a useful weapon in that battle.



elementary and secondary schools.

In closing, it is clear that NIMBYism, accompanied by ignorance, fear, and prejudice, is a continuing barrier to the creation of inclusive, vibrant communities in Florida. Current efforts to educate Florida's citizens on the value and importance of affordable housing are insufficient and should not be relied upon as the only tool in the state's housing toolbox. Strong, informed leadership to ensure that Florida has sufficient affordable housing for

What is needed - A Comprehensive Campaign to Promote Affordable Housing

Legal strategies aside, there is still a challenge. The Commission believes that there are strategies and measures that can mitigate the negative impacts of NIMBYism and otherwise promote affordable housing. These strategies and measures must be comprehensive in scope and coordinated in implementation. In other words, the Commission believes that we need a comprehensive campaign to promote affordable housing.

In order to help community residents and government officials make this connection, the Florida Housing Finance Corporation should collect existing demographic and career choice information about residents who live in affordable housing developed through the Corporation. While respecting the residents' rights to privacy is of the utmost concern, this general type of information can be used to combat misperceptions about who specifically lives in affordable housing. By collecting data that documents where residents formerly lived, the Corporation can help reinforce the fact that in most cases affordable housing serves existing community residents.

Likewise, we need a comprehensive education campaign that is aimed at not only elected officials or potential NIMBY opponents, but the general public, including students in our

its citizens in the future is needed from Florida's leaders now. Mounting a comprehensive campaign to promote affordable housing should be the first step in these efforts. The Commission offers the following recommendations to lay the groundwork for that campaign.

Recommendation 1: *To illustrate that housing affordability is an issue that impacts the quality of life of all Floridians, by providing housing for our families, friends and other respected members of our communities, the Florida Housing Finance Corporation should compile demographic and occupational choice information on the makeup of individuals and families that live in affordable housing produced through their programs. This should include information on where residents formerly lived to demonstrate that affordable housing serves existing community residents and does not typically attract new residents.*

Recommendation 2: *The Department of Community Affairs, in partnership with the Florida Housing Finance Corporation, should educate city and county elected officials on issues surrounding NIMBYism and the value and benefits of building inclusive communities.*

Recommendation 3: *The Department of Community Affairs, in partnership with the Florida Housing Finance Corporation, should develop and fund an on-going NIMBY education program. Such program should feature, in part, components that can be used by*

the Florida League of Cities, the Florida Association of Counties and others, within their respective training programs, to educate city and county elected officials on issues surrounding NIMBYism and the value and benefits of building inclusive communities.

Recommendation 4: *The Department of Community Affairs should prepare a NIMBY education curriculum that can be adopted and used by the Florida Department of Education and local school boards in Florida's elementary, middle, and high schools for the purpose of educating Florida's youth on the value and benefits of building inclusive communities.*

Recommendation 5: *The Department of Community Affairs should ensure that all elected officials receive a copy of "Creating Inclusive Communities in Florida: A Guidebook for Local Elected Officials and Staff on Avoiding and Overcoming the Not in My Backyard Syndrome." The Department should explore options for distributing additional copies of this publication to neighborhood associations and other interested parties.*

Recommendation 6: *Developers of affordable housing should work with local communities and citizens in the pre-development process to promote and enhance community involvement.*

Recommendation 7: *Affordable housing advocates, including government agencies, should educate economic development entities and industries whose employees depend on the availability of affordable housing (e.g., tourism, agriculture, the retail sector, nursing, government employees) about the benefits of affordable housing, and secure their assistance in advocating for more affordable housing in Florida.*

Recommendation 8: *The public and private sectors should emphasize the necessity and benefits of housing and housing affordability for all citizens of the state.*

The myths surrounding affordable housing must be exposed for what they are—prejudices masquerading as concerns. The Corporation's funding programs are structured such that they ensure well-built quality housing managed for the long-term. This can be evidenced by the overwhelming success of the housing tax credit program as the housing units fit seamlessly into existing neighborhoods.

The Commission's 2002–2003 Agenda

The Role of Manufactured Housing in

Florida's Affordable Housing

The Commission considered several topics for its 2002–2003 agenda. This included: manufactured housing, housing needs of extremely low income families, rural homeownership, housing preservation, innovative technologies to reduce costs, housing accessibility and adaptability, assisted living for the elderly, and single family housing. While all the topics under consideration had critical policy questions that need to be addressed, the Commission chose to address how manufactured housing fits into Florida affordable housing delivery system as its sole topic for the 2002–2003 Commission year. Manufactured housing is housing that is built to the HUD building code. There are several important reasons why manufactured housing was selected.

Manufactured housing already plays a significant role in the delivery of lower cost housing for many of Florida's citizens. Some two million residents, or about 12.5 percent of the state's population, live in manufactured housing. In many locations around the state, new housing starts are dominated by manufactured housing placements. In 2001, state-sponsored research on manufactured housing by the International Hurricane Center estimated that 37 percent of

manufactured housing units in the state had occupants all of which were above the age of 65. Further, almost 50 percent of all manufactured housing units in the state had at least one occupant who was above the age of 65. Moreover, the authorizing legislation for the Commission itself, instructs the Commission to give consideration to various types of residential construction, including but not limited to, manufactured housing (Subsection 420.609(4)(h), *Florida Statutes*).

There are several avenues of study that the Commission will be pursuing as it examines manufactured housing. The principal policy question will be: What is the proper role for manufactured housing in Florida's affordable housing policy framework and delivery system? Related to this will be issues such as: Are there structural and safety concerns for HUD code housing? Are there taxing, assessment, and depreciation problems with manufactured housing and how does this help or impede its role in making a contribution to the delivery of affordable housing around the state? Finally, what legislative, policy, and program solutions does the Commission recommend to help manufactured housing achieve its proper role in providing safe, adequate, and affordable housing for Florida's citizens?

Design Considerations Checklist

Acknowledgement

The following Design Considerations Checklist was developed in conjunction with the Affordable Housing Design Advisor. The Affordable Housing Design Advisor is one of leading web-based resources for learning about and incorporating design considerations in the development of affordable housing. The Affordable Housing Design Advisor was completed under contract for the U.S. Department of Housing and Urban Development (HUD) and is located at: www.designadvisor.org

HUD personnel who were instrumental in the development of the Affordable Housing Design Advisor include:

- Nelson Carbonell, R.A., Office of Policy Development and Research
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- Roma Campanile, Office of Public and Indian Housing
- Mimi Kolesar, Office of Community Planning and Development

The Design Advisor Advisory Group and the organizations that they represented include:

- John Spear, AIA, and Stephanie Bothwell -- The American Institute of Architects
- Moustafa Mourad -- The Enterprise Foundation
- David Parish -- The Federal Home Loan Bank of Boston
- Maria Gutierrez -- The Local Initiatives Support Corporation
- Robert Leland -- The National Congress for Community Economic Development
- Charles Buki -- The Neighborhood Reinvestment Corporation

The Checklist was created to ensure that key issues—those with the greatest potential to impact design quality—are considered from the earliest phases of the development process and that no opportunities for achieving design excellence are overlooked. The Checklist contains over 60 key “design considerations” that have been organized into nine major categories. All the illustrations are drawn from “real world” affordable housing projects from around the country. The Design Advisor Web page incorporates other features and resources in the Checklist.

DESIGN CONSIDERATIONS CHECKLIST

- **PARKING**—*Don't let parking dominate the site, the building or the street.*

Overall Impact

Avoid letting garages, driveways and parking lots dominate the streetscape. Consider placing them at the rear or side of the site to allow a majority of dwelling units to “front on” the street. Consider planting trees and shrubs to soften the overall impact of parking areas and to provide shade and noise reduction. At buildings with parking garages, avoid large areas of blank wall facing the street. Consider incorporating decorative elements above the garage door to soften its visual impact. Consider improving unavoidable blank walls with decorative artwork, display cases, vines, and good quality durable materials to minimize graffiti and deterioration.

Access and Surveillance

Provide locations for parking that minimize walking distance between dwelling units and cars and that allow for casual surveillance of cars from a number of different units. Avoid remote parking. Avoid large lots. Consider breaking them into multiple, smaller lots to enhance safety and accessibility and minimize the aesthetic impact of large, unbroken rows of cars. Locate handicapped and elderly parking with immediate access to their respective units. Locate visitor drop off and parking near main entrances and clearly mark all visitor parking spaces.

Vehicle/Pedestrian Interaction

Design to minimize conflicts between vehicles and pedestrians. Consider separating bicycle and pedestrian paths from vehicular traffic. Consider linking open spaces so that they form an uninterrupted network of vehicle-free areas. Avoid parking layouts that erode a project's open space until only “leftover” areas are available for pedestrian use. Consider traffic calming strategies to slow down cars within the project.

Car Maintenance

Recognize that parking areas will be used for car repair and maintenance. Consider providing a space, with access to water and electricity and with adequate drainage, for this purpose.

Security

In underground or multi-story parking structures, provide a limited number of secure entry points. Ensure that all parking areas are well-lighted, but avoid lighting strategies that cause glare or otherwise negatively impact surrounding buildings. Consider locating parking in areas that can be informally observed by passersby.

Parking Podiums

On parking podiums provide adequate landscaping and site furniture. Landscaping should try to include naturalistic features to mask the artificial character of the podium, if permitted by budget. Consider integrating planters, lighting, trellises, benches and other site furniture with unit and building entries into a coherent open space plan. Make planters at least 30” high to protect plants.

- **PUBLIC OPEN SPACE**—*Public open areas must be designed to the same level of quality as any other “space” in a development.*

Outdoor Rooms

Think of public open space—shared outdoor areas intended for use by all residents—as “outdoor rooms,” and design them as carefully as any other rooms in the project. Avoid undifferentiated, empty spaces. Consider the types of activities that will occur in the “rooms,” including cultural or social activities unique to specific user groups, and design the shared open space accommodate these activities.

Access

Provide direct access to open space from the dwelling units that the open space is intended to serve. At the same time consider designing in ways to control nonresident access to these spaces. When terraces or balconies are used as shared open space, consider locating so they serve as extensions of indoor common areas.

Boundaries

Provide clear boundaries between publicly controlled spaces (streets), community controlled spaces (shared open space) and privately controlled spaces (dwellings and private open space). Consider enclosing or partially enclosing open space with project building(s) to provide clear boundaries.

Surveillance

Provide visual access to shared open spaces from individual units, preferably from the kitchen, living room or dining room.

