

# The Future of Parking in Broward County

A guide for the development of a County Parking Policy

A report to the Transportation Planning and Air Quality Divisions of the Broward County Department of Planning and Environmental Protection

November 2001

The Center for Creating the Future, Inc.  
[www.creatingthefuture.org](http://www.creatingthefuture.org)

Also viewable on the Internet at [www.geocities.com/futureofparking](http://www.geocities.com/futureofparking)

## **Before you begin – a word about the format.**

One unique feature of this report is that, as befits an organization looking to create the future, it has been posted on an Internet site as it has been produced and comments have been welcomed as we have proceeded. We feel comments have greater value while the study is being conducted rather than after it's completed.

Further, we do not consider that turning over a finished product completes our work. Indeed, we believe that current technology will allow this type of report to go on into the future, as needed. We intend to maintain the report on a web site together with all follow-on comments -- and perhaps even our responses to them -- for an indefinite period. Should Broward County create, as we suggest, a Parking Information Network, then this report could be maintained on that web site. Thus, the report could remain readily available to interested parties electronically, in addition to sitting on a shelf. Even then a hard copy could be made available by downloading rather than reprinting, and it would have up-to-date comments and changes.

A second unique feature is that the report will be available in CD format, allowing random access to specific portions in an audio visual presentation. This format is also easily reproduced, if there is a need.

Finally, even the written hard copy of the report is being presented in a format that is similar to the web site presentation: text along one side, pictures adjacent, and references to back-up data next to the text. (Eventually, when most materials are presented on a screen, readers will return to the vertical scroll format of ancient times. The more things change, the more they change, but also remain the same.)

Thank you,

Jack Latona  
Steve McCrea

This report has been researched, written, photographed, videoed, typed and produced by Jack Latona and Steve McCrea of The Center for Creating the Future, Inc. Many people inspired and assisted in many ways and we thank them all but especially Molly Hughes, Bruce Wilson, Mike Sherman, Enrique R. Zelaya, Kathy Chagnard, Ossama Al-Aschkar, Bill Leonard, Daniela Banu and Cindy Corbett-Elder (Department of Planning and Environmental Protection), Robert Baldwin (Town Manager, Lauderdale by the Sea), Paul Carpenter (Downtown Fort Lauderdale TMA), Doug Gottshall and John Hoelzle (City of Fort Lauderdale), Ed Davis, and Patrick Rutter (advisor to City of Weston).

None of these people should, however, be held responsible for any of our mistakes or omissions.

## Executive Summary

### Introduction

Broward County's Division of Transportation Planning asked the Center for Creating the Future, Inc., to look at the future of parking issues in Broward County, including a study of current parking conditions in Broward County, the impact of these conditions on drivers and the environment, options for responses to anticipated parking conditions, and recommendations.

The Center has presented this report in an innovative fashion, maintaining its work on an on-going basis on its web site, [www.creatingthefuture.org](http://www.creatingthefuture.org), and publishing it on a compact disk as well as in print format. The print format has been designed to approximate a web site in its appearance, with many pictures.

Parking presents more issues than just "Do we have enough places to park?" In addition to the objective reality of sufficient spaces, perceptions of sufficiency, ease of access and environmental impact must also be considered. Further, while we have focused on parking, parking issues are inextricably linked with traffic issues and, to that extent, we have addressed that link. Simply put, if parking is plentiful, more people will drive; if parking is difficult, fewer people will drive (or they will go elsewhere). Put another way, the better the parking, the more likely traffic will increase: if you build more parking facilities, just as if you build more roads, they will come. Restricting parking, coupled with providing options to driving (e.g., remote parking and shuttles or more and better public transportation) will reduce demand for parking.

Presently, there is not an objective shortage of parking in Broward County except for certain peak times at popular commercial locations and in the area surrounding the Broward County Courthouse in Fort Lauderdale.

There is, however, a perception of a parking shortage, resulting from the rapid development of certain areas, and a lack of adequate information about parking locations. Also, drivers, accustomed to surface parking, are reluctant to use parking ramps, especially the higher floors of those ramps. Stress on many drivers results from these conditions.

This report also emphasizes the environmental damage resulting from too many cars driving around, looking for the perfect parking space. Methods for reducing this environmental damage are presented. The study concludes that demand for parking is most likely to increase as the population increases. It presents a wide variety of options in response to those increased demands ranging from providing better information about parking options, to diversion of drivers to public transportation or remove parking and shuttles into impacted areas.

Providing more parking downtown will increase traffic and congestion, but that gives all the more reason for public policy makers to maximize the use of existing spaces rather than just allowing more spaces to be built.

The Center recommends creation of a Parking Information Network which would provide local officials, developers and individuals with more information and more accessible information about parking options.

A comment about the role of public policy in the evolution of parking: “Public policy today determines the environment of 2010 and beyond.” We live today with the restrictions and rules decided at least 10 years ago. Each local government has standards that impose requirements for parking, ranging from upper-end suburban cities where every car is required to be in a garage, to Fort Lauderdale, where there is no requirement for parking in the downtown. If asked, most residents of Fort Lauderdale would probably be surprised that their city does not require parking for new buildings downtown, but this is not as dramatic as it sounds. A developer wouldn’t be able to get financing or tenants if there were no parking. The market, not the city, sets the amount of parking needed. The recommendations in this report can be put in place at the discretion of policymakers to diminish the negative impacts of additional parking that will be added in the coming years.

## Conclusion

The Center emphasizes that parking solutions require less capital and shorter lead times than other traffic-related actions and can be adopted as needed. However, since we can anticipate these future needs, we have the opportunity to act before they become critical and can become even better able to anticipate the future by developing better information.

Most urban planners know that we need to pursue “smart growth” in order to balance pressures for development with citizen desires for low-density or no development. We should seek “Smart Parking” policies to provide the greatest service to the community with the least damage to the environment.

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Additional photos are available on the web site:  
[www.geocities.com/futureofparking](http://www.geocities.com/futureofparking). Send your  
comments to: [crefut@bellsouth.net](mailto:crefut@bellsouth.net) or [futureofparking@yahoo.com](mailto:futureofparking@yahoo.com).

## Introduction

The Transportation Planning and Air Quality Divisions of Broward County's Department of Planning and Environmental Protection asked The Center for Creating the Future, Inc., to prepare this report on the future of parking in the County. The County is concerned not just about the transportation aspects of parking but the environmental impacts as well.

The Center, founded in January 2001 and dedicated to the proposition that we can and should create our future and not just wait for it, saw this study as an opportunity to bring a number of concepts to technicians, policy makers and the informed general public. We also took the opportunity to conduct the research and present the results in an innovative way. First, we have put our research on our web site as it was done, so that any interested party could comment immediately and not have to wait until the study was completed. Second, we are presenting the report on a computer disc as well as in the customary printed form and the printed reports visually resemble a web site as much as possible. Finally, the report is structured to allow the County or other interested parties to continue the process, since change, even in an apparently mundane topic as parking, is continuous.

### 1. Overview of present issues

Conventionally, a parking study involves taking a discrete area, analyzing the zoning uses and densities and multiplying by a formula or formulas to arrive at an estimated need for parking. An example is the Beach Study completed in 2000 for the City of Fort Lauderdale by Walker Parking Consultants, which used a growth rate of 2.88% to predict an estimated shortfall of 758 parking spaces during the busiest season by 2005 (growing to a deficit of 2,209 spaces by 2020).

