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## Deerfield Beach Transit Option Study - Executive Summary: Recommendation for Demonstration of Park and Ride Service

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CITY

DEERFIELD BEACH

FLORIDA

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DEERFIELD BEACH TRANSIT  
OPTION STUDY

Executive Summary

Recommendation for Demonstration  
of Park and Ride Service



April 1995

## ACKNOWLEDGEMENT

The Center for Urban Transportation Research (CUTR) has been approached by the City of Deerfield Beach to help develop transportation methods for alleviating traffic congestion and parking problems at the beach.

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## TABLE OF CONTENTS

Purpose of Study .....	1
Survey of Other Beach Communities .....	1
Survey of Beach Users .....	3
Other Observations .....	8
Recommendations for Mitigating Beach Traffic Problems at the Beach .....	9

## LIST OF FIGURES

Figure 1. Is there a traffic problem at the beach? .....	4
Figure 2. Is there a parking problem at the beach? .....	5
Figure 3. Use transit service from a mainland parking facility every ten minutes .....	6
Figure 4. Use transit from a parking facility on the mainland every 30 minutes .....	7
Figure 5. Proposed shuttle route .....	12

## EXECUTIVE SUMMARY

### **Purpose of Study**

The City of Deerfield Beach is quite fortunate to have a beautiful beach as its most important natural asset. This popular beach attracts not only Deerfield's citizens, but residents of neighboring cities and tourists from around the world. The only direct access from the west to the beach on the barrier island is provided by County Road 810 (Hillsboro Boulevard) which includes a drawbridge over the intracoastal waterway. Over the years, demand for beach access has caused traffic bottlenecks on both sides of the bridge, as well as alleged parking capacity problems at the beach.

In August 1994, Deerfield Beach entered into an interlocal agreement with the University of South Florida. The purpose of this agreement was to jointly fund a study to identify alternative means of reducing traffic and parking problems associated with the beach. The study was performed by the University's Center for Urban Transportation Research (CUTR).

CUTR's research revolved around two major activities. The first was to survey a number of other beach communities in the state to determine how they dealt with their traffic problems. Particular emphasis was put on researching transit alternatives that had been implemented. The second major activity was to survey people who used Deerfield's beach to determine beach use patterns and people's perceptions of transportation problems associated with the beach. The survey was also intended to determine if people would use a convenient transit service to access the beach. Two surveys were performed. The first was conducted on a Thursday in December 1994, the second on a Saturday in February 1995. Both days featured beautiful weather, and both were during the winter season when beach use is at its height.

### **Survey of Other Beach Communities**

The survey of other beach communities involved discussions with representatives of 15 coastal communities throughout the state that experience similar transportation demands to their beaches. Regrettably, there were few lessons to be learned from most of these other communities. As in

Deerfield, limited land space hinders opportunities for improving traffic circulation by increasing capacity on local roads. Some cities resolved parking deficiencies by providing more parking facilities. However, increasing the supply of parking tends to encourage automobile travel to the beach, which results in greater traffic congestion. Thus, increasing parking alone creates an imbalance.

A number of the cities surveyed benefit from some sort of transit service to their beach. Most of these beach communities are served by traditional transit provided by the local or county transit system. Some provide a more distinctive rubber-wheeled, open-air trolley service. In almost all cases, service is provided only once an hour, with an average regular fare of \$1.00 per one way trip. In many cases, these transit services are not even provided on Sundays, which is a major day for beach use. This minimal level of transit service is not sufficient to attract enough people to noticeably reduce traffic congestion. The fares also serve as a barrier to use, particularly for beach-going parties with three or more people. Ridership averages approximately 200 passengers per day in such communities. In many such instances, the trolley is in service to promote a beach-city image rather than alleviate traffic.