Play Areas

Consider play—and play areas—as critical to the successful functioning of any family housing project. Avoid placing a low priority on these spaces and leaving their design until the end of a project. In particular, consider how play areas will be used by different age children (2-5 years, 5-12 years, and teenagers) and design these areas accordingly. Avoid “one space fits all” solutions. Locate play areas for small children so that they allow for adult supervision from dwelling units and/or from a central facility such as a laundry. Design play areas so that adults can also congregate and provide supervision.

Nighttime Lighting

Consider a lighting plan for shared open spaces that provides light from a variety of sources. Match lighting intensity and quality to the use for which it is intended; i.e. the lighting required for a pedestrian path is substantially different from that required to illuminate a parking garage. Avoid lighting which shines directly into dwelling units or is overly intense and bright. Consider energy efficient lighting whenever possible

- **PRIVATE OPEN SPACE**—*Every home should have its own private outdoor space.*

Private Outdoor Space for All Dwelling Units

Provide each household in the project with some form of private open space: patio, porch, deck, balcony, or yard. In certain instances, consider shared entry porches and/or shared balconies. Avoid building layouts where front yards face back yards.

Access

Ensure that private open space is easily accessible—physically and visually—from individual units.

Adequate Size

Ensure that private open space is large enough so that it can actually be used. Avoid spaces, particularly balconies, decks and porches, that are too narrow to accommodate furniture.

Balconies

Attempt to locate balconies adjacent to living rooms. Avoid screening balconies with solid walls. Instead, consider screening materials that provide privacy but also allow residents, particularly small children, to look out. Avoid horizontal railings and other designs which enable children to climb up. Carefully consider how and where balconies will drain.

Fencing

Consider providing fencing around all yards and patios to provide privacy and to help define boundaries between public and private open space.

Storage

Provide outdoor storage for outdoor tools, equipment and furniture.

- **LANDSCAPING**—*Landscaping can make or break a development.*

Landscaping is not a Secondary Consideration

Good landscaping is critical to the quality of any project. Consider how landscaping and planting will be handled from the very beginning of the design process. Avoid considering landscaping as an “extra” that can be added in at the end of the project or, worse, eliminated in the name of cost control.

Plantings

Provide as rich a variety of plantings—trees, shrubs, groundcover, and grass areas—as possible. Anticipate mature sizes and avoid crowding trees, shrubs and buildings. Use hardy, native species of trees and plants that are well suited to the project location and are easy to water and maintain.

Appropriate Plantings

Consider how the landscape will be used by project occupants and specify appropriate plantings. In general, assume heavy use in all landscaped areas. Avoid delicate plants and shrubs in heavily trafficked areas, especially in locations where they can be trampled by children. Instead, consider such plantings in areas that are out of the main traffic flow (e.g., as privacy planting next to buildings). Avoid providing only grass areas for children to play in. Consider a mix of grass and paved areas instead. Also, consider raising or otherwise protecting grass areas that are not meant for play.

Paved Areas

Recognize that some paved area will be necessary in family housing to facilitate children’s play. However, large, empty paved areas should be avoided. Consider using alternative landscape approaches—plantings and grass—to break these areas up into smaller functional units.

Edges

Where planted areas, other than lawns, meet hard surfaces include some form of raised edge to contain the soil and discourage cutting across the bed. Consider designing the edges so they can also serve as outdoor seating areas.

Outdoor Seating

Outdoor seating should be an integral part of any landscape plan and should be thoughtfully designed and located. Avoid simply scattering seats at random through the site. Consider what the seating looks at and what looks at it. Consider how the seating is oriented with respect to the sun and breezes and whether it needs protection from rain or wind. Avoid “one type fits all” solutions, particularly in larger projects. Consider providing different seating for different users.

Paths

Pedestrian paths and walkways are critical to the smooth functioning of any affordable housing project, particularly larger, multi-unit developments. Consider the wide range of uses that any path must accommodate—children, adults, bicycles, skate boards, shopping carts, walkers, pets, furniture moving, etc.—and design with this range of uses in mind. Avoid paths that are too narrow to accommodate multiple users at the same time. Consider rounded corners at all intersections and direction changes, especially in projects with children. Ensure that paths are well lighted so that users can see where they are going and be seen by other people. Consider designing path edges so that they encourage users to stay on the path and not trample on adjacent plantings (e.g. through changes in slope or materials or by providing raised edges). Remember that the shortest route from point A to point B is usually a straight line. Avoid forcing people to follow circuitous routes to their destinations or be prepared for the new, unplanned paths that will inevitably appear to accommodate occupant use patterns.

Storage

Provide adequate space to store landscape maintenance equipment and materials.

- **BUILDING LOCATION**—*A building should respect its street, enhance its site and respond to its climate.*

Site Entry and Circulation

The entry to the site is critical to the public image of the development. Emphasize the main entrance and place central and shared facilities there if possible. Respect the street and locate buildings on the site so that they reinforce street frontages.

Setbacks

To the extent possible, maintain the existing setback patterns within the immediate vicinity of the building. Avoid locating a building far in front of or far behind the average setback lines of the four to five properties located on either side of the proposed project. Respect the prevalent side yard and rear yard setback lines prevalent in the area.

Climate Considerations

Consider placing buildings on the site so as to maximize solar access during cooler months and to control it during warmer months. Also consider maximizing natural ventilation and access to views from within the site. Avoid a layout in which adjacent buildings obstruct one another. Design the building so that sun directly enters each dwelling unit during some part of the day year round.

- **BUILDING SHAPE**—*A building should reinforce the physical “fabric” of the surrounding neighborhood.*

Building Height

Relate the overall height of the new structure to that of adjacent structures and those of the immediate neighborhood. Avoid new construction that varies greatly in height from other buildings in the area, except where the local plan calls for redeveloping the whole area at much greater height and density. To the extent feasible, relate individual floor-to-floor heights to those of neighboring buildings. In particular, consider how the first floor level relates to the street and whether this is consistent with the first floors in neighboring buildings.

Building Scale and Massing

Relate the size and bulk of the new structure to the prevalent scale in other buildings in the immediate neighborhood.

Building Form

Consider utilizing a variety of building forms and roof shapes rather than box-like forms with large, unvaried roofs. Consider how the building can be efficiently manipulated to create clusters of units, and variations in height, setback and roof shape.

- **BUILDING APPEARANCE**—*A building should look good to residents and neighbors.*

Image

Avoid creating a building that look strange or out of place in its neighborhood. Consider a building image that fits in with the image of middle income housing in the community where the project is located.

Visual Complexity

Consider providing visual and architectural complexity as possible to the building’s appearance. Consider breaking a large building into smaller units or clusters. Consider variations in height, color, setback, materials, texture, trim, and roof shape. Consider variations in the shape and placement of windows, balconies and other façade elements. Consider using landscape elements to add variety and differentiate units from each other.

Windows

Maximize window number and size (within budget constraints) to enhance views and make spaces feel larger. Use minimum number of different size windows, but consider varying where and how they are used. Consider ways to screen and physically separate ground floor windows from walkways—through screens or plantings—to provide privacy.

Front Doors

Pay careful attention to the design and detailing of front doors. Consider what the front doors convey about the quality of the project and its residents. To the extent possible, respect the placement and detailing of good quality front doors in neighboring homes.

Facade

Relate the character of the new building façade to the façades of similar, good quality buildings in the surrounding neighborhood or region. Horizontal buildings can be made to relate to more vertical adjacent structures by breaking the façade into smaller components that individually appear more vertical. Avoid strongly horizontal or vertical façade expression unless compatible with the character of the majority of the structures in the immediate area.

Roof Shape

Consider relating the roof forms of the new building to those found in similar, good quality buildings in the neighborhood or region. Avoid introducing roof shapes, pitches or materials not found in the neighborhood or region.

Size and Rhythm of Openings

Respect the rhythm, size and proportion of openings—particularly on the street façades—of similar, good quality buildings in the neighborhood or surrounding area. Avoid introducing drastically new window patterns and door openings inconsistent with similar, good quality buildings in the neighborhood or surrounding area.

Trim and Details

Trim and details can provide warmth and character to a building's appearance, particularly on street façades. Carefully consider the design of porch and stair railings, fascia boards, corners, and areas where vertical and horizontal surfaces meet—for example where a wall meets the roof. Generally put trim around windows. Consider adding simple pieces of trim to the top and bottom of porch columns.

Materials and Color

Use materials and colors for the façade (including foundation walls) and roofing that are compatible with those in similar, good quality buildings in the surrounding neighborhood or region. Avoid introducing drastically different colors and materials than those of the surrounding area. Consider using materials that do not require repeated or expensive maintenance, especially those that residents can easily maintain themselves. Consider using materials with high levels of recycled content where possible.

Individual Identity

To the extent possible, provide individual identities and addresses for each dwelling unit. Consider ways to break large, repetitive structures into smaller, individually identifiable clusters. Ensure that all dwelling units have clear, individual addresses. Consider design strategies that allow residents to enhance and individualize the exterior appearance of their own units.

- **BUILDING LAYOUT**—*A building should “work” for residents, staff and visitors.*

Entries

Provide as many private, ground level entries to individual units as possible. Ensure that all building entries are prominent and visible and create a sense that the user is transitioning from a public to a semi-private area. Avoid side entries and those that are not visually defined. At all entries consider issues of shelter, security, lighting, durability, and identity. For apartment buildings, allow visual access from managers office and/or 24 hour desk. Allow visual access to stairs and elevators from the lobby. For buildings with clustered and individual unit entries, consider providing small “porch” areas that residents can personalize with plants, etc. Limit “shared entries” to less than eight households. Consider providing some form of storage—for strollers, bikes, shopping carts, etc.—at or close to all main entries.

Central Facilities and Common Rooms

Consider locating central facilities—such as community rooms and laundries—in a central part of the development or building. Common rooms should be linked to common outdoor space. Ensure that community rooms are comfortable, accessible, durable, and, most important, flexible places. Community room should have access to toilet rooms, a kitchenette, and should have good storage. Consider whether or not a childcare program will be provided and whether the community room will accommodate it. Provide access to daylight and natural ventilation in all common rooms.

