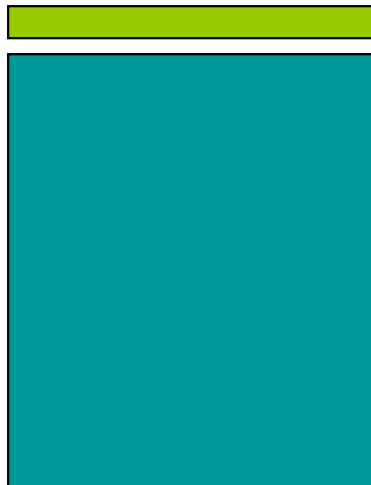


Pompano Beach Plaza Master Plan

parking study



prepared for:
Bermello, Ajamil & Partners, Inc.

Traf Tech
ENGINEERING, INC.

May 2008

May 1, 2008

Mr. Alfredo C. Sanchez, AIA, AICP
Partner - Bermello, Ajamil & Partners, Inc.
2601 South Bayshore Drive
Miami, Florida 33133

Re: Pompano Beach Plaza Master Plan - Parking Study

Dear Alfredo:

Traf Tech Engineering, Inc. is pleased to provide you with the results of the parking study undertaken in connection with the Pompano Beach Plaza Master Plan project. It has been a pleasure serving Bermello, Ajamil & Partners, Inc. on this important beach project.

Sincerely,

TRAF TECH ENGINEERING, INC.



Joaquin E. Vargas, P.E., PTOE
Senior Transportation Engineer

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INTRODUCTION

As a subconsultant to Bermello, Ajamil & Partners, Inc., Traf Tech Engineering has been retained by the City of Pompano Beach to conduct a parking study in connection with the Pompano Beach Plaza Master Plan project. The project study area is generally bounded by:

- The Atlantic Ocean on the east
- The Intracoastal Waterways on the west
- The intersection of SR A1A and N. Pompano Beach Boulevard on the north
- Atlantic Boulevard on the south

The location of the study area is illustrated in Figure 1 on the following page.

The parking study addresses the existing public parking facilities located within the study area, the existing parking demand of these public parking facilities, the future parking needs for the study area, and recommendations intended to improve parking conditions in connection with the Pompano Beach Plaza Master Plan project.

This study is divided in four (4) sections, as listed below:

1. Existing Public Parking Facilities
2. Existing Parking Demand
3. Future Parking Needs
4. Conclusions and Recommendations



EXISTING PUBLIC PARKING FACILITIES

Within the study area, there are four off-street public parking lots and three roadway segments where on-street parking is provided. The four off-street public parking lots include a parking lot located at the easternmost terminus of Atlantic Boulevard (referred herein as the Atlantic Boulevard Terminus Parking Lot), the parking lot bounded by NE 3rd Street on the north, NE 2nd Street on the south, N. Pompano Beach Boulevard on the east, and State Road A1A on the west (Pier Parking Lot), the small parking lot located between N. Pompano Beach Boulevard and the Pompano Beach Pier (Pier Restaurant Parking Lot), and the Ocean Side Parking Lot located on the south side of NE 2nd Street between N. Riverside Drive and State Road A1A. The on-street parking is provided on both sides of Atlantic Boulevard between State Road A1A and N. Pompano Beach Boulevard, the north side of NE 2nd Street, and the south side of NE 3rd Street.

Atlantic Boulevard Terminus Parking Lot

The Atlantic Boulevard Terminus Parking Lot provides 46 regular parking spaces, two handicap parking stalls, and 12 parking spaces designated for life guard personnel for a total of 60 parking stalls. These public parking spaces (excluding the life guard parking stalls) are metered. The current parking rate is as follows:

- Three minutes per nickel
- Six minutes per dime
- 15 minutes per quarter
- One hour per dollar

The access to the Atlantic Boulevard Terminus Parking Lot is not well defined (it is an open area that provides access to the parking areas, as shown in the photo below). This open space should be eliminated and a well-defined access plan should be provided.



Pier Parking Lot

The Pier Parking Lot provides 315 regular parking spaces (no handicap spaces). A Broward County Branch Library is found within this parking lot (immediately west of N. Pompano Beach Boulevard and half way between NE 2nd Street and NE 3rd Street).

