

overwhelming to Greater Pine Island, given the factors that will be discussed in the following sections of this report.

TABLE 1
Dwelling Unit Totals for 1985, 2000, and Build-out

Pine Island, By Sector	Dwelling Units		(15-year increase)	Dwelling Units	
	1985	2000		Build-out	(additional)
Bokeelia	393	914	521	1,735	821
Pineland	128	322	194	2,022	1,700
Pine Island Center	485	873	388	2,269	1,396
Matlacha	632	695	63	1,029	334
Flamingo Bay	717	869	152	1,330	461
Tropical Homesites	117	259	142	713	454
St. James City	1,182	1,705	523	3,213	1,508
TOTALS:	3,654	5,637	1,983	12,311	6,674

SOURCES:
1985 dwelling units: Lee County Coastal Study, pages 3 through 13 of Volume II, Godschalk & Associates, 1988.
2000 and build-out dwelling units: See full data in Appendix C.
Sector boundaries: See map in Appendix C.

TRANSPORTATION ISSUES

Hurricane Evacuation

Pine Islanders will have a very difficult time evacuating if the island is struck by hurricanes of certain types.

Updated evacuation estimates were recently provided for Pine Island by the Southwest Florida Regional Planning Council (SWFRPC). In the event of a Category 2 hurricane coming from the most hazardous direction in the month of November, over 20 hours could be required for an evacuation.²

This evacuation time is unacceptably high even at today’s population levels. Hurricane forecasters are not confident that they can provide this much warning that a hurricane is likely to strike a specific area. Also, this evacuation time already exceeds the regional³ and county⁴ standards for evacuation times.

These problems are not isolated to Pine Islanders alone. First, any evacuation of Pine Island would include residents of Upper Captiva and Useppa. Second, although Matlacha and its two-

² This time period includes 12 hours to get all evacuating vehicles through the most restrictive segment of the evacuation route (called the “clearance time”) and to a shelter or to the county line, plus 8 hours (“pre-landfall hazard time”) to account for the time before the hurricane strikes when the evacuation must cease due to gale force winds or tidal waters flooding the evacuation route. This time period could be reduced slightly if westbound traffic is temporarily banned from Pine Island Road, which may be ordered during the latter part of an evacuation if traffic is backing up on Pine Island.

³ “Projected evacuation times will be regularly reduced from 1995 levels, and by 2010, evacuation times will not exceed 18 hours in any part of the region.” [Goal III-5, Strategic Regional Policy Plan, SWFRPC, 1995]

⁴ “By 1995, evacuation times will be restored to 1987 levels using the 1987 Southwest Florida Regional Hurricane Plan Update as guidance; and by 2010, the clearance time portion of evacuation time will not exceed 18 hours.” [Objective 79.1, Lee County Comprehensive Plan]

lane drawbridge will create a bottleneck for vehicles exiting the island, a potentially more dangerous bottleneck exists on the mainland to the east of the bridge.

The SWFRPC study presumes that “a successful road network exists to take people to a safer place on higher ground.” Unfortunately for Pine Islanders, this network includes Burnt Store Road (subject to flooding in heavy rains that often accompany hurricanes), the Del Prado Extension, and Pine Island Road.

At the present time Pine Island Road is only two lanes all the way to Santa Barbara in Cape Coral. A heavy influx of evacuees from low-lying areas of western Cape Coral can be expected to also end up on Pine Island Road, slowing traffic flow. Burnt Store Road is being extended to the south now and Pine Island Road will be widened to four lanes between Chiquita and Santa Barbara in about four years, but no other improvements are planned through at least the year 2020.

Lee County roads are not the only barrier to successful evacuation; there is a serious shortage of places for evacuees to stay. Consider the potential consequences of a Category 3 storm (as Donna was, in 1960), arriving in November from the southwest, making landfall not at Fort Myers Beach but at Boca Grande. Under this unlucky scenario, 14 designated shelters out of 34 would be unusable, and extensive stretches of the evacuation routes would be under water, according to Lee County Emergency Management maps. Under those conditions, Pine Island evacuees would be at the tail end of a queue made up of evacuees from much of Cape Coral and North Fort Myers, joined by many others from coastal areas as far south as Naples, all heading north on U.S. 41 and I-75, both of which are subject to flooding even in some tropical storms. There is serious potential for the resulting gridlock to trap tens of thousands of residents directly in harm’s way.

Based on these factors and the inability to provide additional roads to Pine Island (as discussed later in this report), Lee County would be justified in immediately limiting any further development on Pine Island. However, in recognition of the private property rights already granted, as discussed in the previous section, this plan recommends a series of measures that, taken together, will avoid the creation of substantial additional property rights that would exacerbate today’s serious hurricane evacuation problem.