Support and Service Areas

Carefully consider the design and location of key support/service areas such as the managers office, maintenance rooms, janitor’s facilities, mechanical equipment rooms and trash collection areas. Provide access to bathrooms and kitchens, and adequate space, furniture and storage for each of these uses, together with access to bathrooms and kitchens as appropriate. The manager’s office should supervise the main entrance and should be located centrally, next to community and maintenance rooms. Provide screened trash collection areas that are convenient and easy to access from all of the units. Consider the path of travel of trash from source to removal area.

Stairs

Ensure stairs are durable, attractive and safe. Avoid treating stairs as an afterthought. Instead, consider them, particularly entry stairs, as major design elements. Consider how they relate to the street and neighborhood, how they accommodate users and visitors, and what they “say” about the project and its occupants. Consider how the area under the stairs will look and be used. Ensure that all stairs can accommodate moving furniture without damage to finishes.

Elevators

Locate elevators in sight of managers office if possible. Design adequate space in front of elevator to allow waiting and passage.

Access Corridors

Avoid corridors of excessive length; i.e. greater than 100 feet unbroken length. Break up long corridors with lobbies, lighting, benches, materials and color changes, offsets, artwork. To the extent possible, provide corridors with access to natural daylight and ventilation. Ensure that all corridors can accommodate moving furniture without damage to finishes.

Security

Consider ease of visual and physical surveillance by the residents of areas such as the street, the main entrances to the site and the building, children’s play areas, public open space and parking areas. Consider locating windows from actively used rooms such as kitchens and living rooms so that they look onto key areas. Also consider containing open spaces within the building layout and using the selection and layout of plant materials to enhance, rather than hinder, surveillance and security. Consider specific design strategies to maximize the security of the building, including adequate lighting, lockable gates and doors at all entrances to the site and the buildings, and video cameras and monitors.

- **UNIT LAYOUT**—*A home should “work” for its residents.*

Entry

Consider recessing or otherwise articulating unit entries so as to provide individual identities for each unit and to allow residents to personalize their entry areas.

Room Relationships

Unit layout and room organization will be partly determined by the building type, orientation, location on the site and user profile. Consider activities and behaviors in each space to allow adequate room and durable materials for these activities. Create a clear separation of the private sleeping areas from the less private living areas. Avoid excessive circulation space. To the extent possible in multi-unit buildings, locate similar rooms adjacent to each other; for example, place the bedrooms of one unit adjacent to the bedrooms of the neighboring unit. Try to stack “wet” rooms so that plumbing runs are efficient.

Room Design

Consider how individual rooms will be used. Test furniture arrangements, outlet, telephone and cable jack, and light fixture locations to ensure that all rooms can be reasonably furnished. Consider partly enclosing kitchen to allow flexibility in dining/living room use. The master bedroom may have a private bath; other bedrooms will share bathrooms. Consider how rooms can be arranged to accommodate working at home. Avoid through traffic in living rooms.

Unit Mix

Unless local requirements dictate otherwise, consider providing a variety of unit types—studios, one-, two-, three- and four-bedrooms. The proportion of each type should take into account the population being served and the prevalent mix of units in the area surrounding the project. In multi-story buildings, try to locate larger family units on the ground floor to allow easy access and surveillance of children.

Dining Rooms

Provide enough space to accommodate a large table and enough chairs for occupants and guests. Consider how the space might be used for other activities such as homework.

Bathrooms

Provide visual screening of bathrooms from the entry and from the living and dining areas. When more than one bedroom shares a bathroom, consider separating the lavatory from the toilet/tub area to allow use by more than one person at a time.

Daylight and Ventilation

Access to natural light in all bedrooms and the living room is essential and cross ventilation throughout the unit is encouraged. Consider layouts that allow natural light to the kitchen and allow the natural ventilation and lighting of bathrooms.

Storage Space

Provide as much storage space as possible. At a minimum provide an amount of bulk storage commensurate with the size of the unit and the number and ages of residents it is expected to accommodate, including: coat closets in the entry area, large closets in the bedrooms, linen closets, pantry spaces, and storage rooms adjacent to exterior balconies or patios. Assume two occupants per bedroom for storage purposes.

Window Views

Consider what residents will see when they look out the window. To the extent possible orient the most used rooms to the best views.

Materials

Avoid materials that require frequent maintenance, especially by specialists. Consider materials that residents can maintain themselves. Provide floor coverings appropriate to use in room—generally use resilient flooring in kitchens, bathroom, laundries, dining rooms and entries. Consider “healthy” building materials for interior finishes and materials, such as: carpet, resilient flooring, paint, glues, cabinets. Evaluate selection of materials in terms of lifecycle cost.

Appliances and Mechanical Systems

Avoid appliances that require frequent care at short intervals by specialists. Provide heavy-duty, energy-efficient appliances and fixtures. Consider providing washer/dryer hookups, especially for families and disabled households. Provide adequate duct/chase space for both vertical and horizontal duct runs, especially for ranges and bathroom fan.



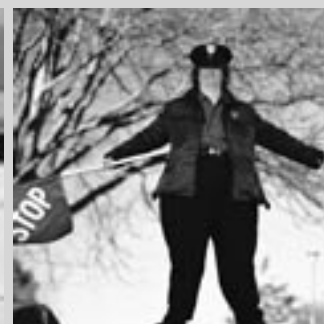
Waiters and Waitresses
\$13,170



Baggage Porters & Bellhops
\$13,500



Manicurists
\$14,640



Crossing Guards
\$15,330

State of Florida Median Incomes by Occupation - 2001

| OCCUPATION | CUMULATIVE | |
|--|---------------|-----------|
| | MEDIAN INCOME | % RANKING |
| Transportation Attendants (Except Flight) | \$13,060 | 0.1 |
| Waiters And Waitresses | \$13,170 | 0.3 |
| Bartenders | \$13,370 | 0.4 |
| Counter Attendants-Coffee Shop or Cafeteria | \$13,400 | 0.5 |
| Shampooers | \$13,500 | 0.6 |
| Ushers & Ticket Takers | \$13,500 | 0.8 |
| Baggage Porters & Bellhops | \$13,500 | 0.9 |
| Dining Room, Cafeteria & Bartender Helpers | \$13,600 | 1.0 |
| Fast Food Workers | \$13,850 | 1.1 |
| Farm Workers, Food and Fiber Crops | \$13,850 | 1.3 |
| Agricultural Graders & Sorters | \$13,940 | 1.4 |
| Hand Packers & Packagers | \$14,040 | 1.5 |
| All Other Hand Workers | \$14,100 | 1.6 |
| Food Servers (Outside) | \$14,310 | 1.8 |
| Slaughterers & Butchers | \$14,310 | 1.9 |
| Cooks-Fast Food | \$14,410 | 2.0 |
| Animal Breeders | \$14,440 | 2.2 |
| Amusement & Recreation Attendants | \$14,560 | 2.3 |
| Parking Lot Attendants | \$14,560 | 2.4 |
| Manicurists | \$14,640 | 2.5 |
| Child Care Workers | \$14,640 | 2.7 |
| All Other Food Service Workers | \$14,660 | 2.8 |
| Hosts & Hostesses-Restaurants & Lounges | \$14,850 | 2.9 |
| Sewing Machine Operators-Garment | \$15,040 | 3.0 |
| Teacher Aides (Paraprofessional) | \$15,250 | 3.2 |
| Crossing Guards | \$15,330 | 3.3 |
| Teacher Aides (Clerical) | \$15,350 | 3.4 |
| Laundry & Drycleaning Machine Operators | \$15,480 | 3.6 |
| Maids & Room Cleaners | \$15,540 | 3.7 |
| Cosmetologists | \$15,640 | 3.8 |
| Motion Picture Projectionists | \$15,640 | 3.9 |
| Elevator Operators | \$15,870 | 4.1 |
| Vehicle Washers & Equipment Cleaners | \$15,890 | 4.2 |
| Janitors | \$15,930 | 4.3 |
| Textile Machine Operators-Knitting & Weaving | \$15,930 | 4.4 |
| Food Preparation Workers | \$16,060 | 4.6 |
| Cashiers | \$16,270 | 4.7 |
| Sewing Machine Operators-Non-Garment | \$16,560 | 4.8 |
| Hotel Desk Clerks | \$16,700 | 4.9 |



Maids & Room Cleaners
\$15,540



Hotel Desk Clerks
\$16,700



Food Preparation Workers
\$16,060



Barbers
\$17,370



Bicycle Repairers
\$17,760

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|--|---------------|-------------------------|
| Soldering & Brazing Machine Operators | \$16,700 | 5.1 |
| Subway & Streetcar Operators | \$16,700 | 5.2 |
| Fabric/Apparel Patternmakers, Layout Workers | \$16,760 | 5.3 |
| Animal Caretakers (Except Farm) | \$16,790 | 5.5 |
| Security Guards | \$16,810 | 5.6 |
| Pressing Machine Operators-Textiles/Garments | \$16,830 | 5.7 |
| Meat, Poultry & Fish Cutters (Hand) | \$16,830 | 5.8 |
| All Other Motor Vehicle Operator | \$16,830 | 6.0 |
| Teachers-Preschool | \$16,850 | 6.1 |
| Ambulance Drivers & Attendants | \$16,890 | 6.2 |
| Glaziers-Manufacturing | \$16,970 | 6.3 |
| Cannery Workers | \$17,010 | 6.5 |
| Plastic Molding Machine Operators | \$17,040 | 6.6 |
| Pressers-Delicate Fabrics | \$17,080 | 6.7 |
| Sewers (Hand) | \$17,080 | 6.9 |
| General Laborers | \$17,100 | 7.0 |
| Pressers (Hand) | \$17,120 | 7.1 |
| Pharmacy Assistants | \$17,200 | 7.2 |
| All Other Clean,building Service | \$17,240 | 7.4 |
| Solderers & Brazers | \$17,260 | 7.5 |
| Coil Winders, Tapers & Finishers | \$17,280 | 7.6 |
| Locker & Dressing Room Attendants | \$17,310 | 7.7 |
| Barbers | \$17,370 | 7.9 |
| Funeral Attendants | \$17,410 | 8.0 |
| Tire Repairers & Changers | \$17,410 | 8.1 |
| Messengers | \$17,430 | 8.2 |
| Cooks-Short Order | \$17,430 | 8.4 |
| Personal & Home Care Aides | \$17,430 | 8.5 |
| Cutters & Trimmers (Hand) | \$17,470 | 8.6 |
| Service Station Attendants | \$17,530 | 8.8 |
| Cooks-Institution Or Cafeteria | \$17,560 | 8.9 |
| Taxi Drivers & Chauffeurs | \$17,560 | 9.0 |
| Precision Dyers | \$17,600 | 9.1 |
| Motorboat Operators | \$17,600 | 9.3 |
| Home Health Aides | \$17,640 | 9.4 |
| Machine Forming Operators-Metal/Plastic | \$17,640 | 9.5 |
| Packaging & Filling Machine Operators | \$17,640 | 9.6 |
| Machine Feeders & Offbearers | \$17,640 | 9.8 |
| Menders-Garments & Linens | \$17,720 | 9.9 |