This study will go well beyond that. This study will address parking issues throughout Broward County and, while urban areas with intense commercial uses will receive the most attention, suburban commercial areas and certain residential parking issues will be addressed.

While the basic issue is, is there enough parking and, if not, what can be done about it, we will also address the negative environmental impacts of parking: emissions resulting from searching for parking spaces inside and outside ramps and the loss of carbon dioxide-oxygen exchange as more grass is paved over.

Since this is a parking study, we assume that, as the County's population increases, the demand for parking will increase. This is not strictly linear, i.e. one person does not equal one car equals X residential and job-related parking spaces. It requires, at the very least, age and income analysis as well as marketing trends analysis. For example -- just two of the many possible examples -- will the trend of more people eating more meals outside the home continue or decline as we age? The Center forecasts dramatic 10-to-20-year increases in the longevity of the US population over the next 30 to 50 years, so will we drive more (more free time) or less (reduced skills)? Probably both: with more people over the age of 75, virtually all will want to remain mobile. Some of us will require more shuttles and others will continue to drive (using anti-aging nutrients to retain our faculties).

There are several trends that could lead to reduced demand for parking spaces: more reliance on public transportation, more telecommuting, and more internet and telephone shopping. As the analysis and the recommendations will demonstrate, **PARKING SOLUTIONS ARE MUCH LESS CAPITAL INTENSE AND HAVE MUCH SHORTER IMPLEMENTATION TIMES THAN RELATED TRAFFIC-ISSUE SOLUTIONS.** Necessary changes can be made incrementally with much less risk of time and capital. (THIS IS A KEY POINT OF THIS STUDY. Key points will be highlighted and numbered. This is Key Point 1.)

Finally, the terrorist attacks of September 11, 2001 have raised another issue which was not foreseen in the original scope of this study. Security should, however, be addressed as the extent of the risk becomes clarified. A look back at the history of similar events shows that present responses are almost certainly overly cautious, but nonetheless, the issue should be addressed at a later time.

We have, to the extent possible, made an effort to limit this study to parking issues and not slide into traffic issues. In fact, the separation is not a clear or simple one. At a very basic supply-demand level, more and cheaper parking will attract more cars, creating more traffic. Conversely, limited, expensive parking will discourage drivers and limit traffic.

Many analyses of traffic problems look to parking restrictions as a traffic control mechanism. (See Alan Durning's article.) In downtown San Francisco, creation of new parking spaces is strictly limited in an effort to deflect people to public transportation.

Further, poor parking information can cause drivers to spend time and road space looking for parking spaces, thus increasing traffic volume. Occasionally, cars back up entering crowded parking facilities, either at ramps or surface lots, can actually block road traffic.

This report will not expand into traffic issues, but the reader should keep in mind that improving parking conditions will improve traffic conditions.

## **2. Methods**

We have followed many paths in our research, our analysis, and our presentation. The Center considers it essential that such studies be accessible to the informed general public as well as technicians and experienced policy makers. A thick stack of paper simply will not be read. Our report is meant to be seen and the mounds of data available will be accessible but not included. The information presented will be what is necessary to begin developing a plan for the future. That plan can begin to be implemented at once, in six months, or two years. As the specific recommendations will make clear, some should begin sooner rather than later, that is, to **CREATE THE FUTURE OF PARKING NOW RATHER THAN WAITING FOR IT.** (Key Point 2.)

Each reader should be able to reach his or her own conclusions from the presentation as to the timing of the recommendations.

## **Present Parking Conditions in Broward County**

We will address four elements regarding present parking conditions in Broward County:

- a) Availability: Is there enough parking?
- b) Access: How easy is it to park?
- c) Perceptions: Why is parking stressful?
- d) Environmental impacts of parking

### **a) Is there enough parking in Broward County?**

There are some calculations about adequacy of parking in Broward County, but certainly nothing approaching completeness. Since it would be a number which changed daily, as new spaces are developed and old spaces put to other uses, without constant updating, even a 99% accurate number (unlikely) would quickly become out of date.

(A rough estimate of parking available in 17 garages for Downtown Fort Lauderdale is 10,688 spaces. Details of this estimate are given on the Future of Parking web site at [www.geocities.com/futureofparking/pin.html](http://www.geocities.com/futureofparking/pin.html).) In addition, the inventory would need to be matched with demand requirements, an even more elusive target (see page 19 for a case study of two office buildings, where the ratio of employees to parking spaces approaches 1.25-to-1, one of the highest ratios in Broward County). To some degree, demand and utilization are a function of availability. The easier it is to park, the less likely we are to consider alternatives such as walking, public transportation or staying put.

Extensive observations and interviews, while necessarily anecdotal, have provided evidence which indicates there is no actual shortage of parking spaces in Broward County. (The perception of shortages will be addressed below.) This can be checked by observation and experience. For example, viewing the area thought to be in the most critical condition, downtown Fort Lauderdale, from the top floor of any tall building will reveal, at any given time, significant numbers of empty spaces. Similarly, on a tour of downtown, one will only occasionally encounter a "Lot Full" sign.

There are exceptions. In bad weather, indoor parking can reach capacity as more people wish to park indoors and those already in, choose to stay in. The area around the Broward County Courthouse also experiences overloads in the morning hours as lawyers, litigants and jurors all attempt to find nearby spaces at the same time. Recent security measures have exacerbated this situation. Prior to that, the switch to selecting jurors from the list of licensed drivers rather than from the list of registered voters increased the size of the jury pools necessary to fill juries. More pre-screening (already suggested to County parking officials by The Center) may improve this situation.

People's expectations that a parking space should be in the very closest proximity to their destination, adds to the Courthouse problem and the concomitant morning congestion.

There is considerable expansion of parking facilities on the north side of the New River, at the Bank of America building, the first Union Building and One River Plaza. Another peak load circumstance in the downtown is the Florida Atlantic University/Broward Community College Higher Education Complex at Las Olas and Southeast Third Avenue. That problem is compounded by student and faculty expectations that parking should not only be contiguous to the buildings but free as well. Utilization of the top floor of the City Park garage by FAU and BCC has improved this situation considerably.

### **Peak-Hour Shortages**

Elsewhere in Broward County, parking shortages are almost entirely peak-hour problems, usually resulting from demand that exceeds the conventional parking formulas. One or more exceptionally popular restaurants or bars can throw off the conventional calculations for a shopping center by a wide margin. Market clearing and the usual ebb and flow of consumer choices will usually handle these situations: that is, either because of the parking difficulties or just the fickleness of popular taste, the "crisis" will pass. Some cities, such as Weston, have responded by changing their formulas. (A complete set of parking ordinances for Broward County and its municipalities can be accessed by sending an e-mail message to Rosalia Bunge (rbunge@co.broward.fl.us) at Broward County's Department of Planning and Environmental Protection.)

Private-sector strategies can include providing valet parking at peak times, which increases both customer satisfaction and parking capacity and raising prices. (A fuller discussion of pricing strategies will be found below). Fort Lauderdale Beach, for example has less intense parking

problems than a few years ago, when it seemed that “everyone” had to go to Beach Place.