SETTING THE COURSE

Even with *no* additional development, Pine Island exceeds regional standards for the time needed to evacuate when a hurricane approaches. Planned road improvements through Cape Coral may reduce evacuation times slightly. But as Cape Coral grows to its planned population of 350,000 people, evacuation problems will continue to increase. Lee County should pursue any measures that can improve evacuation times. Unnecessary rezonings and other development approvals that would exacerbate this situation must be avoided.

GETTING THERE

1. Modify comprehensive plan Policy 14.2.3 as follows:
POLICY 14.2.3: In addition to the enforcing the restrictions in the Policy 14.2.2, the county shall take whatever additional actions are feasible to increase the capacity of Pine Island Road. The following measures shall be evaluated:
 - The construction of left-turn lanes at intersections with local roads in Matlacha, or a continuous third lane.
 - Improvements to Burnt Store Road and Pine Island Road to the east of Burnt Store that will prevent premature closure of those roads during an evacuation, closures which now limit the number of Greater Pine Island and Cape Coral residents able to evacuate.
2. Modify comprehensive plan policy 14.2.2 as proposed later in this report.

Road Constraints

Access to Pine Island was strictly by boat until 1926 when the causeway carrying Pine Island Road was built through the mangrove islands that became Matlacha. With road access, modern development became practical.

For many decades, this two-lane road was sufficient to meet all demands placed upon it. Although there have been occasional discussions about a second bridge to Pine Island, the hurdles facing such a plan have always been insurmountable.

Appendix A of this plan contains a complete discussion of transportation constraints affecting Pine Island. The remainder of this section is excerpted from Appendix A.

Constraints on access to Pine Island

As the years progressed, traffic on Pine Island Road has continually increased. By general county standards, the current congestion would warrant plans to widen it to four lanes.

However, in 1989 Lee County formally designated Pine Island Road through Matlacha as “constrained,” meaning that the road cannot (or should not) be widened for the preservation of the scenic, historic, environmental and aesthetic character of the community. Since that time, Lee County has also designated the heart of Matlacha as a historic district, further protecting it from road widening that would damage its character.

The decision not to widen a constrained road can obviously increase congestion. Because counties are required by state law to set maximum levels of congestion on every road, a very high level had to be set for all constrained roads. This normally causes only minor problems, because other parallel roads can handle much of the overflow traffic.

On Pine Island Road the traffic levels theoretically allowed on constrained roads could have had alarming consequences because it would legally indicate that there was road capacity to develop vast tracts of vacant Pine Island land. To avoid this problem, the county chose to modify a 1988 proposal from the Greater Pine Island Civic Association to gradually limit development on Pine Island as Pine Island Road began to approach its capacity. The proposal would have prohibited rezoning most additional land for development when 80% of road capacity was used up, and prohibited approvals of new subdivisions, even on land already zoned, when 90% was used up. This proposal ultimately was adopted as Policy 14.2.2, which restricts rezonings when traffic on Pine Island Road reaches 810 trips per hour and restricts other approvals at 910 trips (see full text of Policy 14.2.2 on page 3).

Since 1990, traffic on Pine Island Road in Matlacha has increased by about 22%. Figure 1 shows the averages for each year, with a visual comparison to the 810 and 910 thresholds. The 810 threshold was surpassed in 1998, 1999, and 2000.

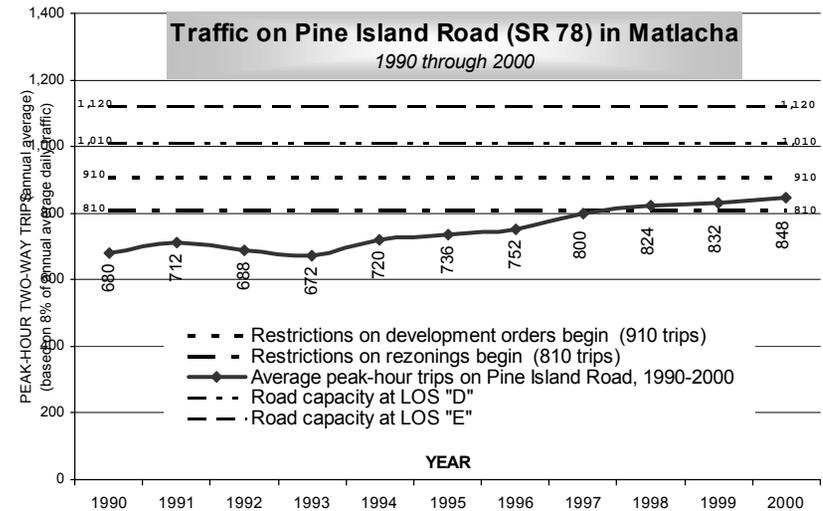


Figure 1, Traffic on Pine Island Road in Matlacha, 1990 through 2000

These significant traffic increases occurred during a decade where there was relatively little new subdivision or condominium development on Pine Island. Population increases resulted mostly from the construction of new homes on pre-existing vacant lots.