The pier parking lot only enjoys one entrance/exit driveway off of N. Pompano Beach Boulevard. Furthermore, there is a guard house located approximately 25 feet from the entrance street (25 feet of throat length). The guard-house attendant provides a parking ticket to all entering vehicles into the subject parking lot (the payment for the usage of this parking lot is assessed when vehicles are exiting the parking lot, depending on the amount of time spent at the parking lot¹). The location of the guard-house is



undesirable, as shown in the photo. That is, if two vehicles arrive at the same time to the parking lot, the second vehicle will spill onto N. Pompano Beach Boulevard, creating conflicts with vehicles traveling north and south on the subject beach-front street. Hence, the pier parking lot entrance driveway should provide sufficient throat length to allow on-site stacking for at least two vehicles. Since the frontage of the pier parking lot along N. Pompano Beach Boulevard is approximately 500 feet in length (between NE 3rd Street and NE 2nd Street), two driveways could be provided for the subject parking lot (one for entering vehicles and one for exiting traffic). These driveways should be located at least 150 feet from either NE 3rd Street or NE 2nd Street.

The pavement markings of the parking spaces are worn-out and therefore, many parking spaces are difficult to see.

Pier Restaurant Parking Lot

The Pier Restaurant Parking Lot provides 16 regular parking spaces and four handicap parking stalls for a total of 20 parking spaces. The parking fee is paid at the Bait Shop (a parking permit is provided for each vehicle and said permit is to be displayed face-up on the dashboard of each parked vehicle).

¹ The library provides a parking voucher for people visiting the library. The parking voucher is used in lieu of payment at the parking guard house when the library patron leaves the parking lot.

Ocean Side Parking Lot

The Ocean Side Parking Lot provides 380 regular parking spaces and 8 handicap parking stalls for a total of 388 parking spaces. The parking fee is paid at a centralized payment stand located within the parking lot, as illustrated in the photo on the right. Depending on the fee paid, a parking ticket is issued with an expiration time. The parking ticket is to be displayed face-up on the dashboard of each parked vehicle.



Figure 2 shows the location of the off-street parking lots located within the study area.

Atlantic Boulevard On-Street Parking

On-street parking is provided on both sides of Atlantic Boulevard between State Road A1A and N. Pompano Beach Boulevard. A total of 15 on-street parking spaces are provided (five on the north side of the street and 10 on the south side of Atlantic Boulevard). All on-street parking spaces are metered with the same parking rate as the Atlantic Boulevard Terminus Parking Lot.

NE 2nd Street On-Street Parking

On-street parking is provided on the north side of NE 2nd Street. A total of 15 metered parking spaces were found on this east-west roadway. Two meters were broken near State Road A1A.

NE 3rd Street On-Street Parking

Nine metered on-street parking spaces are provided on the south side of NE 3rd Street. A typical on-street parking arrangement is presented in the photo to the right.

Figure 3 presents the location of the on-street parking spaces.







Table 1 summarizes the number of public parking spaces provided within the study area. As shown in the table, there are a total of 783 off-street parking spaces and 39 on-street parking stalls for a total of 822 public parking spaces within the study area.

TABLE 1
Parking Supply
Pompano Beach Plaza Master Plan

OFF-STREET PARKING				
Location	Number of Parking Spaces			
	Regular	Handicap	Life Guard	Total
Atl. Blvd Term.	46	2	12	60
Pier	315	0	0	315
Pier Restaurant	16	4	0	20
Ocean Side	380	8	0	388
Subtotal	757	14	12	783

ON-STREET PARKING				
Location	Number of Parking Spaces			
	Regular	Handicap	Life Guard	Total
Atlantic Blvd	15	0	0	15
NE 2 nd Street	15	0	0	15
NE 3 rd Street	9	0	0	9
Subtotal	39	0	0	39

Grand Total	796	14	12	822
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Source: Traf Tech Engineering, Inc.

In reviewing the parking inventory data presented above, the following observations are made:

- Less than two percent (2%) of the total public parking spaces provided within the study area are handicap parking stalls. Moreover, no handicap parking spaces are provided at the Pier Parking Lot.
- Four different fee-collection systems are found within the study area. These include metered spaces at the on-street parking spaces and at the Atlantic Boulevard Terminus Parking Lot, payment at the Bait Shop for the Pier Restaurant Parking Lot, payment to the parking attendant at the time of exit from the Pier Parking Lot, and a centralized parking payment system at the Ocean Side Parking Lot. It is recommended that one payment system is provided throughout the study area for uniformity purposes.

EXISTING PARKING DEMAND

To determine the current parking demands for the study area, parking occupancy counts at each parking lot/parking area were conducted on Thursday, Saturday, and Sunday, October 3, 6, and 7, 2007. These parking counts were recorded in one-hour increments between the hours of 9:00 AM and 5:00 PM. Tables 2 through 4 present the maximum number of parking spaces observed at each parking lot/parking area located within the study area during the month of October, 2007. Table 2 summarizes the parking demands observed during a weekday. Tables 3 and 4 document the results of the parking demand study conducted on Saturday and Sunday, respectively.