One notable exception occurs in Ft. Myers on the west coast of Florida. Lee County Transit operates free rubber tire trolley service to the Ft. Myers beach on a frequent basis (every 15 minutes) during the winter season. The demand for parking at the beach greatly exceeds the supply, and access to the beach is only available on a two lane road (with a middle lane for left hand turns). Traffic can easily back up for five miles, and a trip to or from the beach often exceeds two hours to travel five miles. Park and ride lots on the mainland are colorfully marked and free. Given the intense traffic, limited beach parking and free transit alternatives, use of the trolleys is substantial. Over 3,500 passengers per day are carried during the winter season and 2,500 per day during the off-season. Ft. Myers' circumstances do not perfectly parallel Deerfield's because road capacity is very limited and traffic at Ft. Myers' beach is incredibly bad. However, Ft. Myers' example still illustrates that convenient, smartly promoted, and free park and ride trolley service can attract beach-going passengers.

The survey of other beach communities revealed that Deerfield's parking meter rate of \$.25 per 15 minutes is very comparable to those rates charged throughout the state. Other communities offer seasonal parking permits to non-residents at considerably higher rates than residents. This can generate additional income for the city which could be used to help pay for the expense of

a shuttle service or other transportation improvements. Some communities also offered greater conveniences to auto users such as lot parking with attendants that precluded the need for people to have change and make frequent trips to feed the parking meter.

### **Survey of Beach Users**

As noted above, surveys of beach users were conducted on two different days of the week during the winter season. The intent of the surveys was to find out: who used the beach; patterns of beach use; perceptions of traffic and parking conditions associated with the beach; and if a demand exists for a transit alternative to access the beach.

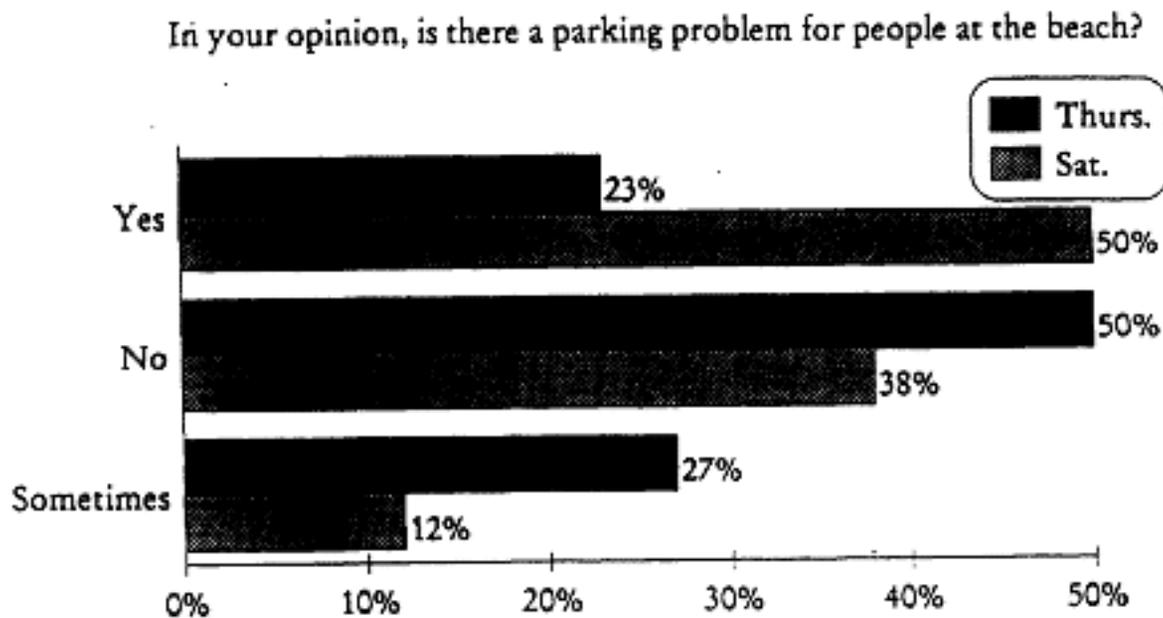
Over 300 beach users gladly cooperated in responding to the survey which was administered by CUTR and City of Deerfield representatives. In general, the survey results revealed the following major points.