Physical alternatives that could improve access

Appendix A examines road improvements that might be able to improve road access to Pine Island. These improvements could have a variety of physical impacts, primarily in Matlacha if the existing right-of-way were reconfigured or widened. The impacts would be primarily environmental if an entirely new access road were built.

Widening Pine Island Road

The critical segments of Pine Island Road have only 66 feet of right-of-way (approximately the distance between utility poles). The existing pavement, including the paved shoulders, is about 32 feet wide. Without widening it could be rebuilt and reconfigured to three lanes of almost 11 feet each, and the unpaved shoulders could be paved to serve as breakdown lanes or sidewalks. The third travel lane could serve either as a two-way left turn lane or as a reversible lane for use in the busier direction.

Adding a third lane would cause a number of problems, however. Pedestrians trying to cross Pine Island Road would have to walk a greater distance, making the crossing less safe, and they would lose the use of the paved shoulder, which now functions as an informal sidewalk. The character of Matlacha would lose some of its village atmosphere and pedestrian orientation, replaced with a more highway-oriented character, plus businesses and homes would lose some of their parking.

The road could also be widened and converted into an urban street with curbs, for instance with four 11-foot lanes, 2-foot concrete curbs and gutters, and 9-foot raised sidewalks.

This configuration would significantly increase the traffic-carrying capacity of Pine Island Road. However, it would require extensive earthwork and metal railings, similar to the recently rebuilt San Carlos Boulevard as it approaches Fort Myers Beach. Sidewalks would extend to the very edge of the right-of-way, putting them directly adjacent to many buildings whose fronts are on the right-of-way line. It would also eliminate all parking from the right-of-way, a major disadvantage that would seriously damage, if not eliminate, the viability of many small businesses. And unless the bridges were widened as well, either approach would still face the bottleneck of having a three-lane or four-lane road narrow into two-lane bridges. The normal engineering solution of widening the road through Matlacha to four travel lanes cannot be considered as a viable or practical option because it would seriously harm Matlacha's village atmosphere and pedestrian orientation.

Widening the right-of-way is also not a solution. Shallow lots often back up to the waters of Matlacha Pass and many of the existing buildings directly adjoin the existing right-of-way. Thus, widening the right-of-way would involve altering or demolishing many buildings in Matlacha. Lee County's 1990 designation of Matlacha as a historic district would not legally prevent the county from altering historic buildings, but it indicates the historic value of many of Matlacha's buildings in addition to its unique village character.

New bridge bypassing Matlacha

The capacity of Pine Island Road could also be increased by building a new bridge immediately to the south of Matlacha. It could provide uninterrupted two-way traffic, or one-way traffic with the existing Pine Island Road serving traffic in the other direction.

Two-way traffic is generally more convenient to the public. One-way traffic allows more cars to use the same amount of roadway, but is generally regarded as being harmful to businesses

along the route. Either scenario would create serious intersection impacts at each end, and could cause additional travel to connect motorists with their actual destinations.

Pine Island Road is a county road west of Burnt Store Road (as are both bridges). Any improvements would be constructed and paid for by Lee County. As major bridges are generally beyond the ability of the county to pay for with current revenue sources, they are built with the proceeds from selling bonds, which are then paid back over time (usually with tolls).

Based on recent costs for bridge building, a new bridge should be expected to cost at least \$50 million and perhaps \$100 million (see cost comparisons in Appendix A).

State and federal permits are required for all new bridges, and are difficult to obtain, especially for a new bridge through the Matlacha Pass Aquatic Preserve. At least at present, building a new bridge around Matlacha is not a feasible option.

Entirely new bridge and entrance road

Another alternative involving a new bridge would be to extend Cape Coral Parkway westerly across Matlacha Pass, ending about halfway between St. James City and Pine Island Center near the Masters Landing power line. A continuous bridge would be needed to avoid interference with tidal flows.

This alignment would extend into the Cape Coral city limits, adding an extra layer of regulatory issues. The new bridge would add traffic onto Cape Coral Parkway, which is planned to be widened to six lanes but cannot be widened further.