TABLE 2
Results of Parking Demand Study (Thursday, October 3, 2007)
Pompano Beach Plaza Master Plan

OFF-STREET PARKING			
Location	Total Number of Parking Spaces	Maximum Observed Parked Vehicles	Percent of Parking Capacity
Atl. Blvd Term.	60	35 (5PM)	58%
Pier	315	32 (1PM)	10%
Pier Restaurant	20	16 (12PM)	80%
Ocean Side	388	63 (12PM)	16%
Subtotal	783	128 (2PM)	16%

ON-STREET PARKING			
Location	Total Number of Parking Spaces	Maximum Observed Parked Vehicles	Percent of Parking Capacity
Atlantic Boulevard	15	8 (3PM)	53%
NE 2 nd Street	15	6 (3PM)	40%
NE 3 rd Street	9	4 (10AM)	44%
Subtotal	39	15 (3PM)	38%

Grand Total	822	141 (2PM)	17%
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Source: TrafTech Engineering, Inc.

As presented in Table 2, less than 20% of the total number of public parking spaces provided within the study area were occupied on Thursday, October 3, 2007. Furthermore, no parking lot reached its maximum parking capacity. The most utilized parking areas include the Atlantic Boulevard Terminus and Pier Restaurant parking lots, each reaching a maximum occupancy of 58% and 80%, respectively. The overall peak parking demand for the study area occurred at approximately 2:00 PM.

TABLE 3
Results of Parking Demand Study (Saturday, October 6, 2007)
Pompano Beach Plaza Master Plan

OFF-STREET PARKING			
Location	Total Number of Parking Spaces	Maximum Observed Parked Vehicles	Percent of Parking Capacity
Atl. Blvd Term.	60	37 (2PM)	62%
Pier	315	41 (12PM)	13%
Pier Restaurant	20	19 (12PM)	95%
Ocean Side	388	48 (10AM)	12%
Subtotal	783	133 (12PM)	17%

ON-STREET PARKING			
Location	Total Number of Parking Spaces	Maximum Observed Parked Vehicles	Percent of Parking Capacity
Atlantic Boulevard	15	9 (12PM)	60%
NE 2 nd Street	15	11 (2PM)	73%
NE 3 rd Street	9	4 (3PM)	44%
Subtotal	39	21 (3PM)	54%

Grand Total	822	150 (12PM)	18%
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Source: Traf Tech Engineering, Inc.

In reviewing the results of the parking demand study presented in Table 3 for a typical Saturday during the month of October, the following observations are noted:

- Less than 20% of the parking supply was used
- The Pier Restaurant Parking Lot reached a parking occupancy of 95% (almost full)
- Approximately 62% of the total parking spaces provided at the Atlantic Boulevard Terminus Parking Lot were used during its peak parking hour of 2:00 PM
- The overall peak parking hour for the study area occurred at approximately midday (12:00 PM)

TABLE 4
Results of Parking Demand Study (Sunday, October 7, 2007)
Pompano Beach Plaza Master Plan

OFF-STREET PARKING			
Location	Total Number of Parking Spaces	Maximum Observed Parked Vehicles	Percent of Parking Capacity
Atl. Blvd Term.	60	54 (1PM)	90%
Pier	315	29 (3PM)	9%
Pier Restaurant	20	17 (2PM)	85%
Ocean Side	388	31 (4PM)	8%
Subtotal	783	122 (2PM)	16%

ON-STREET PARKING			
Location	Total Number of Parking Spaces	Maximum Observed Parked Vehicles	Percent of Parking Capacity
Atlantic Boulevard	15	9 (12PM)	60%
NE 2 nd Street	15	11 (4PM)	73%
NE 3 rd Street	9	5 (2PM)	56%
Subtotal	39	20 (3PM)	51%

Grand Total	822	141 (2PM)	17%
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Source: TrafTech Engineering, Inc.

The results of the parking demand study obtained for a typical Sunday during the month of October are very similar to those presented in the preceding tables. That is, the parking utilization was low, no parking lot/area reached its capacity, less than 20% of the parking supply was consumed during the peak parking period, and the study area peak parking hour occurred at approximately 2:00 PM.

Appendix A provides the results of the parking occupancy counts conducted for the off-street and on-street public parking spaces located within the study area.