Other commercial situations, such as warehouses and office parks, seem to be satisfactorily served by present formulas. The City of Weston has added an innovative approach to these uses by tailoring the parking requirements of new office park developments to the actual intended use. For example, a trans-shipping facility with a small number of employees and no visiting customers will be required to make fewer spaces than an electronics assembly facility or telemarketing operation.

Opportunities to park in residential developments also seem to be adequate at this time, with a few serious exceptions. When the resident mix of a multi-unit complex changes, severe problems can result. Most of the condominiums built in the 1970s in Broward County were designed for retirees who rarely had more than one vehicle. Those unit owners are now being replaced by much younger couples, in most of which both partners work. Further, as housing costs rise, apartments which were previously rented to one person and one car are now being occupied by two working roommates. Given the economic status of these projects, most physical solutions are not financially feasible, for example, tearing down some buildings to create parking space or acquiring adjacent properties for more parking. The cost squeeze in these situations can be severe and while it is not a public obligation, local governments need to be aware and prepared to assist with zoning changes and in other ways.

There are a few other special peak-hour situations such as churches and various special events where alternatives to supplying more parking, discussed below, should be considered.

To sum up, there is no overall parking shortage, much less a parking crisis, in Broward County in terms of availability of parking spaces. That, however, is not the whole story. Access to parking is an important component of any parking analysis. How can we make parking easier for people?

#### **b) Access: How easy it is to park?**

Improving access to parking, making it easier to park, increases the perception of availability of parking and reduces the stress of parking. (Key Point 3.)

Presently, people feel there are fewer parking spaces than there actually are because they are not aware of them or feel they are difficult to find or park in.

The problem surfaces in different ways for different people. Tourists may be completely unaware of parking locations, occasional visitors unaware of all the possibilities and frequent parkers unaware of alternatives to their accustomed parking spot. Once at the parking garage or area, signage or lighting may be inadequate, making the parking experience an unpleasant one.

Special events, which change traffic patterns, such as a Las Olas Art Fair or the Air and Sea Show, compound access to parking dramatically, but they also give us examples of how to deal

with even everyday parking problems.

First, information for the public, from both governmental and private sources, should be plentiful and understandable. As a driver approaches his or her destination, information should be continuously available. Even within a parking structure, signage is important, both its visual clarity and its understandability. As people know more and their experiences get better, the time necessary to park will decrease, as will stress. Those responsible should thoroughly test their signs for these factors.

Signs are proliferating throughout our environment. As we increase information about parking access, it must be done in an esthetically pleasing fashion. It should also be predictable, that is, in the same locations as testing shows most enhances readability. Absorbing the information should distract drivers as little as possible, while being effective.

In Europe, much effort goes into making parking "invisible", concealing parking facilities to the greatest degree possible. Where it is essential to preserve the historical and esthetic appeal of an area, this is appropriate. Too often, however, these suggestions come from people who are merely hostile to automobiles. Most Americans do not share these feelings.

### **The Aesthetics of Parking**

Parking facilities should be as attractive as any other part of our visual environment but they needn't be invisible. U.S. drivers like to see where their car is and is going to be. (Key Point 4.) That factor should not be ignored by planners and urban designers.

#### **c) Perceptions: Why is parking stressful?**

The 1990 Census put Fort Lauderdale's population at 149,377 and in 2000 the city stood at 152,397. The County's population is over ten times that, 1,623,018 (2000). In 1970, it was only 620,100, just before the take-off. Further, while Fort Lauderdale has long been the County seat, its downtown and beach did not begin to take off until the mid-1990s. Similarly, suburban communities have only recently jumped not only in residential population (Weston, Sunrise, Plantation, Coral Springs), but in commercial development. As a result, all but the most recent arrivals remember when they could park "anywhere" with no hassle and virtually no charge. They have forgotten that there was little or nothing to do when they got there. The infrastructure of downtown Fort Lauderdale, the government office buildings such as the Federal Courthouse, the State of Florida Office Building, were built in the late '70s and early '80s but the private sector response did not kick in until the early '90s, fueled to a significant degree by the multiple offshoots of the entrepreneurial energy of Wayne Huizenga and his associates. All of a sudden, after 20 years of effort downtown was an "overnight success." Street parking or the first floor or two of a parking garage was not enough to park everyone, so a garage building boom in Fort Lauderdale has given the city more than ten garages with more than 4 levels.

## **What are acceptable parking conditions?**

A parking space on the fourth floor of a parking garage underneath or adjacent to one's office building for a monthly fee of \$70 (a bargain in New York and an ecstatic circumstance even in Miami) is considered an insuperable burden in Broward County. On Fort Lauderdale beach, after the (forced) departure of Spring Break in 1985 and 1986, there was an idyllic period beginning in the early 1990s when redevelopment was as yet undiscovered. One had the feeling of having the beach to oneself. When the rest of South Florida and the world discovered our paradise, things changed. The "crisis" came with the opening of Beach Place, a multi-story complex of shops and restaurants attached to a time-share hotel. "Everyone" not only had to go there, they had to park there, not a block away. Now that the initial excitement has calmed down and people have gotten more savvy, traffic and parking have subsided to the level of "merely very crowded" during the peak of the tourist season.

Similarly, as suburban communities like Weston and Coral Springs grew, commercial development moving to the rhythms of natural economic patterns did not always keep up. That, plus the occasional hyperpopularity of a particular bar, restaurant or shop, would lead to a parking "crisis." Eventually, the market place and individuals responded to these conditions: more parking is created, more restaurants are opened in other areas, and people change their behavior, either consciously or unconsciously. If a parking or traffic "crisis" continues at a particular location, it means people want to go there and will pay the price in time and stress. Local governments can only do so much about these perceptions, but there are several relatively easy steps which can be taken in the near term to ameliorate these problems. They will be set forth in our recommendations. It is difficult to quantify the stress levels caused by parking problems, but they do have social and individual health consequences and should not be brushed off.

## **d) Environmental impacts of parking**

Most people do not consider parking as an environmental issue, but in fact it is.

In congested downtown areas, it is easiest to see: cars driving around looking for a place to park add to the amount of air pollution. Within parking structures, where exhausts are trapped, is a further intensification of the problem. Exhaust fans or open structures reduce the levels inside the structures by spreading pollutants to the outside, but this only adds to ambient pollution levels. Air quality regulators are aware of this and limit the amount of exhaust pollution allowed within designated areas and increased development can be halted if levels are exceeded (see the web page about the Parking Facility License).

## **Air Quality**

Broward County is presently regarded as having adequate air quality (after having been under EPA restrictions that required vehicle emissions to be checked annually). Our air quality is

constantly being monitored and we must be continuously aware of the impact of automobile generated pollution on our air quality and quality of life.

The issue is not limited to densely developed urban areas. Large suburban parking lots can also be large generators of auto exhaust as people search for parking spaces. Furthermore, the instinctive response to a shortage of parking, even if only at a few peak periods, is to require paving over more land for more parking. This not only fails to reduce pollution, it reduces air quality by eliminating vegetation which cleans our air and exchanges carbon dioxide for oxygen. Also, while we now require storm water runoff to be contained on site at parking lots, if the water does not filter back into the aquifer, it will either require expensive treatment or dump pollutants into our waterways.