- Over 75 percent of beach users were not permanent residents of Deerfield Beach.
- Over 60 percent of the non-residents considered themselves seasonal visitors, the majority of whom stay for more than four weeks.
- The December survey showed that 86 percent of people accessed the beach by car, while 74 percent did so in February. Almost all others walked to the beach.
- Parties going to the beach most commonly have two people (57 percent in December and 45 percent in February). Between 20 and 33 percent of all parties are comprised of three or more people.
- The average length of time spent at the beach is approximately three hours.

- Fifty-nine percent of those surveyed on Thursday in December felt there were no traffic problems associated with the beach. Eleven percent believed there was a consistent traffic problem, while another 30 percent believed that sometimes there were traffic problems.
- Forty-eight percent of those surveyed on Saturday in February felt there were no traffic problems associated with the beach. However, 37 percent believed there was a consistent traffic problem, while another 15 percent felt that sometimes there were traffic problems.

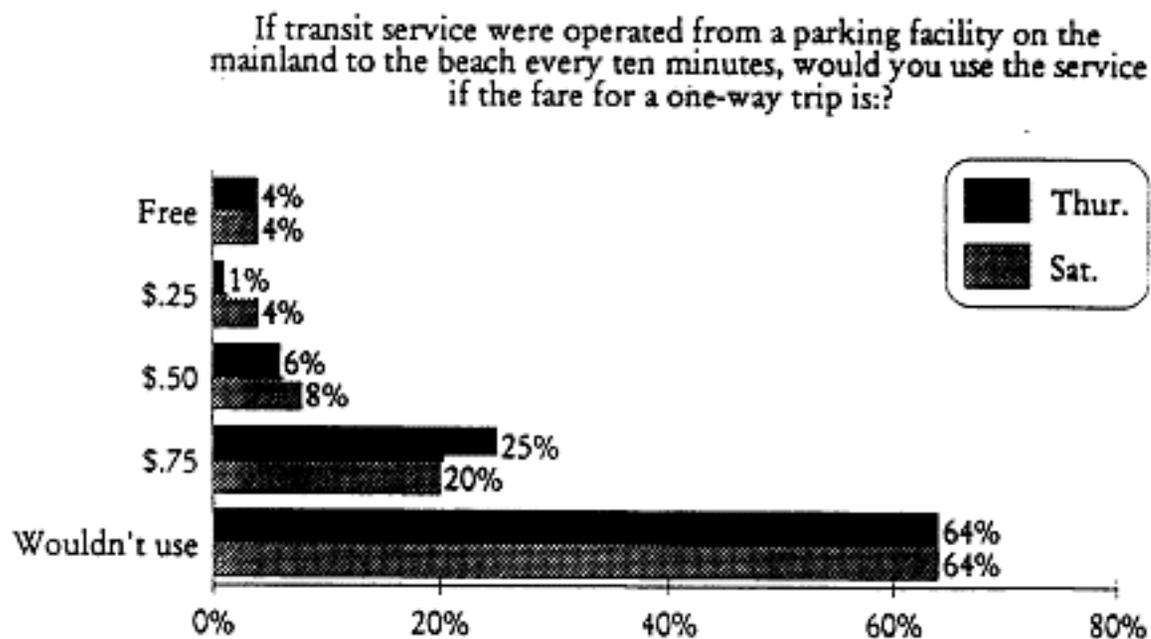
- Fifty percent of those surveyed in December believed there were no parking problems at the beach. Twenty-three percent believed there was a consistent problem with parking, while 27 percent felt parking was sometimes a problem.
- Only 38 percent of those surveyed in February believed parking was not a problem. Fifty percent believed it was a consistent problem, while 12 percent indicated parking was sometimes a problem.

Figure 2



- Both surveys revealed that 64 percent of all survey respondents would not use a transit service from a park and ride lot on the west side of the Intracoastal to access the beach, even if it ran every 10 minutes and was free. Many people regard their cars as their "home base" at the beach, in which they carry coolers, roller blades, beach furniture, cloths, etc. Large parties with children anxious to get to the beach may not want to transfer from car to shuttle with the attendant waiting time. Senior citizens might not want to climb up and down the steps of a trolley. Most Deerfield residents prefer to take **advantage of conveniently located sticker parking spaces**. On the other hand, 36 percent of respondents indicated they would use such a service, even if there was a fare.