FUTURE PARKING NEEDS

Since the parking demand study was undertaken during the off-peak season, a review of FDOT's *Peak Season Factor Category* (PSFC) report was conducted in order to project peak parking demands during the study area's peak season. Additionally, the FDOT currently has a continuous traffic count station on State Road A1A located approximately 500 feet north of Atlantic Boulevard (near the center of the study area). Based on the PSFC report, a factor of 1.30 is required to convert parking occupancy counts collected in the first week of October to average peak season conditions (refer to Appendix B). Moreover, according to the traffic data recorded by FDOT for the continuous traffic count station located on SR A1A, the peak traffic month is March (refer to Appendix C). Table 5 compares the October traffic volumes recorded on SR A1A against the peak March traffic volumes at the same location. As presented in Table 5, the peak traffic volumes are approximately 62% higher than the traffic flow recorded on October, on average. Hence, a factor of 1.62 was applied to the October parking counts in order to determine the parking needs during the peak season (refer to Appendices A and D).

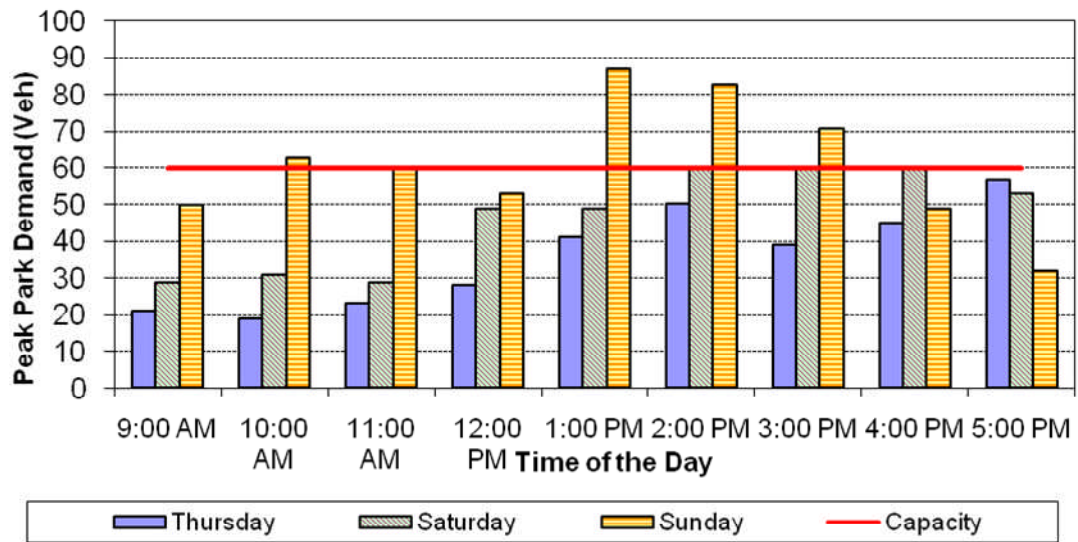
TABLE 5 October Traffic Volumes versus Peak March Traffic Volumes State Road A1A – 500 feet north of Atlantic Boulevard			
Day of Week	Daily Traffic Volumes (AADT)		Percent Change
	October	March (Peak)	
Thursday	11,798	19,980	+69%
Saturday	12,828	19,600	+53%
Sunday	11,418	18,819	+65%
Average	12,015	19,466	+62%

Source: Florida Department of Transportation

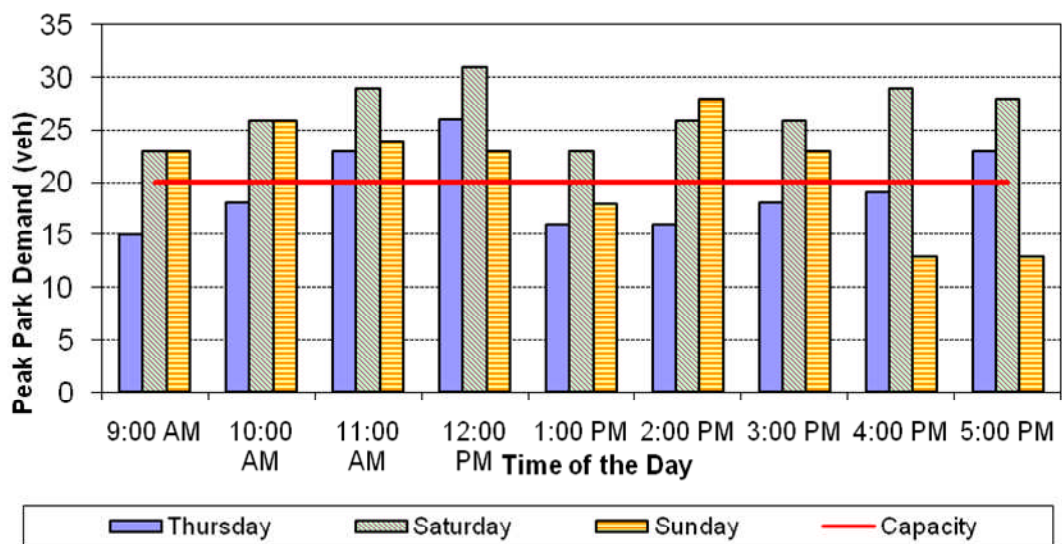
After the 1.62 factor was applied to the parking counts collected in October, the following parking occupancy results were obtained:

- Overall, the study area appears to have a significant surplus in public parking
- Of the four off-street parking lots, the following two parking lots do not have sufficient parking spaces to accommodate the peak parking demands:
 1. Atlantic Boulevard Terminus Parking Lot (refer to top graph on the next page)
 2. Pier Restaurant Parking Lot (refer to bottom graph on the following page)
- Of the three roadway segments where on-street parking is provided, the following two on-street parking locations result in a parking shortage:
 1. Atlantic Boulevard (refer to top graph on Page 14)
 2. NE 2nd Street (refer to bottom graph on Page 14)

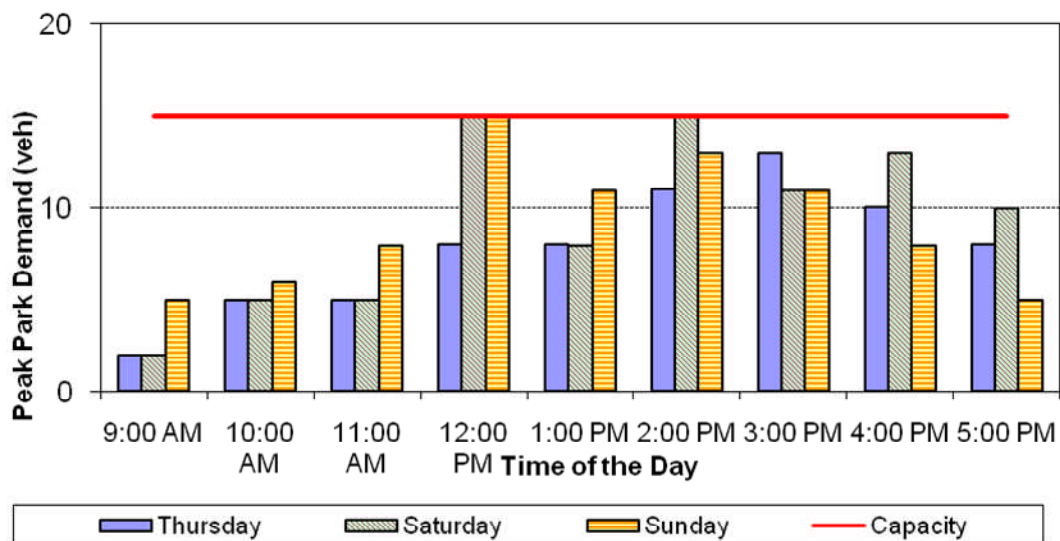
Atlantic Boulevard Terminus Parking Lot



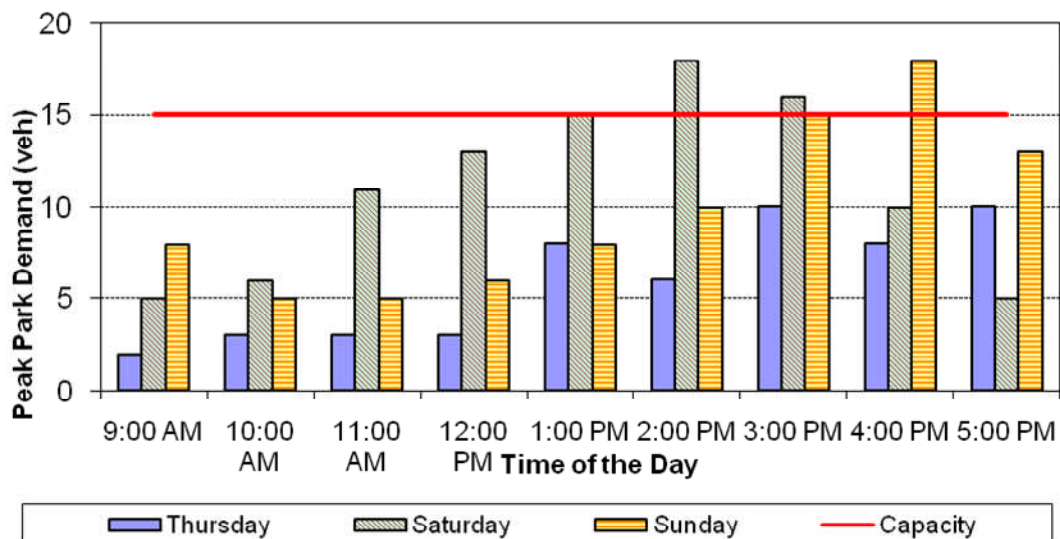
The Pier Restaurant Parking Lot



Atlantic Boulevard On-Street Parking



NE 2nd Street - On-Street Parking



Even though the Pier and Ocean Side Parking Lots appear to have sufficient parking spaces to accommodate the peak parking demands, these parking lots may provide insufficient parking spaces during the peak season for the following reasons:

- The factor of 1.62 applied to the October parking counts to obtain peak season parking demands was based on variations in traffic volumes. The relationship between traffic volumes and parking demands is unknown and therefore, the application of traffic volume data to parking data may not be very reliable.
- A “windshield” observation of parking usage conducted at 1:00 PM on December 26, 2006, revealed the following conditions regarding the off-street parking lots located within the study area:
 - The Atlantic Boulevard Terminus Parking Lot appeared to be 100% full
 - The Pier Parking Lot appeared to be 90% full
 - The Ocean Side Parking Lot appeared to be 25% full

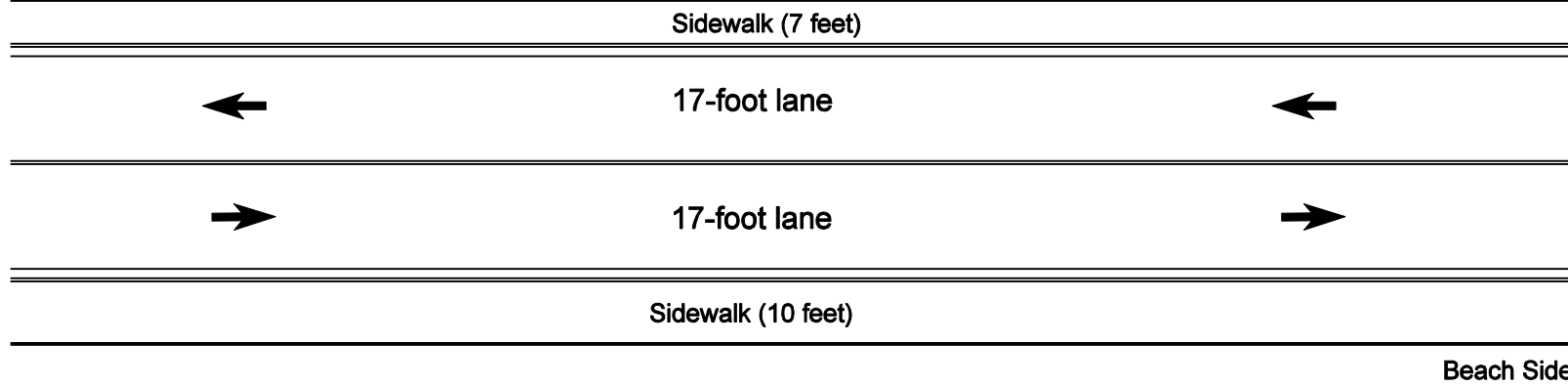
Based on the above, it is recommended that a parking demand count be conducted during the peak season. This supplemental parking count should be conducted in order to adjust the projected parking needs for the study area, as calculated in this report. The peak season parking counts should be conducted during a Thursday, Saturday, and Sunday, between the hours of 11:00 AM and 3:00 PM (the peak parking demand occurred between 12:00 PM and 2:00 PM).

Additionally, the number of parking spaces east of State Road A1A should be increased. This could be accomplished by converting N. Pompano Beach Boulevard to a one-way northbound facility. This roadway modification could be implemented from Atlantic Boulevard to either NE 2nd Street, NE 3rd Street, or for the entire length to SR A1A on the north. The section that is converted to a one-way northbound street should include on-street parking on the beach side of the roadway. Two options are available for on-street parking (angle parking and parallel parking). With angle parking, more parking spaces can be provided adjacent to the beach areas. Parallel parking provides more opportunities for landscaping and could also accommodate a bike lane along N. Pompano Beach Boulevard. The angle parking scheme is depicted in Figure 4. The parallel parking alternative, with bike lanes, is illustrated in Figure 5.