## The Future of Parking in Broward County (Most Likely Outcomes)

The easiest projection to make of any future trend is a straight line following existing data. In the case of parking needs in Broward County, or almost anywhere, the easiest forecast would be to take present spaces -- exact number unknown -- and multiply by the anticipated increase in the population. It then becomes a simple matter to predict that Broward County will need to provide "more" parking spaces, both public and private, tied to population forecasts. A more conservative forecast would be "much more" parking, the outer limit would be "a whole lot more." This is not just an attempt at humor, it is a *reductio ad absurdum* of present parking planning: build more of the same as demand requires.

### **Refining our forecasts**

This model falls well short of what is possible. First, population numbers can be refined. Driving, working, education, shopping, entertaining are some of the constituent elements of parking demand that can be made much more precise by demographic analysis: age and income, information which is easily accessible, can reduce or increase the forecast of anticipated drivers and their likely destinations. Young children need to be driven to school, older children will in many cases drive themselves. Age and income figures, properly analyzed, can give us reasonably reliable figures on shopping, dining out, employment and so forth. Private sector marketing analyses do this all the time. Knowing the answer to these questions can help us to refine our forecasts, reducing the chance of over- or under-reaction. Fortunately, parking changes require a relatively short-term turnaround, and corrections can be relatively easily made.

In addition to refining our forecasts, there are plausible alternatives that could lead to a need for less parking than a simple or even complex demographic forecast would indicate.

Transportation planners for many years have been urging more reliance on public transportation and this message is beginning to influence decision makers. Investment in Tri-Rail has been increased. Expansion of Miami-Dade's MetroRail into Broward County, the Community Bus

program in various municipalities, the Waterbus waterways transportation program and expansion of conventional bus service, with more routes, longer hours of service and shorter intervals between buses are all underway. Historically, these changes have lagged population increases, but that is beginning to change, with public transportation ridership showing greater increases, in some circumstances, than the population. While this is not the place to discuss the cost-effectiveness of such programs, there is no doubt that greater availability, improved access, better information, and momentum\* will increase ridership and reduce demand for parking.

### **Impact of technology**

Other trends, difficult to quantify, will also have some impact. More people are doing some or all of their work at home. As the technologies which facilitate working at or near home become better and more familiar, such as wireless Internet access, voice recognition for email and teleconferencing, we can expect these trends to reduce traffic and parking demand.

Similarly, while the bursting of the dot-com bubble has put a hold on shop-at-home trends, there is no doubt that these programs will resume and to a greatly expanded audience as convenience, product quality and service improve. Publix, for example, is undertaking an Internet grocery shopping service. While the timing of widespread acceptance of this service is uncertain, it is not difficult to imagine a virtual shopping experience: going down aisles, looking at shelves, making selections and then having them delivered to a specially designed food-port at one's home or apartment. We can see this future; it's the timing that's unclear. When it happens, parking demand will be reduced. A further extension of this notion: as the quality of prepared foods continues to increase as it has been, another reason to leave home or park at a store or restaurant on the way home will be eliminated. This will not happen all of a sudden, but it is happening now. Its impact is hard to measure, but this part of the future is beginning to happen now.

### **Market clearing**

Finally, there is the effect of people's daily choices: If it gets too bad, they just won't do it. If the experience of parking is too stressful, expensive or difficult, people won't park there and they will go somewhere else. (Key Point 5.) It is easy to misunderstand this phenomenon, known to economists as market clearing. It is part process, part explanation, part solution. Some simple examples: we will not reach actual gridlock; people will go elsewhere. We will not run out of oil: we will switch to substitutes or change our behavior.

We often hear people say that some location in Broward County has reached its traffic or parking limit. Perhaps. For example, traffic in Miami is worse, yet tolerated. There are parking facilities in Miami which have eight or more levels of parking, all full. There is obviously some attraction in Miami, either jobs, business opportunities, entertainment, or whatever, that continues to pull different people, at different times, into Miami in spite of the congestion. Also, it is clear, at least anecdotally, that there are people who don't go to Miami because of the congestion who would go, or perhaps so at off peak times, if there was less congestion. Each

location, of course, will have a different degree of "magnetism."

In any case, market-clearing will to some degree suppress demand if conditions are "below acceptable" to certain individuals.

## Alternatives (Possible Outcomes)

The relationship between Parking and Congestion is close: If drivers know that there is a parking space waiting for them, they will try to drive to work. Congestion takes place because drivers are arriving at or near the traditional beginning of the office work day (9 a.m.).

Flextime, an arrangement where arrival times are staggered, is used in other metropolitan areas to reduce the peak congestion. A survey was conducted as part of this study to determine the level of support for flexible arrival times. Past surveys have indicated that managers are less enthusiastic than their employees are about later start times.

The survey included a question that specifically mentioned e-mail, which has become more widespread. This survey is believed to be the first to ask about answering e-mail from a home computer. The survey was sent to the Stiles Buildings 350 and 450 East Las Olas and 800 copies were distributed, thanks to assistance and coordination by Judy Carter, the building manager.

### **The Question**

Are you able to do some of your work at home, perhaps answering email before you commute to work after the rush hour? The responses are probably more from people who are advocates of flex-time work schedules. We expect that the results will fall to about 20 in 100 in support of flex time.

The critical impediments mentioned in the report are

*"My boss wants me in the office at 9 a.m."*

*"The e-mail system does not allow me to view the email from home."*

### **Possible actions**

An education campaign could be started, drawing on the experience of companies in Southern California, where thousands of workers arrive earlier or later and avoid the rush hour.

Creating an email account on a web-based email system, such as Yahoo.com or hotmail.com, allows the workers to check e-mail from home. Perhaps a worker who arrives early to work can check the email for other workers and forward e-mail messages to the "later-arriving" workers to work on before they come to the office.

### **Parking Information Sources Which Are Available Now**

The following contact numbers will allow most organizers of events to quickly identify 90% of

the convenient garage space available for use by event attendees on weekends and evenings:  
County Parking Garages (located west of Andrews Avenue and South of Broward Blvd.)

a) the Garage shared with Riverfront Mall

b) the Garage connected by a skywalk to the Government Center

The County Courthouse parking garage (1800 spaces)

Ed Davis, 954.357.6030, fax 954.357.5544

edavis@broward.org

115 South Andrews Avenue, Suite 504

Fort Lauderdale, FL 33301

Ed Davis is the County's Parking Manager -- A position created when the country began to lease its spaces through a professional parking management company.

Judy Carter, Stiles Building Property Manager, 954.525.9316, at judyc@stiles.com, covering the properties at 350 East Las Olas Blvd. (725 parking spaces) and 450 East Las Olas Blvd. (577 parking spaces), totaling 1302 spaces

City of Fort Lauderdale, John Hoelzle, 954.828.3700, with 2,127 parking spaces in the City Park Parking Garage (and 31 handicapped spaces). Spaces are available in the parking garage next to the main library. In the month of August 2001, the city sold 2,531 permits for the 2,127 spaces (obviously, not everyone with a permit uses the space every day).

#### Creating the Future of Parking in Broward County (Recommendations)

We do not have to sit and wait for the future to arrive. The basic principle of The Center for Creating the Future, Inc., is that we can create our future by understanding what it holds in store for us and by acting now to prepare for it.