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|---|---------------|-------------------------|
| Cementing & Gluing Machine Operators | \$17,740 | 10.0 |
| Marking Clerks | \$17,760 | 10.2 |
| Bicycle Repairers | \$17,760 | 10.3 |
| Shoe Sewing Machine Operators | \$17,760 | 10.4 |
| Farm Equipment Operators | \$17,800 | 10.5 |
| Laborers, Landsacpe/Groudskeepers | \$17,800 | 10.7 |
| Veterinary Assistants | \$17,800 | 10.8 |
| Heaters-Metal/Plastic | \$17,850 | 10.9 |
| Photographic Processing Machine Operators | \$17,850 | 11.0 |
| Nursing Aides | \$17,950 | 11.2 |
| File Clerks | \$17,970 | 11.3 |
| Stock Clerks-Sales Floor | \$17,990 | 11.4 |
| Screen Printing Machine Setters | \$18,030 | 11.5 |
| All Other Service Workers | \$18,100 | 11.7 |
| Assemblers (Except Machine/Elect./Precision) | \$18,140 | 11.8 |
| Molders & Casters (Hand) | \$18,180 | 11.9 |
| All Other Agric.,forest,fish. | \$18,260 | 12.1 |
| All Other Machine Operators | \$18,300 | 12.2 |
| Bakers-Bakery Shops & Restaurants | \$18,320 | 12.3 |
| Switchboard Operators | \$18,350 | 12.4 |
| Mail Clerks(Except Mail Machine,Postal Service) | \$18,350 | 12.6 |
| Precision Shoe & Leather Workers | \$18,350 | 12.7 |
| Sawing Machine Setters-Wood | \$18,390 | 12.8 |
| Tire Building Machine Operators | \$18,390 | 12.9 |
| Helpers, All Other Construction | \$18,430 | 13.1 |
| Electrical & Electronic Assemblers | \$18,530 | 13.2 |
| All Other Religious Workers | \$18,550 | 13.3 |
| Counter & Rental Clerks | \$18,550 | 13.5 |
| Mail Machine Operators | \$18,550 | 13.6 |
| Farm Workers, Farm/Ranch Animals | \$18,550 | 13.7 |
| Heating Equipment Setters-Metal/Plastic | \$18,600 | 13.8 |
| Recreation Workers | \$18,620 | 14.0 |
| Retail Salespersons | \$18,620 | 14.1 |
| Roofer Helpers | \$18,620 | 14.2 |
| Dietetic Technicians | \$18,640 | 14.3 |
| Detail Design Decorators (Precision) | \$18,660 | 14.5 |
| Cooks-Restaurants | \$18,700 | 14.6 |
| Interviewing Clerks | \$18,720 | 14.7 |
| All Other Precision Assemblers | \$18,760 | 14.8 |

APPENDIX B



**Photographic Processing
Machine Operators**
\$17,850



**Screen Printing
Machine Setters**
\$18,030



**Bakers-Bakery Shops
and Restaurants**
\$18,320



Cooks-Restaurants
\$18,700



**Receptionists &
Information Clerks**
\$19,840

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|--|---------------|-------------------------|
| Library Assistants & Bookmobile Drivers | \$18,780 | 15.0 |
| Portable Machine Cutters | \$18,780 | 15.1 |
| Painter, Paperhanger & Plasterer Helpers | \$18,840 | 15.2 |
| Freight, Stock & Material Handlers | \$18,840 | 15.4 |
| Engraving & Printing Workers (Hand) | \$18,870 | 15.5 |
| All Other Metal/plastic Operator | \$18,910 | 15.6 |
| Mechanic & Repairer Helpers | \$18,910 | 15.7 |
| Directory Assistance Operators | \$18,990 | 15.9 |
| Pruners | \$18,990 | 16.0 |
| All Other Health Service Workers | \$19,030 | 16.1 |
| Pattern Markers-Wood | \$19,030 | 16.2 |
| Psychiatric Aides | \$19,050 | 16.4 |
| Demonstrators and Promoters | \$19,070 | 16.5 |
| All Other Protective Service | \$19,070 | 16.6 |
| Paper Goods Machine Setters | \$19,070 | 16.8 |
| Pharmacy Technicians | \$19,120 | 16.9 |
| Travel Clerks | \$19,120 | 17.0 |
| Stock Clerks-Stockrm,Warehouse,Storage Yard | \$19,120 | 17.1 |
| Proofreaders | \$19,160 | 17.3 |
| Central Office Operators | \$19,160 | 17.4 |
| Sawing Machine Operators-Wood | \$19,160 | 17.5 |
| Plastic Molding Machine Setters | \$19,240 | 17.6 |
| Roustabouts | \$19,260 | 17.8 |
| Models | \$19,280 | 17.9 |
| Carpenter Helpers | \$19,280 | 18.0 |
| Optical Goods Workers (Precision) | \$19,300 | 18.1 |
| Woodworking Machine Oprs (Except Sawing) | \$19,300 | 18.3 |
| Data Entry Keyers (Except Printing) | \$19,340 | 18.4 |
| Crushing/Grinding/Mixing Machine Operators | \$19,340 | 18.5 |
| Plumber & Pipefitter Helpers | \$19,360 | 18.7 |
| Order Fillers-Wholesale & Retail Sales | \$19,390 | 18.8 |
| Electrical & Electronic Assemblers (Precision) | \$19,390 | 18.9 |
| Merchandise Displayers & Window Trimmers | \$19,410 | 19.0 |
| Precision Etchers & Engravers | \$19,430 | 19.2 |
| All Other Printing, Binding, Rel | \$19,510 | 19.3 |
| Guides | \$19,530 | 19.4 |
| School Bus Drivers | \$19,570 | 19.5 |
| Tellers | \$19,590 | 19.7 |
| Machine Assemblers | \$19,700 | 19.8 |
| Advertising Clerks | \$19,740 | 19.9 |
| Bindery Machine Operators | \$19,780 | 20.1 |
| Carpet Cutters, Markers & Seamers | \$19,780 | 20.2 |

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|---|---------------|-------------------------|
| Custom Tailors & Sewers | \$19,800 | 20.3 |
| Truck Drivers-Light (Including Delivery) | \$19,800 | 20.4 |
| Cutting & Slicing Machine Setters | \$19,820 | 20.6 |
| Electromechanical Equip.Assemblers(Precision) | \$19,820 | 20.7 |
| Receptionists & Information Clerks | \$19,840 | 20.8 |
| Rolling Machine Setters-Metal/Plastic | \$19,840 | 20.9 |
| Electrolytic Plating Machine Oprs-Metal/Plastic | \$19,930 | 21.1 |
| Electrician Helpers | \$19,990 | 21.2 |
| Graduate Assistants (Teaching) | \$20,050 | 21.3 |
| Highway Maintenance Workers | \$20,070 | 21.4 |
| Brick & Stonemason & Hard Tile Setter Helpers | \$20,070 | 21.6 |
| All Other Material Moving Oper. | \$20,110 | 21.7 |
| Data Entry Keyers (Printing) | \$20,160 | 21.8 |
| Driver/Sales Workers | \$20,180 | 22.0 |
| Textile Bleaching & Dyeing Machine Operators | \$20,220 | 22.1 |
| Conveyor Operators & Tenders | \$20,220 | 22.2 |
| Telemarketers,Vendrs,Door-To-Door Sales Wkrs | \$20,240 | 22.3 |
| Grinding & Polishing Workers (Hand) | \$20,280 | 22.5 |
| Cooking Machine Operators-Food/Tobacco | \$20,320 | 22.6 |
| General Office Clerks | \$20,340 | 22.7 |
| Wood Machinists | \$20,340 | 22.8 |
| Painting, Coating & Decorating Workers (Hand) | \$20,380 | 23.0 |
| Residential Counselors | \$20,400 | 23.1 |
| Electrolytic Plating Mach.Setters-Metal/Plastic | \$20,400 | 23.2 |
| Camera Operators-TV & Motion Pictures | \$20,450 | 23.4 |
| Music Directors, Singers & Composers | \$20,450 | 23.5 |
| Production Inspectors, Testers & Graders | \$20,450 | 23.6 |
| Medical Records Technicians | \$20,490 | 23.7 |
| Statement Clerks-Banking | \$20,510 | 23.9 |
| Medical Appliance Makers | \$20,510 | 24.0 |
| Punching Machine Setters-Metal/Plastic | \$20,570 | 24.1 |
| Machine Tool Cutting Operators-Metal/Plastic | \$20,590 | 24.2 |
| Extractive Worker Helpers | \$20,610 | 24.4 |
| Molders & Shapers (Except Jewelry & Foundry) | \$20,650 | 24.5 |
| Peripheral Computer Equipment Operators | \$20,700 | 24.6 |
| Sawing Machine Setters-Metal/Plastic | \$20,740 | 24.7 |
| Nonelectrolytic Plating Mach.Setters-Met/Plast. | \$20,800 | 24.9 |
| Personnel Clerks (Except Payroll) | \$20,820 | 25.0 |
| Refractory Material Repairers | \$20,920 | 25.1 |
| Food Batchmakers | \$20,950 | 25.3 |
| All Other Machine Setters/oper. | \$20,970 | 25.4 |
| Fence Erectors | \$21,010 | 25.5 |