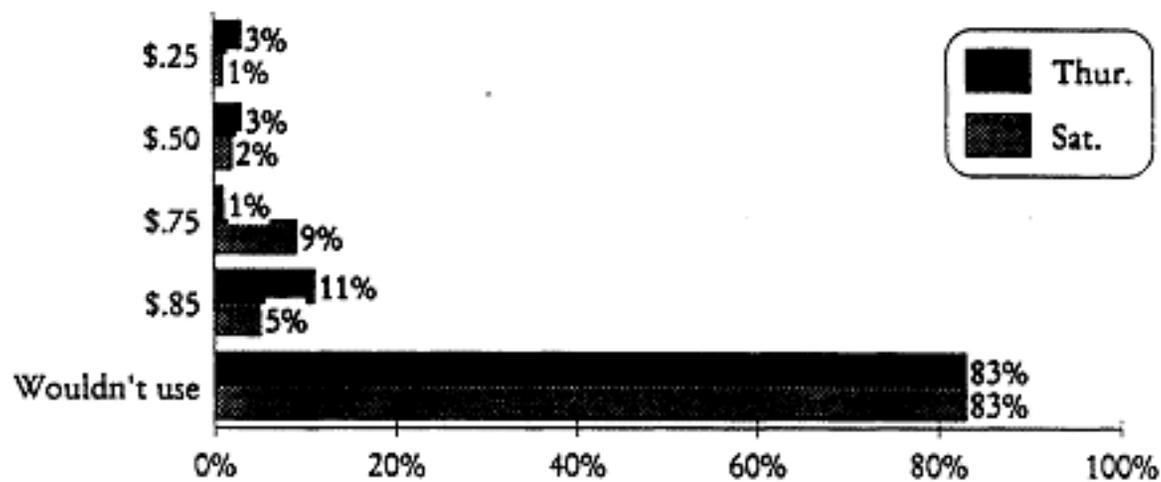
Figure 3



- Both surveys revealed that 83 percent of all survey respondents would not use transit service operated every 30 minutes from locations further west such as Military Trail.

Figure 4

If transit service were operated from locations in the City of Deerfield Beach (i.e. shopping centers along Hillsboro Blvd., Federal Hwy., and Military Trail) to the beach every 30 minutes, would you use the service if the fare for a one-way trip is?



## **Other Observations**

In the course of conducting the survey and observing traffic circulation patterns over many visits to the beach, CUTR's representatives noted that even on the days of heaviest beach usage, traffic did not start becoming congested until after 10:30am. Not surprisingly, the largest contributing factor to traffic congestion on Hillsboro Boulevard and SR A1A is the opening of the bridge over the Intracoastal. This bridge opens on the hour, twenty minutes after the hour and forty minutes after the hour. East-bound traffic on Hillsboro Boulevard would back up for more than a half-mile when the bridge was up. In the afternoons, north-bound traffic on SR A1A would back up for a mile. The worst time for traffic congestion was between 1:00am and 4:00pm when people are going to and leaving the beach.

The total quantity of parking did not seem to be a problem. Even on the busiest days, metered parking was available on side streets, while free parking was available near the park at 5th Street west of SR A1A. This observation was corroborated by city parking enforcement personnel who work on the beach every day. Certain conditions might contribute to a perceived parking problem. One prominent parking lot on the beach, north of 1st Street, is barely visible (behind hedges), and signage for directing people to additional parking is almost non-existent. This is compounded by the jog in Ocean Way between 4th and 6th streets. Those unfamiliar with the beach and heading south on Ocean Way might not know the public beach (with additional parking) extends further south than 4th Street.

The major conveniences and attractions at the beach are available near the pier at the north end of the beach. The pier also serves as a landmark for those who will meet other people, contributing to even more concentrated traffic at the north end of the beach. Consequently, parking at the north end of the beach was always full, while parking further south (particularly on side streets) was always available.

The beach is not a particularly friendly environment for bicyclists. There are very few bike racks at the beach, and no bike path designated over the bridge.