Broward County can begin to create the future of parking in a variety of ways which we will present as a menu of policy choices. Most of these choices can be immediately implemented, others have a longer time frame for implementation, whether because the problem is not yet severe enough or the technology, while foreseeable, is not yet available as a practical matter. The first choice, which we strongly reject, is to do nothing.

Doing nothing is a choice just as much as adopting one or more policy choices (Key Point 6). Doing nothing actually means choosing to have a wide variety of public and private decision makers respond on an ad hoc basis to each need or "crisis" as it arises. If the response is inadequate, people will adjust various ways and life will go on (see discussion above about market clearing).

The difficulty with this choice is that it is unnecessarily inefficient. We say unnecessarily because, as will be shown, parking can be improved without massive capital investment and long-term projects. Parking is not so complex a matter that the "invisible hand" of the market will produce a better result as would be the case where the scope of the problem exceeds the grasp of public policy. While parking is not as simple a matter as it appears to most people at first blush, neither does it require the resources needed to put people on the Moon (which, of course, we did).

## Better data

Better decisions, public or private, individual or institutional, require better data. As mentioned at the beginning of this report, some parking data is available but changes occur so frequently that any given snapshot is of limited value.

Specific data is important for two uses: planning and consumer information.

Public or private parking decision makers should be able to access not only current parking data but to interact with that data with their own plans and marketing information so that we don't go from not enough parking in a given situation to too much because three developers built 900 spaces each when there was a demonstrated need for only 1500 spaces.

Further, an accurate Parking Data Bank would become the basis for providing parking availability information to consumers. Initially, this could be done in the form of area parking maps and a web site showing parking locations. This could over time develop into a very sophisticated system – initially with an online or call-in parking availability service, later a radio format with parking information and eventually an interactive Global Positioning system (GPS). The Miami Dade Metropolitan Planning Organization is presently considering a full-time radio-based traffic information system. If accurate parking data were available, it could easily be added to this radio format.

## Parking Information Network

To make such data useful, Broward County could create a Parking Information Network (PIN). This Network would, at a minimum, provide parking data to municipal and private parking developers. It could also provide parking availability information to consumers online and through tourist oriented brochures and, as need/demand increased, go to more sophisticated communication methods.

Local parking providers could also make this information available to tenants and customers. At the local level, it is also essential to provide effective, attractive and consistent parking signage for both drivers on the street and within parking structures and lots. Better information is an important first step to reducing parking stress (to say parking rage would be a bit much) and to reducing pollution emitted by parking space hunting. The importance of interior signs should not be minimized. Many parking structures and even surface lots we studied do not clearly show the driver where to go – or not go – and drivers can end up frustrated, wasting gas and generating unnecessary pollution.

## Improving communication

A Parking Information Network would serve two very important purposes: to facilitate the most efficient use of existing parking resources, thereby reducing the need for excessive parking structures or lots; it could then become the platform for new consumer information technology as

it is developed and needed.

The Downtown Fort Lauderdale Transportation Management Association (DFLTMA) is drafting a proposal (as of November 2001) to develop an inventory of parking spaces. This would be the first step for creating a Parking Information Network. The TMA is the ideal public-private partnership to implement the full PIN as it develops. We consider the network to be the foundation of creating the Future of Parking for Broward County.

### Immediate Steps

In addition to the Parking Information Network, there are many specific steps that can be taken by either municipal or private parking facilities to improve the amount and accessibility of parking in Broward County.

With or without a Parking Information Network, municipalities and public and private parking facilities should provide more and better parking information in the form of maps, advertising and the internet. There are several dramatic examples of how careful coordination and better information can significantly improve parking conditions even under very adverse circumstances: the Fort Lauderdale Air and Sea Show, the Winterfest Boat Parade and the Las Olas Art Fairs. The Air and Sea Show and the Boat Parade have demonstrated how offsite parking can work, bringing hundreds of thousands of people to Fort Lauderdale beach from remote parking sites, most on buses but some even on foot. The Air and Sea Show and Boat Parade are, of course, once-a-year events and very strong attractions. Nonetheless, it shows what can be done and what people will do given good planning and information.

### **A Case Study: Las Olas Art Fair**

The most recent Las Olas Art Fair was studied closely as another example of what can be done with intelligent effort. Like the Air and Sea Show, the circumstances are out of the ordinary: an art fair on a street which is a main route to the beach, running through residential areas sensitive to the impact of the traffic and parking generated by the Fair. In addition, some of the merchants on the street are ambivalent about the impact of the crowds on their particular businesses. All together, a difficult set of problems requiring good planning and great diplomacy. It was a very instructive case study.

To lessen the impact on the residential streets, fair attendees were not allowed access to the area. Instead, signs directed them to fair parking at the City Park Garage and free shuttle buses took

them to Las Olas. The program was generally successful.

### **Lessons learned from the Las Olas Art Fair:**

Properly informed and motivated people will accept remote parking;

Bigger and better signs would have helped (see graphics);

Coordinate with other area parking facilities;

If we do it again, it will work even better.

(collected from responses by observers and participants in the new parking arrangements associated with the Las Olas Art Fair.)

### **Remote Parking**

Remote parking is one of the most frequently mentioned “solutions” to parking and congestion problems. Attempts have been made in Broward County using the Tri-Rail parking lot at Broward and I-95, and the City of Fort Lauderdale experimented using the Arts and Science District Garage for employees. Presently, a TMAX community bus route from State Road 7 and Oakland Park Boulevard to downtown Fort Lauderdale is operated by the Transportation Management Association (TMA).

This program could be called a success with 8 round trips (4 in the morning, 4 in the afternoon) with an average of 57 riders at rush hour each day. Until the crunch is severe, those solutions will work best which require the least change of behavior by consumers. (Key Point 7.)

### **Staggered Work Hours**

Another example of an idea which requires behavioral changes is staggered work hours. There is no real reason in many work situations why people need to arrive and leave work between 8:00-8:30 a.m. and 5:00-5:30 p.m. A survey we conducted for this study shows some individuals are willing to do this (some may already be doing so without a program), but for many employers, the response is simply “we’ve never done it that way.”

### **Live-work arrangements**

Live-work arrangements are another way to stagger hours – one need not work every hour at home – do your e-mail at home and then drive to work or to a meeting. Again, this is more a congestion than parking matter, but as more people do some, if not all, work at home, the demands at peak times will decline.

### **Price mechanisms**

Price mechanisms can be an effective way to modify behavior. As we have shown in the market-clearing” discussion, incentives and disincentives of various kinds can make people change their behavior. Requiring all parking to be paid by the consumer – no “free” parking for public or private employees -- and raising the prices for parking would certainly reduce demand and both traffic and parking congestion. What sounds good to the planner or economist may not sound so good to the individual. Most Americans consider free parking from their employer virtually a God-given right. Students at the downtown campus of Florida Atlantic University and Broward Community College feel the same way. They are willing to have a portion of their student activity fees used to pay for parking, but do not want to pay directly.

Like off-site parking, increasing the direct cost to the consumer can be effective where there is

sufficient motivation. People happily pay parking fees in New York in amounts that would not be tolerated in Broward County. Even within the county, boosting fees in downtown Fort Lauderdale could lead to chasing businesses to other locations in the County or in other counties, which would not only impact downtown businesses but encourage and exacerbate sprawl. Other techniques, some low-tech which can be implemented immediately, and others which are higher-tech and higher cost, are available.