**Painting, Coating & Decorating
Workers (Hand)**
\$20,380



**Camera Operators-
TV & Motion Pictures**
\$20,450



Welding Machine Operators
\$21,030



**Instructors & Coaches-
Sports, Physical Training**
\$21,150



Photographers
\$23,030

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|---|---------------|-------------------------|
| Supervisors-Cleaning & Building Services | \$21,030 | 25.6 |
| Welding Machine Operators | \$21,030 | 25.8 |
| Cutting & Slicing Machine Operators | \$21,130 | 25.9 |
| Instructors & Coaches-Sports, Physical Training | \$21,150 | 26.0 |
| Real Estate Clerks | \$21,150 | 26.1 |
| Extruding & Forming Machine Setters | \$21,150 | 26.3 |
| All Other Precision Textile, appa | \$21,240 | 26.4 |
| Watch, Clock & Chronometer Assemblers | \$21,240 | 26.5 |
| All Other Transp., mat. moving Opr | \$21,240 | 26.6 |
| Purchasing Clerks | \$21,300 | 26.8 |
| Transit Clerks-Banking | \$21,320 | 26.9 |
| Cleaning/Pickling Equipment Operators | \$21,320 | 27.0 |
| Soldering & Brazing Machine Setters | \$21,360 | 27.2 |
| All Other Plant And System Occ. | \$21,440 | 27.3 |
| Electronic Semiconductor Processors | \$21,490 | 27.4 |
| Veterinary Technicians | \$21,300 | 27.5 |
| Weighers, Measurers & Checkers (Clerical) | \$21,590 | 27.7 |
| Credit Authorizers | \$21,720 | 27.8 |
| New Accounts Clerks-Banking | \$21,880 | 27.9 |
| Psychiatric Technicians | \$21,900 | 28.0 |
| Maintenance Repairers (General) | \$21,940 | 28.2 |
| All Other Met. & plas. mach. set/ops | \$21,940 | 28.3 |
| Extruding & Forming Machine Operators | \$21,940 | 28.4 |
| Blasters & Explosives Workers | \$22,030 | 28.6 |
| All Other Mining Mach. Operators | \$22,030 | 28.7 |
| Duplicating Machine Operators | \$22,090 | 28.8 |
| Cooling & Freezing Equipment Operators | \$22,110 | 28.9 |
| Bindery Machine Setters | \$22,130 | 29.1 |
| Emergency Medical Technicians | \$22,150 | 29.2 |
| Coating & Painting Machine Operators | \$22,150 | 29.3 |
| Typists (Including Word Processing) | \$22,170 | 29.4 |
| Woodworking Machine Setters (Except Sawing) | \$22,170 | 29.6 |
| All Other Sales & Related Occ. | \$22,240 | 29.7 |
| Medical Assistants | \$22,240 | 29.8 |
| Athletes, Coaches, Umpires & Related Workers | \$22,280 | 29.9 |
| Paving & Surfacing Equipment Operators | \$22,280 | 30.1 |
| Billing/Posting/Calculating Machine Operators | \$22,300 | 30.2 |
| Pipelayers | \$22,340 | 30.3 |
| Shipping, Receiving & Traffic Clerks | \$22,360 | 30.5 |
| Combination Machine Tool Oprs-Metal/Plastic | \$22,360 | 30.6 |
| All Other Precision Workers | \$22,380 | 30.7 |
| Order Clerks | \$22,400 | 30.8 |

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|--|---------------|-------------------------|
| Pest Controllers & Assistants | \$22,400 | 31.0 |
| Coating & Painting Machine Setters | \$22,440 | 31.1 |
| Cabinetmakers & Bench Carpenters | \$22,510 | 31.2 |
| Furniture Finishers | \$22,510 | 31.3 |
| Forest Fire Inspectors & Prevention Specialists | \$22,550 | 31.5 |
| Extruding Machine Setters-Metal/Plastic | \$22,590 | 31.6 |
| Bridge, Lock & Lighthouse Tenders | \$22,590 | 31.7 |
| Adjustment Clerks-Merchandise & Billing | \$22,670 | 31.9 |
| Credit Checkers | \$22,690 | 32.0 |
| Upholsterers | \$22,690 | 32.1 |
| Head Sawyers | \$22,690 | 32.2 |
| Announcers-Radio & TV | \$22,730 | 32.4 |
| Industrial Truck & Tractor Operators | \$22,730 | 32.5 |
| All Other Material Workers | \$22,860 | 32.6 |
| Library Technical Assistants | \$22,900 | 32.7 |
| Radio Operators | \$22,900 | 32.9 |
| All Other Precision Woodworkers | \$22,900 | 33.0 |
| Musical Instrument Repairers & Tuners | \$22,920 | 33.1 |
| All Other Precision Food, tobacco | \$22,920 | 33.2 |
| Shear & Slitter Machine Setters-Metal/Plastic | \$22,920 | 33.4 |
| Furnace, Kiln, Oven & Kettle Operators | \$22,920 | 33.5 |
| Meter Readers-Utilities | \$22,940 | 33.6 |
| Bus Drivers (Except School) | \$22,960 | 33.8 |
| Floor Sanding Machine Operators | \$22,980 | 33.9 |
| Pattern & Model Makers-Metal & Plastic | \$22,980 | 34.0 |
| Photographers | \$23,030 | 34.1 |
| All Other Office Mach. Operators | \$23,030 | 34.3 |
| Grinding/Buffering Machine Setters-Metal/Plastic | \$23,090 | 34.4 |
| Clergy | \$23,110 | 34.5 |
| All Other Construction Workers | \$23,150 | 34.6 |
| Paste-Up Workers | \$23,150 | 34.8 |
| All Other Clerical & Admin Supp | \$23,170 | 34.9 |
| Sewing Machine Mechanics & Repairers | \$23,250 | 35.0 |
| Riggers | \$23,360 | 35.2 |
| All Other Precision Printing | \$23,400 | 35.3 |
| Metal Pourers & Casters-Basic Shapes | \$23,420 | 35.4 |
| Combination Machine Tool Setters-Metal/Plastic | \$23,440 | 35.5 |
| Tax Preparers | \$23,480 | 35.7 |
| License Clerks | \$23,610 | 35.8 |
| Bookbinders | \$23,610 | 35.9 |
| Physical Therapy Assistants & Aides | \$23,630 | 36.0 |
| Fish & Game Wardens | \$23,650 | 36.2 |

APPENDIX B



Clergy
\$23,110

Mates-Ship, Boat & Barge
\$23,980

**Hazardous Materials
Removal Workers**
\$24,190

Travel Agents
\$24,290

**Designers
(Except Interior Designers)**
\$24,610

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|---|---------------|-------------------------|
| Drilling & Boring Machine Setters-Metal/Plastic | \$23,690 | 36.3 |
| Press & Brake Machine Setters-Metal/Plastic | \$23,690 | 36.4 |
| Electrocardiograph Technicians | \$23,730 | 36.5 |
| Roasting/Drying Machine Oprs-Food/Tobacco | \$23,770 | 36.7 |
| Machine Builders/Precision Mach. Assemblers | \$23,800 | 36.8 |
| All Other Service Supervisors | \$23,820 | 36.9 |
| Spotters-Dry Cleaning | \$23,820 | 37.1 |
| Billing, Cost & Rate Clerks | \$23,860 | 37.2 |
| All Other Constr. & Extractive | \$23,860 | 37.3 |
| Refuse & Recyclable Materials Collectors | \$23,880 | 37.4 |
| Medical Secretaries | \$23,920 | 37.6 |
| Foundry Mold & Core Makers (Precision) | \$23,920 | 37.7 |
| Metal Fabricators-Structural Metal Products | \$23,920 | 37.8 |
| Pump Operators | \$23,960 | 37.9 |
| Mates-Ship, Boat & Barge | \$23,980 | 38.1 |
| Secretaries (Except Legal & Medical) | \$24,000 | 38.2 |
| All Other Printing Setter/oper. | \$24,000 | 38.3 |
| Tool Grinders, Filers & Sharpeners | \$24,110 | 38.5 |
| Hand Compositors And Typesetters | \$24,110 | 38.6 |
| Hazardous Materials Removal Workers | \$24,190 | 38.7 |
| Camera Operators | \$24,190 | 38.8 |
| Lawn Service Managers | \$24,210 | 39.0 |
| Dental Laboratory Technicians (Precision) | \$24,230 | 39.1 |
| Telegraph & Teletype Installers & Repairers | \$24,250 | 39.2 |
| Precision Hand Wkrs-Jewelry,Related Products | \$24,270 | 39.3 |
| Travel Agents | \$24,290 | 39.5 |
| Sprayers/Applicators-Trees & Lawns | \$24,320 | 39.6 |
| Bill & Account Collectors | \$24,380 | 39.7 |
| Motorcycle Repairers | \$24,380 | 39.8 |
| Coin & Vending Machine Servicers & Repairers | \$24,380 | 40.0 |
| Statistical Clerks | \$24,480 | 40.1 |
| Metal Molding & Casting Machine Operators | \$24,480 | 40.2 |
| Welders & Cutters | \$24,480 | 40.4 |
| Human Services Workers | \$24,500 | 40.5 |
| Bookkeeping & Accounting Clerks | \$24,500 | 40.6 |
| Court Clerks | \$24,540 | 40.7 |
| Correspondence Clerks | \$24,590 | 40.9 |
| Foundry Mold Assembly & Shakeout Workers | \$24,590 | 41.0 |
| Designers (Except Interior Designers) | \$24,610 | 41.1 |
| Surveying & Mapping Technicians | \$24,690 | 41.2 |
| Dental Assistants | \$24,690 | 41.4 |
| Grader, Bulldozer & Scraper Operators | \$24,710 | 41.5 |