## **Recommendations for Mitigating Beach Traffic Problems at the Beach**

Based on survey results and on-site observations of parking and traffic circulation, it is clear that traffic congestion is not an all-day, everyday problem at Deerfield's Beach. Traffic congestion occurs primarily during weekends of the winter season, with the worst conditions occurring between 10:30am and 4:30pm. The total availability of parking is not a significant problem. However, people either prefer to park near the north end of the beach, or are unaware of other parking opportunities, particularly toward the south end of the beach. There are vacant parcels of land that could be purchased and used for parking, but CUTR would recommend against taking such valuable land off the tax roles without first trying other solutions targeted to correcting the problems that only take place at certain times of the day, week and year. Thus, the following recommendations should be considered by the City of Deerfield Beach.

### **Recommendation #1**

The bridge over the Intracoastal Waterway on Hillsboro Boulevard is the single most significant cause of traffic congestion related to the beach. The city should work with the Florida Department of Transportation and the U.S. Coast Guard to determine if traffic flow would be improved if bridge openings were limited to once every half hour instead of the present schedule of opening every 20 minutes. Regardless of what schedule is deemed best, the city should inform the public of the bridge opening schedule through prominent signs on both sides of the bridge, and through every other means the city has to provide information to their own residents. This will help people plan their trips to and from the beach around times when the bridge is open to car traffic, thereby reducing bridge-related traffic queues.

### **Recommendation #2**

A limited but high quality shuttle service should be established between the beach and a park and ride facility on the mainland near U.S. 1. This service only needs to be provided on weekends, during the winter season, from 10:00am to 5:00pm. These hours of operation will address the times when traffic congestion warrants optional methods of accessing the beach, and the limited hours will help minimize the expenses to the city.

The marketing and packaging of this service is critical to its success. The vehicles used for this service should be very distinctive, brightly colored and open air. Other areas report that beachgoers are far more attracted to such vehicles than they are to typical city transit buses which tend to be intimidating. Open air vehicles are more in keeping with the total beach experience. Passengers with wet bathing suits prefer open air vehicles to air conditioned buses. In addition, drivers of such vehicles should be dressed in more colorful, casual and friendly outfits than normal city transit operators. The colors of the vehicles, driver outfits, bus stops, and signage should be consistent to reinforce a theme of coordinated transportation improvements for the beach.