### **Valet Parking**

Valet parking, while requiring higher personnel costs, can dramatically increase the capacity of any parking facility and is easily done in surface lots. It also reduces parking time and stress for the consumer. Most commonly found at restaurants as a consumer service, it can be much more widely applied. There are a few office buildings presently using it due to severe shortage of parking spaces. Valet parking does not work as well where everyone arrives or leaves at the same time as do most employees, but it does work well for in-and-out and client parking needs.

### **Robotic Parking**

At the high-tech end (see graphic), robotic parking can also increase capacity and reduce consumer time and stress. A robotic facility uses a pallet storage system for each car, reducing pollution at the parking site and increasing the capacity of any given land footprint. Presently, one cannot build a robotic facility in Broward County since parking structure construction codes require ramps. Fort Lauderdale is presently modifying its ordinances to allow robotic parking facilities. Like valet parking, robotic parking is not effective where everyone arrives or leaves at the same time. However, office building developers should be encouraged to put a percentage of their parking into robotic parking for client parking.

### **Mixed Surface Lots**

On surface lots where peak time demand is infrequent, for example churches, codes should allow/require a portion of the peak load parking to be on a mixed surface of hard material and grass. This accomplishes many positive environmental benefits. First, it is more attractive and, in our climate, possible the entire year. It naturally absorbs and filters storm water and it absorbs heat rather than holding it on the surface and reflecting it back into the air. The projected volumes of use for commercial surface lots should be analyzed to allow/require these surfaces.

### **Cross-easements**

Another device for increasing the productivity of existing parking is cross-easements for adjacent uses where the times of use do not overlap. Some cities allow this now but much more could be done. In most areas, office building parking, structure and surface, is empty, while nearby restaurant and bar lots overflow. If the County establishes a Parking Information Network, these overlapping uses could be negotiated and increased, to everyone's benefit.

### **Fine-tuning parking requirements**

The City of Weston has modified its codes to allow fine-tuning of parking requirements based on the actual anticipated use of a commercial or industrial property, rather than using a one-size fits-all formula based on the square footage of the building. With today's technology a very large warehouse transshipping facility can operate with very few employees and few customers

coming to the site requiring very little parking. An electronics assembly plant might require more than the formula amount. Allowing the parking requirements to be adjusted to the actual need benefits the property owner and the community by not wasting space with unnecessary asphalt.

Similarly, planning codes should recognize the differences created by demographics and economics in residential parking requirements. Presently, parking codes require apartments or condos to have X number of parking spaces per unit. Some might modify that based on the number of bedrooms per unit. None of this acknowledges that many upscale units in Broward County are second or third homes. Even if it is a primary residence for someone who has other residences or who travels a great deal, they are not parking there every day, every week. Generally, the larger and more expensive the unit, the more likely this is to be true. To cite a dramatic but by no means unique example, a very prominent professional athlete (who is not with a local team) owns a large unit in a prominent Fort Lauderdale beach condominium. He is not there every day; he does not drive to work every morning. Parking and traffic regulations should reflect these demographic variations.

#### Trips Rates

The “Trip Rates by Purpose” data sheet, dated July 7, 1998, is distributed by Broward County’s Planning Department to assist developers and planners in predicting the number of trips that a new development could place on the neighboring road system. Under the residential category of “High Rise,” each dwelling unit is predicted to create 0.74 trips per day from “home-based work,” nearly 1 trip for “home-based shopping,” two trips for “home-based other trips” and 0.42 “non-home-based trips.”

Using these numbers, we could observe 100 high-rise units and expect 74 trips generated by home businesses, 96 trips for shopping, 207 other trips and 42 other trips that are not home-based. In total, there are 419 predicted trips. Yet, the unit owned by the professional athlete is outside this model. If many of his friends join him in the building as second-home owners, the 100 units might generate fewer than 200 trips per day.

As long as the increase in residential units continues to be at the high end, economically, many new owners will not be the full-time residents who enter traffic 50 weeks out of the year. The full-time population of Fort Lauderdale might not increase significantly, and certainly a lot less than the 40% growth anticipated in the entire county from 2000 to 2015.

In short, the demographics of the residents of a particular building ought to have some influence on how the Trip Rates schedule and parking requirements are interpreted.

#### Car sharing

There are a number of sophisticated car pooling or car sharing ideas in various stages of development. These eventually involve using technology to facilitate sharing of vehicles in several ways. Another way of looking at these concepts is to expand the car rental at an airport model to other situations and locations. For example, you could take public transportation to work but if you needed a car during the day, even on short notice, one would be available either in your building or in the area. Larger corporations and local governments presently use such arrangements (providing a vehicle pool for use by employees) but it would not be a difficult step to make it more widespread, reducing inbound and outbound rush-hour traffic as well as parking loads.

## Taxicabs

Another very old “technology” exists for avoiding local trips in urban areas – taxicabs. In some very dense urban areas – New York City and Washington, D.C., for example -- they are widely used by many people who wouldn’t dream of using their car to drive from place to place in the city. In Broward County, cabs are used largely by tourists, the disabled, and by those who cannot afford a car. Even with the free downtown TMAX Shuttle in place, people do not hesitate to drive from one side of the river to the other. It’s very easy. Were it to get more difficult, taxis, even water taxis, might begin to be used for that purpose. Should that need arise, taxis can be encouraged by setting aside pick-up/drop-off spaces for them. There are a few but, by and large, there are no cabs cruising or waiting to be hailed. That we are not using cabs in that fashion is an indicator that during the day, it is easy to get around and park throughout our urban areas, even downtown Fort Lauderdale.

## On-street parking

Until very recently, the trend of urban planning has been to remove as much on-street parking as possible. This was due to traffic engineers wanting to move cars more quickly. Wider lanes and fewer distractions -- people parking, opening doors, just being there -- allow greater speed. Also, many urban planners would like to keep cars away and out of sight. More recently, however, this conventional wisdom has been challenged. Fort Lauderdale has had spectacular results from its decision to return on-street parking to Las Olas Boulevard, proposed by Center founder Jack Latona when he served on the Fort Lauderdale City Commission. It significantly increased pedestrian activity and a sense of sophisticated urban ambience, as well as increased property values and parking revenue. The reasons for this overnight change are many: on-street parking increases parking capacity and the perception of increased parking availability. It provides a buffer for pedestrians and outdoor diners, an important consideration for a through street like Las Olas. It increases the amount of visual stimulation for pedestrians – people need constant visual change to keep them interested as they walk. Long, empty vistas discourage walking. Also, Americans, in particular, like to see where their car is, if possible.

On-street parking is being considered anew for low-density residential areas as well. Long considered a traffic hazard and a sign of low-income status (older homes, i.e. pre-1940, frequently did not have larger driveways and garages), on-street parking is now being seen as having some positive aspects. First, it slows down traffic, a good thing in residential areas. Second, as in commercial areas, it provides a buffer for pedestrians and visual interest. Third, it increases parking flexibility where the number of cars in a household increases, usually when the children begin to drive. Fort Lauderdale has examined various rules for parking in swales where there are no sidewalks: for example, no tires on the swale, two tires on the swale or all tires on the swale. There are arguments to be made for each format and their applicability varies from neighborhood to neighborhood, depending on the width of streets and depth of setbacks to the front of the house.