This option, like the Matlacha bypass option, is currently cost-prohibitive and could have major environmental impacts on Matlacha Pass. Neither new-bridge option can be considered to be feasible.

Transportation policy alternatives

Beginning in 1998, the 810-trip threshold in Policy 14.2.2 has been exceeded each year. Once they became aware of this fact, the Lee County Commission voted to reexamine this policy.

No technical factors or changes since 1989 have been discovered in the course of this planning process that would justify abandoning the 810 or 910 thresholds in this policy. However, there is an opportunity at this time to determine the best way to fully implement this policy in the fairest possible way.

In 1991 Lee County amended its land development code using language almost verbatim from Policy 14.2.2. This is a problem because it is not self-evident which kinds of rezonings will “increase traffic on Pine Island Road.” A better approach would be to have clearer regulations to implement Policy 14.2.2.

For instance, some types of rezonings would have minor or even positive effects on traffic flow in Matlacha. A convenience store in St. James City would serve only local residents and those passing by and would attract *no* new trips through Matlacha. A larger grocery store in St. James City would attract shoppers from a larger area, perhaps including some who currently drive to Matlacha or Cape Coral to shop for groceries, possibly *decreasing* traffic on Pine Island Road. However, a large new hotel or marina on the same property could have a different effect.

Thus an important distinction could be made in implementing Policy 14.2.2 between those land uses that primarily serve residents or visitors who are already on Pine Island, and land uses that primarily attract additional people across Pine Island Road. For instance, the following commercial uses would primarily serve residents and visitors: grocery, hardware, and convenience stores; hair salons; and service stations.

This distinction would be clouded somewhat by other factors, particularly the size and location of commercial uses. Some

small commercial uses might be exempted from this policy.

Other alternatives would be to:

- allow minor rezonings below a certain size if they are proposed on “infill” properties between existing development at similar intensities (rather than expanding or intensifying already-developed areas);
- allow rezonings whose characteristics are such that traffic during the busiest peak hours would not be increased;
- give preference to rezonings for small enterprises that promote the nature and heritage of Greater Pine Island.

In summary, none of the available options for adding significant road capacity to Pine Island are practical. Building four lanes through Matlacha would seriously damage Matlacha’s village atmosphere and pedestrian orientation. Either new-bridge option would have serious environmental impacts and there are no funds for such expensive undertakings. The increased traffic capacity of either bridge would most likely lead to approval of more development on Pine Island, negating the initial positive impacts on traffic flow and hurricane evacuation.

SETTING THE COURSE

Lee County made a sound decision in 1989 to slow development on Pine Island as the capacity of Pine Island Road through Matlacha is reached. This system should be maintained because no practical method of increasing road capacity has been identified. The specific regulations that govern this slowing should be clarified so that small-scale infill development isn’t prohibited. However, additional larger-scale development rights should not be granted where there is no ability to provide basic services such as minimal evacuation capabilities.

GETTING THERE

Modify comprehensive plan Policy 14.2.2 as follows:

POLICY 14.2.2: In order to recognize and give priority to the property rights previously granted by Lee County for about ~~6,675~~ ~~6,800~~ additional dwelling units, the county shall keep in force effective ~~consider for adoption~~ development regulations which address growth on Pine Island and which implement measures to gradually limit future development approvals. ~~The effect of These regulations shall would be to~~ appropriately reduce certain types of approvals at established thresholds prior to the ~~capacity of Pine Island Road~~ ~~adopted level-of-service standard~~ being reached, measured as follows at the permanent count station on Little Pine Island at the western edge of Matlacha:

- When traffic on Pine Island Road ~~between Burnt Store Road and Stringfellow Boulevard~~ reaches 810 peak hour, annual average two-way trips, the regulations shall ~~provide restrictions on~~ further rezonings which would increase traffic on Pine Island Road: through Matlacha. These regulations shall provide reasonable exceptions for minor rezonings on infill properties surrounded by development at similar intensities and those with inconsequential or positive effects on peak traffic flows through Matlacha, and may give preference to rezonings for small enterprises that promote the nature and heritage of Greater Pine Island.
- When traffic on Pine Island Road ~~between Burnt Store Road and Stringfellow Boulevard~~ reaches 910 peak hour, annual average two-way trips, the regulations shall ~~provide restrictions on~~ the further issuance of residential development orders to one-third the maximum density otherwise allowed on that property. ~~(pursuant to the Development Standards Ordinance), or other measures to maintain the adopted level of service, until improvements can be made in accordance with this plan.~~ These development regulations may provide exceptions for legitimate ongoing developments to protect previously approved densities for final phases that have a Chapter 177 plat or site-plan approval under Ordinance 86-36.