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|---|---------------|-------------------------|
| Insulation Workers | \$24,730 | 41.6 |
| Roofers | \$24,730 | 41.8 |
| Lathe & Turning Machine Setters-Metal/Plastic | \$24,730 | 41.9 |
| Loan & Credit Clerks | \$24,770 | 42.0 |
| Photoengraving & Lithographic Machine Oprs | \$24,770 | 42.1 |
| Painters & Paperhangers-Construction | \$24,810 | 42.3 |
| Broadcast Technicians | \$24,860 | 42.4 |
| Service Unit Operators, Oil & Gas | \$24,880 | 42.5 |
| Typesetting & Composing Machine Operators | \$25,000 | 42.6 |
| Telephone & Cable Tv Line Installers, Repairers | \$25,020 | 42.8 |
| Excavating & Loading Machine Operators | \$25,020 | 42.9 |
| Concrete And Terrazzo Finishers | \$25,110 | 43.0 |
| All Other Precision Metal Worker | \$25,110 | 43.1 |
| Announcers (Except Radio & Tv) | \$25,170 | 43.3 |
| Reservation & Transportation Ticket Agents | \$25,170 | 43.4 |
| Furnace Operators & Tenders | \$25,190 | 43.5 |
| Dispatchers-Police, Fire & Ambulance | \$25,210 | 43.7 |
| Painters-Transportation Equipment | \$25,270 | 43.8 |
| Insurance Claims Clerks | \$25,290 | 43.9 |
| Meat Cutters | \$25,330 | 44.0 |
| Biological, Agricultural & Food Technicians | \$25,360 | 44.2 |
| All Other Inspectors, Testers | \$25,360 | 44.3 |
| Dispatchers (Except Police, Fire & Ambulance) | \$25,400 | 44.4 |
| Parking Enforcement Officers | \$25,420 | 44.5 |
| Payroll Clerks | \$25,580 | 44.7 |
| Electronic Home Entertainment Equip.Repairers | \$25,670 | 44.8 |
| All Other Timber Cutting Workers | \$25,690 | 44.9 |
| Septic Tank & Sewer Pipe Servicers | \$25,710 | 45.1 |
| Printing Press Operators | \$25,710 | 45.2 |
| Computer Oprs (Except Peripheral Equipment) | \$25,830 | 45.3 |
| Occupational Therapy Assistants & Aides | \$25,880 | 45.4 |
| Truck Drivers-Heavy Or Tractor-Trailer | \$25,920 | 45.6 |
| Pattern & Model Makers-Wood | \$25,940 | 45.7 |
| Precision Layout Workers-Metal | \$25,980 | 45.8 |
| Log Handling Equipment Operators | \$26,000 | 45.9 |
| Telegraph & Teletype Operators | \$26,060 | 46.1 |
| Stonemasons | \$26,060 | 46.2 |
| Platemakers | \$26,060 | 46.3 |
| Claims Takers-Unemployment Benefits | \$26,100 | 46.4 |
| Gas Appliance Repairers | \$26,150 | 46.6 |
| Insurance Policy Processing Clerks | \$26,170 | 46.7 |
| Log Graders And Scalers | \$26,170 | 46.8 |



Roofers
\$24,730



**Painters & Paperhangers-
Construction**
\$24,810



**Excavating & Loading
Machine Operators**
\$25,020



**Reservation & Transportation
Ticket Agents**
\$25,170



Meat Cutters
\$25,330

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING | OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|--|---------------|-------------------------|---|---------------|-------------------------|
| Boiler Operators & Tenders (Low Pressure) | \$26,170 | 47.0 | Shipfitters | \$27,480 | 52.3 |
| Title Searchers | \$26,190 | 47.1 | Animal Trainers | \$27,520 | 52.4 |
| Sheet Metal Duct Installers | \$26,210 | 47.2 | Stenos, Court Reporters & Transcriptionists | \$27,560 | 52.5 |
| Photographic Process Workers (Precision) | \$26,210 | 47.3 | Milling & Planing Machine Setters-Metal/Plastic | \$27,640 | 52.7 |
| Mobile Home/Prefab Building Install/Repairers | \$26,250 | 47.5 | Derrick Operators-Oil & Gas | \$27,680 | 52.8 |
| Loan Interviewers | \$26,290 | 47.6 | Heating, A/C & Refrigeration Mechanics | \$27,750 | 52.9 |
| Glaziers | \$26,330 | 47.7 | Jewelers & Silversmiths | \$27,790 | 53.0 |
| Metal Molding & Casting Machine Setters | \$26,330 | 47.8 | Nursery & Greenhouse Managers | \$27,850 | 53.2 |
| Religious Activities & Education Directors | \$26,350 | 48.0 | Auto Body Repairers | \$27,850 | 53.3 |
| Structural Metal Fitters (Precision) | \$26,350 | 48.1 | Traffic Technicians | \$27,890 | 53.4 |
| Small Engine Specialists | \$26,400 | 48.2 | Nonelectrolytic Plating Mach.Oprs-Metal/Plastic | \$28,040 | 53.6 |
| Farm Equipment Mechanics | \$26,420 | 48.4 | Precision Inspectors, Testers & Graders | \$28,100 | 53.7 |
| Office Machine Repairers | \$26,420 | 48.5 | Embalmers | \$28,120 | 53.8 |
| Hard Tile Setters | \$26,440 | 48.6 | Rock Splitters-Quarry | \$28,160 | 53.9 |
| Electric Home Appliance/Power Tool Repairers | \$26,460 | 48.7 | Pattern/Modelmks(Ex.Met.,Plast.,Wood,Fabric) | \$28,180 | 54.1 |
| Ceiling Tile Installers | \$26,480 | 48.9 | Electricians | \$28,200 | 54.2 |
| Numerical Control Mach.Tool Oprs-Metal/Plastic | \$26,520 | 49.0 | Machinery Maintenance Workers | \$28,230 | 54.3 |
| All Other Mechanics, Installers | \$26,540 | 49.1 | All Other Printing Press Set/op. | \$28,230 | 54.4 |
| All Other Health Prof.,para,tech | \$26,580 | 49.2 | All Other Transportation Workers | \$28,270 | 54.6 |
| Locksmiths & Safe Repairers | \$26,640 | 49.4 | Insurance Examining Clerks-Banking | \$28,330 | 54.7 |
| Separating & Filtering Machine Operators | \$26,690 | 49.5 | Production & Expediting Clerks | \$28,330 | 54.8 |
| Earth Drillers (Except Oil & Gas) | \$26,710 | 49.6 | Operating Engineers | \$28,370 | 54.9 |
| Ordinary Seamen & Marine Oilers | \$26,710 | 49.7 | Dairy Processing Equipment Setters, Operators | \$28,430 | 55.1 |
| Instructors-Nonvocational Education | \$26,750 | 49.9 | Wellhead Pumps | \$28,560 | 55.2 |
| Carpenters | \$26,770 | 50.0 | Opticians (Dispensing) | \$28,620 | 55.3 |
| Sheet Metal Workers | \$26,920 | 50.1 | Loading Machine Oprs-Underground Mining | \$28,620 | 55.5 |
| Real Estate Sales Agents | \$26,940 | 50.3 | Audio-Visual Specialists | \$28,640 | 55.6 |
| Gas Pumping Station Operators | \$27,040 | 50.4 | Supervisors-Ag. Services, Forestry & Fishing | \$28,680 | 55.7 |
| Carpet Installers | \$27,100 | 50.5 | Structural Metal Workers | \$28,720 | 55.8 |
| Air Hammer Operators | \$27,100 | 50.6 | Bakers-Manufacturing | \$28,770 | 56.0 |
| Job Printers | \$27,140 | 50.8 | Dragline Operators | \$28,790 | 56.1 |
| Brokerage Clerks | \$27,190 | 50.9 | All Other Service Sales Occ. | \$28,810 | 56.2 |
| Reporters | \$27,230 | 51.0 | Gem & Diamond Workers | \$28,850 | 56.3 |
| Printing Press Setters | \$27,250 | 51.1 | Forest & Conservation Workers | \$28,870 | 56.5 |
| Precision Instrument Makers | \$27,290 | 51.3 | Electronic Pagination System Operators | \$28,870 | 56.6 |
| Welfare Eligibility Workers | \$27,330 | 51.4 | Tank Car & Tank Truck Loaders | \$28,890 | 56.7 |
| Surgical Technologists | \$27,370 | 51.5 | Correction Officers & Jailers | \$28,910 | 56.9 |
| Drywall Installers | \$27,370 | 51.6 | Specialty Materials Printing Machine Setters | \$28,910 | 57.0 |
| Medical Laboratory Technicians | \$27,410 | 51.8 | Auto Mechanics | \$28,930 | 57.1 |
| Heat Treating Machine Operators-Metal/Plastic | \$27,460 | 51.9 | Welding Machine Setters | \$29,040 | 57.2 |
| Parts Salespersons | \$27,480 | 52.0 | Tapers | \$29,060 | 57.4 |
| Logging Tractor Operators | \$27,480 | 52.2 | Industrial Machinery Mechanics | \$29,140 | 57.5 |

APPENDIX B



Electricians
\$28,200



Auto Mechanics
\$28,930



Welding Machine Setters
\$29,040



Artists & Commercial Artists
\$29,660



Dancers & Choreographers
\$29,720

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|--|---------------|-------------------------|
| Letterpress Setters | \$29,220 | 57.6 |
| Phys & Life Science Technicians | \$29,270 | 57.7 |
| All Other Science Technicians | \$29,270 | 57.9 |
| Textile Machinery Mechanics | \$29,290 | 58.0 |
| Machinists | \$29,390 | 58.1 |
| Computer Programmer Aides | \$29,410 | 58.2 |
| Recreational Therapists | \$29,410 | 58.4 |
| Plumbers & Pipefitters | \$29,430 | 58.5 |
| Mechanical Control Installers & Repairers | \$29,520 | 58.6 |
| Investigators (Clerical) | \$29,560 | 58.8 |
| Electric Motor & Transformer Repairers | \$29,560 | 58.9 |
| Artists & Commercial Artists | \$29,660 | 59.0 |
| Farm & Home Management Advisors | \$29,700 | 59.1 |
| Dancers & Choreographers | \$29,720 | 59.3 |
| Curators, Archivists & Museum Technicians | \$29,740 | 59.4 |
| Musicians (Instrumental) | \$29,740 | 59.5 |
| Private Detectives & Investigators | \$29,740 | 59.6 |
| Plumbers & Pipefitters | \$29,430 | 59.8 |
| Mechanical Control Installers & Repairers | \$29,520 | 59.9 |
| Investigators (Clerical) | \$29,560 | 60.0 |
| Electric Motor & Transformer Repairers | \$29,560 | 60.2 |
| Customer Service Representatives-Utilities | \$29,760 | 61.0 |
| Bus, Truck & Diesel Engine Mechanics | \$29,870 | 61.2 |
| Lathers | \$29,890 | 61.3 |
| Social Workers (Medical & Psychiatric) | \$29,930 | 61.4 |
| Photoengravers | \$29,990 | 61.5 |
| Licensed Practical Nurses | \$30,040 | 61.7 |
| Mobile Heavy Equip.Mechanics(Except Engines) | \$30,200 | 61.8 |
| All Other Machinery Mechanics | \$30,240 | 61.9 |
| Camera & Photographic Equipment Repairers | \$30,240 | 62.1 |
| Supervisors-Helpers,Laborers,Material Handlers | \$30,260 | 62.2 |
| All Other Teachers, Instructors | \$30,280 | 62.3 |
| Brickmasons | \$30,280 | 62.4 |
| Water & Waste Treatment Plant Operators | \$30,280 | 62.6 |
| Employment Interviewers | \$30,330 | 62.7 |
| Petroleum Technicians | \$30,350 | 62.8 |
| Transportation Agents | \$30,510 | 62.9 |
| Reinforcing Metal Workers | \$30,580 | 63.1 |
| Floor Layers (Except Carpet, Wood & Hard Tile) | \$30,620 | 63.2 |
| Legal Secretaries | \$30,700 | 63.3 |
| Mine Cutting Machine Operators | \$30,740 | 63.5 |
| Plasterers & Stucco Masons | \$30,830 | 63.6 |