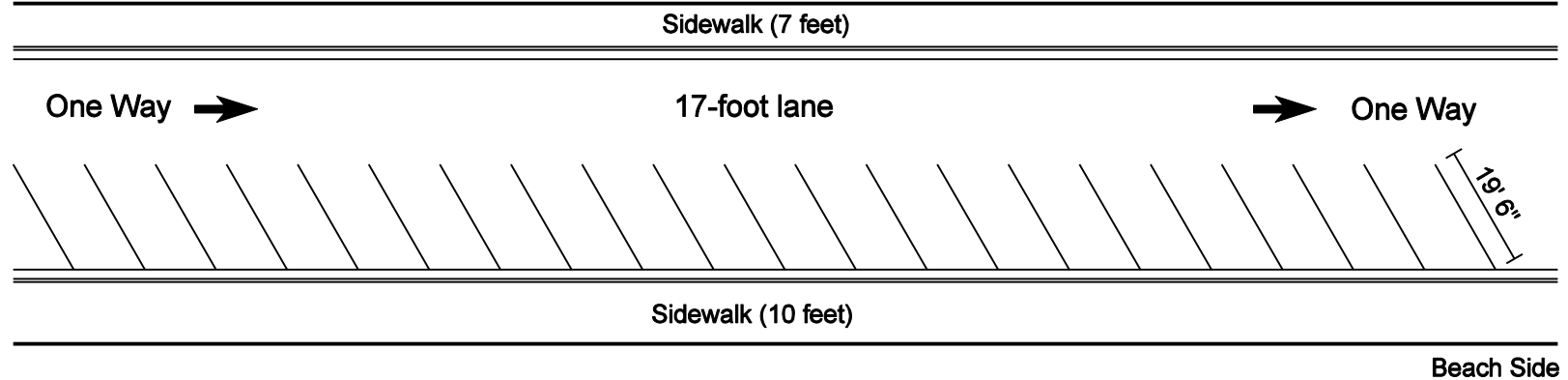
EXISTING CONDITIONS

West Side



POTENTIAL ANGLE ON-STREET PARKING OPTION

West Side



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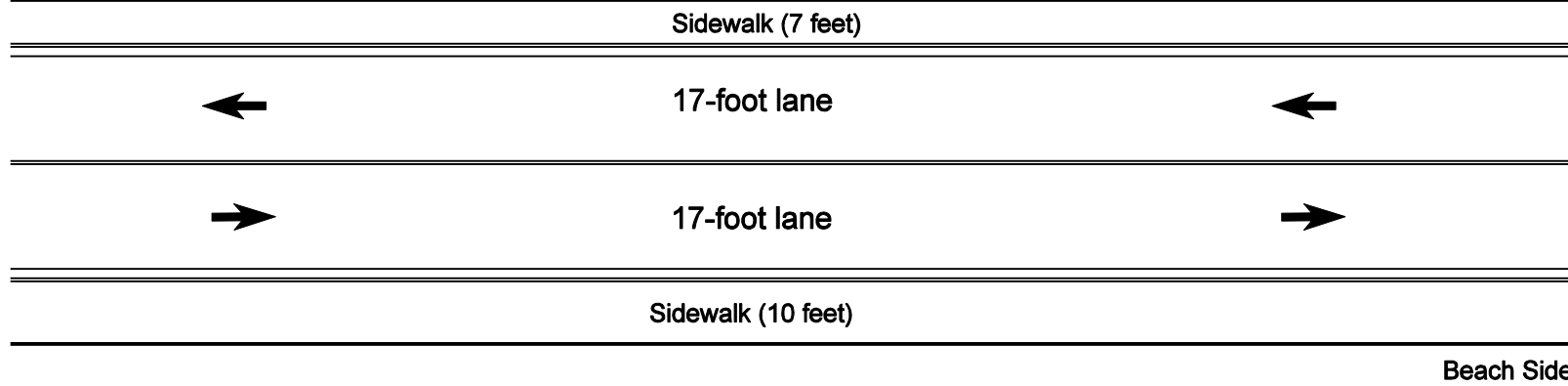
ANGLE ON-STREET PARKING