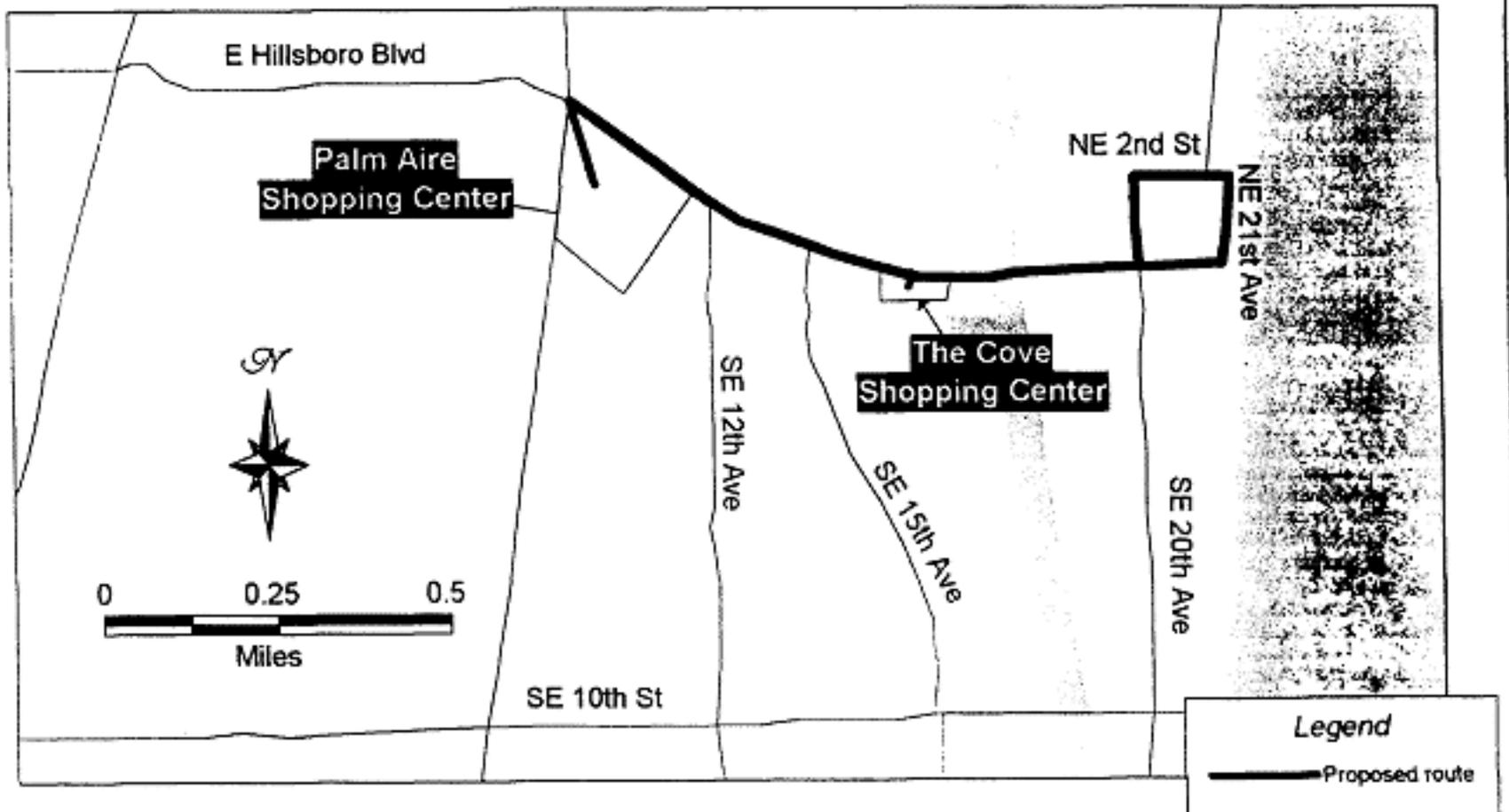
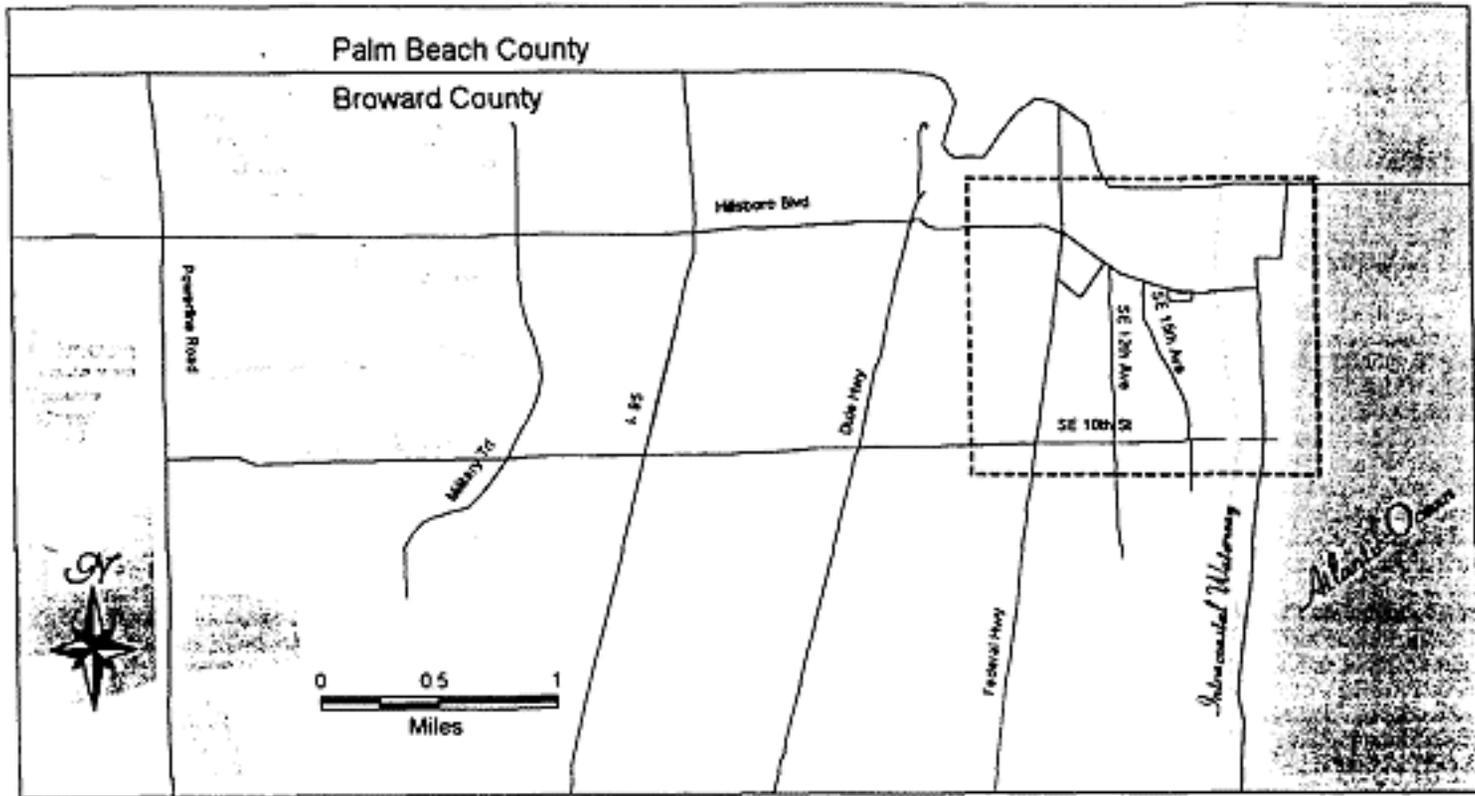
Service should be offered for free to minimize any barriers to its use, at least for the first year. This will provide a competitive cost advantage over parking at the beach. Service should also be provided no less frequently than once every fifteen minutes, and even more frequently, if possible. The city may need to reach an understanding with owners of the shopping centers on the southeast quadrant of U.S. 1 and Hillsboro Boulevard that beachgoers will park there to catch the shuttle. Shopping center interests should be aware that the shuttle will make it easier for the thousands of seasonal visitors living east of the bridge to access their shops. People returning from the beach are also likely to shop there. In Ft. Myers, shopping centers pleaded to be used as park and ride locations based on the additional business shuttle users generated. Hopefully, area businesses might further cooperate by offering discounts to people who use the shuttle.