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|---|---------------|-------------------------|
| Offset Lithographic Press Setters | \$30,870 | 63.7 |
| Rotary Drill Operators-Oil & Gas | \$30,950 | 63.8 |
| Buyers-Wholesale & Retail Trade | \$30,970 | 64.0 |
| Marine Equipment Mechanics | \$30,970 | 64.1 |
| Title Examiners & Abstractors | \$31,010 | 64.2 |
| Social Workers (Except Medical & Psychiatric) | \$31,050 | 64.3 |
| Scanner Operators | \$31,080 | 64.5 |
| Food Service & Lodging Managers | \$31,140 | 64.6 |
| Chemical Technicians (Except Health) | \$31,260 | 64.7 |
| Teachers-Kindergarten | \$31,320 | 64.8 |
| Chemical Equipment Controllers & Operators | \$31,390 | 65.0 |
| Watchmakers | \$31,430 | 65.1 |
| Drafters | \$31,450 | 65.2 |
| Public Relations Specialists | \$31,490 | 65.4 |
| Supervisors-Clerical Workers | \$31,550 | 65.5 |
| Corrective & Manual Arts Therapists | \$31,780 | 65.6 |
| Buyers-Farm Products | \$31,820 | 65.7 |
| Producers, Directors, Actors & Entertainers | \$31,820 | 65.9 |
| Chemical Equipment Tenders | \$31,820 | 66.0 |
| All Other Therapists | \$31,890 | 66.1 |
| Foresters & Conservation Scientists | \$31,910 | 66.2 |
| Strippers-Printing | \$31,910 | 66.4 |
| Pipelaying Fitters | \$31,970 | 66.5 |
| Dredge Operators | \$32,120 | 66.6 |
| Tax Examiners & Collectors | \$32,160 | 66.8 |
| Electromedical Equipment Repairers | \$32,160 | 66.9 |
| All Other Commun.equip.mechanics | \$32,200 | 67.0 |
| All Other Rail Vehicle Operators | \$32,240 | 67.1 |
| All Other Legal Assistants | \$32,260 | 67.3 |
| Fallers And Buckers | \$32,260 | 67.4 |
| All Other Management Support Wks | \$32,490 | 67.5 |
| Fire Fighters | \$32,610 | 67.6 |
| Film Editors | \$32,640 | 67.8 |
| Law Clerks | \$32,820 | 67.9 |
| Mathematical Technicians | \$32,840 | 68.0 |
| Loan Officers & Counselors | \$32,910 | 68.1 |
| Hoist & Winch Operators | \$32,990 | 68.3 |
| Supervisors-Sales | \$33,070 | 68.4 |
| Bailiffs | \$33,180 | 68.5 |
| Assessors | \$33,220 | 68.7 |
| Sheriffs & Deputy Sheriffs | \$33,380 | 68.8 |
| Machinery Mechanics-Water Or Power Plant | \$33,430 | 68.9 |



Curators, Archivists & Museum Technicians
\$29,740



Plumbers & Pipefitters
\$29,430



Chemical Technicians (Except Health)
\$31,260



Fire Fighters
\$32,610



Computer Support Specialists
\$35,340

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|---|---------------|-------------------------|
| Millwrights | \$33,490 | 69.0 |
| All Other Communication Operator | \$33,510 | 69.2 |
| Radio Mechanics | \$33,570 | 69.3 |
| Data Processing Equipment Repairers | \$33,680 | 69.4 |
| Funeral Directors & Morticians | \$33,720 | 69.5 |
| Forging Machine Setters-Metal/Plastic | \$33,720 | 69.7 |
| Crane & Tower Operators | \$33,720 | 69.8 |
| Precision Instrument Repairers | \$33,820 | 69.9 |
| Textile Draw-Out Machine Operators | \$34,010 | 70.1 |
| All Other Litho & Photeng Wrks | \$34,030 | 70.2 |
| All Other Financial Specialists | \$34,050 | 70.3 |
| Continuous Mining Machine Operators | \$34,050 | 70.4 |
| Able Seamen | \$34,050 | 70.6 |
| Writers & Editors | \$34,170 | 70.7 |
| Property & Real Estate Managers | \$34,200 | 70.8 |
| Captains-Water Vessel | \$34,280 | 70.9 |
| Choke Setters | \$34,320 | 71.1 |
| First Line Supervisors,all Other | \$34,320 | 71.2 |
| Teachers-Vocational Education & Training | \$34,550 | 71.3 |
| Aircraft Structure Assemblers (Precision) | \$34,570 | 71.4 |
| Rail-Track Laying Equipment Operators | \$34,590 | 71.6 |
| Frame Wirers-Central Telephone Office | \$34,820 | 71.7 |
| Personnel Specialists | \$34,860 | 71.8 |
| Teachers-Elementary School | \$34,880 | 72.0 |
| Supervisors-Production & Operating Workers | \$34,920 | 72.1 |
| Suprvisors-Transp./Material Moving Equip.Oprs | \$35,010 | 72.2 |
| Gas Compressor Operators | \$35,030 | 72.3 |
| Mechanical Engineering Technicians | \$35,090 | 72.5 |
| Municipal Clerks | \$35,150 | 72.6 |
| Business Services Sales Representatives | \$35,240 | 72.7 |
| Computer Support Specialists | \$35,340 | 72.8 |
| Extruding Mach. Oprs-Synthetic & Glass Fiber | \$35,340 | 73.0 |
| All Other Prof.,paraprof.,techn. | \$35,420 | 73.1 |
| Radiologic Technicians, Hospitals | \$35,460 | 73.2 |
| Sales Representatives(Except Scientific,Retail) | \$35,530 | 73.4 |
| Paralegals | \$35,630 | 73.5 |
| Electronics Repairers-Commercial/Indust.Equip. | \$35,690 | 73.6 |
| Purchasing Agents | \$35,730 | 73.7 |
| Electrical & Electronic Engineering Technicians | \$35,730 | 73.9 |
| Railroad Brake, Signal & Switch Operators | \$35,840 | 74.0 |
| Library Science Teachers | \$36,150 | 74.1 |
| All Other Engineering Technician | \$36,320 | 74.2 |

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|---|---------------|-------------------------|
| Civil Engineering Technicians | \$36,380 | 74.4 |
| Mathematical Scientists | \$36,480 | 74.5 |
| Pile-Driver Operators | \$36,550 | 74.6 |
| Tool & Die Makers | \$36,550 | 74.7 |
| Statisticians | \$36,690 | 74.9 |
| Administrative Law Judges | \$36,920 | 75.0 |
| Enforcement Inspectors (Except Construction) | \$36,960 | 75.1 |
| Dietitians | \$36,980 | 75.3 |
| All Other Social Scientists | \$37,130 | 75.4 |
| Insurance Sales Agents | \$37,130 | 75.5 |
| Police Patrol Officers | \$37,210 | 75.6 |
| Criminal Justice and Law Enforcement Teachers | \$37,380 | 75.8 |
| Aircraft Engine Specialists | \$37,420 | 75.9 |
| All Other Electric.,electro.mech | \$37,460 | 76.0 |
| Electroencephalograph Technologists | \$37,500 | 76.1 |
| Supervisors-Mechanics, Installers & Repairers | \$37,540 | 76.3 |
| Electrical Repairers-Transportation Equipment | \$37,540 | 76.4 |
| Numerical Tool/Process Control Programmers | \$37,790 | 76.5 |
| Boilermakers | \$37,880 | 76.6 |
| Textile Machine Setters | \$37,900 | 76.8 |
| Advertising Sales Representatives | \$37,960 | 76.9 |
| Respiratory Therapists | \$37,980 | 77.0 |
| Teachers-Special Education | \$38,170 | 77.2 |
| Supervisors-Construction & Extractive Workers | \$38,270 | 77.3 |
| Technical Writers & Editors | \$38,480 | 77.4 |
| Counselors (Vocational & Educational) | \$38,500 | 77.5 |
| Credit Analysts | \$38,520 | 77.7 |
| Rail Car Repairers | \$38,560 | 77.8 |
| Aircraft Mechanics | \$38,600 | 77.9 |
| Underwriters | \$38,630 | 78.0 |
| Lecturers | \$38,630 | 78.2 |
| Teachers-Secondary School | \$38,750 | 78.3 |
| Special Agents-Insurance | \$38,850 | 78.4 |
| Mail Carriers | \$38,980 | 78.6 |
| Transportation Inspectors | \$39,120 | 78.7 |
| Biological Scientists | \$39,170 | 78.8 |
| Librarians | \$39,210 | 78.9 |
| Postal Service Clerks | \$39,210 | 79.1 |
| Real Estate Appraisers | \$39,250 | 79.2 |
| Stationary Engineers | \$39,400 | 79.3 |
| Electric Meter Installers & Repairers | \$39,580 | 79.4 |
| Cardiology Technologists | \$39,600 | 79.6 |