## Parking Meters

On-street parking in commercial areas raises the issue of parking meters. Meters serve two purposes, one obvious – revenue – the other not so obvious but also important – turnover. Turnover means new visitors can have some expectation of finding a space. No turnover, probably the result of employees parking in front of the store, does not encourage people to stop and shop. While people can find parking meters and parking tickets an annoyance, they not only fill municipal coffers but serve the public as well by keeping alive at least the hope of achieving the American dream: an empty parking space right in front of my destination. It just won't be free. There is a large body of information and technology concerning the placement, design and monitoring of meters as well as an entire business of collecting parking tickets. We feel that is outside the scope of this study.

All of the above parking strategies can be implemented with existing low-tech methods. High-tech parking can be seen in our future as well, however.

### Siemens Traffic Guidance Systems

As we have stated, changing people's behavior is difficult. Giving them the information they need to get to their destination, that is, a specific open parking space, can make their lives easier, reduce congestion, and improve our environment. As described above, Miami-Dade County is considering a full-time traffic information radio station, much like those now in service near large airports. Parking information could easily be made available over this same station. Siemens has developed a system that enables parking structures to measure incoming vehicles and to direct them to spaces according to size, thus increasing the capacity of the structure. They also have developed traffic guidance systems for traffic control which could be connected to the Parking Information Network and direct drivers to available parking. Other techniques for enhancing parking structures are available. Presently, it is possible to put traffic and parking information on the Internet. Soon, it will be possible to get real time information about available parking and reserve your space before you leave home! More and more cars are coming equipped with Global Positioning Systems (GPS) either as options or, in some cases, standard.

### G P S

While presently a one-way system – you can find out where you are - soon it will be possible to create an interactive system. (Some vehicles also have a cell phone-based emergency system that might be adapted to a parking information system.)

This is the perfect example of creating the future: the technology exists or is foreseeable. A chip in each parking space will communicate to the Parking Information Network that it is empty; you will ask your GPS to identify a parking space closest to your destination; the screen will show you the exact location, not just the parking facility, but the space in it. You will then reserve the space by paying for it with a credit card and go directly to the space, saving time, reducing stress, and reducing pollution. As the cost of making this technology available comes down, the need/demand will increase and at that intersection, the future of parking will be created.

## Bicycles

When discussing parking, most people think only of automobiles. However, bicycles should also be given some attention. Broward County and the Florida Department of Transportation have been quite aggressive in developing bike lanes so that increasingly one can bike, either for recreation or commuting, throughout much of the County. Less attention has been paid to safely and conveniently parking bicycles (or motor bikes of one sort or another). Municipalities can provide more parking for bikes and begin to require it from office and commercial developers. There are two good reasons for such a policy. First, there are people who prefer to ride their bikes and they are entitled to accommodation just as automobile drivers are. Second, the more bike riding is facilitated, the more of it will occur. This is good for both the bike riders and non-riders. Bikes are healthy for the rider, take up much less space on the road or for parking and do not pollute. (Even motor bikes take up less space and produce fewer pollutants.) In other parts of the world, bicycles are very important part of the transportation system, usually because they are so much cheaper. However, particularly given our climate, there is no reason that more travel in Broward County could not take place on bikes.

Like walking, riding a bike necessitates dressing differently than most business people presently do. We need to get away from suits, ties, high heels and panty hose as the business person's uniform. In addition to reducing our traffic and parking burdens, this would also enable us to set our office thermostats higher, saving energy and reducing pollution. Further, we would then require less cooling as we drive home and after we arrive there.

Most traffic-policy reduction programs involve getting people out of their cars more – that will not happen in South Florida until we “dress light.” (Key Point 8.)

## Conclusions

The future of parking in Broward County can be seen and it can be created. Presently, except for occasional peak time circumstances, there is no parking crisis in Broward County. That does not mean there are not specific problems to be solved or that some people still may think there is a crisis. It means we presently have the facilities available to deal with existing needs so long as we take steps to maximize the use of what we have. That may involve more efficient use of present spaces, better information, especially signs, about where parking is available, and, to some degree, getting people to understand that they should not expect to find a free, empty space ten steps away from their destination.

Will demand increase?

The future is another matter. While there are some possible changes in work and shopping behaviors which could lead to a reduced number of automobile trips and the resulting need for fewer parking spaces, they are most likely only to reduce the anticipated increase in demand, not cause an actual reduction in demand. (Key Point 9)

The forecast of an increase in demand is based on increases in population, demographic changes – more young people and more active seniors -- and increasing work and non-work choices, all leading to more trips and more non-home conclusions to those trips, i.e. more parking.

This means we should take steps today to make the parking experience of the future easier, less stressful and less environmentally damaging.

### Two poles of parking policy

Parking policies fall between two poles: do nothing, let the market take its course; or aggressively restrict parking to shift people from their cars to public transportation (referred to as the San Francisco Model).

San Francisco has been able to pursue this policy because it already had a very dense, very compact urban community (49 square miles), politically willing to restrict automobiles, an economic magnetism that drew countless new dot-com business to want to locate there, and an existing public transportation infrastructure of buses, trolleys, cable cars, the Bay Area Rapid Transit (BART) and a sophisticated fleet of taxis which can be hailed on the street in the downtown.

Broward County, much larger geographically (414 square miles), has not achieved either the population density or the economic magnetism essential to make such a policy successful.

However, Broward County is continuing to grow rapidly and a hands-off public policy will lead to chaos in heavily congested areas of the County.

This report sets forth tiers of policy choices that can be adopted as policy makers determine that circumstances require.

Analysis of the nine key points of the study lead to the conclusion that Broward County should begin to develop a “Smart Parking” policy that begins with creating the Parking Information Network which will lay the foundation for efficient implementation of the other parking solutions available now or in the foreseeable future. These solutions will reduce stress on drivers and on the environment and can be implemented as needed (Key Point 1). Broward County should not wait until future developments force reactive solutions (Key Point 6). Demand for parking will continue to increase but there are factors which may reduce that likely increase (Key Point 9).

If parking becomes too difficult people will go elsewhere (Key Point 5). To gain acceptance of

new solutions, those most likely to succeed will impose the least change on individuals (Key Point 7). People will not give up their cars until the alternatives are equally or more attractive than their present circumstances (Key Point 8).

It is possible to reduce the negative impact of parking (Key Point 3). Parking facilities can and should be as attractive as any other part of our visual environment (Key Point 4). We can create the future of parking in Broward County (Key Point 2).

#### Incremental, low-cost, short-term actions

Most of the steps we have outlined are incremental, low-cost and can be implemented within a short time frame. Only a few require new and expensive technology and those do not have to be used to obtain much improved parking experiences. One first step is essential: obtaining and maintaining up-to-the-minute parking information for the entire county. This will enable public and private planners to avoid under or over building of parking facilities and allow for the fine-tuning techniques we have suggested in this report. Where parking conditions are tight or perceived to be tight, the information can then be provided to people to maximize existing parking facilities and reduce the time and stress associated with coping with these conditions. A Parking Information Network for the County would be a cost-effective first step to creating the future of parking in Broward County. Other steps could then be taken as we become aware of the need. If we begin now, we can create a future of faster, easier and cleaner parking in Broward County.

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#### Key Point 1

Parking solutions are much less capital intense and have much shortest implementation times than related traffic solutions.