It is vitally important to harness and direct the local energy that can make the shuttle a success. In Broward County there are ample examples of city shuttle services that have succeeded or failed based on the level of citizen involvement. An advisory committee of city residents and business owners should be established to help plan and promote the service. This group could include representatives of the chamber of commerce, beach hotels, shopping centers on U.S. 1, businesses on SR A1A, civic associations, high schools, city staff, minority interests, Century Village, and other civic-minded groups. The Gold Coast Commuter Services agency can help organize this group free of charge. The advisory committee can help promote the service throughout the city and develop ideas for marketing the service. Such marketing should be extremely focused to reach the most likely users. Among the more simple and inexpensive techniques would be fliers placed under windshield wipers of cars parked at the beach, information on paper placemats in restaurants, displays on hotel counters, notices (stuffers) in other city mailings, displays at businesses within shopping centers and brightly colored signs on Hillsboro Boulevard.

The route of the shuttle should follow Hillsboro Boulevard from U.S. 1 to SR A1A, north to N.E. 20th Terrace, south on Ocean Way to Hillsboro Boulevard and back to U.S. 1. This route will take people to the most popular destination along the beach (the north end). It will also prevent the shuttle from getting stuck in north bound traffic on SR A1A. This routing will allow the shuttle to maintain an attractive level of frequency with minimal waiting time for passengers. The bus shelter areas at the park and ride location and at the beach should be substantially improved in a theme consistent with the shuttle vehicle and other signage.