APPENDIX B



Police Patrol Officers
\$37,210



Interior Designers
\$39,620



Surveyors & Mapping Scientists
\$40,230



Aircraft Pilots & Flight Engineers
\$49,150



Computer Programmers
\$49,900

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|---|---------------|-------------------------|
| Interior Designers | \$39,620 | 79.7 |
| Purchasing Managers | \$39,640 | 79.8 |
| Chemists (Except Biochemists) | \$39,670 | 79.9 |
| Chemical Plant & System Operators | \$39,670 | 80.1 |
| Accountants & Auditors | \$40,000 | 80.2 |
| Locomotive Firers | \$40,120 | 80.3 |
| Surveyors & Mapping Scientists | \$40,230 | 80.5 |
| Fire Inspectors | \$40,230 | 80.6 |
| Medical Laboratory Technologists | \$40,310 | 80.7 |
| Electrical Power Line Installers & Repairers | \$40,410 | 80.8 |
| Construction & Building Inspectors | \$40,520 | 81.0 |
| Auxiliary Equipment Operators-Power | \$40,600 | 81.1 |
| Claims Examiners-Property/Casualty Insurance | \$40,830 | 81.2 |
| Police Detectives | \$40,850 | 81.3 |
| Estimators & Drafters-Utilities | \$40,890 | 81.5 |
| Railroad Conductors & Yardmasters | \$40,930 | 81.6 |
| Mining Machinery Mechanics | \$40,960 | 81.7 |
| Education Program Specialists | \$41,160 | 81.9 |
| Longshore Equipment Operators | \$41,160 | 82.0 |
| Railroad Signal Or Switch Maintainers | \$41,410 | 82.1 |
| Cost Estimators | \$41,430 | 82.2 |
| Landscape Architects | \$41,480 | 82.4 |
| Mathematical Sciences Teachers-College | \$41,560 | 82.5 |
| Flight Attendants | \$41,560 | 82.6 |
| Social Work Teachers | \$41,790 | 82.7 |
| Elevator Installers & Repairers | \$41,930 | 82.9 |
| Industrial Engineering Technicians | \$42,180 | 83.0 |
| Shuttle Car Operators-Underground Mining | \$42,290 | 83.1 |
| Roof Bolters-Mining | \$42,390 | 83.2 |
| Ship Engineers | \$42,430 | 83.4 |
| Philosophy and Religion Teachers | \$42,660 | 83.5 |
| Financial Analysts (Statistical) | \$43,060 | 83.6 |
| Registered Nurses | \$43,120 | 83.8 |
| Nuclear Medicine Technologists | \$43,120 | 83.9 |
| Psychologists | \$43,160 | 84.0 |
| Economists & Market Research Analysts | \$43,370 | 84.1 |
| Urban & Regional Planners | \$43,510 | 84.3 |
| Radiation Therapists | \$43,720 | 84.4 |
| Administrative Services Managers | \$44,200 | 84.5 |
| Telephone Installers & Repairers | \$44,200 | 84.6 |
| Sales Representatives-Scientific Prod.,Services | \$45,050 | 84.8 |
| Operations/Systems Analysts(Except Computer) | \$45,180 | 84.9 |

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|---|---------------|-------------------------|
| Insurance Adjusters, Examiners & Investigators | \$45,510 | 85.0 |
| Construction Managers | \$45,590 | 85.2 |
| Insurance Appraisers-Auto Damage | \$45,640 | 85.3 |
| Powerhouse, Substation & Relay Electricians | \$45,760 | 85.4 |
| Budget Analysts | \$45,860 | 85.5 |
| Arts, Ethnic, and Cultural Studies Teachers | \$45,860 | 85.7 |
| Central Telephone Ofc/Pbx Installers, Repairers | \$46,050 | 85.8 |
| Gas Plant Operators | \$46,380 | 85.9 |
| Management Analysts | \$46,630 | 86.0 |
| Personnel Managers | \$46,650 | 86.2 |
| English Language and Literature Teachers, Posts | \$46,700 | 86.3 |
| Gaugers | \$46,740 | 86.4 |
| All Other Extractive Occ.,ex.hel | \$46,760 | 86.5 |
| Art, Drama & Music Teachers-College | \$46,990 | 86.7 |
| Dental Hygienists | \$46,990 | 86.8 |
| Stevedores (Except Equipment Operators) | \$47,400 | 86.9 |
| Petroleum Refinery & Control Panel Operators | \$47,470 | 87.1 |
| Speech Pathologists & Audiologists | \$47,550 | 87.2 |
| Foreign Language and Literature Teachers, Posts | \$47,690 | 87.3 |
| All Other Managers & Administ. | \$47,800 | 87.4 |
| Data Base Administrators | \$47,960 | 87.6 |
| Locomotive Engineers | \$47,960 | 87.7 |
| Computer Science Teachers-College | \$47,990 | 87.8 |
| Railroad & Transit Police | \$48,050 | 87.9 |
| Power Distributors & Dispatchers | \$48,190 | 88.1 |
| All Other Post Secondary Teacher | \$48,300 | 88.2 |
| All Other Computer Scientists | \$48,480 | 88.3 |
| Rail Yard Engineers & Dinkey Operators | \$48,530 | 88.5 |
| All Other Life Scientists | \$49,000 | 88.6 |
| Supervisors-Fire Fighting | \$49,070 | 88.7 |
| Aircraft Pilots & Flight Engineers | \$49,150 | 88.8 |
| Pilots-Ship | \$49,550 | 89.0 |
| Chemistry Teachers-College | \$49,630 | 89.1 |
| Oil Pumpers (Except Wellhead) | \$49,750 | 89.2 |
| Marketing & Public Relations Managers | \$49,770 | 89.3 |
| Computer Programmers | \$49,900 | 89.5 |
| Power Plant Oprs (Except Auxiliary Equipment) | \$49,900 | 89.6 |
| Architects (Except Landscape & Marine) | \$49,980 | 89.7 |
| All Other Physical Scientists | \$50,250 | 89.8 |
| Government Chief Executives & Legislators | \$50,340 | 90.0 |
| Securities Sales Representatives | \$50,340 | 90.1 |
| Physician Assistants | \$50,590 | 90.2 |



**General Managers &
Top Executives**
\$52,920



Veterinarians
\$63,750



Chemical Engineers
\$67,930



Pharmacists
\$77,170



Physicians & Surgeons
\$137,530

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|---|---------------|-------------------------|
| Agricultural & Food Scientists | \$51,080 | 90.4 |
| Industrial Production Managers | \$51,360 | 90.5 |
| Systems Analysts | \$51,400 | 90.6 |
| Petroleum Pump System Operators | \$51,500 | 90.7 |
| Nursing Instructors | \$51,960 | 90.9 |
| Health Services Managers | \$52,100 | 91.0 |
| Occupational Therapists | \$52,270 | 91.1 |
| Real Estate Brokers | \$52,310 | 91.2 |
| Main-Line Station Engineers-Oil & Gas | \$52,420 | 91.4 |
| Parks, Recreation, Leisure, and Fitness Studies | \$52,810 | 91.5 |
| Transportation & Public Utility Managers | \$52,830 | 91.6 |
| General Managers & Top Executives | \$52,920 | 91.8 |
| Financial Managers | \$53,290 | 91.9 |
| Economic Teachers | \$53,290 | 92.0 |
| History Teachers | \$53,480 | 92.1 |
| Agricultural Engineers | \$53,560 | 92.3 |
| Industrial Engineers (Except Safety) | \$54,000 | 92.4 |
| Mining & Oil & Gas Drilling Managers | \$54,160 | 92.5 |
| Life Sciences Teachers-College | \$54,660 | 92.6 |
| TV & Radio News Broadcasters | \$54,750 | 92.8 |
| Geologists, Geophysicists & Oceanographers | \$55,080 | 92.9 |
| Anthropology and Sociology Teachers | \$55,140 | 93.0 |
| Education Administrators | \$55,180 | 93.1 |
| All Other Engineers | \$55,720 | 93.3 |
| Marine Architects | \$55,760 | 93.4 |
| Supervisors-Police & Detectives | \$55,930 | 93.5 |
| Mathematicians & Math Scientists | \$56,280 | 93.7 |
| Political Science Teachers | \$56,410 | 93.8 |
| Safety Engineers (Except Mining) | \$56,510 | 93.9 |
| Marine Engineers | \$56,600 | 94.0 |
| Physics Teachers-College | \$57,510 | 94.2 |
| Aerospace Engineers | \$57,820 | 94.3 |
| Medical Scientists | \$58,140 | 94.4 |
| Psychology Teachers | \$58,240 | 94.5 |
| Sales Engineers | \$58,930 | 94.7 |
| Business Teachers | \$59,180 | 94.8 |
| Communication Teachers, Postsecondary | \$59,450 | 94.9 |
| Physical Therapists | \$59,650 | 95.1 |
| All other social science teachers | \$59,800 | 95.2 |
| Postmasters & Mail Superintendents | \$60,420 | 95.3 |
| Architecture Teachers | \$60,530 | 95.4 |
| Civil Engineers | \$60,940 | 95.6 |

| OCCUPATION | MEDIAN INCOME | CUMULATIVE % RANKING |
|--|---------------|-------------------------|
| Mechanical Engineers | \$61,170 | 95.7 |
| Criminal Investigators-Public Service | \$61,380 | 95.8 |
| All Other Phys. Science Teachers | \$61,550 | 95.9 |
| Meteorologists & Space Scientists | \$62,630 | 96.1 |
| Education Teachers | \$63,480 | 96.2 |
| Veterinarians | \$63,750 | 96.3 |
| Home Economics Teachers | \$63,940 | 96.4 |
| Computer Engineers | \$64,500 | 96.6 |
| Nuclear Technicians | \$64,770 | 96.7 |
| Mining Engineers (Including Safety) | \$65,120 | 96.8 |
| Geography Teachers | \$65,480 | 97.0 |
| Engineering Teachers-College | \$67,100 | 97.1 |
| Electrical & Electronic Engineers | \$67,750 | 97.2 |
| Chemical Engineers | \$67,930 | 97.3 |
| Power Reactor Operators | \$68,080 | 97.5 |
| Metallurgists & Ceramics & Materials Engineers | \$68,640 | 97.6 |
| Actuaries | \$69,890 | 97.7 |
| Airplane Dispatchers & Air Traffic Controllers | \$71,610 | 97.8 |
| All Other Health Practitioners | \$71,820 | 98.0 |
| Agricultural Sciences Teachers, Postsecondary | \$72,880 | 98.1 |
| Engineering, Math & Science Managers | \$73,260 | 98.2 |
| Health Specialties Teachers-College | \$75,050 | 98.4 |
| Pharmacists | \$77,170 | 98.5 |
| Law Teachers | \$77,500 | 98.6 |
| Nuclear Engineers | \$77,630 | 98.7 |
| Physicists & Astronomers | \$78,230 | 98.9 |
| Petroleum Engineers | \$78,290 | 99.0 |
| Chiropractors | \$81,410 | 99.1 |
| Lawyers | \$82,120 | 99.2 |
| Optometrists | \$90,920 | 99.4 |
| Health Diagnostics Teachers, Postsecondary | \$111,260 | 99.5 |
| Judges & Magistrates | \$118,020 | 99.6 |
| Podiatrists | \$136,990 | 99.7 |
| Dentists | \$137,220 | 99.9 |
| Physicians & Surgeons | \$137,530 | 100.00 |