#### Key Point 2

**CREATE THE FUTURE OF PARKING NOW RATHER THAN WAITING FOR IT.**

#### Key Point 3

Improving access to parking, making it easier to park, increases the perception of availability of

parking and reduces the stress of parking.

#### Key Point 4

Parking facilities should be as attractive as any other part of our visual environment but they needn't be invisible. U.S. drivers like to see where their car is and is going to be.

#### Key Point 5

If the experience of parking is too stressful, expensive or difficult, people won't park there and they will go somewhere else.

#### Key Point 6

Doing nothing is a choice just as much as adopting one or more policy choices. Doing nothing actually means choosing to have a wide variety of public and private decision makers respond on an ad hoc basis to each need or "crisis" as it arises. If the response is inadequate, people will adjust various ways and life will go on.

#### Key Point 7

Until the crunch is severe, those solutions will work best which require the least change of behavior by consumers.

#### Key Point 8

Most traffic-policy reduction programs involve getting people out of their cars more – that will not happen in South Florida until we "dress light."

#### Key Point 9

Changes in work and shopping behaviors are most likely only to reduce the anticipated increase in demand, not cause an actual reduction in demand.

### Background Materials

For readers who want more of the details.

The study was designed to be read in one sitting. It is supported by visuals that help the reader to grasp the complexity and interconnections of the subject. Parking is not just about placing cars in safe, convenient zones in a downtown area. Parking defines the interactions between people and the environment and colors their experience of the city. The best way of capturing the concepts visualized in this report would be with an animated documentary, which is recommended for a future information campaign about parking policy issues that might one day be directed at the general public. The audio-visual items that support this study as background materials include several videos that have been converted to run on Quicktime Software.

Videos on CD:

Robotic Parking (Information)

Robotic Parking (TV broadcast)

Visit to Publix Multi-Story Garage in Miami Beach

The Case Study: Las Olas Art Fair (September 2001)

Auto-Park Demonstration

#### Contacts

Paul Carpenter, Executive Director, Downtown Fort Lauderdale Transportation Management Authority.

761 3543 Ridership runs an average of 300,000 a year. The “park and ride” lot at 441 and Oakland Park Blvd. has about 57 riders a day. The ridership in the morning tends to be higher than the number of riders in the afternoon (some morning commuters apparently catch a ride home on the bus or with a friend). Two shuttle buses both make two trips in both the morning and the evening, a total of 8 round trips per day.

Ed Davis, County Parking Manager

A fifteen-foot tall sign (viewable from Broward Blvd. along SW 1st Avenue from Broward), will be installed on the County Garage. This is the first of what this study’s writers hope will be more signage to help the first-time visitor to Broward County in navigating.

The diagram is a schematic: it does not represent the actual end product and it is an artist’s rendition. It was provided by the very helpful and consumer-oriented parking manager who works for the County.

Source: Ed Davis, edavis@broward.org

TRANSPORTATION PLANNING DIVISION 357-6608

115 S. Andrews Avenue, Room 329H, Ft. Lauderdale, 33301 FAX 357-6228

Director: Bruce Wilson 357-6641; Congestion Management Team - Enrique R. Zelaya 357-6635; Long Range Transportation Planning Team - Ossama Al Aschkar, P.E. 357-6653

Jeff Weidner, Florida Department of Transportation

Jeff coordinated a useful series of workshops to bring together teams that are working on various projects in Broward and Southeast Florida. His workshops helped many participants realize that each team is not only working on a specific project, but also helping to construct part of a transportation system for the region.

#### Publications

Countywide Parking Policy Study for Miami-Dade County (project No. E95-MPO-02R), August 1999, prepared by Barton-Aschman Associates. Provided by Jesus Guerra, guerraj@co.miami-dade.fl.us, 111 NW First St, Miami, FL 33128, (305) 375-4507

Year 2000 Traffic Count Report, April 2001, Broward County Metropolitan Planning Organization.

Parking Study – Beach Area (2000) Walker Parking Consultants (made available to us through the courtesy of Doug Gottshall, City of Fort Lauderdale). This 45-page study includes data from surveys in August and September 2000. In a related matter, the City of Fort Lauderdale paid for a detailed transportation study including parking issues which is expected to be completed in 2002. Copies should be available from the City of Fort Lauderdale at that time.

Collection of Parking Ordinances: A complete set of parking ordinances for Broward County and its municipalities can be accessed by sending an e-mail message to Rosalia Bunge (rbunge@co.broward.fl.us) at Broward County's Department of Planning and Environmental Protection (DPEP).

The Parking Professional (industry monthly magazine), International Parking Institute, Fredericksburg, Va.

Benchmarking the Parking Profession, 2001. International Parking Institute, Fredericksburg, Va.

### **Web site references**

Intelligent Parking Garages, by B. Ran and S. Leight

WEB: [www.cae.wisc.edu/~uwits/programs/garages.html](http://www.cae.wisc.edu/~uwits/programs/garages.html)

Siemens Intelligent Traffic Systems

WEB: [http://www.atd.siemens.de/traffic/siemens\\_english/ebene0/index.htm](http://www.atd.siemens.de/traffic/siemens_english/ebene0/index.htm)

Siemens: Parking in no time at all. (Interactive system with signals to the driver).

[http://www.ad.siemens.de/news/html\\_76/simrepo/3\\_97/html\\_76/anw5\\_2.htm](http://www.ad.siemens.de/news/html_76/simrepo/3_97/html_76/anw5_2.htm)

County Parking Facility License

A parking facility license is required of any facility that exceeds fifteen parking spaces for a single-level parking lot or 750 parking spaces for a parking garage.

WEB: [www.broward.org/aqi02300.htm](http://www.broward.org/aqi02300.htm)

Alan Durning, June 26, 2001, "Cheap parking spaces drive up fuel prices" (opinion)

Web archive of the [www.Seattletimes.com](http://www.Seattletimes.com)

The citizen's group that opposed a parking garage on Deerfield Beach.

WEB: [www.saveourbeach.com](http://www.saveourbeach.com)

Congestion in Broward County (photos)

WEB: <http://www.geocities.com/creatingthefuture/parkingcongestion.html>

Parking can help attract and support redevelopment.

WEB: <http://www.ci.fairfax.va.us/City/ReDevelopmentCOF.htm>

"...the city will invest approximately \$30 million in public improvements to North Street, constructing parking garages and undergrounding utilities in the Old Town area."

The inventory of parking spaces in 17 major garages in downtown Fort Lauderdale are located at [www.geocities.com/futureofparking/pin.html](http://www.geocities.com/futureofparking/pin.html).

Additional web references can be found at: [www.geocities.com/futureofparking/references.html](http://www.geocities.com/futureofparking/references.html)

### **Products and Concepts**

Sidewalk Sails™ by JK McCrea. Protected sidewalks tend to encourage pedestrian traffic. Protection from rain and sun should encourage people to walk farther from their cars. The graphic on page 36 is called Sidewalk Sail and it is copyrighted in 2001 by JK McCrea [Jkmccrea@iname.com](mailto:Jkmccrea@iname.com). The conceptual drawings appear in this study with the permission of its creator. [www.geocities.com/americanarchitecturalsigns/sail.html](http://www.geocities.com/americanarchitecturalsigns/sail.html)