The proposed shuttle route is presented in Figure 5.

Figure 5  
Proposed Park and Ride Service  
for City of Deerfield Beach



### **Recommendation #3**

The city can apply for grants from the Florida Department of Transportation to help pay for the costs of operating the shuttle service. There is a chance that funding from FDOT's Service Development Grant Program might be available to pay 50 percent of operational costs. There is also a chance that funding from the Congestion Mitigation/Air Quality (CMAQ) program could be secured to help pay for 100 percent of this service. Applications for the CMAQ funds will need to quantify the reduction in air pollution that will result from operating the shuttle. However, the city must realize the highly competitive nature of such grant programs, particularly at a time when almost all governments are downsizing. Therefore, the city should be prepared to assume all expenses and make service provision decisions accordingly. CUTR recommends initially providing service only during the weekends of the winter months, not only to address the worst traffic conditions, but also to minimize expenses of operations. The cost of operating two vehicles on Fridays, Saturdays and Sundays from 10am to 5pm between December and April is estimated to be \$28,072 (based on \$33.42 per hour per vehicle). Some of these expenses could be defrayed through advertising on the vehicles and at bus shelters, or contributions from business that see benefits from the shuttle's operation. If the shuttle proves successful during the weekends, the city could consider providing service during weekdays of the winter season, then weekends during the non-winter seasons.

### **Recommendation #4**

Better signage at the beach alerting people to additional parking opportunities could help traffic along Ocean Way move more smoothly. Colorful signs should advise automobile drivers of parking opportunities south of 4th Street and near the park west of SR A1A. The color and design of such signs should be bright and consistent with other signs associated with beach traffic, such as those that note the bridge opening schedules and the signs alerting motorists to park and ride/shuttle opportunities.

#### **Recommendation #5**

The city can help reduce motorized traffic to the beach by encouraging more people to access the beach by bicycle. Encouraging bike use is consistent with the beach's fundamental nature as a recreation destination. The market for this transportation option is relatively narrow. However, most people riding bikes are younger and most of the younger beachgoers like to use the north portion of the beach where parking is scarce. The city should improve bike rack facilities along the beach including "bike banks" in which bicyclists could store personal belongings. The city should also install bike racks on the shuttle vehicles providing transit to the beach to assist bicyclists in crossing the drawbridge (which has no bikepath). Broward County's Bicycle Program Coordinator could help the city design any improvements and assist the city in applying for Transportation Enhancement funds through the Metropolitan Planning Organization. City efforts in promoting greater bicycle use could be assisted by the previously mentioned advisory committee, local papers, civic associations, schools and local businesses.

#### **Recommendation #6**

The most significant complaints from beachgoers concerned the use of parking meters. People complained of the difficulty of finding change and recommended the placement of change machines at convenient places. Others preferred parking lots with attendants that would negate the need for feeding the parking meters. Others complained of heartless parking enforcement personnel and the steep costs of parking violations. The city might want to experiment with providing change machines in secure facilities or making one of its lots available with an attendant. This would make the beach experience more pleasant for those using their cars. However, any actions that make car usage more pleasant might work against the hopes of attracting people to use the shuttle. These are items the city must weigh and balance as it determines exactly how it wants to serve its beach visitors.

#### **Recommendation #7**

It should also be noted that many people complained of how "disabled stickers" were abused by those parking at the beach. People with such stickers need not pay for parking. There appeared

to be very little relationship between cars with "disabled stickers" and the driver's ability to pay. In many cases, non-disabled (very active) people would be seen arriving in cars with such stickers. CUTR recommends the city consider revising its ordinance which allows cars with "disabled stickers" to park for free. The extra money generated through parking revenues could help pay for the shuttle, better bus stops or improved bicycle facilities. Also, the city should consider placing parking meters at the public spaces near the church west of A-1-A and north of 5th Street. Revenues generated from these meters could also go toward the expenses of the shuttle operation or other alternative transportation improvements.