FIGURE 4
Redevelopment Area
Pompano Beach, Florida



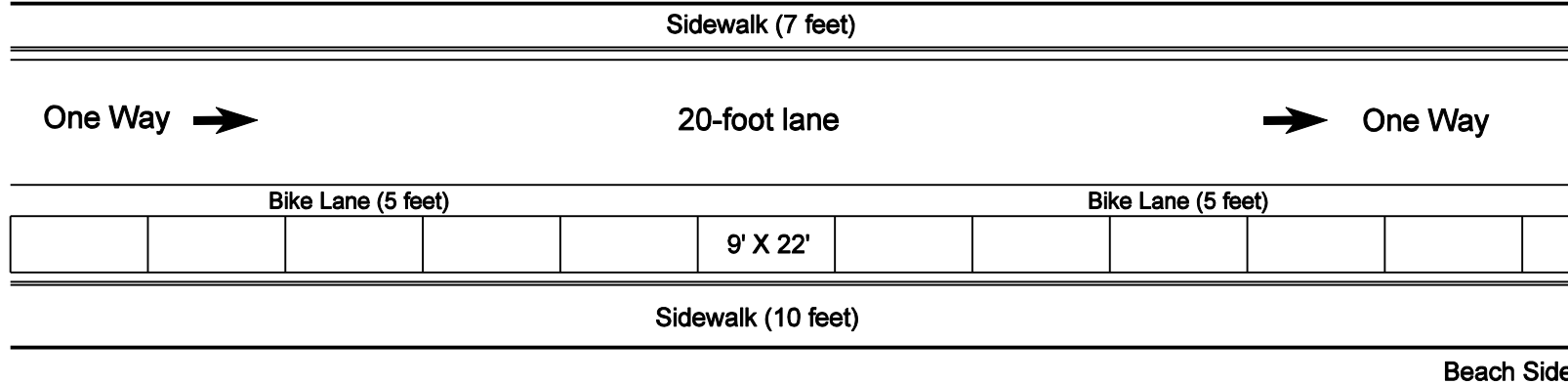
EXISTING CONDITIONS

West Side



POTENTIAL PARALLEL ON-STREET PARKING OPTION (1-WAY Traffic)

West Side



TRAF TECH
ENGINEERING, INC.

PARALLEL ON-STREET PARKING

FIGURE 5
Redevelopment Area
Pompano Beach, Florida

CONCLUSIONS AND RECOMMENDATIONS

This traffic report addresses the existing and future parking needs of the area generally bounded by the Atlantic Ocean on the east, the Intracoastal Waterways on the west, the intersection of SR A1A and N. Pompano Beach Boulevard on the north, and Atlantic Boulevard on the south. This study is part of the Pompano Beach Plaza Master Plan project. Existing parking facilities, current parking demands, future parking needs, and parking improvement options were evaluated as part of this report and recommendations intended to improve the overall parking system of the study area were made.

The following parking recommendations should be considered for the study area.

- Provide a uniform parking fee collection system throughout the study area. It is recommended that a centralized parking fee collection system, similar to the one provided at the Ocean Side Parking Lot, be implemented for the off-street and on-street parking areas.
- Maintain all existing parking lots and on-street parking areas, especially the on-street parking located on the north side of Atlantic Boulevard.
- The open pavement area that provides access to the Atlantic Boulevard Terminus Parking Lot should be replaced with two well-defined access driveways. One of the driveways should be aligned with Atlantic Boulevard and the other should be located at the northwest corner of the subject parking lot. The newly created east leg of the Atlantic Boulevard/N. Pompano Beach Boulevard intersection should be controlled by a stop sign. This intersection will function as a four-way stopped-controlled intersection and therefore, the existing “3-Way” supplemental plates should be replaced with “All-Way” supplemental plates under each stop sign.
- The pier parking lot should provide two driveways on N. Pompano Beach Boulevard (one for entering vehicles and one for exiting traffic). These driveways should be located at least 150 feet from either NE 2nd Street or NE 3rd Street. The north driveway should align with the pier restaurant inbound-only driveway. Moreover, the inbound-only driveway should provide on-site stacking for at least two vehicles.
- Increase the number of parking spaces provided east of State Road A1A. This could be accomplished by converting N. Pompano Beach Boulevard to a one-way northbound facility. This roadway modification could be implemented from Atlantic Boulevard to either NE 2nd Street, NE 3rd Street, or for the entire length to SR A1A on the north. The section that is converted to a one-way northbound street should include on-street parking on the beach side of the roadway. Two options are available for on-street parking (angle parking and parallel parking). With angle parking, more parking spaces can be provided adjacent to the beach

areas. Parallel parking provides more opportunities for landscaping and could also accommodate a bike lane along N. Pompano Beach Boulevard.

- Convert the on-street parallel parking spaces on Atlantic Boulevard to angle parking. This would increase the number of parking spaces. The two existing eastbound and westbound through lanes can be reduced to one through lane due to the low vehicular traffic traveling east and west on Atlantic Boulevard, east of SR A1A.
- A parking demand count should be conducted during the peak season. The result of the supplemental parking count would be used to adjust the projected parking needs for the study area, as calculated in this report. The peak season parking counts should be conducted during a Thursday, Saturday, and Sunday, between the hours of 11:00 AM and 3:00 PM (the peak parking demand occurred between 12:00 PM and 2:00 PM).
- Provide a “Way-Finding” signage system for the public parking system. These signs should guide motorists to the different parking areas from the west via Atlantic Boulevard, the north via State Road A1A and N. Riverside Drive, and from the south via State Road A1A.